

# STEREO BUYERS GUIDE 1984

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- Receivers
- Amplifiers
- Tuners
- Turntables
- Tonearms
- Tape Decks
- Blank Tape
- Accessories
- Speakers
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What does that mean? What is "high fidelity?" For a company with Nakamichi's reputation for outstanding specifications, it may be surprising to learn that specifications, in themselves, do not concern us! We are interested only in *perfect music reproduction*. When we attain that goal, excellent specifications follow automatically for they simply document technical performance. We believe that excellent specifications are the *effect*—not the cause—of high fidelity—the *result*—not the means—of attaining our goal!

All too easily, this distinction is blurred and ultimately forgotten! Specifications become an end in themselves. This is not surprising for specifications are easily quantified and naturally appeal to the technical minds that create high-fidelity products.

Not so at Nakamichi! We are unlike many audio giants. To serve as a constant reminder that our goal is *music reproduction*, we constructed an excellent concert hall as part of our headquarters/research facility. We consider the *concert hall* our Ultimate Test Instrument—a place

where the creation and recreation of music are directly compared.

The concert hall symbolizes Nakamichi Philosophy—a dedication to creativity, innovation, and musical excellence. Its location in our combined headquarters and research lab is symbolic in itself for the Nakamichi Philosophy permeates our entire organization.

We are proud to be small enough for our President to have a drafting board in his office and a sketch pad at hand as he prowls the laboratories keeping his finger on the pulse of research. We are proud to be large enough to have the finest staff and the finest test instruments in the industry. And we are proud of our dedication to music and to research—research that creates the products of the future—the products of the next decade and beyond.

This philosophy—this dedication to imagination and creativity—attracts the very finest engineers to

our staff—engineers who are in love with music, in love with sonic perfection. Our philosophy sets us apart from others and, more than anything else, has helped establish our enviable reputation for innovation and musical perfection.

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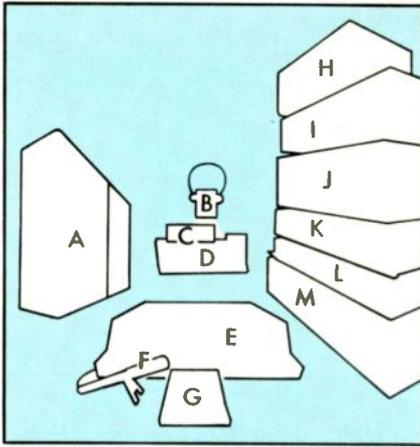
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## FEATURES

How to Buy a Stereo System .....	William Burton.....	4
Upgrading Your Stereo System .....	Julian Hirsch.....	12
Glossary of Audio Terms .....		19
Explanation of Abbreviations.....		22
Directory of Manufacturers .....		25

## PRODUCT LISTINGS

1. Receivers .....	28
2. Amplifiers .....	40
3. Tuners .....	54
4. Turntables .....	60
5. Cartridges & Tonearms .....	69
6. Tape Decks .....	80
7. Blank Tape .....	96
8. Accessories .....	102
9. Speakers .....	114
10. Headphones .....	150
11. Microphones .....	157
12. Signal Processors .....	164
13. Digital Audio .....	172
14. Pocket Stereo .....	178
15. Car Stereo .....	182

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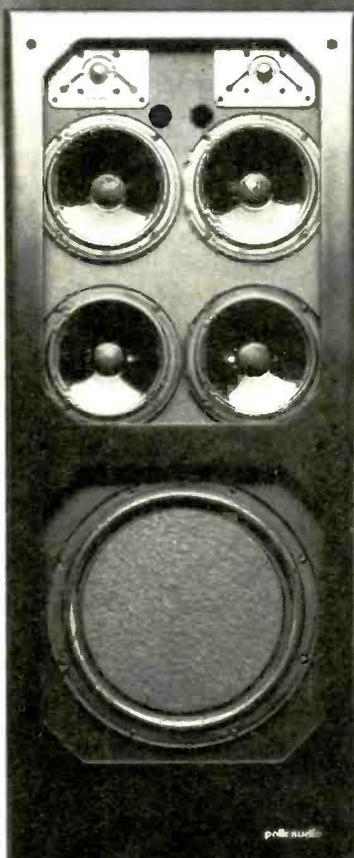
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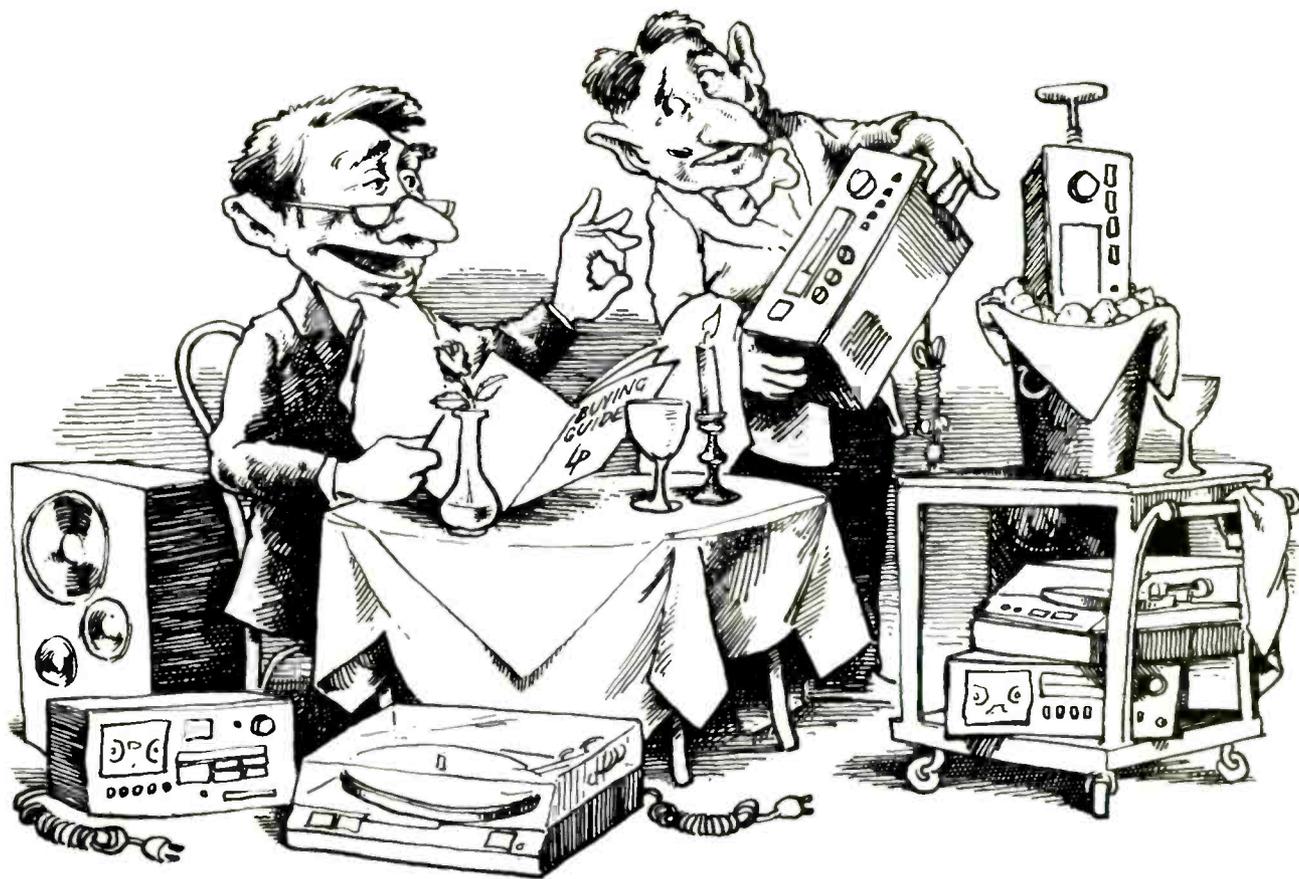
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# How to Buy a Stereo System

By William Burton

**B**uying your own stereo system is an exciting event, one that will open new worlds of music to you through the technology of audio electronics. Because the sound quality you will experience will depend on the quality of the components you purchase, the decisions you make are important—but the selection process itself should be a pleasure, not a chore. If you look at stereo shopping as an creative challenge, an opportunity to get the best equipment for your music at the best prices, and a chance to learn something about music and electronics, buying your stereo can be a lot of fun. And that pleasure will continue every day you use your system.

If you know audio equipment inside out, and can rattle off the specifications, test report results, and model numbers of every piece of equipment on the market, you probably don't need this article—or anything else—to help

you buy a component stereo system. But specs don't tell you everything about how a component will sound. Only your ears will tell you that. If you don't know everything about audio (I don't, and I don't think anyone does), you can still buy a stereo system that will provide pleasure and fulfillment for years to come. Following the hints in this article, examining the product listings in this buyers' guide, reading test reports such as those appearing in *Stereo Review*, and listening to the advice of knowledgeable friends will all aid you in your quest.

## BEFORE YOU GO SHOPPING

To prepare for your stereo shopping spree, listen to music *as it should be heard*—live, as it is being produced, so you can judge the quality of a system that reproduces music. Go to concerts and make mental notes of what makes

the music sound good—the impact of sharp transients, the contrast of soft and loud passages, the wide range of frequencies, and the absence of tape hiss or record noise. Try to remember what real music sounds like so you can select a system that comes as close to that ideal as possible.

Also, listen to high-quality component systems at the homes of friends or in audio showrooms. This will give you an idea of good reproduction, and while you may not be able to afford such a "reference" system (as you probably cannot afford a live orchestra or band) it will set a standard, a goal to aim for.

A basic stereo system will not sound exactly like an orchestra, but fortunately it will probably play in a living room rather than a concert hall. Before you shop, think about where you'll listen to your stereo system. Huge speakers may impress you in the showroom

with their authoritative bass and dramatic fortissimos, but you can't play them that loud if you live in a small apartment with cantankerous neighbors only a thin wall away. (Perhaps the solution to this particular problem is a pair of headphones which will please your ears and those of your neighbors.)

The size of your listening room is important not only because it must contain the equipment you'll buy, but because that is also the space you will want to fill with sound. Large rooms require more amplifier power, and/or more efficient speakers, for music to be as loud as in small rooms.

Because different materials reflect or absorb sound (especially high frequencies such as those produced by cymbals and bells), the decor of your listening room will influence the sound your system produces. A room with heavy drapes, overstuffed furniture, and plush carpeting will absorb sound. A powerful receiver, efficient speakers, and careful speaker placement (*not* behind the sofa) might be required for satisfactory sound reproduction in such an acoustically "dead" room. A room that is acoustically "live," with hard wood floors, bare walls, and many windows to reflect sound waves, will not require as much power (or as efficient speakers) as a dead room. Exactly where you intend to place the speakers should be considered before shopping since speaker placement affects both overall tonal balance and perceived stereo "imaging," not to mention the appearance of the room.

### COMPONENT SYSTEMS

Ideally, there would be nothing between the music and the listener. Unfortunately, simplicity and performance have not come together to this extent—simple systems tend to sound like tinny mush, while good systems tend to be fairly complex and expensive. So you're looking for a compromise, something simple enough to buy and use, but something that will produce better sound than your telephone. There are three kinds of stereo systems you can buy—the one-brand system, where the components are selected by the manufacturer—store-packaged systems, where the dealer matches the components—and the do-it-yourself mix-and-match system. No matter who selects the pieces, all basic component stereo systems are made up of three types of components. These are **signal sources**, the **receiver**, and the **speakers**.

**Signal sources** provide the audio signals which are amplified and processed by the rest of the system. A *turntable* plays records, with the help of a cartridge to actually play (track) the disc and a tonearm to hold the cartridge. The output voltage of a turntable is very low, requiring amplification and equalization. Three other common signal sources put out higher signals at what is called "line level." A *Compact Disc player* plays the new 4.7-inch digital Compact Discs by means of a laser. Likewise, a *tape deck* will record and play back cassette tapes. A *tuner* picks up AM and FM radio signals.

However, you don't have to buy a tuner if you buy a

**Receiver**, which performs the functions that would otherwise be done by three separate components in a more sophisticated system: the *tuner*, the *preamplifier* (or *control amplifier*) and the *power amplifier*. (A preamplifier and power amplifier are sometimes combined into one unit, an *integrated amplifier*). The preamplifier section of the receiver contains the basic switching and sound-processing controls. One of the primary functions of a preamp is to amplify the cartridge output of a turntable up to line level. A preamp can also modify the sound by means of tone controls (bass and treble knobs), adjust the balance between the two stereo channels, set the playback volume level, select which signal source will be heard, and so on. The power amplifier section takes the line-level signal and makes it powerful enough to drive the

**Loudspeakers**, which actually produce sound by turning electrical power into vibrations of a diaphragm (usually a cone or a dome). The various cones and domes making up a speaker are called *drivers*, and the box that contains them is called an *enclosure*. A basic speaker will have two (or possibly three) drivers—one for the low sounds and one for the high sounds (a three-way system will also include a separate midrange driver). The low-frequency driver is called the *woofer*, and the high-frequency driver is called the *tweeter*. You can keep these straight by thinking of the low *woof* of a dog and the high *tweet* of a bird. An electrical circuit within a basic loudspeaker splits the incoming signal into high- and low-frequency parts to send them to the tweeter and woofer respectively. This circuit is called a *rossover*.

### BUDGETING YOUR MONEY

These are the components you need to create a basic system: signal sources, a receiver, and speakers. Now you must decide how much you'll have to spend to get them. The average basic stereo system as described above costs between \$500 and \$1,000. If you have less to spend, consider used equipment, shop at discounters, or make your purchase by mail order. It's not a good idea to buy used turntables, cartridges, cassette decks, or other components with moving parts that can wear out, but used amplifiers, receivers, and other all-electronic components can sound as good as new. (Beware of used speakers, and test them out thoroughly before handing over your money.) If you're spending more than \$1,000, you may want to consider separates (tuner, preamplifier, and power amplifier) instead of an all-in-one receiver because of separates' additional flexibility.

Once you've decided on your total budget, you need to allocate the money among the different components. For a \$500 system, you might put \$150 into the receiver, \$100 for the turntable, \$50 for the cartridge (or \$150 for a tape deck instead of the turntable and cartridge), and \$200 for the speakers. Roughly,

figure on 30% of your budget for the receiver, 20% for the turntable, 10% for the cartridge (or 30% for a tape deck), and 40% for the speakers.

If you are extraordinarily concerned with record wear and damage, you might consider increasing the portion of the budget spent on the turntable and especially on the cartridge; a damaged record is usually irreparable. As long as CD players have list prices from \$750 to \$1,500, they can't (unfortunately) be a part of a budget system.

In one-brand systems, the dollar allocations are already made for you. In fact, a consumer usually can't find out how the manufacturer has "budgeted" a one-brand system since the consumer is only quoted a single price for a set of matched components. A well-designed and manufactured one-brand system is a reasonable alternative to separate components, especially if the prospect of shopping for a component system is daunting.

But, compared to an equivalent component system, a one-brand tends to have a lower resale value, and (most importantly) usually has speakers of inferior sonic quality. If you are interested in a one-brand, see if you can buy the system without the speakers; then you can shop for the speakers separately. One-brands are also difficult to upgrade by changing individual components, and their styling options are limited (although their matched look can be attractive).

### CHOOSING COMPONENTS

Now that you know what you want, you've got to work on matching the pieces to your room and to each other. As far as the size of the components, you are the best judge of that. If you want speakers as large as refrigerators in your bedroom and can fit them in, fine. But remember that you should balance three factors—your room, the power of the receiver, and the efficiency of your speakers. If you don't balance these factors, you may not be able to play your stereo system as loud as you like—or it may distort terribly when you do—or you may pay a lot of money for a powerful receiver or super-efficient speakers when you don't need them.

**Choosing Your Speakers.** Speakers being considered for a basic system will react much the same way to the signal sent to them by a receiver, differing mainly in their efficiency, their frequency response, and in the resistance to the power they are receiving. The term for this last concept is *impedance*. Most home speakers will have an impedance rating of 8 ohms. The impedance of most "8-ohm" speakers falls to well below that figure at some frequencies, thus requiring more amplifier power to reproduce those frequencies. Likewise speakers with 4-ohm impedance will draw more power from your receiver than 8-ohm speakers.

These facts are only important if, either immediately or at some later date, you plan to connect a second pair of speakers to the same receiver or amplifier and to play two or more

pairs of speakers simultaneously. In this case, the lower of the two speaker impedances should not fall below 4 ohms unless the receiver or amplifier is known to be good at driving low load impedances.

Efficiency is a measure of the sound power a speaker puts out compared to the amplifier power going in. On specification sheets this is usually indicated by the related (but not equivalent) specification of *sensitivity*. Sensitivity is usually measured by putting one watt of power into a speaker and seeing how loud the sound is one meter directly in front of the speaker. The sensitivity spec may look like this—**88 dB SPL/W/m**, which translates to "This speaker will produce a sound-pressure level of 88 decibels when given a driven by a signal of one watt, measured one meter away from the speaker." Sensitivity is important because a 3-dB increase in sensitivity means that you can obtain the same sound levels from an amplifier or receiver which is *half* as powerful.

This is where the *Stereo Buyers Guide* can be especially useful. If you're in an audio showroom and you hear some especially lovely speakers, check their sensitivity spec. Compare it to the figures for other speakers. If it's very low, you might need a more powerful receiver. If the efficiency is greater than most speakers, you can buy a less powerful (and less expensive) receiver to produce the same sound levels. Typical sensitivity values for home loudspeakers run from 87 to 92 dB sound-pressure levels for 1-watt inputs. And likewise, once you've selected the speakers you like, you can check the specs on receiver candidates to see if they can produce the power the speakers need. Remember that dead rooms will need more power than live rooms and that a speaker's sensitivity is not an index of its sound *quality* but only of how much amplifier power is needed to drive it to very loud levels.

In addition to sensitivity, another important specification of speakers is *frequency response*. A frequency response spec might look like this: 20-20,000 Hz  $\pm 3$  dB. This means that the speaker will play with a loudness which does not vary by more than three decibels up or down as a steady test-oscillator frequency varies between 20 and 20,000 Hz. Unfortunately, most printed loudspeaker specifications are not comparable to each other since the methods for obtaining the spec differ so widely between companies. You should completely ignore any speaker response which does not contain a tolerance limit (like the "plus or minus 3 dB" above). About the only part of a speaker frequency-response specification like the one above which can be depended on for some useful information is the low-end limit (20 Hz in this case). If you like low bass, look for a spec that goes pretty far down, or the bass guitar and low organ notes won't be as loud and/or distortion-free as you'd like.

The most important thing about frequency response is that a speaker should sound natural and pleasing to your ears—no frequency should be slighted, no part of the sonic spectrum should be overemphasized. A good test

of a speaker is to listen to a male announcer on FM radio: many poor speakers will overemphasize the upper bass to hide a lack of low bass and to add a bit more 'punch' to rock and disco music. An upper-bass boost is often accompanied by an upper-midrange boost making what is known in the trade as a "boom and sizzle" speaker. This sound quality may be seductive in a store, but can become unbearable in long-term listening at home, especially after your ears become trained to listen for good sound quality. Upper-bass boost will make a low male voice sound unnaturally boomy, as if the speaker were in the bottom of a barrel, and the upper-midrange overemphasis can impart an unpleasant "edge" to a well-recorded string orchestra or a female vocalist.

Because speakers vary so much, not only in frequency response and efficiency, but in the type, size, number, and arrangement of their drivers, choosing a speaker is very much a matter of personal taste. If you like people to sound as if they're in a barrel, buy speakers that produce that effect—but don't expect the speakers to reproduce the sound of an orchestra or a rock band accurately. For tailoring sound to personal preferences, use the tone controls on your receiver, or buy an equalizer to provide more precise control of the relative volume of parts of the sonic spectrum.

When comparing speakers in a showroom, follow these simple rules:

1. Always match (using FM interstation noise) the volume levels of the two speakers you are comparing. Studies have shown that most listeners prefer the louder speaker in a comparison regardless of the quality of the softer speaker.
2. Make sure the dealer is displaying the speakers in their manufacturer-recommended placements. Speakers meant to be placed on shelves should be on shelves, both in the store and in permanent installation at home.

3. Listen to a wide variety of source material, good and bad. A bad recording will make a borderline speaker sound awful.

4. Try to arrange a home audition of the speakers before you buy them, and/or make sure your dealer will give you your money back or apply the purchase price in full to another, more satisfactory pair of speakers.

**Choosing a Receiver.** Since the primary job of the receiver is powering the speakers, you have to know how much power you need. This may appear to be a simple question, but the debate in the audio community continues to rage on over this topic. The definitive answer is that there is no definitive answer—it depends, as mentioned above, on the size and acoustical properties of your listening room and its furnishings, the efficiency of your speakers, and lastly (but probably most importantly) on how loud you want your music. See the table titled "How Much Power Do You Need?—Sound Level vs. Watts" to see how many watts into speakers of varying efficiency produce how much sound in a "dead" listening room of 3,612 cubic feet.

Handy rules of thumb:

1. Only by doubling amplifier power will you be able to obtain an *audibly significant* increase in sound level (a 40-watt amplifier will play just about as loud as a 50-watt unit).

2. An amplifier or receiver which has a power rating into 4-ohm loads which is higher than that for 8-ohm loads is better than an amp or receiver with a 4-ohm rating lower than that for 8-ohm loads.

3. If a *dynamic headroom* rating is given, the higher the better.

4. Buy as much amplifier power as you can afford—but *after* deciding on the other components in your system; you can never have too much amplifier power.

Amplifier or receiver output power is measured in watts (like light bulbs) and is usually given this formulation in data sheets: "25 W/ch from 20-20,000 Hz with no more than 0.05% THD," which translates to "25 watts per channel, from 20 cycles per second to 20,000 cycles per second, with no more than 0.05% total harmonic distortion." The only really important part of this specification in home equipment is the first number, the output power rating in watts. For home equipment of acceptable quality, frequency bandwidths are usually wide enough and distortion levels usually so low that both specifications can be safely ignored.

It is debatable whether any receiver from a reputable manufacturer sounds significantly different from any other reputable receiver—as long as their power ratings are the same and neither of them is being overloaded. Differences in distortion, signal-to-noise ratio, damping factor, and a host of other technical parameters can be measured, but the sonic differences between most receivers—when they are not asked to produce beyond their ability—are slight. So, if you want, you can listen to every receiver in your price range and buy the one you think sounds best, but you should consider other factors as well.

Since the receiver includes a tuner, you'll have to choose between digital tuning and tuning on an analog "slide rule" scale. To decide on the type of tuning, operate both digital and analog tuning on a variety of receivers and see what suits your fancy. But watch out! A front-panel digital readout of the tuner frequency is sometimes used as a lure for the novice—it may indeed mean that the station is locked to a digitally synthesized reference frequency for precise and accurate reception, but it may only mean that the frequency of the station being received is displayed in numbers. Digital-synthesis tuning is being found on less expensive equipment as time goes on, and it does provide excellent performance with greatly increased convenience.

In evaluating the preamplifier functions, make sure the receivers you consider have enough inputs for the signal sources you plan to use. It's better to have too many than too few. And decide how much tailoring of the sound you would like to do with tone controls. Other useful functions include connections

# HEAR ALL OF THE MUSIC AND NONE OF THE TAPE...



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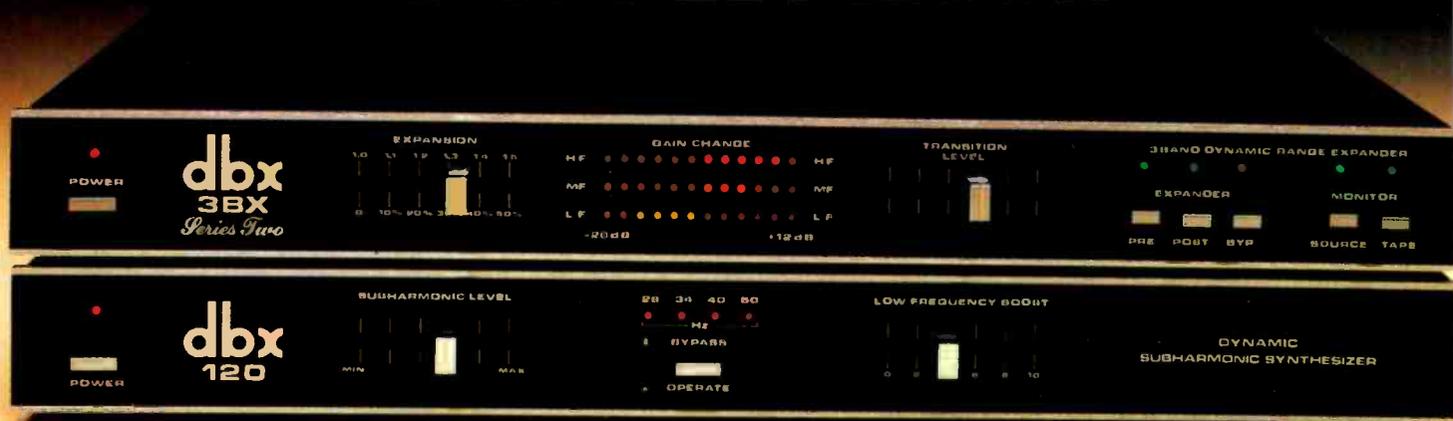
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and switching for two tape decks (even if you only have one recorder, you can hook many other accessories to the other tape connections), connections and switching for more than one pair of speakers, a headphone output, and an infrasonic—sometimes miscalled “sub-sonic”—filter (for removing inevitable and amplifier-power-consuming ultra-low-frequency rumble noises coming from the turntable).

**Choosing Signal Sources.** Since we’re now working backwards in the audio chain, from the speakers through the receiver to the signal sources, we come to the most interesting components last. Which ones you’ll look for will depend on what software (LPs, CDs, cassettes) you plan to buy. Each has its advantages and disadvantages.

More music is released on LP than in any other form. LPs sound pretty good, with hardly any noticeable distortion and a good frequency range. They’re cheap and convenient, but they are fragile and get noisy if you don’t take good care of them. And they require care-

ful setup and maintenance of the cartridge, tonearm, and turntable for best results.

Less music has been released on CD than in any other form, but as of the fall of 1983, a catalog published by the Compact Disc Group listed over 450 titles available in the all-digital format, and that number is increasing as more record companies commit themselves to Compact Disc. CDs sound better than LPs, with stronger lows, higher highs, and clearer midranges, with negligible distortion and far less noise. Early claims of the digital discs’ indestructibility were generally exaggerated, but CDs are much less fragile than LPs, and any fingerprints or dust that can cause mistracking are easily wiped away. CDs are expensive, although prices are already below the level of some “audiophile” LPs.

Pre-recorded cassettes have increased in popularity (despite the poor quality of all but the “audiophile” cassettes) because of their convenience and their use in car stereos, portable players, and pocket stereos. Many people

simply dub discs at home onto cassette to take their music with them, and to protect the disc from the damage caused by repeated playing and handling.

Since you have a signal source (the tuner) built into your receiver, you can add the others when you can afford them. You must balance the performance of the component with the cost, considering the inherent capabilities of each format and the comparative availability of software.

**Turntables (and Cartridges).** If you’ve decided to get a turntable, you need to decide on (1) the type of drive system, (2) the degree of automation, and (3) the type of tonearm.

(1) Turntable platters are usually turned either by a belt attached to the motor spindle (belt drive), or by the motor spindle directly (direct drive). Whatever the drive system, smooth and even motion is desired, and this is indicated by a low wow & flutter specification. (Wow is a slow speed variation—flutter is fast one.) You also want a quiet turntable, so look

*The calculations in this table are for a listening room that measures 17 x 25 x 8 1/2 feet, is fairly “dead” acoustically, and contains an area rug, heavy curtains, and several pieces of heavy stuffed furniture. Doubling the volume of the listening room will increase the power required for the same sound volume by about 1.6 times. Adding or removing furniture will have a stronger effect, changing the power requirements over a range of about three to one.*

*The table illustrates several important points: (1) How much power you need depends very strongly on how loud you like your music. If you never listen above moderate background levels, 20 watts per channel is plenty, even with inefficient speakers. (2) The average power required for most systems, even playing loud classical music at concert levels, is quite low (unless you’re driving two pairs of speakers at once, which needs a lot more power). It is the momentary peaks that require a big amplifier. Be aware, though, that a well-designed amplifier can “clip” the highest peaks as much as 3 or 4 per cent of the time with only a mild effect on the subjective sound quality. (3) The choice of loudspeaker can change your power requirements by as much as a factor of twenty. (In general, a 3-dB increase in speaker sensitivity halves the power required for the same sound level.) The examples chosen pretty much cover the range of efficiency of most commonly available loudspeakers.*

*The value for “very loud rock music” represents the levels encountered at an actual concert (even if your system can reproduce such levels, we advise against your doing so for the sake of your personal health and community relations). The level labeled “Cannon (peaks)” is approximately correct for a 105-mm Howitzer firing blanks (as called for in the score of a well-known Tchaikovsky overture) at a distance of about 100 yards.*

## HOW MUCH POWER DO YOU NEED?—SOUND LEVEL VS. WATTS

Type of Sound	Approximate Sound-Pressure Level (in dB)	Necessary Output Power (watts per channel, both channels driven)		
		Speaker Efficiency		
		High (94 dB/W/m)	Medium (87 dB/W/m)	Low (81 dB/W/m)
Cannon (peaks)	130	2,512	12,600	50,120
Very loud rock music (peaks)	116	126	631	2,512
Very loud classical music (peaks)	112	40	200	795
Very loud classical music (average)	102	4	20	80
Loud classical music	94	0.6	3.2	12.6
Moderately loud classical music	84	0.08	0.4	1.6
Soft popular music	74	0.006	0.03	0.12
Soft classical music	68	0.0016	0.008	0.03
Very soft classical music	52	0.00004	0.0002	0.0008
Background noise, city apartment	46	*	*	*
Background noise, suburban day	36	*	*	*
Background noise, country night	24	*	*	*
Threshold of hearing	0	*	*	*

\*insignificant

for a low rumble spec as well. Most turntables have acceptable rumble specifications, however, except for the least expensive types (less than \$100).

(2) Fully automatic turntables will start the record spinning and lower the stylus into the lead-in groove, and will lift the arm and return it to its rest at the end of the record. A semiautomatic turntable generally will only return the arm to its rest or just lift it up automatically. A manual turntable requires that you move the stylus on and off the disc. Less automated turntables, because they are simpler, can be more reliable, but automatics may be kinder to your tender vinyl, especially if you are not particularly dexterous or want to allow children to use your system.

(3) Tonearms hold the cartridge as the stylus follows the grooves of the record. Tonearms themselves move in two ways according to their design, either in a gentle arc (if they are *pivoted*), or in a straight line (if they move along a track on the turntable). The latter are called *linear-tracking arms* because they guide the cartridge in a straight line, so that the stylus tracks the grooves in the same way the record was cut, reducing tracking error and its associated distortion. Pivoted arms, because they move the cartridge in an arc, hold it at varying angles to the groove. The

differences in distortion according to type are generally inaudibly small, however, and a well-designed pivoted arm can perform as well as a linear-tracking one, with a simpler mechanism and at a lower cost.

Don't neglect the smallest—but pound for pound the most expensive—component, the one that affects the sound more than any other except for the speakers, the tiny cartridge with its tinier stylus that must negotiate the canyons of an LP, vibrating as fast as 20,000 times per second. An LP and a stereo system can sound no better than the cartridge permits. Look for a cartridge with a recommended tracking force range below 2 grams to minimize record wear. Always set the tracking force in the higher portion of a cartridge's rated range.

One of the most frustrating operations in setting up a stereo system is the installation of a cartridge in a tonearm, particularly if you have average or larger-than-average fingers, or are generally clumsy. A recent development in the turntable/cartridge field is the P-Mount cartridge, which will plug directly into a P-Mount tonearm and be instantly adjusted for correct alignment and tracking force. To avoid the delicate operation of mounting and adjusting a standard cartridge, buy a P-Mount cartridge and a turntable with a P-Mount-com-

patible arm. Many cartridge manufacturers make cartridges that will work in both standard and P-Mount arms.

**Compact Disc Players.** When buying a CD player, you need to weigh features against price. Audio performance of tested units has been uniformly excellent, so the buying decision depends on whether you are willing to pay for a high degree of programmability, remote control, or other features.

**Tape Decks.** With a tape deck, consider what you will use it for, and try to find the best compromise between audio performance, convenience features, and price. Auto-reverse decks and double cassette decks (with two transports, enabling copying of a cassette) are becoming more popular, but these capabilities will increase the cost—or require that other features be skimmed on. Don't buy a cassette deck without a self-contained noise reduction system, if indeed any are still being made. Advanced noise-reduction systems such as Dolby C and dbx will reduce tape noise to a greater extent than the common Dolby B system.

#### SHOPPING TIPS

Lastly, some words on shopping. *Be prepared*—listen to live music, audition reference systems, do your reading, consult friends, and get an idea of what you want even before you step into a store. You might even be able to find specific components in this buyers' guide or in ads that you would like to audition. You'll learn a lot in the store (unless it's a bargain-basement discounter who sells audio equipment with the same sensitivity that they apply to selling washing machines or porno videotapes), but being prepared will help you to learn even more.

Try all kinds of stores—audio salons, stereo chain stores, department stores, and discounters. They each have their advantages and disadvantages, and one or another may be right because of price, selection, convenience, service, or just how you feel about a particular store. Being friends with your audio dealer can be very helpful if your system doesn't sound half as good at home as it did in the showroom.

Remember, you're buying this stereo system for your ears and your music. Take both along when you shop. Depending on which signal source(s) you favor, take an LP, a CD, or a cassette—or all three. Choose contrasting selections that you know well, but keep in mind that you are testing components—especially speakers—by how they reproduce all types of musical sounds, from the pedal notes of a Bach fugue to the soaring violins of a Mozart concerto, from the synthetic bass of Orchestral Manoeuvres in the Dark to the shrieks of Robert Plant. Be sure to listen to the musical instrument you hear most often—the human voice. If the vocals sound good, the vital mid-range area is good and will keep guitars, pianos, and almost everything else well balanced.

Finally, don't forget to have a good time. That's what music is all about. ■



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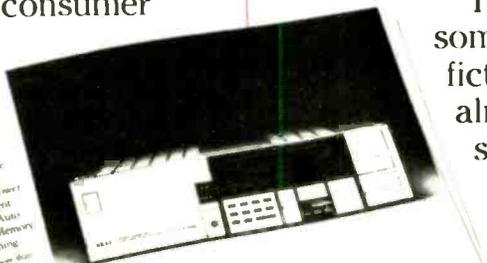
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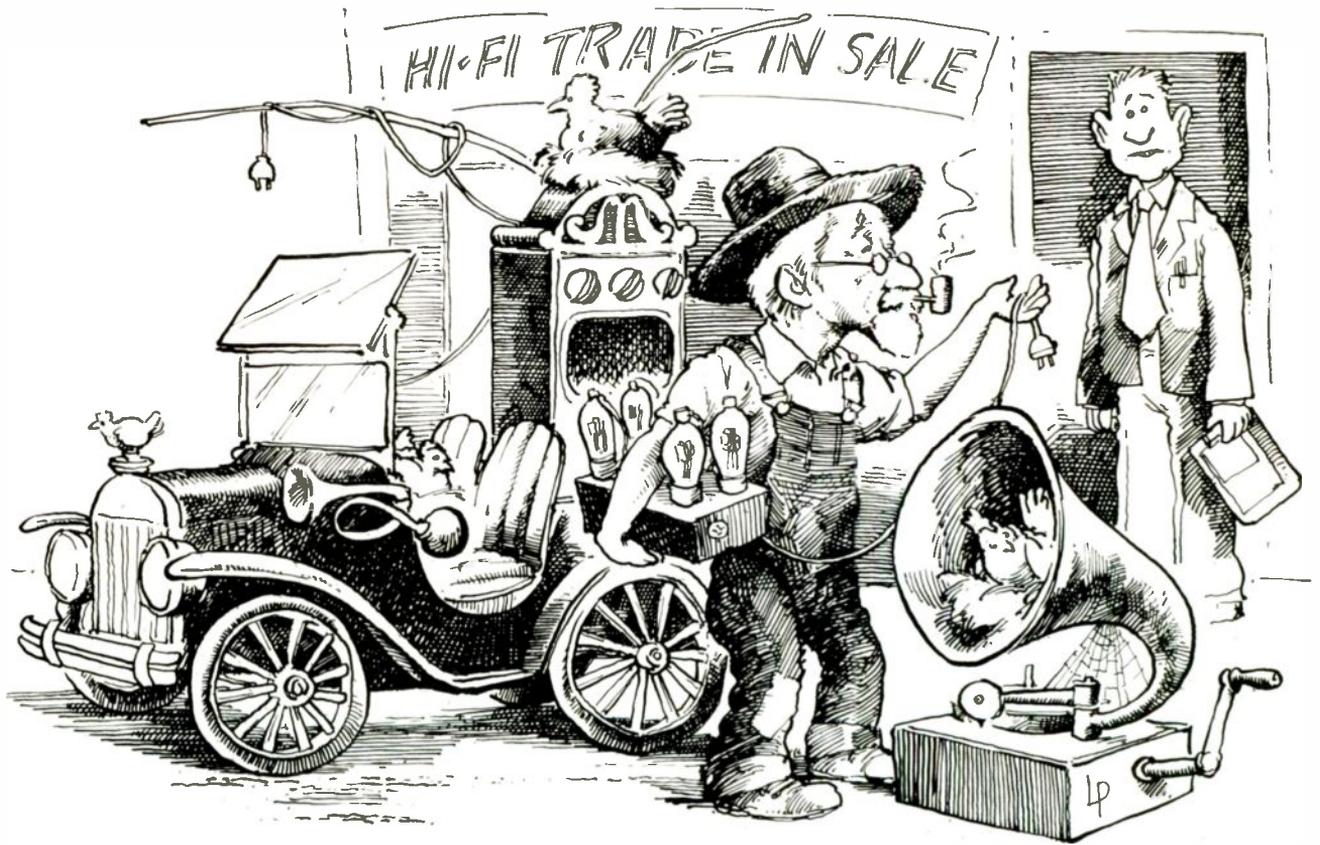
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# Upgrading Your Stereo System

By Julian Hirsch

During a concert intermission, I overheard one man asking another whether he should replace his fourteen-year-old vacuum-tube stereo receiver, and, if so, with what? Much the same question is often asked of me, and probably of most people with any close connection to the audio world. Obviously, if something no longer works, it should be repaired or replaced. Which of those routes to take is, unfortunately, not always so obvious. People tend to develop a strong attachment to a piece of hardware that has given good service over the years and are reluctant to replace it, even if it no longer meets its original performance standards. On the other hand, repairing older components can be very expensive, if repair is possible at all. Most tube devices are expensive to fix, and, as a general rule, I would not recommend trying to keep a vacuum-tube component operating after it begins to become unreliable. In any case, if a system doesn't (or never did) sound as good as you want it to, the

cause should be determined and the necessary changes made.

Behind most of the "should I replace it?" inquiries that come to me, however, I sense a vague feeling of discontent rather than a specific complaint, an ill-defined feeling that the system should sound better somehow, even though all the knobs and buttons seem to function. Perhaps this is the result of hearing a newer and better system at the home of a friend, at a dealer's showroom, or at an audio show, or it may simply arise from reading advertisements or reviews of the latest wonders of audio technology.

While a total replacement of an old stereo system can often yield dramatic results, it may be unnecessarily costly, especially if only one component is substandard. On the other hand, simply changing one arbitrarily selected component may fail to produce the desired sonic rejuvenation. Following a logical procedure to isolate the weakest part of an old or ailing sys-

tem can help you realize the greatest possible improvement in sound per dollar spent.

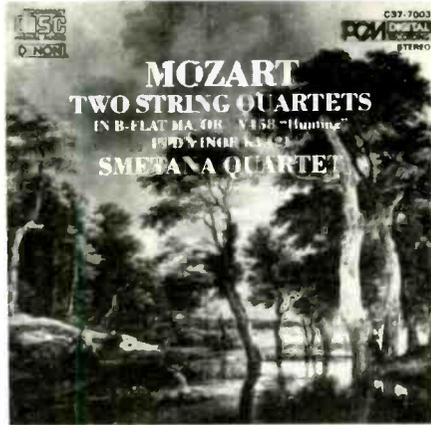
In general, modern solid-state components do not deteriorate with age in the same way the earlier vacuum-tube models did. The greatest enemy of all electronic components is heat, which shortens the life of practically everything—capacitors, resistors, insulation, etc.—that goes into a tuner, amplifier, or receiver. Tube equipment generally runs hot because of the numerous power-wasting vacuum tubes usually squeezed into a small space with barely adequate ventilation for cooling. Transistors typically operate with much less power (heat) dissipation than tubes performing similar functions. Moreover, transistors do not require the heating filaments intrinsic to the operation of a tube, which typically add a couple of watts per tube to the total power requirements of the system. Except for the output stages of a power amplifier, most transistorized stereo components run only slightly warm



C37-7001 BEETHOVEN SYMPHONY NO. 5 in C Minor, Op. 67  
Otmar SUITNER conducting  
STAATSKAPPELE BERLIN



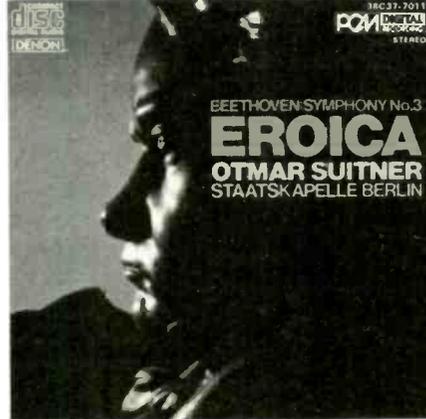
38C37-7026 HANDEL TRIO SONATAS  
Heinz HOLLIGER, oboe



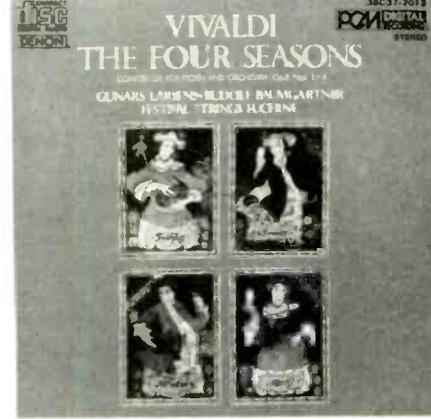
C37-7003 MOZART STRING QUARTET  
NO. 17 in B Flat Major, KV 458 "HUNTING"  
NO. 15 in D Minor, KV 421  
SMETANA QUARTET



C37-7004 DIE GROSSE SILBERMANNORGEL  
DES DOMES ZU FRIEBERG  
J.S. BACH  
Hans OTTO, organ



38C37-7011 BEETHOVEN SYMPHONY NO. 3  
"EREOICA" in E Flat Major, Op. 55  
Otmar SUITNER conducting  
STAATSKAPPELE BERLIN

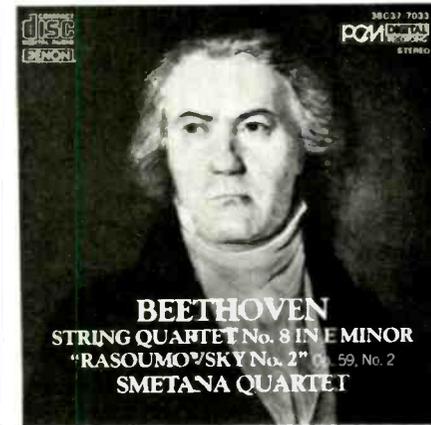


38C37-7013 ANTONIO VIVALDI THE FOUR SEASONS  
Gunars LARSSENS violin  
Rudolf BAUMGARTNER, direction  
FESTIVAL STRINGS LUCERNE

**TO DECIDE  
WHICH  
CD PLAYER  
IS BEST,  
MAKE THESE  
YOUR  
REFERENCE  
CD'S.**



38C37-7032 BEETHOVEN NO. 7 in A Major, Op. 92  
Otmar SUITNER conducting  
STAATSKAPPELE BERLIN



38C37-7033 BEETHOVEN STRING QUARTET NO. 8  
in E Minor, Op. 59, NO. 2  
RASOUMOVSKY NO. 2  
SMETANA QUARTET

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at their hottest, and even power transistors rarely become hot except under sustained bench-test conditions. The reduced overall heat dissipation in solid-state components lowers internal temperatures and considerably lengthens life.

This does not mean that a transistorized component is necessarily trouble-free. A defective part or connection can occur in any product. However, most of them are detected in the manufacturer's final checkout or "burn-in" procedures, and most defective parts that escape detection in those stages will fail early in the life of the product (preferably within the warranty period!). If a modern hi-fi product survives its first few months of service, it is likely to continue operating without significant deterioration for many years.

It is almost axiomatic, however, that a product being considered for replacement is not completely up to date, and most will be perhaps five to ten years old. Many older components were never designed to meet today's high standards of performance and probably have internal trim or alignment adjustments that are no longer needed in current designs. For example, few, if any, new tuners and receivers today have i.f. transformers or multiplex decoders requiring critical alignment settings, which can (and do) change with time. The coils have been replaced with ceramic filters and the multiplex decoders with integrated circuits. These solid-state parts making up today's hi-fi components need little or no maintenance or calibration after manufacture.

Despite the impressive advances in electronic technology in recent years, the *mechanical* portions of an audio system are still its "weak links," the ones most likely to wear out, or at least to limit overall sound quality. These include record-playing components (turntable, tonearm, and cartridge), tape decks, and loudspeakers. Although a speaker is among the most durable and long-lived of components (I have never had one fail or even deteriorate significantly in normal service over a period of more than twenty-five years), most of the really important audible improvements in sound reproduction have resulted from advances in speaker design. A given speaker system, therefore, will probably be rendered obsolete by new technology before it "wears out" from normal use, though it is certainly possible to damage a speaker by overdriving or other careless usage.

The first step in deciding whether some or all of one's system is due for replacement is to consider whether its sound is displeasing, or at least unsatisfying. Without a frame of reference this may be difficult, so a visit to a good audio showroom or to the home of a friend who has a good modern system is a logical beginning. If you have some favorite records with which you are thoroughly familiar, take them along. (Do not expect them to sound the same elsewhere as they do in your home—for better or worse, they should sound different in every location.)

During this process, you will probably be

exposed to some of the newer "demo" records so popular at audio shows and among hardcore audiophiles, and their sonic splendor may convince you that your system is hopeless obsolete. But unless these records include your favorite types of musical fare, don't be unduly swayed by what you hear. Many of them can make the least pretentious music system sound better than it has any right to sound! Play records that represent your normal listening tastes. The differences between hi-fi systems are less spectacular with more mundane program material, yet this may be what you will ordinarily be playing. It seems sensible to me to choose a system that makes the most of what *you* want to hear. Incidentally, I am assuming that your interest in high fidelity is primarily in musical enjoyment, rather than investigating the most subtle sonic qualities of different audio components. If the latter is the case, I am afraid that a logical approach to system selection is invalid (although the final choice in both cases will presumably still be made on the basis of what sounds best to you).

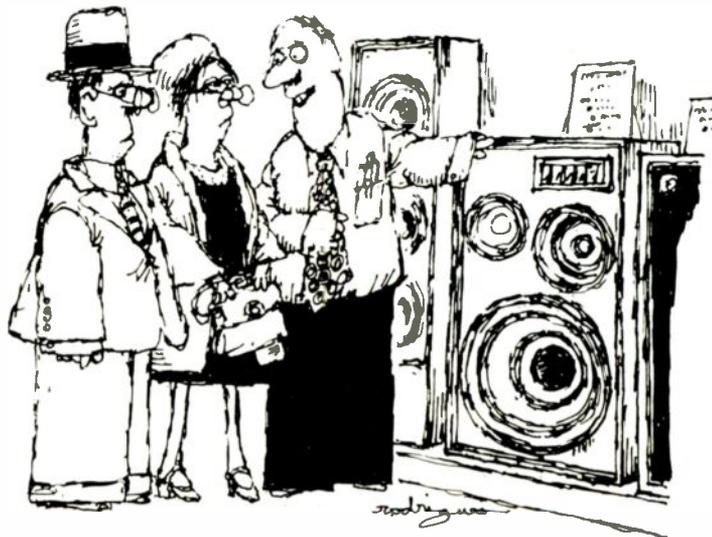
Let us assume that you have heard a system that makes your favorite records sound better in some way than your old system. No doubt every part of that system is different from the corresponding part of your own. Probably most of the audible differences can be ascribed to the speakers and the room in which they are heard. It is risky to compare speakers that differ widely in size, price, or basic construction (a \$1,000 floor-standing speaker is unlikely to sound like an older \$100 "bookshelf" model.) Therefore, after your initial listening sessions, consider your budget and try to audition mainly speakers falling within your price range (unless you enjoy being frustrated). It is often possible to find less expensive speakers, perhaps from the same manufacturer, whose sound coloration (or lack of it) is similar to that of a higher-priced model that you like.

If your speaker auditioning is done in an audio showroom, you cannot assume that a speaker that appeals to you there will continue to do so in your home (or that one whose sound you detest will still be objectionable at home). It is best, then, to try out a pair at home—if you can find a cooperative dealer who will allow returns for credit. Whatever your original speakers are, new ones will probably still be electrically compatible with your amplifier. A very few speakers have unusually low sensitivity and require higher input power for a given listening volume, but most speakers are enough alike in this respect that sensitivity can be ignored as a selection criterion. Speaker impedance *should* be considered since if it falls much below 4 ohms at any frequency some amplifiers may not be able to function properly. Here the manufacturer's specifications can be used as a guide, augmented by test reports, such as those in STEREO REVIEW, that state the actual minimum measured impedance throughout the audio range. In my experience almost any amplifier will operate correctly into the load presented by one pair of almost any model speakers; the problems (if any) arise when one attempts to drive two pairs of similar speakers in parallel.

Perhaps simply replacing your venerable speakers, which may have been "state of the art" performers in their day, will give your system the sound you expect of it (or what you fondly remember it to have been in days past). If so, you are fortunate indeed, although I would still advise examining your other components for signs of senility.

Since speakers hardly ever "wear out" and with reasonable care are not easily damaged, the most likely reason for replacing a speaker system is the availability of newer designs able to produce immediate and often considerable sonic improvements.

At the other end of the electromechanical



"... Sure, lady, \$1,450 is a lot of money, but wouldn't you rather have him home listening to a pair of VX-7's than out every night on monkey business?"

sound-reproducing chain is the turntable, or record player. (I am here considering the turntable and tonearm as one component, although they may be from different manufacturers.) Some people believe the turntable to be almost as important as speakers in contribution to the final sound, but I do not subscribe to that view. I would admit that a defective, poorly designed, or incorrectly installed turntable is certainly capable of degrading a system's sound, but one that is operating properly should be a neutral part of the system, neither adding to nor subtracting from the reproduced sound. In other words, I do not believe that replacing a properly functioning turntable is likely to improve the sound of your system in any way. Those who disagree with this view will, of course, continue to choose their turntables according to whatever criteria please them.

In my opinion, the most valid reasons for replacing a turntable are poor design and/or a degradation of performance (which can occur gradually). Obviously, not all turntables are equally good to begin with. There are often measurable differences among them in respect to flutter and rumble, though most current models are very good in those categories and too much weight should not be given to small differences in their numerical ratings. This is not necessarily true, however, of turntables made some years ago, many of which can with time develop audible rumble or flutter.

Probably even more important, though not yet subject to standardized measurement methods, is the acoustic isolation of a record player from its environment. If your present turntable tends to skip grooves when anyone walks heavily in the same room or generates acoustic-feedback "howls" from the speakers at high volume settings, then you need one that has better isolation.

The effectiveness of turntable's acoustic isolation can be estimated by tapping or shaking its shelf or other support while playing a record (preferably a silent-groove record or one with lengthy low-level passages). If light to moderate tapping produces disturbing sound from the speakers, or even causes the pickup actually to leave the groove, the record player is a candidate for replacement—and if a record player fails this test at a dealer's showroom, it is one to be avoided. (Note, however, that a poor match between the mass of the tonearm and the mass and compliance of the cartridge can also cause groove jumping.) The best isolation is likely to be found in an *inexpensive* direct-drive turntable. But there are enough exceptions to both these "rules" to make an actual in-use test with the cartridge you're considering the best basis for a final choice. (Our turntable test reports indicate when a model is much better or worse than the norm in this respect.)

Being a mechanical device with at least one rotating part (more if it has arm linkages), a turntable is subject to wear. Frankly, I think it highly unlikely that a turntable's main bearing and platter shaft will wear significantly even

after many years of home service. Still, most modern automatic and semi-automatic turntables have other moving parts—associated with their arm indexing and other automatic features—made of plastic or light-gauge sheet metal that are at least theoretically subject to wear or the need for some adjustment after long periods of use. Wear of these parts will usually manifest itself in obviously improper operation of the record player rather than subtle degradation of sound. Whether to replace the worn part or the entire player is a purely economic decision.

Other factors having nothing to do with basic turntable performance may be even more important to you. For example, you may want more or less automation in your turntable than is offered by your present unit. If your phono cartridge has to be replaced, the new one you choose may be more compatible with a tonearm of lower (or higher) mass than the one you now have. A number of recent record players have low-mass arms designed for plug-in "P-mount" cartridges. The combination of a very low-mass arm and a low-mass cartridge give P-mount players outstanding ability to track warped records as well as lessened susceptibility to acoustic feedback and jarring effects. However, since only P-mount cartridges can be used with these turntables, those who prefer conventional cartridges cannot take advantage of their special qualities.

Many people, having read of the development of the Compact Disc digital audio system, are reluctant to replace an ailing or otherwise unsatisfactory analog record player, anticipating its obsolescence in a few years by digital-disc players. While I understand their concern, I am positive that the analog record system will be the mainstay of high-fidelity listening for many years to come; it is more likely to coexist with the Compact Disc than to be immediately replaced by it.

The phono cartridge is one of the few audio components that actually wears out with use. In some cases a cartridge can even deteriorate just with the passage of time because of hardening of elastomer dampers and similar parts of the moving system. While no one can say with certainty how long a given stylus will last, there is no doubt that not even a diamond stylus is "forever." Moreover, a worn stylus does not announce its condition in time for the user to safeguard his record collection. By the time the increased distortion and decreased tracking ability of a worn stylus is audible, irreparable damage may already have been done to records played with it. The best practice is to take your pickup periodically to a qualified dealer for a stylus inspection schedule, depending on how often you use your phono system, might be anywhere from quarterly to annually. Unfortunately, even microscopic inspection is not an unambiguous test of the need for stylus replacement.

Even if a cartridge has not deteriorated in any way, there can be other good reasons to replace it. Ongoing improvements in cartridge performance can make it worthwhile to up-

grade this component every few years. And while the audible differences between most good cartridges of similar vintage are not nearly as great as some people think, they do have different sound characters that in some cases can be appreciated only when a better speaker system reveals them for the first time. To put it another way, a cartridge that sounded fine with your 1968 speakers may seem harsh, dull, or otherwise unsatisfactory when your speakers have been upgraded to 1983 models. The better the speakers (or almost any other part of the system, for that matter), the more likely you will be to hear improvements in other components, and this is probably the best reason for replacing marginally satisfactory components as part of a system-improvement program.

A system's most mechanical component, the tape recorder, is also the one most likely to wear out and require costly maintenance. Moreover, tape recorders, especially cassette machines, are the components in which some of the most dramatic performance improvements have been made in recent years. If you are using a cassette deck that is more than three or four years old, you may be surprised at the improved performance of current models. The changes are frequently quite dramatic because of the combined effects of improvements in tape-head design, tape formulations, noise-reduction systems, bias and equalization circuits, and transport mechanisms.

Cassette decks do wear out, at least to the extent of requiring replacement of belts and clutches in units employing that type of transport mechanism. Today's better (and more expensive) machines often use direct-drive motors, dispensing largely or even entirely with belts and clutches. This offers at least the potential for a longer trouble-free service life. Of course, in time both electronic circuits and motors can give trouble, but this is likely to take many years in the case of a good recorder.

One part that can wear out with considerable use and can be expensive to replace is a tape head (especially a separate playback head, for its gap is very small and high-frequency performance will deteriorate seriously if the gap widens or becomes uneven). I have no better information on tape-head life than I do on phono stylus life, though I would expect a tape head to outlast a stylus by a considerable margin unless low-quality tapes are the primary program sources for the system. If and when excessive head wear (not to be confused with head misalignment) is confirmed by a competent repairman, you may wish seriously to consider replacing the entire tape deck (assuming that it is at least a few years old). The audible improvement in most cases will be unmistakable.

Any regular reader of STEREO REVIEW is aware of the current tendency toward including lots of "bells," "whistles," and lights in tape decks as well as in other electronic components. Some of these features (such as computerized tape-bias optimization) are useful, but others may not be. Each buyer must

make up his or her own mind. In any case, few such features are likely to justify replacing a properly functioning recorder with a newer one. If you do much live recording on cassettes, however, a machine with metal-tape recording capability may be desirable, though it is not strictly necessary.

Users of open-reel tape recorders generally require certain special capabilities of that medium, and the latest machines may or may not offer genuine advantages over well-built machines of a few years ago. The same potential for wear exists in open-reel recorders as in cassette decks, of course, but their generally higher cost makes repair more reasonable than replacement in most cases. While the relatively few open-reel decks manufactured today do not differ from their predecessors as strikingly as is the case with cassette decks, they have also undergone improvement, as has the raw tape itself.

That outlines what I consider the most valid reasons for replacing the speakers, record player and cartridge, and tape deck in a music system. Although a loudspeaker is perhaps the most durable hi-fi component, ongoing design improvements may justify replacing your speakers after a number of years even if they are still in perfect working condition. Record players and tape decks are subject to mechanical wear that can necessitate their eventual replacement. Also, as with loudspeakers, technological developments may warrant the purchase of a new turntable or deck simply for the improved sound it will provide even when your old one is still in good working order.

The situation is not so clear-cut in the case of the purely electronic components of the system: the tuner and amplifier (or receiver, if the two are combined). Barring actual failure of an internal component (a transistor, switch, etc.), an electronic audio product can continue to give good service for a surprisingly long time. With an occasional touch-up alignment, there is no reason a tuner or amplifier should not still meet its original operating specifications after twenty or thirty years of service. (I still have a communications receiver that is going strong after more than thirty-six years with no failures or even a tube change!)

Granted, there are few hi-fi components that will satisfy the tastes of today's audiophiles after a couple of decades of service. For one thing, a mono system is *passé* today no matter how well it works. For another, our standards of audible performance are higher than they were in the fifties and sixties; the hum and noise levels of the best components of those decades would probably not be acceptable today. Finally, as I pointed out above, maintenance of an old piece of tube equipment can become unreasonably expensive or even impossible.

Therefore, let us consider an "old system" to have electronic components that are all solid-state, stereo, and no more than five to fifteen years old. Furthermore, we will assume that the components were good enough to have been called "hi-fi" when they were new

and still function adequately in most important respects. It is certain that the written specs of those older components, even if they were expensive, top-grade products in their time, would be surpassed even by lower-priced equivalents today. But, for a variety of reasons, even major differences in some specifications are rarely audible, so it is usually inadvisable to use specs as the only, or even the main, criteria for deciding whether to replace something that still works properly and sounds good.

Older FM tuners usually have a number of adjustable internal components (mostly in the i.f. and multiplex-decoder sections) that should be checked at regular intervals (such as annually) and realigned if necessary to ensure full performance. Owners tend to ignore such routine maintenance, especially if their systems seem to function normally without it. Most current tuners do not require as much routine maintenance as older ones, and they have generally superior performance characteristics as well, so it is quite possible that replacing an old, neglected tuner with a new one will make an improvement in sound quality.

But not always! Most FM listeners need only a small fraction of the total performance capability of a reasonably good tuner, which, after all, must be designed to meet the needs of a very diverse group of users. Moreover, most FM broadcasts in this country offer sound quality ranging from mediocre to terrible. Therefore, replacing an undistinguished older tuner with the latest "state-of-the-art" model may make *no* audible difference at all. If you have a specific, identifiable reception problem (distortion, noise, interference from another station, or the like), a new tuner with superior qualities in that area may help. But the only way to be sure of this is to try it out at home before buying, if you can find a dealer who will allow this or if you can borrow a comparable unit from a friend.

Before digital-synthesis tuning became common even on inexpensive units, some degree of guesswork (and skill) was usually required to tune in a station correctly. Tuning meters and similar aids sometimes failed to deliver their implied tuning accuracy. Dial calibration was not always good to begin with and usually deteriorated over time (this is correctible with a simple alignment procedure, but if you already know where your favorite stations appear on the dial, the actual calibration is less important). Although digital tuners have no fundamental performance advantages, they at least leave no doubt of the received frequency, and, with no dial to be calibrated, they require no realignment to maintaining tuning accuracy throughout their useful lifetimes. While I cannot guarantee that digital tuners will always be trouble-free, they should be substantially more reliable over the long run than the older analog variety.

To sum up: if your old tuner sounds good, don't replace it—unless, like so many of us, you find the various features of the current crop irresistible. If you have a specific recep-

tion problem, look to your antenna system first (ordinarily, multipath distortion can only be treated effectively in the antenna system, although a number of recent developments in tuner circuit design offer other avenues of improvement). Then try to borrow a better tuner to see if it really makes a difference. Even if it does, your old tuner may still be acceptable after a thorough overhaul, although that might be a less appealing alternative than buying a new digital tuner with its advantages of compactness and potentially more reliable operation.

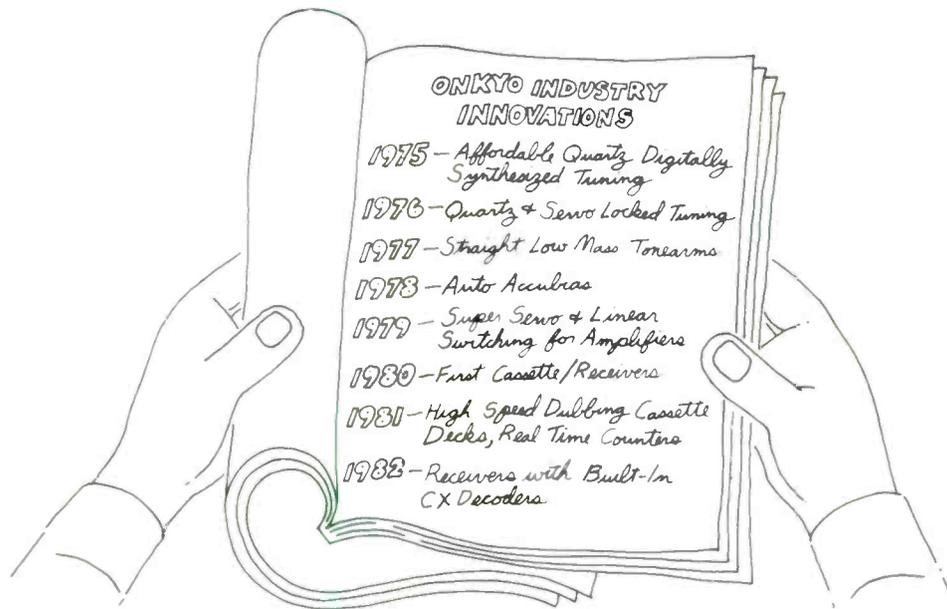
There are several valid reasons for replacing an old amplifier even when it is still working well. A new speaker system might benefit from substantially higher amplifier power, although a *small* power increase is barely worthwhile (*doubling* the output power can increase the sound level by only 3 dB). Alternatively, your new speaker's impedance may be too low for best results with your old amplifier, especially if you plan to drive additional speakers in a different room at the same time. Or perhaps the preamplifier you have lacks the flexibility you require for your upgraded system (you may have added a Compact Disc player or cassette deck, and not all preamplifiers are designed to control a large number of ancillary components with equal effectiveness). Another reason for upgrading is that today's amplifiers are usually very quiet, and your old one may be showing its age in the form of noise.

The parts of a hi-fi component most prone to wear out or deteriorate over a period of time are the switches and potentiometer controls that fill the front panels of most preamplifiers and integrated amplifiers. After some years, you may find that turning a volume or tone control produces scraping or crashing sounds from your speakers or that a switch does not always make contact properly the first time you move it (moving it through several positions and then back to the one you want may help).

Obviously, if you have a receiver, it can only be replaced as a unit even if just one part of it is not performing properly. This is one of the very few real disadvantages of a receiver (there are no inherent drawbacks in performance compared with equivalent separate tuners and amplifiers). On the other hand, it is likely that a receiver that has been used for a number of years will no longer be the equal of a new receiver in many important performance characteristics and features (such as peak output-power capability or digital-synthesis tuning).

I suppose it is fruitless to be *too* rational when dealing with something as personal and subjective as a stereo system. The appeal of those new components with their microcomputers, digital readouts, flashing LED displays, and so on, is undeniable and, for many of us, irresistible. But for those who are not lured by the technological trappings of audiophilia and just seek the best possible musical reproduction for the money, I hope I have put into perspective the factors that affect a system's actual sound over the long run. ■

# Last year, we told you about all our "industry firsts."



## This year, we've added to the list.

### 1983

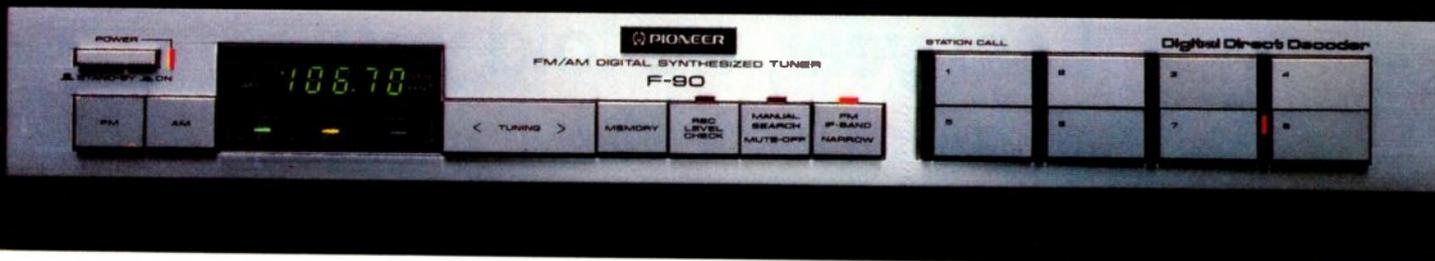
- "Digital Ready" Amplifiers
- The Delta Power Supply
- Triple Stage Isolation System
- Automatic Precision Reception
- Programmable Cassette Decks

If you happened to read the Buyers Guide last year, you discovered that Onkyo was second to none when it came to industry innovations. This year, we've set the pace again with our Triple Stage System that eliminates all turntable feedback. Automatic Precision Reception in our tuners and receivers, instant selectable song location in our cassette decks, and a host of other high performance features. So, whether it's filling the gap between basic components and costly audiophile gear (our new Integra Series), or providing exceptional dollar value in our receivers, cassette decks and turntables, Onkyo should be your #1 choice.



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# THE DIGITAL DIRECT DECODER.™ TECHNOLOGY SO ADVANCED EVEN A HUMAN BEING CAN HEAR THE DIFFERENCE.

Most highly-touted, so-called technological breakthroughs are actually so subtle only a handful of people in the world can actually discern that there's a difference.

The rest of us, audiophiles and normal human beings alike, must be content to subtract the old specs from the new and assume there really is an audible difference.

But not with the F-90 tuner. A new tuner with design technology that *High Fidelity* says represents "...a stunning breakthrough in FM tuner performance thanks to a circuit it (Pioneer) calls a Digital Direct Decoder..."

Not only are the new F-90's specs remarkably superior to the naked eye, its sound quality and reception capabilities are unmistakably better to the naked ear.

Coupled with its companion amplifier, the A-90, you have a system that produces much cleaner, more musical sound. The kind of sound the musicians and recording engineers had in mind in the first place.

The reason is an exclusive, revolutionary

new technology invented by Pioneer engineers. The Digital Direct Decoder is an unconventional circuit that uses a 1.26 MHz pulse train and a pure 38 KHz sine wave, thereby eliminating the need for a conventional noise filter (which creates distortion, harmonics, and limits frequency response).

Consequently, Total Harmonic Distortion at 1 KHz has been reduced to 0.0095% (mono) and 0.02% (stereo), which you'll have to agree is an exceptional improvement over conventional tuners.

Signal-to-noise ratio is an astonishing 93dB (mono), 86dB (stereo).

Furthermore, alternate channel selectivity (always a nemesis and rarely exceeding 60dB before) has been raised significantly to 90dB at 80dBf, eliminating neighboring station "bleed over" once and for all.

And, whereas the better tuners available before produced stereo channel separation numbers no higher than 50dB, the F-90's numbers are up 30% to 65dB.

Suffice it to say, you can expect the same outstanding performance from our new A-90 integrated amplifier.

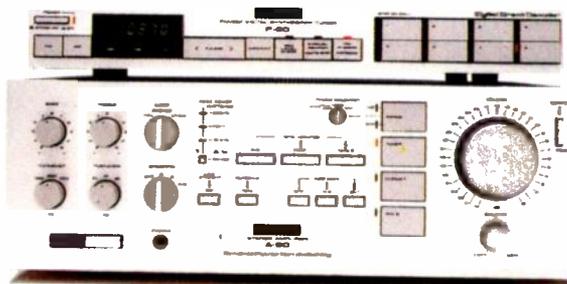
To begin with, there's 200 watts per channel of exceptionally clean power. (0.002% THD, 20-20,000 Hz at rated power, both channels driven, 8 ohms.)

And signal-to-noise ratio is a superior 115dB that combines with the above numbers to get distortion levels that read at the level of immeasurability.

The reasons: our new dynamic power supply, non-switching amp circuits, an FET Buffer circuit, D.C. Servo circuit, and a new, higher specification on even the lowliest components.

Naturally, we recommend you audition both the F-90 and A-90 at your earliest convenience.

Because mere words can't describe a difference so remarkable it can actually be heard with your own two ears.



**PIONEER**  
Because the music matters.

# GLOSSARY OF AUDIO TERMS

**Acoustic Feedback:** The pickup, by a turntable, of vibrations from the loudspeaker. If these vibrations reach the *cartridge*, they will be reamplified, causing noise (usually a rumble, but in extreme cases a howl) and/or distortion.

**Acoustic Suspension:** A speaker system in which the woofer cone is loosely suspended, and its motion controlled to a great extent by the stiffness of the enclosed air. Noted for its extended, low-distortion bass output and low efficiency.

**AM (Amplitude Modulation):** A process in which the program information is imposed on a carrier signal of constant frequency, by varying its amplitude in proportion to program level. Used on the standard broadcast band (550 to 1,650 kHz), and on longwave and shortwave bands.

**AM Suppression:** The ability of an FM tuner to reject AM signals.

**ANRS, Super ANRS:** A noise-reduction system used by JVC, ANRS operates on principles similar to those used by the *Dolby system*. Therefore, there is a degree of compatibility between recordings made with either noise-reduction system.

**Antiskating:** A system for neutralizing the lateral skating force developed with a tonearm having an offset cartridge angle. See *Skating Force*.

**Automatic Turntable:** A record player whose tone arm is positioned automatically for playing records when a control is operated, and which shuts off automatically at the end of play. See *Record Changer*.

**Bias:** A high-frequency current which is combined with the signal being recorded. Necessary for low distortion and noise, and must be adjusted for the properties of the tape used.

**Bidirectional:** In open-reel or cassette recorders, the ability to play (and, in some cases, record) both stereo track pairs on a tape by reversing the tape's direction of motion without removing and replacing the tape reels or cassette from the tape deck. When referring to microphones, bidirectional means responding equally well to sounds from two opposite directions (a figure-8 pattern).

**Biradial:** See *Elliptical*.

**Cantilever:** The rod, or tube, that supports the stylus at its free end, is pivoted at or near its other end, and transfers the stylus motion to the generating elements of the cartridge.

**Capstan:** A shaft rotating at constant speed, which is pressed against the tape and moves it past the heads.

**Capture Ratio:** The minimum ratio between the strengths of two FM signals on the same frequency that will enable the tuner to suppress the weaker by 30 dB.

**Cardioid:** A heart-shaped polar response, with strong rejection to signals arriving from the rear.

**Cartridge:** The device which holds the stylus (or "needle") and translates into an electrical signal the motions of the stylus as it tracks the wiggling modulations of the groove.

**Channel:** An independent signal path. Stereo recorders have two such channels, quadraphonic ones have four.

**Channel Separation:** The amount of stereo program material from one channel appearing in the cartridge output for the other channel. Expressed in decibels relative to the desired channel output, with values of 20 to 30 dB (the higher figure being preferable) through most of the audible frequency range being typical of good cartridges.

**Circumaural:** A headphone in which the earpiece completely surrounds the wearer's ear, and is sealed to the head to provide tight bass coupling.

**Closed-Loop Drive:** A tape transport mechanism in which the tape's speed and tension are controlled by contact with a capstan at each end of the head assembly.

**Coaxial:** Tweeters are sometimes mounted in front of woofers; since each driver fires along the same axis, they are said to be coaxial.

**Compliance:** The ease with which a stylus can be deflected by the groove wall.

**Condenser:** A type of electrostatic microphone characterized by wide frequency range and low distortion.

**Crossfield Recording:** A system in which the *Bias* is not applied to the tape by the recording head, but by a separate head on the tape's backing side, so that the bias/signal will not partially erase high frequencies as they are being recorded.

**Crossover Network:** A filter which passes low frequencies to a woofer, middle frequencies to a mid-range driver (in three-way systems) and high frequencies to a tweeter. Frequencies outside the range of each driver are attenuated at

a rate determined by the network design. A crossover frequency is a frequency at which each of two drivers is receiving half the amplifier's power; below or above that point, one speaker will receive more power than the other speaker.

**Cueing Device:** A lever or control that raises and lowers the tonearm without direct handling by the operator. Usually viscous damped for uniform rise and fall times, no matter how rapidly the control is moved.

**Cue Control:** A switch which temporarily disables a recorder's Tape Lifters during fast-forward and rewind, so the operator can judge what portion of the recording is passing the heads of the tape deck.

**CX:** A compressor/expander noise-reduction system first introduced by CBS Records. Capable of 20 dB of noise reduction, it extends the dynamic range of phonograph discs to 80 to 85 dB. To realize this extension, the user must play the record back through a decoder, but the system is designed so that a record played without decoding is quite listenable.

**Damping:** The application of a mechanical resistance, such as a rubber or silicone material, to the cantilever pivot to reduce the amplitude of a resonance.

**dbx:** A noise-reduction system by which the program is compressed before being recorded, and expanded upon playback to restore the original dynamic range.

**Decibel (dB):** A measure of the ratio between two power levels. Doubling or halving the power corresponds to a 3-dB change, and 10-dB corresponds roughly to the audible effect of doubling or halving the *loudness* of a signal (although it represents a power ratio of 10:1).

**Deemphasis:** A form of equalization used in FM tuners, complementary to a pre-emphasis used in transmission. The purpose is to improve the overall S/N ratio, while maintaining a uniform frequency response.

**Dipole:** A form of speaker which radiates in approximately equal amounts to the rear and the front.

**Direct Drive:** A record playing system whose motor is designed to turn at the record speed. No intermediate coupling devices are used, and the platter rests directly on the motor shaft. Direct-drive motors generally utilize electronic speed control.

**Dispersion:** The spread of a speaker's high frequencies, measured in degrees.

**Distortion:** An undesired change in the waveform of a signal. With a single frequency (sine wave) signal, distortion appears as harmonics (multiples) of the input frequency. The rms (effective a.c. point) sum of all harmonic distortion components, is known as *total harmonic distortion*, or THD. When a two-tone test signal is used, distortion components appear at frequencies which are sums and differences of multiples of the input frequencies. Their magnitude is expressed as *intermodulation (IM) distortion*, which is more distressing to hear than THD.

**Dolby:** Three companding (compressing/expanding) noise-reduction systems developed for tape recording. (Dolby B has also been adapted to FM broadcasting.) Dolby A, the professional version of the system, provides 10 dB of noise reduction. Dolby B, the most commonly used consumer version, also produces 10 dB of NR, while Dolby C, the newer consumer version, doubles that. Dolby C is basically two Dolby B circuits operating one after the other. Basically, Dolby works by *increasing* the high-frequency (treble) sounds during recording and *decreasing* them during playback, which restores them to their original level, so the tape hiss added during recording is decreased during playback.

**Driver:** Any individual speaker within a system, such as the *woofer*, *tweeter*, etc.

**Dual Capstan:** See *Closed Loop*.

**Dynamic:** (When referring to speakers): A speaker drive principle using the interaction between the magnetic field surrounding a voice coil carrying a signal current and a fixed magnetic field to move the coil and the cone to which it is attached.

**Dynamic:** (When referring to headphones): A headphone driver using a voice coil in a magnetic field, driving a paper or plastic diaphragm as in a speaker.

**Dynamic Range:** The ratio between the maximum signal level and the background noise. Expressed in decibels (dB).

**Echo:** A special recording effect, where a portion of the recorded program is taken from the playback head, a short interval after being recorded, and mixed with the incoming program. Principally used at tape speeds greater than 3¾ ips, where the delayed signal is not heard as a separate sound.

**Efficiency:** The percentage of the electrical input power to a speaker that is converted to acoustic energy. Varies from a small fraction of one percent to as much as ten percent or more, depending on the design of the speaker. Higher efficiency means that less electrical amplifier power is required for a given listening volume, but is not directly related to sound quality.

**Electret:** A permanently polarized form of condenser microphone.

**Electronic Speed Control:** A system whereby a motor's speed is controlled by feedback from a frequency-sensing circuit attached to the device being powered.

**Electrostatic:** A drive system for speakers and headphones using a thin plastic membrane, or diaphragm, suspended in a high-voltage electrostatic field, whose variation by the signal voltage moves the entire diaphragm to create a sound pressure wave.

**Elliptical Stylus:** A stylus whose cross-section, as seen from above, is an ellipse placed across the record groove. Elliptical styli can more readily trace the finer high-frequency modulations of the groove than spherical styli can.

**Equalization:** An intentional departure from response flatness to compensate for complementary characteristics introduced elsewhere in the system (as with discs, tape, and FM broadcasting). Also used to correct for response deficiencies in speakers and other components.

**Expander:** A device used to restore natural dynamic range by counteracting the compression of dynamic range used in the making of recordings and in broadcasting.

**Filter:** A circuit that attenuates signals above or below a specific frequency without materially affecting signals in its pass-band.

**Flutter:** The audible effect of short-term record speed fluctuations, occurring at a low audio or an infrasonic rate (0.5 to 200 Hz). This causes a frequency modulation of the program material, heard as a wavering or roughness of the sound. It is described as a percentage of rated speed; the smaller this percentage, the less audible the flutter. The percentage is generally combined with wow. (See *Wow*.) It is often "weighted" (wrms) so that it corresponds to the average human hearing response.

**FM (Frequency Modulation):** A process in which the program information is imposed on a carrier signal of constant amplitude by varying its instantaneous frequency in proportion to the program level. Used on the FM broadcast band (88 to 108 MHz).

**Four Track (Quarter Track):** A tape format in which the width of the tape is recorded in four parallel magnetic tracks, separated by narrow unrecorded guard bands.

**Frequency Response:** Always specified as a range, such as 50 to 15,000 Hz; but in order to be meaningful it must be further defined in terms of decibel variation from absolute flatness over a specified frequency range (e.g., ±3 dB from 50 to 15,000 Hz). An indication of a

sound system's ability to reproduce all audible frequencies supplied to it.

**Graphic Equalizer:** A multi-band equalizer whose controls are sliders, so that their settings can be seen as a rough graph of their frequency response characteristics. See also *Equalization*.

**Head:** A magnetic component containing a coil through which a signal current is passed, and a narrow gap in its pole structure against which the tape presses.

**HZ:** The standard abbreviation of Hertz, the unit of frequency; one cycle per second.

**i-f Rejection:** The ability of a superheterodyne AM or FM tuner's i-f circuits to reject external interference at the intermediate frequency.

**Image Rejection:** The ability of a superheterodyne receiver to ignore signals removed from the desired frequency by twice the intermediate frequency (10.7 MHz in home FM receivers, 455 kHz in home AM receivers).

**Impedance:** A speaker's opposition to the flow of an alternating current, which varies with frequency.

**Infinite Baffle:** A fully sealed box enclosing the speaker.

**Integrated Amplifier:** A single component combining the functions and circuitry of a power amplifier and preamplifier.

**Intermodulation (IM):** See *Distortion*.

**Line:** A term used to denote a high-level signal input or output circuit. Line level is usually of the order of a volt, as distinguished from the microphone level of the order of millivolts.

**Loudness Compensation:** A form of equalization, coupled with the volume control, that progressively emphasizes low frequencies (and sometimes also high frequencies) relative to the middle frequencies as the volume is reduced. Intended to correct for the human ear's natural loss of hearing sensitivity at the frequency extremes when sound level is reduced.

**Magnetic:** A type of cartridge which generates its signal from the relative motions of a magnetic field and a coil or coils (either the field of the coils may move, depending on cartridge design). The output is proportional to the velocity of the stylus motion.

**Mass (tip):** The combined effect of the mass of the diamond stylus, its mounting, the cantilever rod, and the generating elements, as experienced by the record groove which must accelerate that mass.

**Memory Counter (or Rewind):** A system which allows the tape to be rewound automat-

ically to any predetermined point on the tape.

**Molecular Film:** A type of *piezoelectric* speaker.

**Monitor Head:** A separate playback head on some tape recorders that makes it possible to listen to the material on the tape an instant after it has been recorded, and while the recording is still in progress.

**Motional Feedback:** Correction of a speaker's response by feeding information about its motion back to the amplifier. The amplifier then compares the speaker's motions with its own output and changes this output in such a way as to counteract any changes (distortions) created by the speaker.

**Moving-coil:** A type of magnetic cartridge in which the coils, connected to the stylus, move within a stationary magnetic field.

**MPX Filter, Multiplex Filter:** Circuits to remove 19 kHz tones from a signal to be recorded, in order to prevent audible interference between the tape recorder's bias signal and the 19-kHz pilot tone in the output signal from a stereo FM tuner or receiver.

**Multipath:** A condition in which a signal reaches the receiving antenna over two or more paths of different lengths. The resulting interference causes distortion in the receiver, as well as loss of stereo channel separation.

**Multiplex:** The system used to transmit two stereo program channels on a single FM carrier in such a form that the complete program (left plus right channels) can be heard on a mono FM tuner. A multiplex demodulator in the tuner converts the composite received program to its two-channel form.

**Noise:** Any unwanted signal unrelated to the desired signal and tending to obscure it. In audio, noise is usually heard as hiss (random noise) or as hum (the power line frequency and its harmonics).

**Omnidirectional:** Emitting or responding to sound equally in all directions. Frequently applied to speakers that are only "omni" in the forward or upward hemisphere.

**Pause Control:** A feature of some tape recorders that make it possible to stop the movement of tape temporarily without switching the machine from "play" or "record."

**Peak Indicator:** An indicator, usually of the flashing-light type, showing when transient signal levels exceed a recorder's ability to handle them without distortion. Such indicators are often used to supplement *Recording-Level Meters*, which usually indicate average signal levels.

**Peak-Reading meter:** A type of *Recording-*

*Level Meter* whose needle rises quickly and falls back at moderate speed, permitting the operator to judge the levels of transient peak waveforms.

**Piezoelectric (cartridge):** A type of cartridge whose generating element is a ceramic, crystal or electret which generates electricity when bent, twisted or stressed. The output of such cartridges can be fairly high. It is also proportional to the amplitude of the stylus motion, rather than the stylus velocity.

**Piezoelectric (speaker):** A speaker drive principle using a ceramic element which expands or bends under the application of a signal voltage. This deflection generates a sound output. Used in some tweeter designs.

**Pitch Control:** A circuit which permits a turntable's speed to be varied slightly.

**Polar Response:** The variation of output, at any given frequency, at different angles to the forward axis of symmetry of the speaker, in general, it will be different in horizontal and vertical planes, as well as with frequency. See *Dispersion*.

**Port:** An opening in a speaker enclosure, permitting the bass radiation from the back of the woofer cone to be combined with its forward radiation to enhance the total response.

**Power Output:** FTC rules require that amplifier power be measured with all channels operating, after a standard pre-conditioning period to bring amplifier components to their maximum working temperature. Advertised power must be expressed in the form: "50 watts minimum rms per channel into 8 ohms with less than 0.3% harmonic distortion from 20 Hz to 20,000 Hz." The manufacturer is free to establish its own power, frequency, and distortion ratings, and implicit in the rating is the statement that rated distortion will not be exceeded at any power from 0.25 watts to rated power.

**Preamplifier:** Also known as control amplifier, or control center. A switching, amplification, and equalization component designed to select input signals, amplify them and deliver an output voltage to a power amplifier.

**Quarter Track:** See *Four Track*.

**Radial Tonearm:** A tonearm that moves along a track parallel to the record radius, maintaining perfect tangency to the groove. Sometimes called *straight line tracking arm* or *linear-tracking arm*.

**Record Changer:** A type of automatic turntable capable of playing a stack of records (usually 6 to 10) in sequence.

**Recording-Level Meter:** An indicator on a tape recorder that provides some idea of the signal levels being applied to the tape from

moment to moment. It is intended as an aid in setting the recording levels to ensure that the tape is neither overloaded with excessive levels or "under-recorded" with too little signal, allowing hiss and other noise to intrude.

**Ribbon (microphone):** A type of microphone using a light metal foil ribbon in a powerful magnetic field. Widely used in studios.

**Ribbon (speaker):** A form of high-frequency driver using a light ribbon suspended in a magnetic field to generate sound when current is passed through it. In its basic form, a very high quality but fragile high frequency driver.

**Rumble:** The audible effect of low-frequency vibration transmitted from the motor or other moving parts to the record or the tonearm. Heard (as a hum or rumbling sound) only when the pickup stylus is on a rotating record. Rumble is measured in dB below a specified signal level.

**Saturation:** An effect that occurs when a tape is fully magnetized, and further increase of signal input level does not produce a corresponding increase in recorded level. Saturation can also occur in the magnetic structure of the heads.

**Selectivity:** The ability of a tuner to reject unwanted signals on nearby channels. Abbreviated sel.

**Self-Energizing:** A type of electrostatic phone which uses the stepped-up signal voltage to supply the d.c. polarizing voltage required for operation.

**Sensitivity:** In FM, the signal strength a tuner requires in order to reduce noise and distortion to specified levels. "Quieting sensitivity" measures the input signal needed to reduce noise and distortion to 50 dB below the output audio signal level, a fairly listenable condition. "Usable sensitivity" defines the signal level needed to reduce noise and distortion to 30 dB below the audio output, a condition noisy enough to render "unable" a misnomer. Sensitivity is usually stated both in microvolts ( $\mu V$ ) of signal across the tuner's 300-ohm input (figures across the 75-ohm input would be lower) and in "dBf"-decibels above a signal level of one femtowatt ( $10^{-15}$  W), equivalent to 0.55  $\mu V$  into 300 ohms. When referring to microphones, it is a measurement of the electrical output of a microphone for a given sound pressure level at its diaphragm. Also used to mean *efficiency*. Abbreviated sens.

**Semiautomatic:** Having automatic arm return and motor shut-off at the end of a record, but no automatic start and tonearm set-down at the beginning of play.

**Servo Control:** A technique by which the speed or position of a moving device is forced into conformity with a desired, or standard

speed or position. The speed of a servo-controlled turntable is established by a precision voltage or frequency standard, to which it is compared and automatically adjusted to reduce the difference to a minimum with electronic speed control).

**Shibata Stylus:** The first of several multi-radial stylus designs, with two flat facets forming a vee-shaped "prow" in front, and a blunter stern. The main claimed advantage is that the stylus's sharp edges can easily track ultra-fine, high-frequency modulations.

**Signal-to-Noise Ratio (S/N):** See *Dynamic Range*.

**Skating Force:** A frictional force between the pickup stylus and the record material, tending to move the pickup toward the center of the record. It is present only when the cartridge is offset at an angle tracking error. See *Antiskating*.

**Sound-on-Sound:** A process in which a program is recorded first on one track, then played back and re-recorded with added material on the other track.

**Subwoofer:** A speaker designed only to handle very low frequencies, usually from a top of 100 Hz to a bottom below 20 Hz.

**Super-Cardioid:** Similar to cardioid (see above) but with a narrower response lobe.

**Supertweeter:** A tweeter used only for extremely high frequencies; usually in 4-way or 5-way systems.

**Statically Balanced Arm:** A type of tonearm whose masses are first balanced about the pivot, then unbalanced to provide tracking force.

**Spherical Stylus:** A stylus whose shape is conical with the downward-facing point of the cone rounded to a specified radius of curvature usually 0.5 to 0.7 mil.

**Stylus:** The specially shaped jewel tip (normally a diamond) that rides in a record groove and follows the variations in groove shape and position. Its motion is transmitted through the supporting cantilever to the generating elements in the cartridge. Styli come in several shapes, such as *Elliptical*, *Spherical*, and *Shibata*.

**Synthesizer:** A system for generating a precise and stable frequency whose accuracy is determined by a quartz crystal oscillator, instead of inductance/capacitance tuned circuits.

**Tape Monitor:** An interruption in the signal path of a preamplifier, from which the selected input signal is supplied to an external tape recorder, and to which the playback output of the recorder is returned for further amplification and processing. Tape monitor circuits al-

low the owner of a recorder with separate recording and playback heads to listen to a tape as it's recorded, ensuring it is being recorded properly. They also allow the use of external signal-processing devices such as equalizers, noise reducers and expanders, and are sometimes known as "external processor loops" for that reason.

**Tension Arm:** An arm, or feeler, over which the tape rides as it enters or leaves the heads of a tape recorder. It is lightly spring loaded to take up any tape slack and maintain a uniform tension, in order to reduce flutter. Should the tape end or break, the arm causes the transport to shut off.

**THD:** Total Harmonic Distortion. See *Distortion*.

**Tonearm:** The portion of a record player that supports the phono cartridge and maintains it in the correct relationship to the record surface and the spiral groove.

**Tone Control:** A circuit designed to increase or decrease the amplification in a specific frequency range, with little or no effect at other frequencies. Bass tone controls usually affect frequencies below a turnover frequency which may vary between 100 and 1,000 Hz. Treble tone controls are typically "hinged" to affect frequencies above 1,500 Hz. The range of a tone control (the maximum amount by which it can vary the amplification within its operating range) is typically about  $\pm 15$  dB, but may be as low as  $\pm 7$  dB or as great as  $\pm 20$  dB.

**Tracking Error:** The angle between the front-rear axis of the phono cartridge and a line tangent to the record groove. Ideally it should be zero, but can be maintained at less than 0.5 degrees per inch of playing radius in a well designed tonearm. Excessive error can cause increased distortion.

**Tracking Force:** The vertical force (in grams) exerted by the stylus on the record groove. Must be high enough to keep the stylus in contact with the groove at all times.

**Tweeter:** A high-frequency driver.

**Two-way, Three-way:** Refers to the number of frequency bands a speaker's output is divided into. A two-way system would divide the spectrum into two such bands, one of which would be handled by a woofer or woofers, the other by a tweeter or tweeters. A three-way system would have one or more woofers, midrange speakers and tweeters. Systems up to five-way have been marketed.

**Woofer:** A low-frequency driver.

**Wow:** The audible effect of a low-frequency flutter, occurring at a rate of 0.5 to 10 Hz. Most audible and objectionable on sustained tones. See *Flutter*.

## Abbreviations

ac	—alternating current
amp	—amplifier
CD	—Compact Disc
CrO <sub>2</sub>	—chromium dioxide
dB	—decibel
dBf	—decibel femtowatt
dc	—direct current
EE	—extra efficiency
EIA	—Electronic Industries Association
EIAJ	—Electronic Industries Association of Japan
EQ	—equalization
F	—Farad
FeCr	—ferrichrome
FET	—field-effect transistor
FR	—frequency response
g	—gram(s)
HX	—headroom extension
Hz	—Hertz (cycles per second)
IC	—integrated circuit
IEC	—International Electrotechnical Commission
IEEE	—Institute of Electrical and Electronic Engineers
i-f	—intermediate frequency
IHF	—Institute of High Fidelity
IM	—intermodulation (distortion)
imp	—impedance
ips	—inches per second
k	—one thousand
kHz	—kiloHertz
LCD	—liquid-crystal display
LED	—light-emitting diode
L/R	—left/right
LSI	—large-scale integrated (circuit)
m	—meter (as in SPL/W/m)
m	—milli (one thousandth)
MC	—moving coil
MM	—moving magnet
MNOS	—Metallic nitrogen-oxide semiconductor
MOL	—maximum output level
MOSFET	—metal-oxide semiconductor field-effect transistor
mm	—millimeter
MPX	—multiplex
$\mu$	—micro (one millionth)
mV	—milli volt
NAB	—National Association of Broadcasters
nWb	—nanoWeber
NR	—noise reduction
PLL	—phase-locked loop
P-P	—peak-to-peak, push-pull
RF (or r-f)	—radio frequency
RIAA	—Recording Industry Association of America
rms	—root mean square
sel	—selectivity
sens	—sensitivity
sep	—separation
S/N	—signal to noise (ratio)
SPL	—sound pressure level
THD	—total harmonic distortion
TIM	—transient intermodulation
V	—volt(s)
VHS	—Video Home System
VU	—volume unit
W	—watt(s)
W&F	—wow and flutter
Wb	—Weber
wrms	—weighted root mean square

# To eliminate the major flaws of cone-shaped speakers we created speakers without a cone. Technics Honeycomb Disc Speakers.

One of the unfortunate aspects of the conventional audio speaker is the speaker design itself: a cone-shaped diaphragm that performs with undesirable dips and peaks in frequency response. The result is reproduction that can be less than accurate.

Technics has eliminated this problem by eliminating the cone. Instead Technics uses an ingenious, flat speaker called the Honeycomb Disc. This flat Honeycomb Disc is extremely rigid and lightweight. So it responds quickly and with superb accuracy to the most delicate or the most dynamic musical signal. And can handle a wider range of frequencies than conventional speakers without creating distortion.

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But perhaps best of all, the price of all this technology is remarkably modest.

Hear how eliminating the speaker cone can add to your music. Experience the startling fidelity of Honeycomb Disc Speakers from Technics.

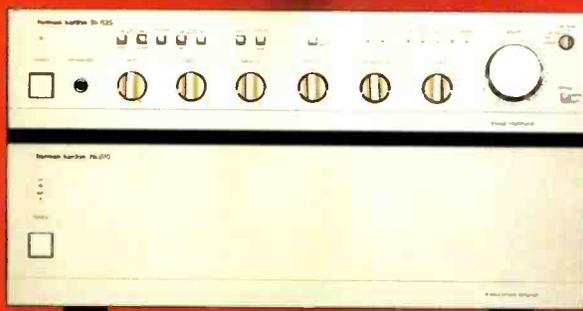


**Technics**

The science of sound

CIRCLE NO. 4 ON READER SERVICE CARD

# HARMAN KARDON INTRODUCES STATE-OF-THE-MIND TECHNOLOGY



30 years ago Harman Kardon introduced the world's first high fidelity receiver. It was built on the philosophy that quality audio must evolve from creative, quality thinking.

Over the years, Harman Kardon continued to introduce original audio theories that were truly "state-of-the-mind", each proving so successful that they were immediately absorbed into the marketplace as "state-of-the-art".

For example, in 1958, Harman Kardon developed the first stereo receiver. A state-of-the-mind theory that instantaneously became state-of-the-art.

Harman Kardon, in 1970, saw the need for a noise reduction system for recording tapes and became the first company to use Dolby<sup>1</sup> in a cassette deck.

Now, Harman Kardon's most important state-of-the-mind concept, High Current Capability, has turned state-of-the-art. A recently published paper<sup>2</sup> states that in order for an amplifier to properly drive loudspeakers it must have the High Current Capability to instantaneously generate as much as 6 times its rated power into a 1.33 Ohm load. Harman Kardon has consistently

used High Current Capability in our products and we are presently<sup>3</sup> using it in all of our receivers and amplifiers.

The hk870 100 Watt<sup>3</sup> power amplifier, our newest product, carries this philosophy even further. The hk870 has an exceptional 60 Amps of High Instantaneous Current Capability and maintains a negative feedback level of only 12dB.

The hk870 is matched by the hk825 preamplifier. The hk825 offers dual RIAA equalization circuitry in the phono section, a discrete Moving Coil head amplifier and Ultrawidebandwidth of 0.1Hz to 180kHz delivering extremely pure, transparent sound.

So, while other manufacturers continue to pile on unnecessary features and performance reducing gimmicks, Harman Kardon continues to fine tune the basics and develop fundamentally advanced audio equipment.

1. Dolby is the registered trademark of Dolby Laboratories Inc.  
2. "Input Current Requirements of High Quality Loudspeaker Systems", published and presented to the AES by Dr. Matti Otala. For a copy of this paper, write to Harman Kardon.

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**ROBINS DIVISION** (Benjamin Electroproducts, Inc.)  
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**RTR INDUSTRIES, INC.**  
8116 Deering Ave., Canoga Park, CA 91304



*"... We apologize for the stereo image's seeming to come from your ceiling, but we are experiencing technical difficulties."*

**RUSSOUND/FMP, INC.**  
PO Box 2369 Woburn MA 01888

**SAE** (Scientific Audio Electronics, Inc.)  
701 E. Macy St., Los Angeles, CA 90012

**SANSUI ELECTRONICS CORP.**  
1250 Valley Brook Ave., Lyndhurst, NJ 07017

**SANYO ELECTRIC INC.**  
1200 W. Artesia Blvd., Compton CA 90220

**SCHOEPS** (Posthorn Recordings)  
142 W. 26 St., 10 Floor, New York, NY 10001

**SCOTCH**  
3M Center, St. Paul, MN 55101

**H.H. SCOTT, INC.**  
20 Commerce Way Woburn MA 01888

**SENNHEISER ELECTRONICS CORP.**  
10 W. 37 St., New York, NY 10018

**SHAHINIAN ACOUSTICS LTD.**  
24 Commercial Blvd. Medford NY 11763

**SHARP ELECTRONICS CORP.**  
10 Keystone Pl., Paramus, NJ 07652

**SHERWOOD** (div of Inkel Corp.)  
500 E. Carson Plaza Dr., Suite 221, Carson, CA 90745

**SHURE BROTHERS INC.**  
222 Hartrey Ave. Evanston, IL 60204

**SIGNET DIVISION**, (div A-T-U-S, Inc.)  
1221 Commerce Dr., Stow, OH 44224

**SNELL ACOUSTICS**  
10 Prince Place, Newburyport MA 01950

**SONUS by SONIC RESEARCH, INC.**  
27 Sugar Hollow Rd., Danbury, CT, 06810

**SONY INDUSTRIES**  
Sony Drive, Park Ridge, NJ 07656

**SOUNDAIDS**  
395 Riverside Dr., New York, NY 10025

**SOUND CONCEPTS INC.**  
PO Box 135, Brookline, MA 02146

**SOUNDCRAFTSMEN**  
2200 S. Ritchey, Santa Ana, CA 92705

**SOUND DYNAMICS**  
(Audio Products Int'l)  
161 Don Park Rd., Markham Ontario, Canada L3R 1C2

**SOUND GUARD CORPORATION**  
348 SW 13 Ave., Pompano Beach, FL 33060

**SPARKOMATIC CORP.**  
Milford, PA 18337

**SPEAKERLAB, INC.**  
735 N. Northlake Way, Seattle WA 98103

**STANTON MAGNETICS, INC.**  
Terminal Dr. Plainville, NY 11803

**STUDER REVOX AMERICA, INC.**  
1425 Elm Hill Pike Nashville, TN 37210

**SUMIKO**  
PO Box 5046, Berkeley, CA 94705

**SUPEREX ELECTRONICS**  
151 Ludlow St., Yonkers, NY 10705

**SUPEX by SUMIKO, INC.**  
PO Box 5046, Berkeley, CA 94705

**SUPERSCORE by MARANTZ** (Superscope, Inc.)  
20525 Northhoff St., Chatsworth, CA 91311

**SWITCHCRAFT, INC.**  
5555 North Elston Ave., Chicago, IL 60630

**SYNERGISTICS** (RTR Industries, Inc.)  
8116 Deering Ave., Canoga Park, CA 91304

**TANDBERG OF AMERICA INC.**  
Labnola Court, Armonk, NY 10504

**TASCAM by TEAC CORP. OF AMERICA**  
7733 Telegraph Rd., Montebello, CA 90640

**TDK ELECTRONICS CORP.**  
12 Harbor Park Dr., Port Washington, NY 11050

**TEAC CORP. OF AMERICA**  
7733 Telegraph Rd., Montebello, CA 90640

**TECHNICS** (Panasonic Co., Div of Matsushita  
Electric Corp. of America)  
One Panasonic Way, Secaucus, NJ 07094

**TEKNIKA ELECTRONICS CORP.**  
1633 Broadway, New York, NY 10019

**TELEDYNE by OLSEN ELECTRONICS**  
260 S. Forge St., Akron, OH 44327

**THIEL AUDIO PRODUCTS CO.**  
4158 Georgetown Rd., Lexington, KY 40511

**THORENS**, EPI Products Inc  
25 Hale St., Newburyport, MA 01950

**3D ACOUSTICS**  
175 Heritage Ave., Portsmouth, NH 03801

**THRESHOLD CORPORATION**  
1832 Tribute Rd., Suite E, Sacramento, CA 95815

**TOSHIBA AMERICA, INC.**  
82 Tolowa Rd. Wayne, N.J. 07470

**UHER by WALTER ODEMER CO., INC.**  
1516 W. Magnolia Blvd, Burbank, CA 91506

**UNITRONEX CORP.**  
1711 Landmeier Rd., Elk Grove Village, IL 60007

**URSA MAJOR, INC.**  
Box 18, Belmont, MA 02178

**VECTOR RESEARCH**  
20600 Northoff St., Chatsworth, CA 91311

**VIDAIRE ELECTRONICS MFG. CORP.**  
150 Buffalo Ave., Freeport, N.Y. 11520

**VISONIK OF AMERICA, INC.**  
701 Heinz Ave., Berkeley, CA 94710

**WALD SOUND INC.**  
1131 Dora St., PO Box 1085, Sun Valley, CA 91352

**WHARFEDALE** (Rank Hi-Fi, Inc.)  
291 Strawtown Rd, West Nyack, NY 10944

**YAMAHA INTERNATIONAL CORP.**  
6600 Orang-thorpe Ave., Buena Park, CA 90620

**ZAPCO** (Zeffi Advanced Products Co.)  
5718 Paradise Rd., Modesto, CA 95351

# Endorsed . . .

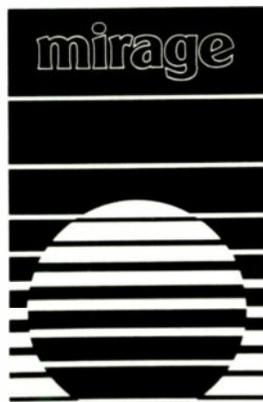
**Denon** *"Mirage speakers represent unusually fine value in sound for the dollar. We recommend them for use with our electronics."*

**Harman Kardon** *"A high quality audio system requires the use of uniformly high quality components. We have found that **Mirage** loudspeakers are among the best value in speakers available."*

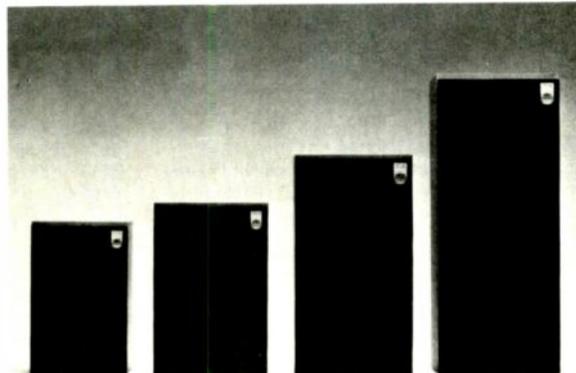
**NAD-USA** *"Accurate loudspeakers are necessary in order to realize the benefits of today's finer components. We find that **Mirage** loudspeakers amply fulfill that criterion, and at a reasonable price."*

**Onkyo** *"Mirage speakers project a seamless, open, three-dimensional sound field which retains the musical excitement of the original performance."*

## Perhaps they know something you should.



SEE THE MUSIC.



Mirage Acoustics, Unit 7, 1361 Huntingwood Dr., Scarborough, Ontario, Canada M1S 3J1, 416-298-3434 in Canada. 617-329-8410 in U.S.

CIRCLE NO. 13 ON READER SERVICE CARD

# 1

# Receivers

## ADS

### Atelier R1 Receiver

Stereo receiver with 5 AM/FM station presets, flywheel manual tuning and amplifier clipping indicators. Features connections for 2 tape decks and 2 sets of speakers, spring-loaded push terminals; LED digital display. FM usable sens mono 1.0  $\mu$ V (11.2dBf); 50dB quieting sens mono 1.8 $\mu$ V (16.5dBf), stereo 21  $\mu$ V (3.77dBf); THD mono <0.15%, stereo <0.25%; S/N mono >70dB, stereo >67dB; FR 15-14,000Hz, +0.5, -1dB; ch sep >40dB at 1,000Hz; capture ratio 1.8 dB; FR 15-14,000 Hz +0.5, -1 dB. Amp section: 35 W/ch continuous average power output into 8 ohms from 20-20,000 Hz with 0.1% THD; 40 W/ch into 4 ohm load. FR tape, 10-75,000 Hz +0, -1.5 dB, phono conforms to RIAA equalization  $\pm$ 0.5 dB from 40-20,000 Hz; input sens tape 50 mV into 200k ohms, phono 400  $\mu$ V at 1,000 Hz into 47k ohms; S/N tape >83dB, phono >73dB; 17.52"W x 2.76"H x 14.84"D; 17.4 lbs ..... \$500

## AKAI

### AA-R42 AM/FM-Stereo Receiver

Stereo receiver with Zero Drive Circuit, moving-coil (MC) cartridge capability. Features dc servo amplifier; subsonic filter; 12-segment fluorescent power meters; digital quartz synthesized tuning; single-screen fluorescent display for all functions; 20 presets, autoscanning capability; random-access tuning; acoustic memory; auto fader; tape dubbing. Output power 60 W/ch min rms into 8 ohms, 20-20,000 Hz at 0.008% THD ..... \$430

**AA-R32.** Similar to AA-R42 except no moving-coil cartridge capability or random-access tuning; 16 presets. Output power 45 W/ch ..... \$330

### AA-R22 AM/FM-Stereo Receiver

Stereo receiver with dc servo amplifier section, digital quartz synthesized tuning. Features single-screen fluorescent display for all functions; 12 presets, auto scan capability; acoustic memory; auto fader; tape dubbing. Output power 30 W/ch min rms into 8 ohms, 20-20,000 Hz at 0.05% THD ..... \$250

### AA-R1 AM/FM Stereo Receiver

Features easy-to-read dial with LED pointer; flywheel-assisted tuning knob; speaker A & B selector; loudness control; tape monitor, bass, and treble controls; electronic circuit protection; tuning and FM stereo LED indicator; detachable AM loop antenna. 22 W/ch min rms at 8 ohms with no more than 0.3% THD; FM sens (IHF) -12.7 dBf; FM sel -60 dB ..... \$170

## BANG & OLUFSEN

### Beomaster 8000 FM-Stereo Receiver

Remote-controlled FM-stereo receiver with 9 FM station presets. Remote station selection, phono, tape 1, tape 2, tape dub to Beocord 8002 stereo cassette deck, volume control, active filters, bass, treble, loudness controls. Features adjustable tape 1, tape 2, phono levels; tape/line-monitoring facilities for 3-head decks. Output power 150 W rms into 4 ohms

with 2 dB headroom, 100 W rms into 8 ohms with 1 dB headroom at 0.05% THD and 0.1% IM distortion; amplifier S/N >75 dB phono; ch sep >55 dB; FM stereo usable sens 15 dBf (1.5  $\mu$ V) into 75 ohms; FM S/N >76/>72 dB mono/stereo at 65 dBf; sep >40 dB, 100-10,000 Hz ..... \$1,495

### Beomaster 5000 Stereo Receiver

AM/FM receiver designed for multi-speaker installations. When used with Master Control Links and remote speakers, it can provide music throughout a home by remote control. Features auto volume adjustment to protect against overload; frequency-synthesized tuner; auto and manual tuning; 9 presets; Auto Station Lock. Amp section: output power 55 W/ch into 8 ohms from 20-20,000 Hz; HD <0.02% DIN/IEC; THD <0.09% IHF; dynamic headroom 1 dB into 8 ohms, 2 dB into 4 ohms; IMD <0.15% IHF; FR 20-20,000 Hz  $\pm$ 1.5 dB phono and tape; S/N >74 dB phono A-weighted. FM section: usable sens 17 dBf (2  $\mu$ V) 75 ohms stereo; 50-dB quieting sens 42 dBf (35  $\mu$ V) 75 ohms stereo; FR 20-15,000 Hz  $\pm$ 1.5 dB; distortion at 65 dBf 0.35% stereo; capture ratio 1.8 dB. 16 $\frac{3}{4}$ " x 3" x 13"; 18 lb 11 oz ..... \$1,195

### Beomaster 6000 FM Receiver

Low-profile FM-stereo receiver with full-feature remote control. Features 7 buttons for 1-touch selection of volume, up and down volume scan buttons, hidden slide-type preset volume control; illuminated scale that displays volume settings; digital display FM-stereo tuner with auto, manual, mono tuning modes; slide-type balance, bass, treble controls; FM tuning display doubles as clock display; loudness switch. Output power 75 W/ch into 8 ohms, 20-20,000 Hz at <0.08% THD; dynamic headroom 0.7 dB; IM distortion <0.05%; FR 20-20,000 Hz  $\pm$  1.5 dB; damping factor >60; input sens/imp 0.22 mV/47k ohms phono, 22 mV/200k ohms tape, 500 mV/15-475k ohms line; S/N A-weighted >75 dB phono, >78 dB tape; sep >50 dB; output level/imp 530/1k ohms tape, 500 mV/1k ohms line, 14 V/200 ohms headphones. FM section: mono/stereo usable sens <15 dBf (1.5  $\mu$ V); S/N mono/stereo >75/>72 dB at 65 dBf; sep >40 dB, 100-10,000 Hz; FR 20-15,000 Hz  $\pm$  1 dB; distortion mono/stereo <0.2%/<0.18%; capture ratio 1.8; adjacent/alternate-ch sel >6/>65 dB; spurious/image/i-f response ratio >110/>86/>120 dB; AM suppression/subcarrier rejection >63/>72 dB; 20 $\frac{3}{4}$ " x 15"D x 6"H; 32 lb ..... \$895

## CARVER

### The Receiver

AM/FM-stereo receiver designed to have noise-free stereo FM and adequate power for digital discs. Features PLL fully digital synthesized AM/FM stereo tuner section; Carver's magnetic field power amplifier; asymmetrical charge-coupled FM detector; phono input; video/digital audio input; auxiliary input; 2 tape inputs; 6 station presets; mono switch; bass, mid-range and treble controls; balance control; switches for tone defeat, speaker selection, tape monitoring, tape dubbing, FM muting, AM noise filter, loudness

contour. 130 W/ch into 8 ohms from 20-20,000; THD at rated power 0.05%; IMD 0.1% SMPTE; FR 20-20,000  $\pm$ 0.5 dB; noise >100 dB. FM section (stereo, 75 ohms, with charge-coupled detector engaged): usable sens 16.3 dBf (1.78  $\mu$ V); 50-dB quieting sens 23.5 dBf (4.0  $\mu$ V); S/N 82 dB at 85 dBf. 17 $\frac{1}{4}$ " x 15 $\frac{1}{4}$ " x 5 $\frac{1}{4}$ " D ..... \$699

## DENON

### DRA-700 Stereo Receiver

Stereo AM/FM receiver with non-NFB, 0 dB, non-switching class A amplifier with oversize power transformer, dual FET phono equalizer, all DC construction. Features MM/MC inputs; dual speaker operation; electronic switching; tape dubbing; loudness, tone, subsonic filter controls; auto scan of digital quartz-PLL synthesized tuning with 8 AM and 8 FM presets; high-gloss wood side panels. Power output 60 W/ch rms into 8 ohms, 20-20,000 Hz 0.015% THD; IM 0.01% (1 kHz, 8 ohms); S/N 84 dB MM, 70 dB MC, 95 dB tape/aux; RIAA deviation 20-20,000 Hz  $\pm$ 0.3 dB; FM usable sens 1.8  $\mu$ V (10.3 dBf); effective sel 70 dB; S/N stereo 78 dB, mono 81 dB; THD stereo 0.15%, mono 0.07%; FR 20-15,000 Hz  $\pm$ 0.2 dB, -1.0 dB; AM usable sens 300  $\mu$ V; S/N 55 dB; power consumption 180 W; 18.6"W x 4.5"H x 16.4"D ..... \$549

### DRA-400 Stereo Receiver

AM/FM-stereo receiver with digital quartz-PLL tuning, 5 AM/5 FM presets. Features nonswitching class-A, full direct-coupled amplifier; oversize power transformer; MC phono head amplifier; fixed time constant, positive center defeat tone controls; wood side panels optional. Output power 45 W/ch into 8 ohms, 20-20,000 Hz at no more than 0.05% THD; IMD 0.03%, 60/7k Hz mixed 4:1; damping factor >80 at 1 kHz into 8 ohms; input sens/imp 2.5 mV/47k ohms MM, 0.25 mV/100 ohms MC; phono overload 200 mV MM, 20 mV MC; S/N 80 dB MM, 62 dB MC, 95 dB tape and aux; RIAA deviation  $\pm$  0.5 dB, 20-20,000 Hz; FM usable sens 1.8  $\mu$ V (10.3 dBf); FM sel 77 dB; FM S/N 71 dB at 0.15% THD stereo; AM sel 55 dB; AM S/N 55 dB; power consumption 130 W; 17.5"W x 16.5"D x 4.5"H ..... \$400

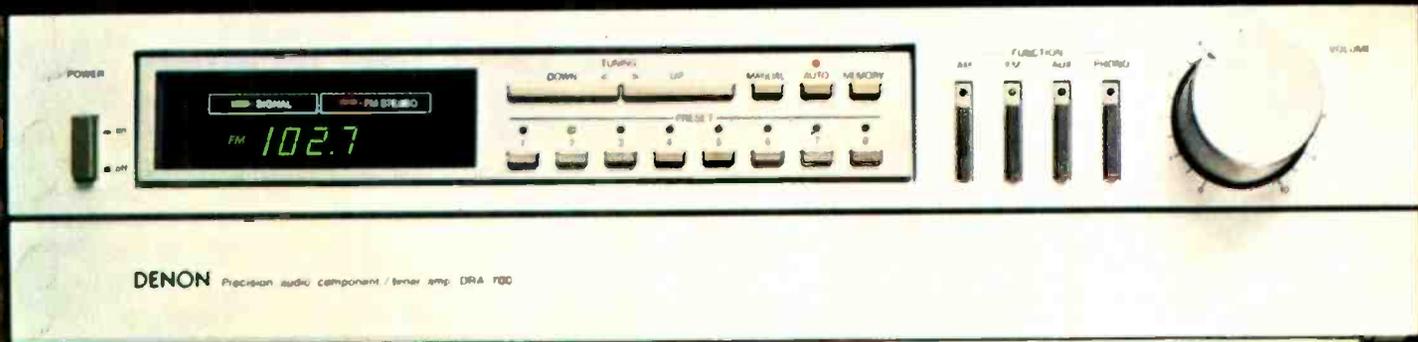
### DRA-300 Stereo Receiver

Nonswitching class A amplifier with digital quartz PLL synthesized tuning system, 5 AM + 5 FM presets and memory hold of last tuned ch. Direct coupled, discrete output construction. Features 2-speaker operation (A, B), tape dubbing, loudness and tone controls, subsonic filter. Woodgrain side panels optional. Output 33 W/ch rms 20-20,000 Hz at no



# DESIGN INTEGRITY:

WHAT MAKES DENON RECEIVERS UNCOMMON IS HOW MUCH THEY HAVE IN COMMON.



**DENON** Precision audio component / tuner amp. DRA-700

## Denon DRA-700 AM/FM Stereo Receiver \$549

Non-NFB OdB Amplifier; Quartz PLL Synthesized FM Tuning; MC Head Amp; 60 Watts\* per Channel.



## Denon DRA-300 AM/FM Stereo Receiver \$299

Non-switching A Amplifier; Quartz PLL Synthesized FM Tuning; 33 Watts\* per Channel.



## Denon DRA-400 AM/FM Stereo Receiver \$399

Non-switching A Amplifier; Quartz PLL Synthesized FM Tuning; MC Head Amp; 45 Watts\* per Channel.

The DRA-700 Receiver incorporates the same OdB Non-NFB circuitry that earned Denon special recognition by *Audio Video International* magazine in their Hi-Fi Grand Prix Competition. This straight-forward circuit design makes the DRA-700 the most electronically sophisticated receiver on the market today.

The DRA-400 actually won the AVI Hi-Fi Grand Prix Award, and was cited for its Non-Switching A Amplifier (which eliminates Switching and Crossover distortions) and Quartz PLL Synthesized FM Tuning System (which improves tuning accuracy and eliminates station drift).

The DRA-300 also offers a Non-Switching A Amplifier and Quartz PLL Synthesized Tuning, but for under \$300.

Denon products share more than name alone.

Denon America, Inc., 27 Law Drive, Fairfield, N.J. 07006

Prices for comparison purposes. Side panels optional except on DRA-700. All power ratings at 8 ohms; 20Hz-20kHz; THD 0.05%; (DRA-700; 0.015%).

# DENON

Imagine what we'll do next.

CIRCLE NO. 16 ON READER SERVICE CARD

# REDEFINITION.

## THE CARVER RECEIVER

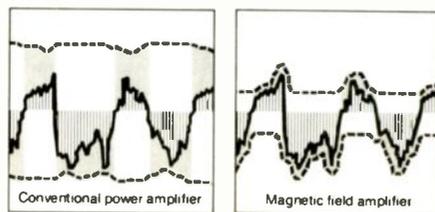
Redefines your expectations of receiver performance with the power you need for Digital Audio Discs plus virtually noise-free stereo FM reception. A receiver with astonishing performance incorporating two highly significant technological breakthroughs: Bob Carver's Magnetic Field Power Amplifier and his Asymmetrical Charge Coupled FM Detector.

**ESSENTIAL POWER:** Your system needs an abundance of power to reproduce, without distortion, the dynamic range of music on Digital Audio Discs and fine analog recordings.

The Magnetic Field Amplifier in the CARVER Receiver gives you 130 watts per channel\* of *pure*, clean power with superbly defined, high fidelity reproduction.

The Magnetic Field Amplifier produces large amounts of power (absolutely necessary for the accurate reproduction of music at realistic listening levels) without the need for heavy heat sinks, massive transformers, and enormous power capacitors required by conventional amplifier design.

Unlike conventional amplifiers which produce a constant, high voltage level at all times, irrespective of the demands of the ever-changing audio signal (Even when there is no audio signal in the circuit at all!), the Magnetic Field Amplifier's power supply is signal responsive. Highly efficient, it produces *exactly and only* the power needed to carry the signal with complete accuracy and fidelity.



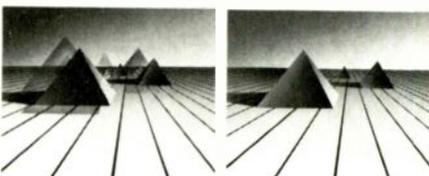
Solid line: audio output signal. Broken line: power supply voltage. Shaded area: wasted power. Vertical lines: power to speakers.

The 130 watts-per-channel\* CARVER Receiver is about the same size and weight of conventional receivers having merely 30 watts per channel!

**NOISE-FREE RECEPTION:** The AM-FM CARVER Receiver gives you FM stereo performance unmatched by that of any other receiver.

As it is transmitted from the station, the stereo FM signal is extremely vulnerable to distortion, noise, hiss and multipath interference.

However, when you engage CARVER's Asymmetrical Charge Coupled FM Detector circuit, the stereo signal arrives at your ears virtually noise-free. You hear fully separated stereo with space, depth and ambience!



Reflected multi-path signals cause audible distortion.

Asymmetrical Charge Coupled FM Detector gives your ears a true sonic image.

The Asymmetrical Charge Coupled FM Detector was first introduced in CARVER's TX-11 Stereo Tuner, receiving unparalleled critical acclaim:

*"A major advance... Its noise reduction for stereo reception ranged from appreciable to tremendous. It makes the majority of stereo signals sound virtually as quiet as mono signals, yet it does not dilute the stereo effect."*

Julian D. Hirsch, STEREO REVIEW (December, 1982)

*"Separation was still there; only the background noise had been diminished, and with it, much of the sibilance and hissy edginess so characteristic of multipath interference."*

Leonard Feldman, AUDIO (December, 1982)

*"What distinguishes the TX-11 is its ability to pull clean, noise-free sound out of weak or multipath ridden signals that would have you lunging for the mono switch on any other tuner we know of."*

HIGH FIDELITY (January, 1983)

The CARVER Receiver has been designed for fidelity, accuracy and musicality. You will want to visit your CARVER dealer for a personal audition of this remarkable instrument.

\*130 watts per channel RMS into 8 ohms, 20 Hz to 20 kHz with no more than 0.05% total harmonic distortion.



## CARVER Powerful Musical Accurate

Carver Corporation P.O. Box 664, Woodinville, WA 98072

Distributed in Canada by Evolution Audio, Ltd.  
CIRCLE 7 ON READER SERVICE CARD

more than 0.05% THD. IM 0.03% (60 Hz, 7,000 Hz, 4.1 kHz); damping factor at 1,000 Hz 8 ohms more than 80; phono sens/imp 2.5mV/47k ohm MM. Tape/AUX 150 mV / > 30k ohm; phono max input MM 150 mV; phono S/N MM 79 dB, tape/AUX 93 dB RIAA 20-20,000 Hz ± 0.5 dB; bass 100 Hz ± 8 dB, treble 10,000 Hz ± 8 dB; FM usable sens 2.0µV; 30 dB effective sel; 55 dB S/N; power consumption 110W at 120V; 17.4"W x 4.5"H x 16.3"D... \$299

**FISHER**

**RS280 Stereo Receiver**

Quartz PLL digital synthesizer AM/FM-stereo receiver with fluorescent digital frequency display and built-in 5-band graphic equalizer. Features stepped LED signal-strength meter; FM muting; auto-search tuning; 6 AM/6 FM station presets; manual tuning, high and low filters; FM stereo, memory, tuning, function LEDs. Output power 100 W/ch rms into 8 ohms, 20-20,000 Hz at 0.05% THD. IM distortion; damping factor > 50; preamp FR 20-20,000 Hz & 0.5 dB all inputs; input sens/imp 2.5 mV MM, 150 mV tape mon, aux/50k ohms all; phono overload 200 mV; preamp output 150 mV/5k Hz & 10 dB; hum and noise 70 dB phono, 90 dB aux, tape monitors 1 and 2. IHF A-weighted, inputs shorted; FM usable sens mono/stereo 10.77 dBf (1.9 µV)/18.45 dBf (4.6 µV); S/N mono/stereo 70/65 dB; capture ratio 0.8 dB; alternate-ch sel 70 dB & 400 kHz; image/spurious/i-f response ratios 75/85/90 dB; AM-suppression ratio 50 dB; THD 0.3% mono, stereo; sep at 100/1k/10k Hz 40/40/35 dB; FR 20-15,000 Hz & 0.5 dB; AM sens 300 µV/m; sel 40 dB at & 10 kHz; S/N 55 dB; power consumption 420 W; 17½"W x 16"D x 5½"H; 36 lb ..... \$500

**RS140 Stereo Receiver**

Quartz-locked digital-synthesizer AM/FM-stereo receiver with LED digital tuning display, graphic equalizer. Features 6 AM/6 FM station presets; 5-LED signal strength meter; auto-scan tuning with indicator; manual/auto tuning switch; FM muting; sliding volume, balance controls; low, high filters; loudness switch; Panel Logic selected-function display. Output power 40 W/ch into 8 ohms, 20-20,000 Hz at 0.09% THD. IM distortion; damping factor > 40; input sens/imp 2.5 mV/47k ohms phono, 150 mV/47k ohms all others; EQ center frequencies 50, 250, 1k, 4.5k, 15k; boost/cut range & 10 dB; hum and noise phono/all others 78/90 dB; FM usable sens mono/stereo 2.3 µV (12.43 dBf)/4.6 µV (18.45 dBf); 50-dB quieting sens mono/stereo 5.5 µV (20 dBf)/45 µV (38.26 dBf); S/N mono/stereo 70/65 dB; capture ratio 1.0 dB; alternate-ch sel 60 dB; image/spurious/i-f response ratio 60/50/70 dB; AM suppression 50 dB; THD at 50-dB quieting mono/stereo 0.4%/0.5%; FR 20-15,000 Hz & 1 dB; AM usable sens 300 µV/m; power consumption 85 W; 15½"W x 11½"D x 4½"H; 15 lb ..... \$330

**RS120 Stereo Receiver**

AM/FM-stereo receiver with analog tuning dial, graphic equalizer. Features 5-LED signal-strength meter; sliding volume, balance controls; tape-monitor input; loudness switch. Output power 20 W/ch into 8 ohms, 20-20,000 Hz at 0.09% THD, 0.1% IM distortion; damping factor > 40; input sens/imp 2.5 mV/47k ohms phono, 150 mV/47k ohms all others; EQ center frequencies 50, 250, 1k, 4.5k, 15k Hz; boost/cut range & 10 dB; hum and noise phono/all others 70/90 dB; FM usable sens mono/stereo 2.8 µV (14.14 dBf)/10 µV (25.43 dBf); 50-dB quieting sens mono/stereo 10 µV (25.43 dBf)/50 µV (39.17 dBf); S/N mono/stereo 70/65 dB; capture ratio 1.5 dB; alternate-ch sel 55 dB; image/spurious/i-f response ratio 55/50/70 dB; AM suppression 55 dB; THD at 50-dB quieting mono/stereo 0.5%/1.0%; FR 20-15,000 Hz & 1 dB; sep 40 dB at 1 kHz; AM sens 300 µV/m; power consumption 120 W; 15½"W x 11½"D x 4½"H; 13 lb ..... \$190

**RS90 Stereo Receiver**

AM/FM-stereo receiver with slide-rule tuning dial. Features 5-LED signal-strength meter; LED tuning eye

on dial pointer; loudness switch; tape-monitor input; bass, treble controls. Output power 20 W/ch into 8 ohms, 20-20,000 Hz at 0.5% THD. IM distortion; damping factor > 20; input sens imp 2.5 mV 50k ohms phono, 150 mV/50k ohms all others; hum and noise phono all others 70/90 dB; FM usable sens mono stereo 2.8 µV (14.14 dBf) 6.8 µV (21.45 dBf); 50-dB quieting sens mono stereo 6.5 µV (21.45 dBf) 55 µV (40 dBf); S/N mono stereo 65/60 dB; capture ratio 2 dB; alternate-ch sel 60 dB; image spurious/i-f response ratio 50/70/80 dB; AM suppression 55 dB; THD at 50-dB quieting mono/stereo 0.4%/0.5%; FR 20-15,000 Hz & 1 dB; sep 40 dB at 1 kHz; AM sens 300 µV/m; power consumption 70 W; 15½"W x 8½"D x 4½"H; 10 lb ..... \$170

**HARMAN/KARDON**

**hk690i AM/FM Stereo Receiver**

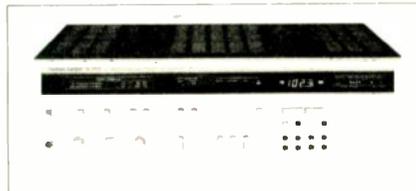
AM FM-stereo receiver with digitally synthesized quartz-locked tuner. Features DC digital frequency display; 8 AM/8 FM presets; 5-LED signal-strength meter; sample and hold MPX decoder; dual RIAA equalization circuitry; bass and treble turnover tone controls; MC head amp; tone defeat; subsonic and high-cut filters; 2 tape monitors with 2-way dub; loudness; muting; up down scan tuning. Output power 60 W/ch continuous into 8 ohms, 20-20,000 Hz with 0.06% THD, high instantaneous current capability 45 amps; FR .2 Hz-150,000 Hz ± 0.3 dB; slew rate 200V/sec; S/N phono MM MC/AUX 80/78/80 dB; phono overload MM/MC 220/12mV; FM sens 1.9V (mono); 50-dB quieting sens mono stereo 3.2V/35V; FR 30-15,000 Hz ± 1.2 dB; capture ratio 1.0 dB; alternate ch sel 70 dB; sep 55 dB at 1 kHz, 17½"W x 5½"H x 16"D ..... \$675

**hk590i AM/FM Stereo Receiver**

AM/FM-stereo receiver with digitally synthesized quartz-locked tuner. Features digital frequency display; 8 AM 8 FM presets; 5-LED signal strength meter; dual RIAA equalization circuitry; bass and treble turnover tone controls; tone defeat; subsonic and high-cut filters. 2 tape monitors with 2-way dub; loudness; muting; up down scan tuning. Output power 45 W/ch continuous into 8 ohms, 20-20,000 Hz with 0.08% THD; high instantaneous current capability 35 amps; FR .2-150,000 Hz ± 0.3 dB; slew rate 120V/sec; S/N phono AUX 80/80 dB; phono overload 170 mV; FM sens 1.9V (mono); 50-dB quieting sens mono stereo 3.3V/37V; S/N 75 dB; FR 30-15,000 Hz ± 1.2 dB; capture ratio 1.0 dB; alternate ch sel 70 dB; sep 55 dB at 1 kHz, 17½"W x 5½"H x 16"D ..... \$525

**hk490i AM/FM Stereo Receiver**

AM FM-stereo receiver with digitally synthesized quartz-locked tuner. Features digital frequency display; 8 AM 8 FM presets; 5 LED signal-strength meter; subsonic and high-cut filters; 2 tape monitors with 2-way dub, loudness; muting; up down scan tuning.



Output power 30 W/ch continuous into 8 ohms, 20-20,000 Hz with 0.08% THD; high instantaneous current capability 18 amps; FR .2-150,000 Hz ± 0.3 dB; slew rate 120V/sec; S/N phono/AUX 80/83 dB; phono overload 170 mV; FM sens 1.9V (mono); 50-dB quieting sens mono/stereo 3.3V/37V; S/N 75 dB; FR 30-15,000 Hz ± 1.2 dB; capture ratio 1.0 dB; alternate ch sel 70 dB; sep 55 dB at 1 kHz, 17½"W x 5½"H x 16"D ..... \$400

**hk380i AM/FM Stereo Receiver**

AM/FM-stereo receiver features subsonic and high-

cut filters; tape monitor; loudness; muting; speaker switching. Output power 30 W/ch continuous into 8 ohms, 20-20,000 Hz 0.08% THD; high instantaneous current capability 18 amps; FR < 1-150,000 Hz ± 0.3 dB; slew rate 100V/sec; S/N phono/AUX 80/85 dB; phono overload 130mV; FM sens 1.9V (mono); 50-dB quieting sens mono/stereo 3.7V/37V; S/N 74 dB stereo; FR 30-15,000 Hz ± 1.2 dB; capture ratio 1.75 dB; alternate ch sel 60 dB; sep 45 dB at 1 kHz, 17½"W x 4"H x 14½"D ..... \$315

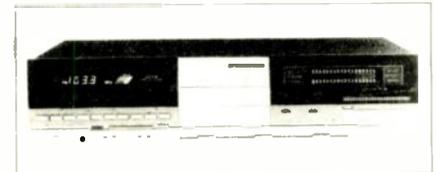
**hk330i AM/FM Stereo Receiver**

AM/FM-stereo receiver features tape monitor; loudness; muting; speaker switching. Output power 20 W/ch continuous into 8 ohms, 20-20,000 Hz with 0.09% THD; high instantaneous current capability 10 amps; FR < 4 Hz-150,000 Hz ± 0.3 dB; slew rate 60V/sec; S/N phono/AUX 80/85 dB; phono overload 120mV; FM sens 2.5V (mono); 50-dB quieting sens mono stereo 4.0V 45V; S/N 74 dB stereo; FR 30-15,000 Hz ± 1.2 dB; capture ratio 1.9 dB; alternate-ch sel 60 dB; sep 45 dB at 1 kHz; 17½"W x 4"H x 14½"D ..... \$235

**HITACHI**

**HTA-4F Tuner/Amplifier**

Quartz digital synthesizer tuner amp with programmable 10-station memory. Features auto scan of preset stations; digital frequency display; dual speaker set capability A, B, A+B. Off: tape dubbing; direct



function control by microcomputer; feather-touch controls; high-gain AM loop antenna; infrasonic filter; dual LED power level meters; loudness compensation; memory backup. Frequency response 30-12,000 Hz ± 2 dB, capture ratio 1.5 dB; 17½"W x 4½"H x 13½"D; 15 lb 13 oz ..... \$370

**HTA-3F Stereo Tuner/Amplifier**

Stereo tuner amplifier with quartz digital synthesizer in one component. Features programmable 8-station memory; auto scanning of preset stations; digital displays of station frequency and ch number, dual speaker set capability A, B, A+B. Off: direct function control by microcomputer, feather-touch control buttons; high-gain AM loop antenna; infrasonic filter; LED power level meters; loudness compensation; memory backup by lithium battery. Power output 30 W/ch min rms from 20-20,000 Hz with < 0.05% THD; FR 10-40,000 Hz ± 2 dB; THD at ½ rated output 0.05%; input sens/imp at 30 W output, 1,000 Hz; phono 2.5mV 47k ohms; tape, CD aux video 150mV/35k ohms; S/N IHF, A network, rated power; phono 70 dB; tape, CD aux/video 95 dB. FM section usable sens IHF mono 13.2 dBf; 50 dB quieting sens mono 20.2 dBf 5.6 µV, stereo 38.2 dBf 44.7 µV; S/N IHF at 65 dBf mono 76 dB, stereo 70 dB; FR 30-12,000 Hz ± 2 dB; capture ratio 1.5 dB; 17½"W x 3½"H x 11½"D; 12 lb 2 oz ..... \$245

**HTA-2 Stereo Tuner Amplifier**

AM FM stereo tuner with power amplifier in a single component. Features vector tuning system; AM loop antenna with built-in circuit; two speaker pair capability; light touch push button function switching; loudness compensation switch; slim design; easy connect speaker terminals; Compact Disc player compatibility; tape monitor switch; FM mute switch. Rms rated output power, both chs driven 40-20,000 Hz, 8 ohms; frequency characteristics 10-40,000 Hz ± 2 dB; THD at rated output < 0.1%; IM distortion 0.05%; input sens at 25 W output, 1,000 Hz, phono 2.5mV 47k ohms, tape, CD video/aux 150mV/35k ohms; S/N IHF, A network, rated power; phono 70 dB;

tape, CD/video/aux 95 dB. FM section: usable sens mono 13.2 dBf; 50 dB quieting sens mono 18.2 dBf 4.5  $\mu$ V; S/N at 65 dBf mono 76 dB IHf, stereo 70 dB IHf; FR 30-12,000 Hz  $\pm$  2 dB; capture ratio 1.5 dB; stereo sep 40 dB at 1,000 Hz; 17 $\frac{1}{4}$ "W  $\times$  3 $\frac{1}{4}$ "H  $\times$  11 $\frac{1}{2}$ "D; 11 lb 14 oz ..... \$180

## JVC

## R-X80 AM/FM-Stereo Receiver

AM/FM-stereo receiver with 5-band Sound Effect Amplifier graphic equalizer, quartz PLL synthesizer tuner, Super-A power amplifier. Features triple power protection; 8 AM/8 FM station presets; 2 tape monitors; MM and MC phono cartridge capability; digital frequency display. Output power 70 W/ch into 8 ohms, 20-20,000 Hz at 0.008% THD; EQ center frequencies 40, 250, 1k, 5k, 15k Hz; boost/cut range  $\pm$  12 dB ..... \$570

RM-80. Wired controller for RX-80 receiver ..... \$50

R-X60. Similar to R-X80 except no MC input. Output power 55 W/ch ..... \$450

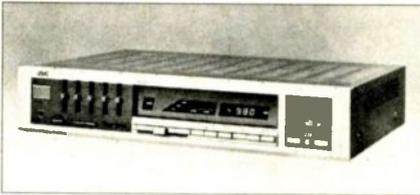
R-X40. Similar to R-X60 except 6 AM/6 FM station presets. Output power 40 W/ch ..... \$350

## R-X44 Stereo Receiver

Super-A digital synthesizer FM/AM stereo receiver. Features 5-band Sound Effect Amplifier stereo graphic equalizer; quartz-PLL digital frequency synthesizer circuitry; pushbutton station selection; presets for 6 AM/6 FM stations; two video/aux inputs; switches for two sets of speakers; loudness control; triple power protection. 50 W/ch, min rms, into 8 ohms from 20-20,000 Hz with < 0.008% THD ..... \$330

## R-K22 Stereo Receiver

Stereo receiver with 5-band Sound Effect Amplifier graphic equalizer. Features 12 station presets;



quartz-PLL digital frequency synthesizer; auto scan; quieting slope control; speaker switching; loudness compensation. 30 W/ch, min rms, into 8 ohms from 20-20,000Hz  $\times$  0.03% THD ..... \$250

## R-K11 Stereo Receiver

Stereo receiver with quieting slope control and indicator. Features JVC's patented triple power protection; speaker switch; video/aux input; loudness control and slider balance/volume/tone controls. 30 W/ch, min rms, into 8 ohms, 20-20,000 Hz < 0.003% THD ..... \$190

## KENWOOD

## KR-1000B Stereo Receiver

Computerized receiver with quartz PLL synthesizer tuner and digital readout. Features graphic display of memory-stored operations; 7-band multiple acoustic compensator; digital volume control with muting function; 6 AM and 6 FM station presets; hi-speed, zero

switching design and DC amplifier; multi-functional weekly program clock/audio timer; fluorescent peak power-level meter; 3-pair speaker capability; 2 tape monitor with tape-to-tape dubbing facility; 120 W/ch min rms at 8 ohms from 20-20,000Hz < 0.01% THD; 40 lbs ..... \$1250

## KR-950 Stereo Receiver

Computerized high-speed stereo receiver. Features 75 W/ch min rms into 8 ohms from 20-20,000Hz < 0.01% THD; quartz PLL synthesizer tuner; 6 AM and 6 FM presets; digital frequency AM/FM readout; LED power and tuning indicators; high speed and dc amplifier; zero switching design; moving-coil capability for phono input; adapter jack for graphic equalizer, NR unit, etc.; 2-pair speaker capability; 2 tape monitor with tape-to-tape dubbing facility; 23 lbs ..... \$530

## KR-930 Stereo Receiver

Computerized high-speed stereo receiver. Features 60 W/ch min rms at 8 ohms from 20-20,000Hz < 0.03% THD; quartz PLL synthesizer tuner; 6 AM and 6 FM presets; digital frequency AM/FM readout; LED power and tuning indicators; hi speed and DC amplifier; zero switching design; 2 pair speaker capability; 2 tape monitor with tape-to-tape dubbing facility; 17 lbs ..... \$380

KR-930B. Same as above but black ..... \$380

## KR-920 Stereo Receiver

Stereo receiver with LED power and tuning indicators. Features 50 W/ch min rms at 8 ohms from 20-20,000Hz; < 0.05% THD; AM/FM analog display tuning; 2 tape monitors with tape-to-tape dubbing (B to A) facility; 2 pair speaker capability; 17 lbs \$260

## KR-910 Stereo Receiver

Stereo receiver features 30 W/ch min rms at 8 ohms from 20-20,000Hz < 0.03% THD; input selector with illuminated indicators; 2 tape monitors with tape-to-tape dubbing (B to A) facility; 2 pair speaker capability; 13 lbs ..... \$200

## KLH

## R-301 AM/FM-Stereo Receiver

Analog-dial AM/FM-stereo receiver with LED signal-strength, tuning indicators. Features A/B/A + B speaker switching; low filter; FM mute; bass, treble controls. Output power 30 W/ch into 8 ohms, 20-20,000 Hz at 0.08% THD and IM distortion; FR 20-20,000 Hz & 0.5 dB; hum and noise phono/all other inputs -76/-95 dB; FM usable sens 2  $\mu$ V mono, 50-dB quieting sens mono/stereo 4.0/48  $\mu$ V, S/N mono/stereo 68/62 dB; capture ratio 1.8 dB; alternate-ch sel 40 dB; image/i-f/spurious response ratio 45/80/70 dB; distortion mono/stereo 0.15%/0.3%; sep 40 dB at 1 kHz; AM sens 300 $\mu$ V/m ..... \$250

## KYOCERA

## Kyocera R-851 Stereo Tuner/Amplifier

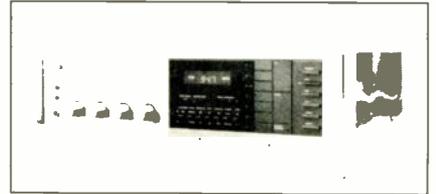
Quartz-synthesized PLL AM/FM-stereo tuner/amplifier with MOSFET design throughout. Features fluoroscan digital frequency display; protection circuitry that autoenlarges safe operating area with regard to high frequencies; pulse sensing protection; 3-band equalizer that controls bass, midrange, treble turnover frequencies; 2-way tape monitor/dub; subsonic, high filters; 7 AM/7 FM station presets; linear-

phase ceramic FM i-f filters; auto wide/narrow -f bandwidth selection; MM and MC phono inputs; LED peak power meters; audio attenuator; auto/manual seek tuning; FM high-blend switch. Output power 85 W/ch rms into 8 ohms, 20-20,000 Hz at 0.015% THD; slew rate 60 V/ $\mu$ sec; rise time 1.0  $\mu$ sec; S/N MC/all other inputs 86/100 dB; FM S/N mono/stereo 88/76 dB $\mu$  ..... \$855

R-651. Similar to R-851 except manual normal/narrow -f bandwidth selection, no MC input. Output power 65 W/ch ..... \$730

## Kyocera R-451 Stereo Tuner/Amplifier

Quartz-locked PLL synthesizer AM/FM-stereo tuner/amplifier with MOSFET design throughout. Features



fluoroscan digital frequency display; 7 AM/7 FM station presets; auto-peak tuning; 2-way tape monitor/dub. Output power 45 W/ch into 8 ohms, 20-20,000 Hz at 0.015% THD; slew rate 40 V/ $\mu$ sec; rise time 1.5  $\mu$ sec; FM S/N mono/stereo 80/74 dB ... \$550

## LUXMAN

## RX-103 AM/FM-Stereo Receiver

ServoFace digital synthesizer receiver with wireless remote control. Features Duo-Beta amplifier; Computer Analyzed Tuning; digital frequency display; MC phono preamp; infrared wireless remote control; FL power meters; discrete power amplifier; preamp output. Output power 90 W/ch into 8 ohms, 20-20,000 Hz at 0.015% THD and IM distortion; phono S/N 86 dB; FM usable sens 1.8  $\mu$ V (10.3 dBf); FM THD 0.05%; FM sep 48 dB ..... \$1,000

RX-102. Similar to RX-103 except has no remote control, MC input; features 24-station memory. Output power 60 W/ch ..... \$600

RX-101. Similar to RX-102 except no preamp output, FL power indicator. Output power 40 W/ch at 0.02% THD and IM distortion; FM THD 0.1% ..... \$500

## 1030 AM/FM-Stereo Receiver

1/1 FM-stereo receiver with Duo-Beta dc amplifier, Computer Analyzed Tuning. Features discrete output power amp; flasher tuning; variable loudness control. Output power 35 W/ch continuous into 8 ohms, 20-20,000 Hz at 0.03% THD and IM distortion; phono S/N 83 dB; FM usable sens 1.8  $\mu$ V (10.3 dBf); FM THD 0.12% at 1 kHz; FM sep 48 dB at 1 kHz \$350

## MARANTZ

## SR 8100DC Stereo Receiver

Quartz-lock frequency synthesizer AM/FM-stereo receiver with 5-band stereo equalizer, digital frequency display. Features LED amp status indicators; gold-plated input, output jacks; EQ output jack; PLL with pilot canceller; 2 tape monitors with tape copy; low, high filters; dual-gate MOSFET FM front end; electronic input selector; 8 AM/8 FM station presets; programmable triple timer system; electronic station search; EQ defeat, loudness switches. Output power 90 W/ch continuous average power into 4 ohms, 20-20,000 Hz at 0.06% THD and IM distortion; FR 10-70,000 Hz & 1.2 dB; input sens 2.7 mV phono, 160 mV high-level; phono overload 225 mV at 1 kHz; S/N 90 dB phono, 98 dB high-level; phono RIAA deviation & 0.2 dB 20-20,000 Hz; FM 50 dB quieting sens mono/stereo 13.2/36.1 dBf; S/N 50 dB; FR 30-15,000 Hz & 0.5 dB; FR 30-15,000 Hz & 0.5 dB; mono, 1.0 dB stereo; THD 0.15% mono, 0.2% stereo at 1 kHz; capture ratio 1.0 dB at 65 dBf; alternate-ch sel 65 dB; sep 45 dB; 16 $\frac{1}{4}$ "W  $\times$  15 $\frac{1}{4}$ "D  $\times$  4 $\frac{1}{4}$ "H ..... \$599

## NOTICE TO READERS

Prices of items described are manufacturers' suggested prices only and are subject to change without notice. Actual selling prices are determined by the dealers.

# ONLY ONE AUDIO DEALER IN TWENTY WILL CARRY THE KYOCERA R-851 TUNER/AMPLIFIER WITH MOS FET AMPS.

Very simply, our R-851 is not for everyone. Not for every dealer. Not for every audio buyer.

Only for those who demand the best. Those who want sound that's pure and distinctive... who hear subtleties others miss. For those discriminating listeners, the R-851 is well worth the quest.

## Hear the silence before you hear the sound.

Switch on the R-851, switch from one function to another. Try Phono. Tape 1. Tape 2. Auxiliary. Back to Phono.

Absolute silence (of course, you'll get sound on AM/FM). The silence is the mark of a great receiver. And great engineering.

The kind of quiet an audiophile loves to hear.

## Sound that takes you closer to the source.

We've turned on the R-851 for some very experienced—even jaded—audio ears and all we can say is it stops 'em every time. The sound is different. The sense of *being there* is almost overpowering. All this comes from 85 watts per channel of power\* (with dynamic power far above this figure) and some of the most sophisticated circuitry in the business. Above all, it uses MOS FET's, the new breed of output transistors, in the amplifier section. They can handle the transients, the power surges, the power requirements of present-day sound (and tomorrow's digital sound) better than bipolar transistors ever could—and give you a sonic purity like no other (many claim MOS FET's have picked up the warm, rich sound of the great tube amps and gone a step beyond!).

## Fine tuned for every audio need.

From front end to output jacks, the R-851 offers every feature an audio enthusiast might want. The most commonly used controls are right up front—the more esoteric ones are placed behind a neat flip-down front panel. There's microprocessor-controlled quartz-locked tuning with 14 station programmable memory (7 AM & 7 FM); automatic station seek; 3-band parametric-style equalizer; fluorescent display panel; and two-way tape monitoring and dubbing.

If you need some help in finding that one Kyocera dealer in twenty, contact: Kyocera International, Inc., 7 Powder Horn Drive, Warren, NJ 07060 (201) 560-0060.

CIRCLE NO. 8 ON READER SERVICE CARD



\*85 watts RMS per channel, both channels driven, at 8 Ohms with no more than 0.015% THD from 20-20,000 Hz.

234



ry, only MM/MC inputs, switching. Output power 43 W/ch at 0.04% THD ..... \$400  
**TX-41.** Similar to TX-51 except no CX decoder, linear switching circuit, MC input. Output power 33 W/ch at 0.06% THD ..... \$300

### TX-31 AM/FM-Stereo Receiver

Servo-locked AM/FM-stereo receiver with linear switching amplifier. MM/MC phono inputs, switching. Output power 45 W/ch into 8 ohms, 20-20,000 Hz at 0.04% THD ..... \$350  
**TX-21.** Similar to TX-31 except no MC input. Output power 30 W/ch at 0.06% THD ..... \$250  
**TX-11.** Similar to TX-21 except no servo-lock tuning. Output power 20 W/ch at 0.06% THD ..... \$200

### TX-25 AM/FM-Stereo Receiver

Computer-controlled quartz digitally synthesized receiver APR system (mute/stereo/auto-high blend). Features dynamic super servo with delta power supply ready for digital sources; 16 preset memories; (8 AM/8 FM); auto scan, A,B,A&B speaker select; direct-tone circuitry; 33 W per ch; both chs driven into 8 ohms; 20-20,000 Hz with no more than 0.08% total harmonic distortion; also available with black matte finish TX-25B ..... \$250

### TX-35 AM/FM-Stereo Receiver

Computer controlled quartz digitally synthesized receiver, APR system (mute/stereo/auto-high blend) local-distant dynamic super servo with Delta power supply ready for digital sources. Features 16 preset memories (8 FM/8 AM); auto scan, subsonic filter; 2 FM muting levels, A,B,A&B speaker select; direct-tone circuitry; 45 W per ch, both chs driven into 8 ohms from 20-20,000 Hz with no more than 0.04% total harmonic distortion; key operation tone ..... \$330

ters, 21-step bass, treble, midrange controls; feather touch tuning; auto/manual scan tuning; 2-way tape monitor/dub; 3 linear-phase ceramic filters; preamp out/main-amp in connectors; full overload protection. Output power 90 W/ch rms into 8 ohms, 20-20,000 Hz at 0.05% THD; FR 15-25,000 Hz & 1 dB; S/N phono/aux 85/90 dB; phono overload 230 mV; FM usable sens 10.33 dBf (1.8  $\mu$ V); capture ratio 1.5 dB; alternate-ch sel 70 dB; image rejection 75 dB; S/N 74 dB mono; sep 50 dB at 1 kHz; 19 1/2" W x 16 1/4" D x 5 1/4" H ..... \$600

### STA-2270 Digital Synthesized Receiver

Digital synthesized receiver with variable stereo expander. Features computerized memory, digital fluorescent frequency display; precise quartz-locked tuning; 14-segment LED power-level meter; 5-segment LED signal-strength meter. FR 15-25,000 Hz  $\pm$  1 dB; S/N 85 dB phono, 100 dB aux; phono overload 165 mV; FM tuner sens IHF 1.7  $\mu$ V 9.8 dBf; capture ratio 1.25 dB; S/N 75 dB; sel 75 dB; image rejection 78 dB; 4 1/4" H x 18 1/4" W x 11 1/4" D ..... \$400

### STA-740 Stereo Receiver

Stereo receiver with Auto Magic\* fine tuning. Features 39-step bass and treble controls, tape monitor, speaker pair switching. Features fast-attack 21-segment LED audio power-level meter; LED signal-strength, FM stereo and tuning indicators. Output power 40 W per ch, min rms into 8 ohms, 20-20,000 Hz at 0.05% THD; FR 15-25,000 Hz  $\pm$  1 dB; S/N 85 dB phono, 90 dB aux; phono overload 140 mV; FM tuner sens IHF 1.9  $\mu$ V 10.8 dB; capture ratio 1.5 dB; S/N 72 dB; sel 53 dB; image rejection 60 dB; sep 48 dB at 1,000 Hz; 5 1/2" H x 18 1/4" W x 12" D ..... \$399

### STA-790 AM/FM-Stereo Receiver

AM/FM-stereo receiver with 21-LED power meters. Features 7-band equalizer with bypass switch; 30-Hz "cut" button; Auto-Magic tuning; 5-LED signal-strength meter; 40-step volume control; center-dented balance control; high filter, loudness switch; FM muting; tape monitor. Output power 45 W/ch into 8 ohms, 20-20,000 Hz at 0.04% THD; FR 15-25,000 Hz & 1 dB; S/N phono/aux 86/92 dB; phono overload 140 mV; FM usable sens 10.8 dBf (1.9  $\mu$ V); capture ratio 1.5 dB; alternate-ch sel 53 dB; image rejection 78 dB; 4 1/4" H x 18 1/4" W x 11 1/4" D ..... \$400

Stereo receiver with 6-LED power, 5-LED signal-strength meters. Features echo with variable intensity control; auto fade-in/out when switching functions; audio muting; pushbutton source select; lighted analog tuning dial. Output power 30 W/ch into 8 ohms, 20-20,000 Hz at 0.08% THD; FR 15-20,000 Hz & 1 dB; S/N phono/aux 78/92 dB; phono overload 140 mV; FM usable sens 13.2 dBf (2.5  $\mu$ V); capture ratio 2 dB; alternate-ch sel 50 dB; image rejection 44 dB; S/N 70 dB; sep 36 dB at 1 kHz; 16 1/2" W x 9 1/4" D x 3 1/4" H ..... \$300

### STA-110 AM/FM-Stereo Receiver

Stereo receiver with high-sens front end. Features green tuning LED; Auto-Magic tuning; pushbutton selectors; illuminated analog dial; 11-step bass, treble controls; protection circuits. Output power 22 W/ch into 8 ohms, 20-20,000 Hz at 0.08% THD; FR 15-25,000 Hz & 1 dB; S/N phono/aux 86/90 dB; phono overload 105 mV; FM usable sens 10.8 dBf (1.9  $\mu$ V); capture ratio 1.0 dB; image rejection 55 dB; S/N 65 dB; sep 45 dB at 1 kHz; 16 1/2" W x 12 1/4" D x 3 1/4" H ..... \$270

### STA-115 Stereo Receiver

Stereo receiver with FM stereo indicators and Auto Magic\* tuning. Features 11-step bass, treble and volume controls; high filter; stereo/mono switch; tape monitor; A/B speaker pairs, aux input. Features 30 Hz "Cut" pushbutton to cut distortion, conserve power; 5-level LED signal-strength meter. Output power 24 W per ch min rms into 8 ohms 20-20,000 Hz at 0.03% THD; FR 15-25,000 Hz  $\pm$  1 dB; S/N 85 dB phono, 88 dB aux; phono overload 120 mV; FM tuner sens IHF 1.9  $\mu$ V 10.8 dBf; capture ratio 1.2 dB; S/N 74 dB; sel 60 dB; image rejection 65 dB; 4" H x 16 1/2" W x 8 3/4" D ..... \$220

### STA-204 Stereo Receiver

Stereo receiver with Auto Magic\* tuning and separate 11-step bass and treble controls. LED FM stereo indicator, high filter, tape monitor, stereo/mono, A/B speaker pairs. Features 10-segment LED AM/FM signal-strength meter; FM muting. Output power 16 W/ch, min rms into 8 ohms 20-20,000 Hz at 0.08% THD; FR 15-25,000 Hz  $\pm$  1 dB; S/N 89 dB phono, 72 dB aux; phono overload 90 mV; FM tuner sens

## Receivers

1

### SR 7100DC Stereo Receiver

Quartz-locked synthesizer AM/FM-stereo receiver with dc amplifier, 8 AM/8 FM station presets, digital frequency display. Features LED power output display; gold-plated input, output connectors; 2-speaker switching; bass, midrange, treble controls; 8 kHz filter; 2 tape monitors with tape copy; loudness switch; Computuner™ programmable computer system; auto on; triple timer system; dual tuning meters; dual-gate MOSFET FM front end; PLL with pilot canceller; up/down station scanning; auto/manual tuning. Output power 63 W/ch, both chs driven into 4 ohms, 20-20,000 Hz at 0.06% THD and IM distortion; damping factor 50 at 20 Hz; input sens/imp 2.7 mV/47k ohms phono, 160 mV/20k ohms high-level; phono overload 225 mV; S/N 90 dB phono, 98 dB high-level A-wtd; FR 20-20,000 Hz & 0.2 dB phono, 10-70,000 Hz & 1.0 dB high-level; FM IHF usable sens 1.7 μV mono; 50-dB quieting sens mono/stereo 2.5/35 μV; S/N 0.15% mono, 0.2% stereo at 1 kHz; FR 30-15,000 Hz & 0.5 dB mono, -1.0 dB stereo; capture ratio 1.0 dB; alternate-ch sel 65 dB; image rejection 55 dB; i-f and spurious rejection 90 dB; sep 45 dB at 1 kHz; AM usable sens 20 μV IHF; S/N 50 dB; 16 1/2"W × 15 1/2"D × 4 1/4"H ..... \$525

### SR 620 AM/FM Stereo Receiver

PLL digital-synthesized tuning AM/FM receiver with pilot canceller. Provision for 2 pairs of speakers. Features gold-plated input, output jacks; touch tuning controls; 16 station presets; auto scan tuning; 2 tape monitors; tape copy function; low filter; loudness switch. Min continuous power output 55 W/ch into 4 ohms, from 20-20,000 Hz with <0.06% THD \$400

### SR 520 AM/FM Stereo Receiver

Digital-synthesized stereo receiver with 38 W/ch into 4 ohms min continuous power output from 20-20,000 Hz with no more than 0.09% THD. Features gold-plated input/output jacks; up/down touch controls for tuning; 16 station preset memory; auto scan tuning; tape monitor; tape-copy function; bass, midrange, and treble controls; low filter; loudness switch; 20 dB muting; PLL digital synthesized tuning with pilot canceller; provision for 2 pair of speakers; 16 1/2"W × 11 1/4"D × 3 1/4"H ..... \$375

## Receivers

1

IHF; 2.8 μV 14.1 dBf; capture ratio 3.0 dB; S/N 65 dB; sel 45 dB; image rejection 50 dB; 5 1/2"W × 5 1/2"D ..... \$200

### STA-700 Stereo Receiver

Stereo receiver with Auto Magic® fine tuning and 5-LED signal-strength meter, tape monitor, mono/stereo and A/B speaker pairs. Features EQ switch for enhanced bass. Output power 5 W/ch, min rms into 8 ohms 40-20,000 Hz at 0.5% THD; FR 15-25,000 Hz ± 1 dB; S/N 82 dB phono, 90dB aux; phono overload 140 mV; FM tuner sens IHF 2.8 μV 14.17 dBf; capture ratio 2.0 dB; S/N 65 dB; sel 45 dB; image rejection 55 dB; 3"W × 16 1/2"H × 8 1/2"D ..... \$180

### STA-430 Stereo Receiver

Stereo receiver with bass, treble controls, loudness switch; tape monitor. Output power 10 W/ch continuous into 8 ohms, 20-20,000 Hz at 0.6% THD; FR & 0.5 dB phono, 15-30,000 Hz 7 & 2dB high-level; S/N 89 dB phono, 72 dB aux, 70 dB tuner, input sens 2.2 mV phono, 160 mV high-level; phono overload 90 mV; 50 dB quieting sens 16.5 dBf stereo; THD 1.0% at 1 kHz; capture ratio 3.0 dB; sel 45 dB; sep 34 dB at 1 kHz; 16 1/2"W × 12"H × 5 1/8"D ..... \$160

### STA-450 Stereo Receiver

Receiver with Auto Magic® fine tuning, A/B speaker switching, separate bass, treble and balance controls, LED FM stereo indicator, stereo/mono switch. Features brushed aluminum front panel; 5-LED signal-strength meter; tape monitor; edge-lit power-on button. Output power 14 W/ch, min rms into 8 ohms 20-20,000 Hz at 0.3% THD; FR 15-25,000 Hz ± 1 dB; S/N 81 dB phono, 85 dB aux; phono overload 120 mV; FM tuner sens IHF 2.7 μV 13.7 Bf; capture ratio 2.0 dB; S/N 78 dB; sel 60 dB; image rejection 50 dB; 5 1/2"W × 16 1/2"H × 7 1/4"D ..... \$160

### STA-12 Stereo Receiver

Stereo receiver with Auto Magic® fine tuning, separate balance and volume controls, stereo headphone jack, function switch for FM mono, FM stereo, AM, phono and tape; BTL switch boosts output power to 10 W in mono mode. Output power 5 W/ch, min rms into 8 ohms 40-20,000 Hz at 0.9% THD; FR 40-20,000 Hz ± 1 dB; S/N 70 dB phono, 72 dB aux; FM tuner sens IHF 7.0 μV 22.3 dBf; capture ratio 3.0 dB; S/N 60 dB; sel 55 dB; image rejection 38 dB; 2 1/2"H × 10 3/8"W × 6 1/4"D ..... \$120

## REVOX

### Revox B780 FM-Stereo Receiver

Amplifier section features defeatable & 8-dB bass (120 Hz), presence (3 kHz), treble (8 kHz) controls; switchable low, high, low/high filters; mono, loudness, -20-dB audio muting switches; phono, tuner, aux, tape 1 and 2 input selectors. Output power 75 W/ch into 8 ohms, 20-20,000 Hz at 0.05% THD; dynamic headroom 1 dB. Tuner features microcomputer-controlled digital synthesis tuning; auto up/down push-button scan tuning with ± 0.0025% accuracy; LED digital frequency display; 18-station memory preset with last station recall; noise reduction, high blend, FM mono, muting off, stereo-only selectors; signal-strength meter; IHF 50-dB quieting 13.2 dBf (2.5 μV); stereo THD 0.25%; S/N 78 dB; capture ratio 2 dB; alternate-ch sel 78 dB; AM suppression 70 dB; unit can be used with European, Asian, US station allocations, deemphasis curves, with standard ac line voltages; 17 1/4"W × 16 1/2"D × 6"H ..... \$2,899

## SAE

### R-102 Stereo Receiver

AM/FM stereo receiver utilizes an on-board computer to eliminate dependency between front panel layout and audio circuits. All controls grouped by function. Features alphanumeric and digital readouts for input functions, tone, volume, balance settings, station frequency and tuner memories; 2 tone memories; tuner

stereo; FM selector; gyro touch tuning; 18 1/2"W × 12 3/4"D × 5 1/2"H ..... \$239

## McINTOSH LABS

### MAC 4100 Receiver

AM/FM stereo receiver with low-noise FET analog input switching and LED input indicators. Features low-imp transistors; electronically controlled trimming of precision-stepped volume control; 5-program equalizer; auto AC power control; front-panel tape-recorder jacks. 100 W/ch min sine wave continuous average power output both chs operating into 4 ohms 20-20,000 Hz with <.05% THD; THD .05%; IM .05%; FR 20-20,000 Hz +0,-0.5 dB at rated power; sens 2.5 μV (13 dBf) IHF min; capture ratio 1.8 dB; 56 lbs ..... \$1,999

## MCS by JC PENNEY

### MCS 3265 Stereo Receiver

Quartz-synthesized-tuning receiver with 16 station presets. 60 W rms min per ch, 2 chs driven at 8 ohms, with <0.02% THD. Features fluorescent display indicators; auto scan; preset scan; high and low filtering; all electronic touch controls; tape dubbing; 16 1/2"W × 5"H × 14 1/2"D; 20.9 lb ..... \$480

### MCS 3246 Stereo Receiver

Quartz-synthesized stereo receiver with 16 station presets. 45 W rms min per ch, 2 chs driven at 8 ohms, with not more than 0.02% THD. Features quartz lock tuning; fluorescent display indicator; auto scan; all electronic touch controls; high filtering control; tape dubbing; 16 1/2"W × 5"H × 14 1/2"D; 18.7 lb ..... \$380

### 3285 AM/FM-Stereo Receiver

AM/FM-stereo receiver with quartz-locked digital synthesizer tuner, Active Drive High Speed Switching dc power amplifier. Features acoustic memory in which bass, treble, filter positions can be preset; 8 AM/8 FM station presets; up/down scan tuning; wide/narrow i-f bandwidth selector; fluorescent digital frequency display; power display; volume setting display.

memory scan; phono power amp; high-current main power amp ..... \$500

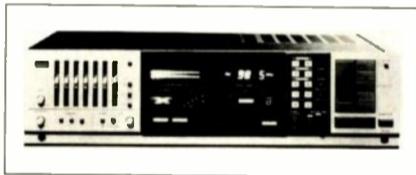
### R-2 AM/FM-Stereo Receiver

Servo-locked tuning AM/FM-stereo receiver with digital frequency display. Features Single-Strata voltage amplifier; full-complementary power amp; black aluminum. Output power 20 W/ch ..... \$299

## SANSUI

### Z-9000X AM/FM-Stereo Receiver

Quartz-synthesizer AM/FM-stereo receiver with Simul-Switching for instant On/program selection, 7-band graphic equalizer. Features Super Feedforward circuitry; adjustable reverberation amp; digital frequency display that doubles as clock with 3-memory program timer; 8 AM/8 FM station presets; auto/manual, preset scan tuning; fluorescent bar-graph power meters; verb display; LED signal-strength



meter; moving-coil phono head amplifier; soft-touch volume control with preset, level indicator; 2 tape monitors; 2-way dubbing; 3-speaker switching; wide/narrow i-f bandwidth. Output power 130 W/ch into 8 ohms 20-20,000 Hz at 0.005% THD; FM usable sens 10.3 dBf (1.8 μV); FM S/N 80 dB mono; FM THD <0.005% ..... \$960

**Z-7000X.** Similar to Z-9000x except has 4-band graphic equalizer, 2-speaker switching, no reverb amp. Output power 100 W/ch ..... \$800

**Z-5000X.** Similar to Z-7000X except has LED peak power meters. Compu-Selector System that links to some Sansui cassette decks, turntables for one-touch operation. Output power 70 W/ch at 0.007% THD; FM usable sens 10.8 dBf (1.9 μV) ..... \$500

**Z-3000X.** Similar to Z-5000X except has dc-servo amplifier. Output power 55 W/ch at 0.008% THD ..... \$400

## SANYO

### DCR350 AM/FM-Stereo Receiver

AM/FM-stereo receiver with PLL frequency synthesizer tuner, 2-way tape monitor/dub. Features 6 AM/6 FM station presets; auto/manual up/down scan tuning; LED digital frequency display; 5-LED signal-strength meter; bass, treble controls; loudness switch; low, high filters; 41-detent volume control; output protection. Output power 33 W/ch into 8 ohms, 20-20,000 Hz at 0.03% THD; FR 10-40,000 Hz +0/-1 dB; phono sens/overload 2.5/150 mV/47k ohms; S/N phono/aux and tape 78/90 dB; FM usable sens 10.8 dBf (1.8 μV); S/N mono/stereo 75/65 dB; distortion mono/stereo 0.3%/0.4% at 1kHz; capture ratio 1.5 dB; alternate-ch sel 60 dB; spurious/image/i-f rejection 75/60/85 dB; AM rejection 55 dB; sep 45 dB at 1 kHz; AM sens 300 μV/m; 420 mmW × 250 mmD × 120 mmH ..... \$280

**DCR250.** Similar to DCR350 except has analog tuning dial; no tape dub. Output power 22 W/ch at 0.09% THD; high-end response 30 kHz; phono overload 130 mV; FM usable sens 11.2 dBf (2 μV); capture ratio 3 dB; alternate-ch sel 55 dB; spurious/f suppression 55/70/50 dB; sep 40 dB ..... \$200

**DCR150.** Similar to DCR 250 except no station presets, up/down scan tuning, high and low filters, speakers A/B/A+B switching. Output power 22 W/ch ..... \$160

### DCR 100 Stereo Receiver

AM/FM receiver with flywheel tuning and 3-part LED signal-strength indicator. Features mode/muting switch; Baxandall-feedback tone controls; loudness button; brushed-satin finish; tape monitoring; headphone jack. 17 W/ch continuous average power into

## Receivers



phono overload 20 mV MC, 250 mV MM; FR & 0.3 dB 20-20,000 Hz phono RIAA, +0.2/-2.0 dB; 1-100,000 Hz aux and tape; THD 0.005%; S/N 75 dB MC, 77 dB MM; 106 dB aux and tape; FM usable sens 1.8 μV (10.3 dBf); S/N 84 dB mono, 79 dB stereo; FR & 0.5 dB 50-15,000 Hz; THD mono 0.08% stereo 0.10% wide, 0.3% mono, 0.5% stereo narrow; capture ratio 1.5 dB; alternate-ch sel 55 dB wide, 75 dB narrow; image rejection 85 dB; i-f and spurious rejection 100 dB; sep at 1 kHz 46 dB; 18 1/2"W × 17 1/2"D × 5 1/2"H ..... \$590

**DA-R25.** Similar to DA-R35 minus peak level indicators; amp output 60 W/ch at 0.015% THD and IM dist ..... \$490

**DA-R15.** Similar to DA-R25 minus MC head amp; phono overload 140 mV; output power 45 W/ch; damping factor 100 ..... \$360

**DA-R11.** Similar to DA-R15 minus high filter; output power 35 W/ch; damping factor 40; frequency synthesized digital tuning 7 FM/7AM presets, independent record selector, variable loudness ..... \$260

## NAD (USA)

### 7150 AM/FM-Stereo Receiver

Digital synthesizer AM/FM-stereo receiver with Schotz PLL FM detector. Features search, scan tuning; 5 AM/5 FM station presets; noninteractive phono preamp; preamp-out/power-amp-in jacks; 2 tape monitors with independent record, listen selectors; pushbutton bridgeable amplifier with soft clipping; speaker imp-matching switch. Output power 50 W/ch into 8 ohms, 20-20,000 Hz at 0.02% THD, 250 W into 8 ohms mono; phono input sensitivity 0.4 mV for 1 W output; S/N 78 dB phono; RIAA deviation & 0.25%; FM-50-dB quieting sens mono/stereo 1.2/30

## Receivers

8 ohms with no more than 0.3% THD; FR 50-20,000 Hz; S/N 70 dB phono, 90 dB aux, tape; usable FM sens 2.8 μV (14.14 dBf); ultimate S/N 65 dB stereo; 16.6"W × 4.5"H × 10.6"D ..... \$100

## H.H. SCOTT

### 379RS AM/FM Stereo Receiver

Digital computerized receiver features 70 W/ch min continuous rms output from 20-20,000 Hz <0.03% THD; quartz PLL frequency synthesized tuning with 14 presets; digital information center with digital readout, signal strength, center tuning, preset station and memory indicators; dual fluorescent auto-range peak hold power meters; 2 tape monitors with one-way copy; 5-band graphic equalizer with tone defeat; auto/manual tuning; 2 pair of speakers capability; slide-type balance and volume controls; subsonic and high filters; FM muting; slide-type balance and volume controls; full electronic protection; IMD <0.03%; S/N 82 dB phono; 100 dB aux; ch sep 65 dB; damping factor 60 dB; IHF sens 9.8 dBf/1.7uV; stereo sep 50 dB; capture ratio 1.0 dB. 4 1/2"H × 17"W ..... \$470

### 359RS AM/FM Stereo Receiver

Digital computerized receiver features 45 W min continuous rms output per ch from 20-20,000 Hz with <0.05% THD; quartz PLL frequency synthesized tuning with 14 presets; digital information center with digital readout, signal strength, center tuning, preset station and memory indicators; LED power meters; 2 tape monitors with one-way copy; 5-band graphic equalizer with tone defeat; auto/manual tuning; 2 pair of speakers capability; slide-type balance and volume controls; subsonic and high filters; FM muting; full electronic protection; IMD 0.05%; S/N 82 dB phono, 100 dB aux; ch separation 65 dB; damping factor 60 dB; IHF sens 10.8 dBf/1.8 μV; stereo sep 50 dB; capture ratio 1.2 dB. 4 1/2"H × 17"W ..... \$390

### 339RS AM/FM Stereo Receiver

Digital computerized receiver features 25 W min continuous rms output per ch from 20-20,000 Hz <0.05% THD; quartz PLL frequency synthesized tuning with 14 presets; digital information center with digital readout, signal strength, center tuning, preset station and memory indicators; tape monitor; bass and treble tone controls; auto/manual tuning; 2 pair of speakers capability; slide-type volume control; loudness contour; DC power amplifier; FM muting; full electronic protection; IMD 0.05%; S/N 80 dB phono, 100 dB aux; ch sep 65 dB; IHF sens 10.8 dBf/1.9uV; stereo sep 45 dB; damping factor 60 dB; capture ratio 1.2 dB. 3 1/2"H × 17"W ..... \$280

### 349RA AM/FM Stereo Receiver

Features: 45 W min continuous rms output per ch from 40-20,000 Hz <0.06% THD; (40 W from 20-20,000 Hz); 3 LED signal strength indicator; tuned indicator; LED power meters; 2 tape monitors with one-way copy; bass and treble tone controls; 2 pair of speakers capability; slide-type volume control; high filter; full electronic protection; DC power amplifier; FM muting; IMD 0.06%; S/N ratio 80 dB phono; 100 dB aux; ch sep 65 dB; damping factor 60 dB; IHF sens 10.8 dBf/1.9uV; stereo sep 45 dB; capture ratio 1.5 dB. 3 1/2"H × 17"W ..... \$280

### 319RA AM/FM Stereo Receiver

Features 25 W min continuous rms output per ch from 40-20,000 Hz <0.08% THD; (20 W from 20-20,000 Hz); DC power amplifier; tuned indicator; 3-LED signal strength indicator; tape monitor; bass and treble tone controls; 2 pair of speakers capability; slide-type volume control; full electronic protection;

Audio terms are defined in the glossary on page 19.

For an explanation of abbreviations, turn to the list on page 22.

Z-9000X

Z-5000X

Z-7000X

Z-3000X

# SANSUI DOESN'T CLAIM TO HAVE THE WORLD'S ONLY DISTORTION-FREE RECEIVER. NOW WE HAVE FOUR.

Unlike most high fidelity companies, Sansui doesn't reserve its most advanced technology exclusively for the top-of-the-line model.

That's why every model in our new "Z" Quartz Synthesizer Compu Receiver line (Z-9000X, Z-7000X, Z-5000X, Z-3000X) is distortion-free.

### Sansui puts its best Super Feedforward

Some competitive receivers herald the fact that they eliminate audible distortion. But only Sansui, with its highly acclaimed and exclusive Super Feedforward DC power amplifier system, banishes every conceivable type of audible and inaudible distortion—THD, TIM, intermodulation, envelope, switching, crossover, etc. And this unique distortion-destroying circuitry is built into every new Sansui "Z" receiver.

### The super intelligence of microprocessor control

Similarly, all models incorporate a high degree of automation, thanks to microprocessor

control. One-touch Simul Switching simultaneously turns on the power and one input—turntable, tape deck or AM, FM broadcast. The microprocessor also controls the Quartz-PLL digital synthesized tuning that presets 8 FM and 8 AM stations. The drift-free tuning, whether auto scan or manual, is so precise that in congested areas even the weakest station sounds as if it's just around the corner. There's also a programmable digital quartz timer/clock with three daily independent memory functions. You can awaken to FM; fall asleep to cassette music; and arrive home to hear your favorite record.

The top-of-the-line Z-9000X makes listening even more pleasurable with a 7-band graphic equalizer, a built-in reverb amp, preset volume control, plus preamps for MC and MM cartridges.

### More music control across the board

Combine all this with power handling capability ranging from

130 to 55 watts, and you can appreciate why no other collection of receivers gives you so much control over your music.

Maybe you're wondering why Sansui doesn't give you less technology and fewer features, as others do. It's because we never compromise when it comes to music. And neither should you.

### Watts per channel

Mirimum RMS, 20-20KHz, both channels driven into 8 ohms, at rated Total Harmonic Distortion.

Z-9000X	130 w.	.005%
Z-7000X	100 w.	.005%
Z-5000X	70 w.	.007%
Z-3000X	55 w.	.008%



SANSUI ELECTRONICS CORPORATION  
Lyndhurst, NJ 07071; Gardena, CA 90248  
Sansui Electric Co., Ltd., Tokyo, Japan

Putting more pleasure in sound

Circle No. 43 on Reader Service Card.

FM muting; loudness contour; edge lighted dial scale; IMD 0.06%; S/N 80 dB phono, 100 dB aux; ch sep 65 dB; damping factor 50 dB; IHF sens 10.8 dBf/1.9uV; stereo sep 45 dB; capture ratio 1.5 dB. 3 $\frac{1}{2}$ "H  $\times$  17"W ..... \$220

## SHARP

## SA-250 Stereo Receiver

AM/FM-stereo receiver with 5-LED signal-strength meter, loudness switch, and flywheel tuning. Features tape monitor switch; high-cut filter; green and red LED dial pointer; FM stereo LED indicator; edge light illumination; bass and treble controls; switch for 2 pairs of speakers. Amp section: 22 W/ch rms from 20-20,000 Hz into 8 ohms with no more than 0.09% THD; FRs; phono 30-20,000 Hz  $\pm$ 1.0 dB, tape 15-32,000 Hz  $\pm$ 2 dB. Tuner section: FM usable sens 11.7 dBf (2.1  $\mu$ V); S/N 73 dB mono, 68 dB stereo; FR 30-15,000 Hz  $\pm$ 3 dB; capture ratio 1.5 dB; sep 38 dB at 1 kHz. 15 $\frac{1}{4}$ "W  $\times$  9 $\frac{1}{4}$ "D  $\times$  3 $\frac{1}{4}$ "H; 11.3 lbs. .... \$160

**SA-150.** Same as SA-250 except power output 10 W/ch (min rms) from 40-20,000 Hz with no more than 0.9% THD; no 2-color LED indicator; no edge light illumination; no high-cut filter; no provision for second speaker pair. 11 lbs. .... \$170

## SHERWOOD

## S-2680 CP AM/FM Digital Receiver

Digitally synthesized receiver with 8 AM and 8 FM presets. Power output 70 W/ch min rms 20-20,000 Hz with <0.05% THD at 8 ohms; IMD 0.05% at 70 W (SMPTE); S/N phono (15mV input) 92 dB, aux 100 dB; FR with built-in LPF 5-40,000 Hz; input sens for rated output 2.5mV phono, 150 mV aux; usable sens 1.7  $\mu$ V (9.8 dBf); sens mono 2.8 $\mu$ V (14.1 dBf), stereo 38 $\mu$ V (36.5 dBf); S/N mono 80 dB, stereo 75 dB; capture ratio 1.2 dB; FM FR 20-15,000 Hz  $\pm$ 1 dB; 17 $\frac{1}{2}$ "H  $\times$  4 $\frac{1}{2}$ "H  $\times$  13 $\frac{1}{2}$ "D ..... \$480

## S-2660 CP AM/FM Digital Receiver

Digitally synthesized receiver with 8 AM and 8 FM presets. Power output 50 W/ch min rms from 20-20,000 Hz with <0.05% THD at 8 ohms; IMD 0.05% at 50 W (SMPTE); S/N (5mV input) 92 dB phono; 100 dB aux; aux FR with built-in LPF 5-40,000 Hz. FM section: usable sens 1.8  $\mu$ V (10.3 dBf); 50 dB quieting sens mono 3.2 $\mu$ V (15.3 dBf), stereo 38 $\mu$ V (36.5 dBf) S/N stereo 75 dB; capture ratio 1.2 dB; FR at 20-15,000 Hz  $\pm$ 1 dB; 17 $\frac{1}{2}$ "W  $\times$  4 $\frac{1}{2}$ "H  $\times$  13 $\frac{1}{2}$ "D ..... \$380

## S-2640 CP AM/FM Digital Receiver

Digitally synthesized receiver with 6 AM and 6 FM presets. Power output 45 W/ch min rms from 40-20,000 Hz with 0.5% THD into 8 ohms; IMD at 35 W (SMPTE) 0.05%; S/N, phono (5mV input) 88 dB, aux 100 dB; aux FR with built-in LPF 5-40,000 Hz. FM section: usable sens 1.9 $\mu$ V (10.8 dBf); 50 dB quieting sens; mono 3.5 $\mu$ V (15.8 dBf) stereo 50 $\mu$ V (39.2 dBf); S/N stereo 72 dB; capture ratio 1.5 dB; frequency response at 20-15,000 Hz  $\pm$ 1 dB; 17 $\frac{1}{2}$ " W  $\times$  3 $\frac{1}{4}$ "H  $\times$  11 $\frac{1}{2}$ "D ..... \$280

## S-2620 CP AM/FM Stereo Synthesized Receiver

Digital synthesized receiver with 10 presets; power output 20 W/ch min rms from 40-20,000 Hz with 0.5% THD into 8 ohms; IMD at 20 W (SMPTE) 0.05%; S/N phono (5 mV input) 88 dB; aux FR with built-in LPF 5-40,000 Hz; usable sens 1.9 $\mu$ V (10.8 dBf); S/N stereo 72 dB; capture ratio 1.5 dB; FR at 30-50,000 Hz  $\pm$ 1 dB; 17 $\frac{1}{2}$ "W  $\times$  3 $\frac{1}{4}$ "H  $\times$  11 $\frac{1}{2}$ "D ..... \$220

## S-9180 Stereo Receiver

AM/FM-stereo receiver with back-lit slide-rule tuning dial and illuminated pointer, FM center-tune meter, 40-kHz input buffer filter to power amplifier. Features all discrete circuitry throughout audio path; dual-gate MOSFET input to r-f amplifier; linear-phase FM ceramic i-f filters; double-tuned quadrature detector; PLL MPX demodulator; loudness switch; FM mute; push-button tape monitor, AM, FM, phono, aux functions.

Output power 29 W/ch rms into 8 ohms, 40-24,000 Hz at 0.5% THD and IM distortion; clipping/dynamic headroom 1.53/2.0 dB; damping factor 40 at 8 ohms; input sens 2.5 mV phono, 150 mV tape and aux; phono overload 140 mV; S/N phono/aux 91/100 dB; FR 8-40,000 Hz & 0.5 dB; FM usable/50-dB quieting sens 1.8  $\mu$ V/40  $\mu$ V stereo, 3.5  $\mu$ V mono; THD stereo/mono 0.20%/1.5%; S/N stereo/mono 75/80 dB; sep 45 dB; alternate-ch sel 65 dB; image/i-f/spurious-response ratio 65/70/70 dB; capture ratio 1.5 dB; FR 30-15,000 Hz & 1 dB; AM sens 300  $\mu$ V/m; ac accessory outlets 1 switched, 1 unswitched; 16 $\frac{1}{2}$ "W  $\times$  13 $\frac{1}{2}$ "D  $\times$  4"H; 16.5 lb ..... \$200

## SONY

## STR-VX750 Stereo Receiver

Stereo receiver with audio/video computer control center and Audio Signal Processor for feather-touch control of volume in 1-dB steps and bass and treble in 2-dB steps. Features direct-access/quartz synthesis tuning; auto sweep tuning and 10-station preset scanning with auto tuning level; station card insert marks preset stations; fluorescent display; speaker switches for A/B/AandB/off and 4/8 ohm; switchable 20 dB audio muting; Direct Comparator for quiet FM reception; legato linear amp for cleaner switching and crossover; memory backup system; remote control optional. Amp section: 70 W/ch from 20-20,000 Hz into 8 ohms with 0.006% THD; IMD 0.006%; S/Ns (A-weighted) phono 1 87 dB, phono 2 84 dB, tape/aux/video 1 and 2 105 dB; FRs; phono RIAA standard curve  $\pm$ .5 dB, tape/aux/video 5 Hz-100 kHz  $\pm$ 0.5-.0.1 dB. Input sens phono 1/phono 2/tape and aux/video 1 and 2, 2.5mV/0.25mV/150mV/150mV. Tuner section: FM usable sens 11.2 dBf (2.0  $\mu$ V) mono; 50-dB quieting sens 38.3 dBf (45  $\mu$ V) stereo, 17.3 dBf (4.0 $\mu$ V) mono; S/N 82 dB mono, 76 dB stereo; FR 30-15,000 Hz  $\pm$ 0.5-.1.5 dB; stereo sep 45 dB at 1 kHz. 17"W  $\times$  4 $\frac{1}{4}$ "D  $\times$  14 $\frac{1}{4}$ "H; 14 lbs,6 oz ..... \$490

**STR-VX550.** Same as STR-VX750 except no phono 2 input. Amp section 50 W/ch from 20-20,000 Hz into 8 ohms with 0.008% THD; IMD 0.008%;S/Ns (A-weighted) phono 81 dB, tape/aux/video 1 and 2 100 dB; 17"W  $\times$  4"D  $\times$  14 $\frac{1}{4}$ "H; 17 lbs, 11 oz. \$360

**STR-VX450.** Similar to STR-VX550 without Audio Signal Processor, auto level or remote option. Amp section: 40 W/ch; S/Ns (A-weighted) phono 1 77 dB,tape/aux/video 1 and 2 100 dB; FRs, tape/aux/video 10 Hz-70kHz-1 dB; S/N 80 dB mono, 75 dB stereo; FR 30-15,000 Hz  $\pm$ 0.5-.2 dB; 17"W  $\times$  4 $\frac{1}{4}$ "D  $\times$  12 $\frac{1}{4}$ "H; 13 lbs, 11 oz. .... \$320

**STR-VX350.** Similar to STR-VX450 without VCR audio dubbing. Amp section: 30 W/ch from 20-20,000 Hz into 8 ohms with 0.03% THD; IMD 0.03%; S/Ns (A-weighted) phono 74 dB, tape/aux/video 1 and 2 96 dB;S/Ns 80 dB mono, 75 dB stereo; 17"W  $\times$  4 $\frac{1}{4}$ "D  $\times$  12 $\frac{1}{4}$ "H; 12 lbs,13 oz ..... \$250

**STR-VX250.** Similar to STR-VX350 with 8 station preset instead of 10 and without audio/video control center, memory scan, or Direct Comparator. Amp section: 20 W/ch from 20-20,000 Hz into 8 ohms with 0.08% THD; IMD 0.08%; S/Ns (A-weighted) phono 72 dB, tape/aux 94 dB; FRs; phono RIAA standard curve  $\pm$ .5 dB, tape/aux 10 Hz-50 kHz -3 dB. phono/tape and aux, 2.5mV/150mV. Tuner section: S/N 75 dB mono, 70 dB stereo; 17"W  $\times$  4 $\frac{1}{4}$ "D  $\times$  12 $\frac{1}{4}$ "H; 12 lbs,5 oz ..... \$180

## TANDBERG

## TR3030 AM/FM-Stereo Receiver

Stereo receiver with 4 AM/4 FM station presets, electronic tuning, high-speed dc amplifier, unique 3-stage phono equalizer. Features AM and FM band selector switches; volume, bass, treble, balance, tuning controls; signal-strength, center-tune meters; FM muting; loudness-compensation, mono/stereo, high and low filters, speakers A and B switches. Output power 30 W/ch into 8 ohms at <0.09% THD; hum and noise tape/phono 82/77 dB; (1.8  $\mu$ V)/37.3 dBf (20  $\mu$ V); S/N at 65 dBf mono/stereo 76/74 dB; 51.5 cmW  $\times$  32 cmD  $\times$  32 cmH ..... \$299

## TECHNICS

## SA-1010 AM/FM Stereo Receiver

Quartz-synthesizer computer-drive class A receiver with linear feedback. Features phono EQ; microcomputer-controlled tuning; auto IF Bandwidth Selector; 16-station random access; auto-scan and auto-memory; digital-analog display; space dimension control; graphic equalizer selectors and rear panel jacks allow remote control of graphic operation; electronic input selectors; up/down 2-speed 56-step electronic volume control pushbuttons with 10-LED volume level indication; two tape monitor switches and indicators with dubbing capability; scan level adjustable in 10 dB steps from 20 dB to 50 dB; Aux/CD/video input selector; high filter, subsonic filter; main and/or remote speaker selection; fuseless electronic protection circuit with relay; FM mode switch. Amp section: 125 W/ch rms into 8 ohms; THD 0.003%; S/Ns (A-weighted) MM 73 dB, MC 72dB (phono), 75 dB (tape/aux); FRs RIAA standard curve  $\pm$ 0.2 dB (phono), 3-100,000 Hz  $\pm$ 3 dB (aux/CD/video/graphic EQ/tape 1/2/EXT); input sens MM 0.23 mV, MC 14 mV (phono/aux/CD/video/graphic EQ/tape 1/2/ ext). Tuner section: FM usable sens 10.8 dBf (1.9  $\mu$ V), 50-dB quieting sens 37.2 dBf (39.7  $\mu$ ) stereo,13.7 dBf (2.7  $\mu$ V) mono; S/N 72 dB (stereo), 78 dB (mono); FR 20-15,000 Hz; capture ratio 1.0 dB; sep 60 dB at 1 kHz. 20 $\frac{1}{2}$ "W  $\times$  6 $\frac{1}{2}$ "D  $\times$  14 $\frac{1}{2}$ "H; 32.2 lbs ..... \$850

## SA-810 AM/FM Stereo Receiver.

Quartz-synthesizer computer-drive class-A receiver with linear feedback. Features synchro-bias circuit; linear feedback, 16-station random preset; auto-scan and auto memory; digital-analog display; graphic equalizer selectors; rear panel jacks; remote control of graphic equalizer; electronic input selectors; up/down 2-speed 56-step electronic volume control pushbuttons with 10-LED volume level indication; fuseless electronic protection circuit; 2-tape monitor switch with dubbing capability; aux/CD/video input selector; high filter, subsonic filter; main and/or remote speaker system selection; quartz lock indicator; flashing frequency scan indicator; FM muting/mode switch. Amp section: 85 W/ch rms into 8 ohms; THD 0.005%; IMD 0.01%; S/Ns (A-weighted) 73 dB (phono), 75 dB (aux/CD/video/graphic EQ,tape 1,2/ext); FRs RIAA standard curve  $\pm$ 0.8 dB (phono), 5-100,000 Hz -3 dB (aux/CD/video/graphic EQ/ tape 1/2/ext); input sens 0.28 mV (phono), 17.0 mV (aux/CD/video/graphic eq/tape 1/2/ext). Tuner section: FM usable sens 10.8 dBf (1.9  $\mu$ V); 50-dB quieting sens 38.3 dBf (45  $\mu$ V) stereo, 16.1 dBf (3.5  $\mu$ V) mono; S/N 72 dB (stereo), 78 dB (mono); FR 20-15,000 Hz; capture ratio 1 dB; sep 45 dB at 1 kHz. 16 $\frac{1}{2}$ "W  $\times$  4 $\frac{1}{2}$ "D  $\times$  13"H; 19.6 lbs ... \$530

**SA-510.** Similar to SA-810 except no graphic equalizer. Amp section: 65 W/ch rms into 8 ohms; THD 0.005%; IMD 0.01%; S/Ns (A-weighted) 74 dB (phono), 76 dB (aux/tape/video/graphic EQ, tape 1,2/ext); FRs RIAA standard curve  $\pm$ 0.8 dB (phono), 5-100,000 Hz -3 dB (aux/CD/video/graphic EQ, tape 1,2/ext); input sens 0.35 mV (phono), 19.0 mV (aux/CD/video/graphic EQ/tape 1,2/ext). Tuner section: FM usable sens 10.8 dBf (1.9  $\mu$ V); 50-dB quieting sens 38.3 dBf (45  $\mu$ V) stereo, 16.1 dBf (3.5  $\mu$ V) mono; S/N 72 dB (stereo), 78 dB (mono); FR 20-15,000 Hz; capture ratio 1 dB; sep 45 dB at 1 kHz. 16 $\frac{1}{2}$ "W  $\times$  4 $\frac{1}{2}$ "D  $\times$  13"H; 18.3 lbs ... \$420

## SA-140 AM/FM Receiver

Quartz-synthesizer computer-drive class A receiver with linear feedback. Features 16-station random access preset and auto-scan tuning; digital-analog display; phono equalizer; fuseless electronic protection circuit; DC protection relay; 2-tape monitor switch with dubbing capability; aux/CD/video input selector; A,B or A + B speaker selection; separate bass and treble controls; subsonic filter; quartz lock indicator; flashing frequency scan indicator; loudness switch. Amp section: 48 W/ch rms into 8 ohms; THD 0.007%; IMD 0.01%; S/Ns (A-weighted) 76 dB (phono), 80 dB (aux/CD/video,tape 1,2/ext); FRs RIAA standard curve  $\pm$ 0.8 dB (phono), 5-70,000 Hz

±3 dB (aux/CD/video,tape 1.2/ext); input sens 0.4 mV (phono), 23 mV (aux/CD/video,tape 1.2/ext). Tuner section: FM usable sens 10.8 dBf (1.9 μV); 50-dB quieting sens 38.3 dBf (45 μV) stereo, 16.1 dBf (3.5 μV) mono; S/N 72 dB (stereo), 78 dB (mono); FR 20-15,000 Hz; capture ratio 1 dB; sep 40 dB at 1 kHz. 16<sup>1/16</sup>"W × 3<sup>1/16</sup>"D × 11<sup>3/32</sup>"H; 15 lbs \$300

**SA-310.** Similar to SA-410 except no DC protection relay, 1 tape monitor switch, and no flashing frequency scan indication. Amp section: 35 W/ch rms into 8 ohms; THD 0.02%; IMD 0.02%; S/Ns (A-weighted) 77 dB (phono), 82 dB (aux/CD/video,tape 1.2/ext); input sens 0.45 mV (phono), 25 mV (aux/CD/video, tape 1.2/ext). Tuner section: S/N 71 dB (stereo), 77 dB (mono), 13 lbs ..... \$250

**SA-210 Quartz Synthesizer Digital Receiver**

Features auto-scan tuning; memory presets; slider controls for bass, treble, balance and volume; fuseless electronic protection circuit; detachable AM loop antenna; built-in loudness compensation for low-volume listening; FM auto-manual mode switch; large pushbutton source selector and tape monitor switches; 4- and 8-ohm speaker load imp available. Amp section: 27 W/ch rms into 8 ohms; THD 0.5%; IMD 0.5%; S/Ns (A-weighted) 75 dB (phono), 82 dB (tape aux); FRs RIAA standard curve (phono), 5-70,000 Hz -3 dB (aux/tape); input sens 0.5 mV (phono), 30 mV (aux/tape). Tuner section: FM usable sens 10.8 dBf (1.9 μV); 50-dB quieting sens 38.3 dBf (3.5 μV) stereo, 16.1 dBf (3.5 μV) mono; S/N 71 dB (stereo), 77 dB (mono); FR 20-15,000 Hz; capture ratio 1 dB; sep 40 dB at 1 kHz. 16<sup>1/16</sup>"W × 3<sup>1/16</sup>"D × 9<sup>3/16</sup>"H; 9.9 lbs ..... \$200

**SA-110 FM/AM Stereo Receiver**

Receiver with convenient sliders for balance, volume, and bass and treble tone controls. Features large gyro-touch tuning knob; LED optimum tuning indicator; fuseless electronic protection circuitry; large pushbuttons for tuner, phono, and tape monitor selection; built-in loudness compensation for low-volume listening; detachable AM loop antenna; easy-connection speaker terminals; 4- and 8-ohm speaker load imp available. Amp section: 20 W/ch rms into 8 ohms; THD 0.5%; IMD 0.5%; S/Ns (A-weighted) 75 dB (phono), 82 dB (tape/aux); FRs RIAA standard curve ±0.8dB (phono), 5-70,000 Hz -3 dB (aux/tape); input sens 0.55 mV (phono), 33 mV (aux/tape). Tuner section: Frequency range 88-108,000 Hz; FM usable sens 10.8 dBf (1.9 μV); 50-dB quieting sens 38.3 dBf (45 μV) stereo, 16.1 dBf (3.5 μV) mono; S/N 70 dB (stereo), 76 dB (mono); FR 20-15,000 Hz; capture ratio 1 dB; sep 40 dB at 1 kHz. 16<sup>1/16</sup>"W × 3<sup>1/16</sup>"D × 9<sup>3/16</sup>"H; 9.9 lbs \$160

**TOSHIBA**

**SA-R3 Stereo Receiver**

Digital synthesizer AM/FM-stereo receiver with 6 AM/6 FM station presets, CX record noise-reduction circuit. Features dc amplifier; switching for 2 pairs of speakers; infrasonic filter. Output power 40 W/ch continuous into 8 ohms, 20-20,000 Hz at 0.04%



THD and IM distortion; phono S/N 72 dB; phono overload 150 mV; FM sens 1.8 μV; 50-dB quieting sens 3.6 μV; distortion stereo/mono 0.15%/0.08%; sep 40 dB at 1 kHz; 16.6"W × 13.2"D × 4.3"H; 15 lb ..... \$380

**SA-R2.** Similar to SA-R3 except output power 25 W/ch; 13.6 lb ..... \$290

**VECTOR RESEARCH**

**VRX-9500 Stereo Receiver**

Stereo receiver with dbx II disc encoder/decoder

noise-reduction system, synthesized tuner with programmable timer functions, relay-controlled input selector. Features moving-coil cartridge head amp; 5-point signal-strength/multipath indicator; 3-band panoramic tone control system with selectable frequencies (bass & 10 dB 65-220 Hz, midrange & 10 dB 350-2000 Hz, treble & 10 dB 2.5k-20k Hz); dual 12-point LED output level indicators; pre/main amp jacks. Audio section: output power 90 W/ch into 8 ohms, 20-20,000 Hz at 0.02% THD; power amp input sens/imp 1 V/47k ohms; MM phono S/N 82 dB A weighted, FM section; sens 10.8 dBf (1.9 μV); S/N 70 dB stereo at 65 dBf; FR 20-15,000 Hz & 1 dB; distortion 0.08% at 65 dBf (at 1 kHz, stereo); sep 50 dB at 1 kHz; 17<sup>1/16</sup>"W × 14<sup>1/2</sup>"D × 5<sup>1/16</sup>"H; 30 lb 10 oz ..... \$1,000

**VRX-9000 Stereo Receiver**

Amplifier section features direct-coupled OCL power circuitry; dual power-output meters with low/high-range meter switch; defeatable bass, midrange, treble controls; 12-dB/octave low, high filters; loudness control; -20 dB audio muting, 2-deck tape monitoring with 2-way dubbing; phono, tuner, aux input selector with LEDs. Output power 80 W/ch continuous, into 8 ohms, 20-20,000 Hz at 0.08% THD and 0.1% IM distortion; damping factor 50 at 1 kHz, 8 ohms; input sens/imp 2.5 mV/47k ohms phono, 150 mV/47k ohms aux, tape 1, 2; FR 20-20,000 Hz & 0.5 phono, 10-50,000 Hz +0.5/-1 dB high-level; S/N 82 dB phono, 93 dB aux and tape. Tuner features PLL frequency-synthesizer quartz-locked digital tuning with up/down scan tuning with hold scan. LED digital frequency display 6-station AM/FM memory preset; 5-LED signal-strength indicators; 25-μsec Dolby de-emphasis; FM muting switches; LED FM stereo indicator. FM section: IHF usable sens 10.8 dBf (1.9 μV); 50-dB quieting 19 dBf mono, 40 dBf stereo; S/N 75 dB mono, 70 dB stereo. FR 20-15,000 Hz & 1 dB; distortion at 1 kHz 0.08% mono, 0.25% stereo; capture ratio 1.1 dB; alternate ch sel 65 dB; spurious rejection 72 dB; image and i-f rejection 100 dB; sep 46 dB at 1 kHz; 17<sup>1/16</sup>"W × 14<sup>1/2</sup>"D × 5<sup>1/16</sup>"H ..... \$650

**VR-5000.** Similar to VR-7000 minus LED power-level display, FM Dolby de-emphasis switch. Output power 45 W/ch ..... \$360

**VR-3000 Stereo Receiver**

Stereo receiver with discrete output transistors in true push-pull configuration. Features 5-point LED signal-strength indicator; LED tuning indicator; dual 5-point LED output-level indicators; bass, treble controls; loudness switch; tape monitor switch. Audio section: output power 25 W/ch into 8 ohms, 20-20,000 Hz at 0.1 THD; FR 10-50,000 Hz & 0.5 dB at 1-W output; S/N 82 dB phono, A-weighted, at rated power; input sens/imp 2.5 mV/47k ohms phono, FM sens 12 dBf (2.2 μV); FR 30-15,000 Hz & 1.5 dB in stereo; sep 40 dB at 1 kHz; 17<sup>1/16</sup>"W × 14<sup>1/4</sup>"D × 5<sup>1/16</sup>"H; 22 lb ..... \$250

**VR-2000 Stereo Receiver**

AM/FM stereo receiver with discrete power amplifier and vector cm tuning. Features built-in relay protection; LED tuning indicators; built-in FM muting; tape monitor; AM loop antenna; nondistortion bass and treble controls; loudness control; speaker A, B and A + B selection; stereo/mono switch; unswitched AC outlet. 22 W per ch into 8 ohms min rms, both chs driven, from 40-20,000 Hz, with no more than 0.2% THD; IMD 0.5%; FR 10-50,000 Hz +1 dB; S/N (IHF, A-

weighted, rated power) phono 78 dB, aux 92 dB, tape 92 dB; input sens/imp phono 2.3mV/47k ohms, aux 150 mV/25k ohms; tape 150mV/22k ohms; sens (IHF) 10.8 dBf 1.9 μV; 50-dB quieting sens; mono 19 dBf; stereo 40 dBf; S/N at 65 dBf mono 76 dB, stereo 71 dB; FR mono 32-15,000 Hz ±1.0 dB; stereo 30-15,000 Hz ±1.5 dB; stereo sep 1,000 Hz 42 dB; 17<sup>1/16</sup>"W × 4<sup>1/16</sup>"H × 14<sup>1/16</sup>"D; 17<sup>1/16</sup> lbs ..... \$250

**YAMAHA**

**R-100 Remote Controlled Receiver**

Stereo receiver with computer-controlled 5-band equalizer, loudness controls and filters. Features 5 CCSS settings for bass, loudness, presence, treble, and high filter; up/down tone control bar; dynamic noise canceller; "auto phono" circuit; auto switches to phono whenever the turntable tonearm is lowered onto a record; infrared remote control; speaker protection circuit; computer servo-lock synthesizer with PLL tuning or FM servo tuning; Spatial Expander control; 10-station random-access station status; auto blend; 10-LED signal-quality meter; 2 tape monitors with tape-copy function; memory backup; digital frequency display; low-imp AM loop antenna; front-panel gain switch for direct input of MC or MM cartridge; built-in infrasonic filter; last ch memory. Amp section: 100 W/ch rms from 20-20,000 Hz into 8 ohms ±1 dB; THD 0.008%; IMD 0.01%; S/Ns (A-weighted) phono MM 88 dB, MC 75 dB, aux 100 dB; input sens phono MM/phono MC/line 2.5/16μV/12 mV. Tuner section: FM usable sens 14.8 dBf (1.5μV) mono; 50-dB quieting sens 8.8 dBf (0.75 μV) mono; S/N 88 dB; FR 50-10,000 Hz ±0.3 dB, 30-15,000 Hz ±0.3/-0.5 dB; capture ratio 1.2 dB (local); sep 50 dB at 1 kHz. 17<sup>1/16</sup>"W × 4<sup>1/16</sup>"H × 15<sup>1/16</sup>"D; 24 lbs 3 oz ..... \$800

**R-90.** Similar to R-100 except rated at 70 W/ch; no auto phono, dynamic noise canceller or auto blend; 17"W × 15"D × 4"H; 21 lbs 2 oz ..... \$600

**R-70 Remote Controlled Receiver**

A 45 W/ch simplified version of R-100 receiver with computer servo lock synthesized tuning; 10-station random-access programmable station memory; Spatial Expander control; MC/MM cartridge switch and 2 tape monitors with tape-copy function. Amp section: FR line 20-100,000-3 dB. Tuner section: FM usable sens 9.3dBf (0.8 μV) mono; 50-dB quieting sens 38.1 dBf (22 μV) stereo, 15.3 dBf (0.8 μV) mono; S/N mono/stereo 85/81 dB; 17<sup>1/16</sup>"W × 15<sup>1/16</sup>"D × 4<sup>1/16</sup>"H; 18 lbs 4oz ..... \$470

**R-50 Stereo Receiver**

35 W/ch receiver basically similar to the R-100 and R-70, but with fewer features. Features include computer Servo lock tuning with digital readout; 10-station random-access programmable station memory; continuously variable loudness control; bass extension control. Amp section: THD 0.015% phono MM; 0.008% line; S/N 88 dB phono, 97 dB line; FR 20-20,000 Hz -3 dB. Tuner section: FM usable sens 9.3 dBf (0.8μV) mono; 50 dB quieting sens mono/stereo 15.3 dBf (91.6μV) /38.1 dBf(0.8μV); FR 50-10,000 Hz ±0.5 dB; 17<sup>1/16</sup>"W × 4"H × 13<sup>1/16</sup>"D; 14 lbs 5 oz ..... \$335

**R-30.** Similar to R-50, this 25 W/ch receiver features a quartz PLL synthesized tuner with analog dial, 5 AM/5 FM presets; continuously variable loudness control, bass extension control and electronic function switching; 14 lbs 1 oz ..... \$275

**NOTICE TO READERS**

Prices of items described are manufacturers' suggested prices only and are subject to change without notice. Actual selling prices are determined by the dealers.

# 2

# Amplifiers

## ACCUPHASE

### P-600 Stereo Power Amplifier

Power amp drives 7-parallel push-pull output stage with MOSFET pre-driver incorporating push-pull circuitry in all stages. Can fully drive a 2-ohm low imp speaker system with a guaranteed output of 700 W/ch. Features digital peak power display; bridge connection switch; 1 dB step input level control. Rated output 300 W/ch into an 8-ohm load with both chs driven, distortion <0.01%, 20-20,000 Hz; bridge connection 1,000 W into an 8-ohm load, distortion <0.01% 20-20,000Hz; IM distortion <0.01%; damping factor 300 (IHF 50Hz); S/N <125 dB (IHF-A); rated input 2V; 18<sup>1</sup>/<sub>16</sub>"W × 9<sup>1</sup>/<sub>16</sub>"H × 18<sup>1</sup>/<sub>16</sub>"D ..... \$3,585

### P-266 Stereo Power Amplifier

Stereo power amp with MOS FETs as the power amplification devices in a triple push-pull arrangement and the following 4 types of operations: 130 W/ch stereo into an 8-ohm load, 30 W/ch (8 ohms) Class-A stereo, 400 W (8 ohms) monophonic and 110 W Class-A monophonic. Rated output, normal, 130 W/ch (into an 8-ohm load with both chs driven, distortion <0.01% 20-20,000 Hz); bridge connection, normal, 400 W, Class-A; 110 W (into an 8-ohm load, distortion <0.003%; damping factor 120 (IHF 50 Hz); rated input 1.3V. Features Normal/Class-A selector switch; bridge connection switch; peak hold switch; 1 dB step input level control; 17<sup>1</sup>/<sub>16</sub>"W × 6<sup>1</sup>/<sub>16</sub>"H × 14<sup>1</sup>/<sub>16</sub>"D; cascade push-pull predrive; MOSFET final stage ..... \$1,375

## ACOUSTAT

### Trans-Nova Twin-200 Power Amplifier

Full FET amp designed to obtain >1000 damping factor in audio band with no first-order distortion in output stage. Features Complement Feedback circuit to eliminate negative-feedback problems. Output power 200 W/ch into 8 ohms at 0.02% THD; full-power FR 15-500,000 Hz +0/-3 dB; slew rate 175 V/μsec; 42 lb ..... \$1,095

## ADCOM

### GFA-1A Power Amplifier

Fully complementary stereo/bridged-mono power amplifier. Features toroidal transformer; dual power supplies; built-in protection relay and thermal-overload switch; peak power LEDs; high/low-speed fan switch. Output power 200 W/ch continuous both chs driven into 8 ohms, 20-20,000 Hz, 0.05%/0.1% THD/IM distortion; damping factor 200; slew rate 80 V/μsec; input sens 1.5 V; cabinet vented on all sides; 10<sup>1</sup>/<sub>2</sub>"W × 8<sup>1</sup>/<sub>2</sub>"H × 6<sup>1</sup>/<sub>2</sub>"D ..... \$500  
**GFRP-1A.** Rack panel for 1A amps ..... \$40  
**GFRP-2A.** Rack panel for two GFA-1As ..... \$40

### GFA-2 Power Amplifier

Stereo power amp with dual-FET input stage, direct-coupled design, separate power supplies for each ch. Features short-circuit and high-temperature protection; auto reset on all protection circuits with LED indicator; peak LEDs for output power indication; dual outputs (4/ch) to allow use of low-imp speakers. Out-

put power 100 W/ch into 8 ohms, 20-20,000 Hz, 0.02% THD. Supplied with rack handles. 19"W × 13<sup>1</sup>/<sub>2</sub>"D × 5<sup>1</sup>/<sub>2</sub>"H ..... \$375

## AUDIONICS

### CC-3 Power Amplifier

Basic power amp in rack-mount enclosure and peak-indicating power LEDs. Output power 80 W/ch into 8 ohms (130 W/ch into 4 ohms), both chs driven 20-20,000 Hz; THD and IM distortion <0.1% at rated output, 8 ohms; mono bridged-output power 225 W into 8 ohms; slew rate 50 V/μsec stereo, 100 V/μsec mono; input sens/imp 1.0 V/22.9k ohms non-inverting; 19"W × 11"D × 3<sup>1</sup>/<sub>2</sub>"H ..... \$750  
**CC-5.** Similar to CC-3 amp except 70 W/ch into 8 ohms FTC method 20-20,000 Hz with <.15% THD and IMD; average continuous power into 4 ohms 120 W/ch. Circuit design allows imp loads as low as 2 ohms. 17" × 3" × 10" 15 lbs ..... \$500

## AUDIO RESEARCH

### D-115 Power Amplifier

Vacuum-tube stereo power amp with cross-coupled circuitry. Features relay coupled for smooth turn on; front-panel fusing for line and screen; power output 120 W/ch min into 8 ohms from 20-20,000 Hz with <1% THD; THD <0.005% at 1W; power bandwidth 10-60,000 Hz; input imp sens 1.1 V for rated output; input imp 75k ohms nominal; noise >90 dB below rated power, broadband-unweighted ..... \$2,995

### D-120 Power Amplifier

Solid-state stereo power amp with Analog Module technology, unique linear output circuit. Features internal bridging switch for mono operation; power supply fuse on front panel; fuse-failure LED indicator. Output power 120 W/ch into 8 ohms, 10-20,000 Hz at <0.25% THD; FR 10-20,000 Hz & 0.1 dB at 1 W into 8 ohms; power bandwidth 0.6-100,000 Hz -3 dB; input sens/imp 1.5 V rms/60k ohms; harmonic distortion <0.004% at 1 kHz, 1 W; IM distortion <0.035% at rated power; slew rate 40 V/μsec; rise time 2 μsec; damping factor 300, 10-20,000 Hz; power consumption 1,000 W max; 19"W × 10<sup>1</sup>/<sub>2</sub>"D × 5<sup>1</sup>/<sub>2</sub>"H; 43 lb ..... \$2,195

### D-70 Power Amplifier

Vacuum-tube stereo power amp with cross-coupled circuitry. Features relay coupled for smooth turn-on; front panel fusing for line and screen; power output 65 W/ch min at 8 ohms from 20-20,000 Hz with <1% THD; THD <0.005% at 1 W; power bandwidth 10-60,000 Hz; input sens .95V for rated output; input imp 75k ohms nominal; noise 9 dB below rated power, broadband-unweighted; 19"W × 7"H × 16.5"D; 95 lbs ..... \$1,995

## BRYSTON

### 4B Power Amplifier

Fully complementary class-AB power amp with bridging switch, 1,000-sq-in. heat-sink area, regulated power supplies to all voltage gain stages, ch sep back to line cord, red LED clipping indicator. Output power 200 W/ch, 800 W bridged into 8 ohms, 20-20,000

Hz at 0.01% THD; IM distortion 0.01%, 10 mW-200 or 208 W; noise -100 dB; slew rate 60 V/μsec; power bandwidth 1-100,000 Hz; damping factor 500 at 20 Hz, 8 ohms; input sens/imp 1.25 V/50k ohms; 19"W × 13<sup>1</sup>/<sub>2</sub>"D × 5<sup>1</sup>/<sub>2</sub>"H ..... \$1,450  
**3B.** Similar to 4B except 100 W/ch, 400 W bridged; input sens/imp 1.25 V/50k ohms; has 500-sq-in. heat-sink area; 9"D ..... \$925  
**2B.** Similar to 3B except 50 W/ch, 200 W bridged; input sens/imp 0.75 V/50k ohms; has 250-sq-in. heat-sink area; 19"W × 10"D × 3<sup>1</sup>/<sub>2</sub>"H ..... \$525

## CARVER

### M-1.5t Power Amplifier

Magnetic Field stereo basic power amp with LED dual peak-responding power displays, infrasonic and ultrasonic filters. Output power 350 W/ch into 8 ohms at no more than 0.1% THD; dynamic headroom/ch 750 W at 4 and 8 ohms; noise >-100 dB A-weighted; IMD .1%; bandwidth dc-250,000 Hz +0/-3 dB at 1 W; input imp 150k ohms; 19"W × 10<sup>1</sup>/<sub>2</sub>"D × 3<sup>1</sup>/<sub>2</sub>"H; 16 lbs ..... \$799

### M-500 Power Amplifier

Stereo power amp with super-efficient Magnetic Field circuitry in slim-line cabinet. Features peak-responding power meters; cool operation; no bulky power transformer, heat sinks, or electrolytic capacitors; brushed-gold with brown trim or charcoal-gray finish. Output power 250 W/ch into 8 ohms, 20-20,000 Hz at 0.05%/0.06% THD/IM distortion; FR 1-250,000 Hz & 0.25 dB; S/N 100 dB A-weighted; slew rate 40 V/μsec ..... \$629

### M400t Power Amplifier

Stereo power amp with Magnetic Field Circuitry that eliminates oversize heat sinks, power transformers, electrolytic capacitors. Features dual vertical LED peak-level display with VU-meter ballistics; brushed-gold with brown trim or charcoal-gray finish. Output power 200 W/ch into 8 ohms, 20-20,000 Hz at 0.05%/0.06% THD/IM distortion; FR 1-250,000 Hz & 0.25 dB; S/N 100 dB A weighted; slew rate 40 V/μsec; 6<sup>1</sup>/<sub>2</sub>"W × 6<sup>1</sup>/<sub>2</sub>"H × 6<sup>1</sup>/<sub>2</sub>"D ..... \$449

### M200t Power Amplifier

Magnetic Field power amp produces 120 W/ch (min continuous power into 8 ohms, 20-20,000 Hz with <0.05% THD. Dark pewter; LEDs indicate power and use of speaker-protection circuitry. Noise >100 dB



down (IHF A-weighted); IMD 0.15% max (SMPTE); transient IMD <0.001%; frequency bandwidth 3-10 dB from 1-80,000 Hz at 1 W; 17.3"W × 9"D × 2.55"H; 10.25 lbs ..... \$350



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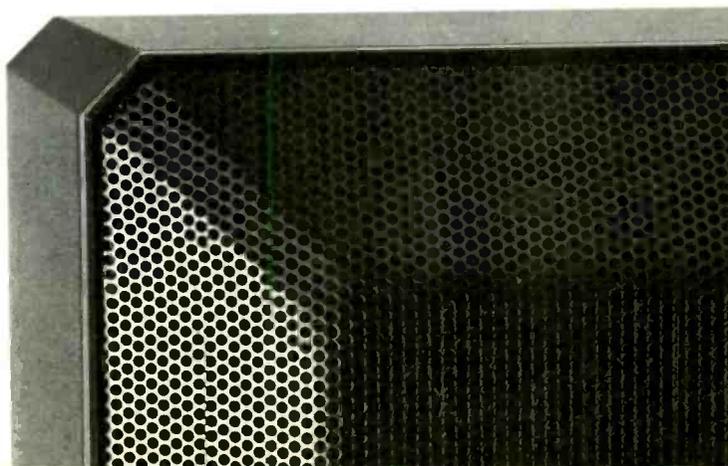
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## Power Amplifiers

2

## Power Amplifiers

### Z-1 Wide Band Z Coupler

Impedance-matching device to enable a Carver Magnetic Field power amp to be used with a receiver or integrated amp. Receiver or integrated amp outputs drive power amp through Z-1 coupler, which presents an optimum noninductive load to the power amp in the receiver or integrated amp. ....\$50

## CONRAD-JOHNSON

### Premier One Power Amplifier

Vacuum-tube power amp with low-noise precision parts in audio circuitry; LED bias indicators. Output power 200 W/ch continuous into 4, 8, or 16 ohms 30-15,000 Hz at 1.0% THD and IM distortion; FR 20-20,000 Hz & 0.5 dB; S/N 90 dB ..... \$4,350

### MV75a Power Amplifier

Vacuum-tube stereo power amp with low-noise precision parts in audio circuitry; LED bias indicators. Output power 75 W/ch continuous into 4, 8, or 16 ohms, 30-15,000 Hz at 1.0% THD and IM distortion, 150 W mono; FR 20-20,000 Hz & 0.5% dB; S/N 90 dB ..... \$1345  
MV45a. Similar to MV75-1 except 45 W/ch.. \$850

## CROWN

### SA-2 Power Amplifier

Features dual-LED input/output comparator display indicators; stereo/mono switch; remote mute; 4 on-board computers that analyze demand, immediate history of amp, load for max output power; 2-speed fan. Output power 220 W/ch continuous into 8 ohms, 20-20,000 Hz at 0.05% THD, 0.01% IM distortion; FR 0-80,000 Hz +0/-1.5 dB; S/N 110 dB A-weighted; 19"W x 14 1/4"D x 7"H ..... \$2,000

### Power Line Two Amplifier

Features detented level controls; mono/stereo switch; Dynamic Analyzing Display, including IOC™ all-distortion, signal-present indicators; 3 bands reported for each ch; Multi-Mode circuit that uses 3-stage output design to eliminate distortion. Output power 50 W/ch into 8 ohms, 20-20,000 Hz, at no more than 0.04% THD; 1 1/4" front panel ..... \$579

**Power Line Three.** Similar to Power Line Two except 90 W/ch. Features frequency analyzing display that provides information about spectral balance of amp output signal ..... \$949

**Power Line Four.** Similar to Power Line Three except 165 W/ch ..... \$1,349

## DB SYSTEMS

### DB-6 Power Amplifier

Stereo power amp able to drive 1-ohm loads. Features 12 dB/octave subsonic filter; peak-clipping LEDs; electronic clamp. Output power 40 W/ch continuous into 8 ohms 20-20,000 Hz at 0.003% THD; THD 0.0008% at 1 kHz; IM distortion <0.002%; FR 20-40,000 Hz +0/-1 dB; input sens/imp 1 V/50k ohms; S/N 112 dB at 1 V A-weighted; slew rate 15 V/μsec; damping factor >400, 20-1,000 Hz. 4.9"H x 16"W x 12.8"D ..... \$595

**DB-6M.** Similar to DB-6 except bridged mono amp at 140 W continuous with 0.008% THD; slew rate 30V/μsec ..... \$595  
Mono conversion of DB-6 to DB-6M ..... \$37

## DENON

### POA-8000 Power Amplifier

Class-A monaural power amp with non-negative feedback circuit. Features high-constant output transistor bias; peak-indicating output metering system; polished bronze-gold end caps. Output power 200 W/ch continuous; THD 0.003%; power bandwidth 5 Hz-100 kHz; S/N & 22 dB; 48.4 lb ..... \$2,600

### POA-1500 Stereo Power Amplifier

Non-NFB direct-A amp features power-on self-diagnostic display; power VU meters; infrasonic filter; wood trim to complement matching preamp; all DC construction; A,B, A+B speaker switching. Rated out-

put (both chs driven) 150 W + 150 W 8 ohms, 240 W + 240 W into 4 ohms; input sens/input imp 1 V/47 ohm; THD (rated output power -3dB) 0.002% (0.005% at rated power); IMD (rated output power -3dB) 0.002%; slew rate 400 V/μsec; TIM immeasurable; power bandwidth 5-100 Hz (THD 0.015%); S/N 124 dB; 48.4 lb. Sold with PRA-1000 preamp ..... \$1,200

## FISHER

### BA 6000B Power Amplifier

Stereo power amp with dc circuitry, dual illuminated power meters with LED peak-indicators. Features 0/-20 dB meter range selector; 4-position speaker selector; input level control. Output power 100 W/ch continuous into 8 ohms, 20-20,000 Hz at 0.01% THD, IM distortion; damping factor 50 ..... \$550  
**BA 3000B.** Similar to BA 6000 minus input level control; output power 60 W/ch ..... \$380

## DAVID HAFLER

### DH-500 Power Amplifier

Stereo power amp designed to deliver >250 W/ch <0.025% distortion into 8 ohms; >400 W into 4 ohms (can be bridged, using optional bridging kit, to deliver >800 W into 8 ohms). Employs MOSFETs on compact enclosed multi-speed fan-cooled heat sink. Fuses and relay protect speakers against turn-on thumps or dc shifts; self-protective capability of the MOSFETs eliminates need for amp protection. Kit ..... \$600  
Factory assembled ..... \$750

### DH-200 Power Amplifier Kit

Stereo power amp with class-A outputs, symmetrical mirror-image complementary push-pull input to output. Features 2 assembled, tested amp modules; mono bridging capability to 300-W conversion. Output power 100 W/ch continuous into 8 ohms, 20-20,000 Hz at 0.02% THD; FR 1-100,000 Hz -3 dB at 1 W; damping factor 150 at 1 kHz, 8 ohms; slew rate 30 V/μsec; input time 2.5 μsec; sens/imp 1/5 V rms/22k ohms. Kit ..... \$330  
Factory assembled ..... \$430

## HARMAN/KARDON

### hk870 Power Amplifier

Stereo DC power amp with discrete components in audio circuitry. Features toroidal power supplies; 4 dual-polarity power supplies. Power output 100 W/ch continuous into 8 ohms, 20-20,000 Hz at .06% THD; high instantaneous current capability 60 amps; power bandwidth <10-80,000 Hz; FR .1-180,000 Hz (1 W) +0/-3 dB; slew rate 160V/ sec; negative feedback 12 dB; input sens/imp main input 1.0V/22,000 ohms; S/N (A-weighted, main input) 98 dB; damping factor 120 ..... \$500

## HITACHI

### HMA-7500MKII Power Amplifier

MOSFET power amp with pure complementary dc OCL, 2-stage differential circuitry systems. Features calibrated peak power meters with meter range switch; 2-speaker switching; protection relay for power resistors, connected speakers; subsonic filter. Output power 75 W/ch continuous into 8 ohms, 20-



20,000 Hz at 0.008% THD; THD and IM distortion 0.01% at rated output; power bandwidth 5-40,000

Hz at 0.01% THD; FR 0-200,000 Hz +0/-1 dB; input sens/imp 1 V/50k ohms; load imp 4-16 ohms; damping factor 60; S/N 120 dB; sep 105 dB at 1 kHz; output terminal 4-16 ohms speaker A or B, 8-16 ohms speaker A + B; one ac outlet; soft gray finish; 18 1/4"W x 14"D x 6 1/2"H ..... \$570

## KENWOOD

### Basic M2 Power Amplifier

Hi-speed power amp. Features 220 W/ch rms at 8 ohms from 20-20,000 Hz <0.004% THD; dynamic linear drive; dynamic headroom 1.5 dB at 8 ohms, 2.9 dB at 4 ohms; Sigma drive for speaker controls; fluorescent variable peak-hold meters; L/R level controls; 2-pair speaker system selection; zero switching design. 38 lbs. .... \$600

### Basic M1 Power Amp

Hi-speed power amp. Features 105 W/ch rms at 8 ohms from 20-20,000 Hz <0.005% THD; dynamic linear drive; dynamic headroom 2.1 dB at 8 ohms, 2.8 dB at 4 ohms; Sigma drive for speaker controls; 2-pair speaker system selection; zero switching design. 23 lbs. .... \$330

## KYOCERA

### B-901 Power Amplifier

Stereo MOSFET power amp with direct coupling throughout. Features dc servocircuit monitoring in each stage; 2 separate power transformers; 2-pole phase compensation; large peak power meters with W/dB scales. Output power 130 W/ch into 8 ohms, 20-20,000 Hz at <0.01% THD; slew rate 120 V/μsec; rise time 0.9 μsec; FR 5-100,000 Hz +0/-1 dB; S/N 120 dB ..... \$1,670

## LUXMAN

### MQ-68C Power Amplifier

Zero feedback vacuum-tube stereo power amp with Duo-Beta circuitry. Output power 25 W/ch continuous into 8 ohms 50-15,000 Hz at <0.04% 0.04%; 16.1"W x 7.3"D x 6.3"H; 30 lb ..... \$800

## MARANTZ

### SM 100 800 Watt Stereo Power Amplifier

Continuous power 400 W/ch both chs driven at 8 ohms from 20-20,000 Hz with no more than 0.01% THD, or 550 W/ch, both chs driven into 4 ohms from 20-20,000 Hz with no more than 0.05% THD; ac or dc input coupling direct connection of speakers to power amp output; nonfrequency discriminating input level controls; accessory switched loudspeaker connections; exclusive pin-fin heat dissipating tunnel; low TIM and SID circuit topology; total stability when driving reactive loads; gold-plated input and output connectors; 19"W x 21 1/4"D x 7"H ..... \$4,995

### MA 5 Monophonic Power Amplifier

Continuous power per ch class A 30 W at 8 ohms; class AB 150 W at 4 ohms; class A or Class AB operation, switch selected; ac or dc coupled inputs; gold-plated input and output terminals; 8 3/4"W x 10 1/4"D x 5 1/4"H ..... \$575

## MARK LEVINSON

### ML-2 Power Amplifier

Class-A monophonic power amp utilizing only discrete circuitry and modular construction. Massive power supply consists of 1.2 KVA toroidal power transformer, a 30-ampere bridge rectifier and 144,000 μF of filter capacitance and is capable of delivering 100 joules of energy. Dual-tracking regulator maintains a specified voltage level within 0.15%. Regulating system provides -95 dB ripple and ac mains interference rejection. 25 W at 8 ohms, 20-20,000 Hz, with <0.1% THD; 50 W at 4 ohms with <0.25% THD and 100 W at 2 ohms <0.5% THD. When pulsed, the ML-2 will develop 18 volts peak, at peak currents up to 26 amperes (468 W peak). Features sophisticated protection system; gold-plated self-lock-

ing speaker connectors and Camac input connectors. Hand-brushed black anodized front plate. 8 $\frac{1}{4}$ "H x 19"W x 21 $\frac{1}{2}$ "D; 65 lbs ..... \$3,245

**ML-3 Power Amplifier**

Dual-monophonic power amp in a single chassis utilizing only discrete circuitry. Employs two fully independent power supplies, each consisting of a 1.2 KVA toroidal power transformer, a 30-ampere bridge rectifier and two 36,000  $\mu$ F filter capacitors, providing 240 joules of stored energy for each ch. Four 1,700 $\mu$ F capacitors provide additional filtering for all voltage gain stages. Class-A AB2 operation in the output stage. 200 W/ch at 8 ohms, 20-20,000 Hz <0.2% THD and 400 W/ch at 4 ohms with <0.4% THD. Twenty 200-W, 15-ampere power transistors per ch enable the ML-3, when pulsed, to develop 52 volts peak, at peak currents up to 52 amperes (2704 W peak) per ch. Features a sophisticated protection system; gold-plated self-locking speaker connectors; Camac input connectors and selectable damping factor; hand-brushed black anodized front plate. 10 $\frac{1}{8}$ "H x 19"W x 24 $\frac{1}{2}$ "D; 116 lbs ..... \$5,400

**ML-9 Power Amplifier**

Stereo power amp rated at 100 W/ch at 8 ohms, 20-20,000 Hz, <0.2% THD and 200 W/ch at 4 ohms <0.4% THD. All circuitry is discrete and Class-A operation is maintained throughout all voltage gain and driver stages, with Class AB2 operation in the output stage. Power supply is comprised of a 1.2 KVA toroidal power transformer, a 30-ampere bridge rectifier and 2 36,000  $\mu$ F filter capacitors, and is capable of storing 230 joules of energy. Two 520 $\mu$ F capacitors provide decoupling and additional filtering for all voltage gain stages. Eight 200-W, 15-ampere power transistors together with the massive power supply enable the ML-9, when pulsed, to develop 58 V peak, at peak currents up to 29 amperes (1,682 W peak) per ch. Features gold-plated binding posts for output connections; Camac input connectors and selectable damping factor; hand-brushed black anodized front plate; 8 $\frac{3}{4}$ "H x 19"W x 13 $\frac{1}{2}$ "D; 56 lbs ..... \$2,870

**ML-11 Power Amplifier**

Stereo power amp rated at 50 W/ch at 8 ohms, 20-20,000 Hz, <0.5% THD and 100 W/ch at 4 ohms <0.6% THD. 140 W at 8 ohms when bridged. All circuitry is discrete and Class-A operation is maintained throughout all voltage gain and driver stages, with Class AB2 operation in the output stage. Power supply consists of a 320 VA toroidal power transformer, two 12-ampere bridge rectifiers, and four 10,000  $\mu$ F filter capacitors, providing separate rectification and 20 joules of energy storage for each ch. Six 200 W, 15 ampere power transistors per ch enable the ML-11, when pulsed, to develop 25 volts peak, at peak currents up to 12.5 amperes (312.5 W peak) per ch. An optional externally programmable voltage limiting circuit makes it possible to reduce the voltage output of the ML-11, offering protection for speakers that have reduced power handling capability. Features gold-plated binding posts for output connections and Camac input connectors; hand-brushed black anodized front plate. 8 $\frac{1}{2}$ "H x 19"W x 12"D; 25 lbs ..... \$1,750

**McINTOSH**

**MC 2500 Power Amplifier**

Power amp with class-A voltage amp and interleaved multifilar wound autotransformer. Features Power Guard circuit to eliminate clipping due to overdrive; black anodized front panel; black baked enamel chassis. 500 W/ch min sine wave continuous average power output both chs into 1 ohm, 2 ohm, 4 ohm or 8 ohm load imp; THD 0.02%; IM 0.02%; FR (at one W output) 20-20,000 Hz + 0 -0.25 dB; noise and hum 95 dB; 19"W x 10 $\frac{1}{2}$ "H x 17"D; 129 lbs \$3,300

**MC 2255 Power Amplifier**

Power amp features complimentary pair of power transistors biased Class AB to follow the voltage amp and Power Guard circuit to eliminate amp clipping due to overdrive. 250 W/ch min sine wave continuous

average power output both ch operating into 1 ohm, 2 ohms, 4 ohms or 8 ohms load imp; THD 0.02%; IM 0.02%; FR (at one W output) 20-20,000 Hz +0, -0.25 dB; noise and hum 95 dB ..... \$2,790

**MC 2250 Power Amplifier**

Power amp with interleaved multifilar wound autotransformer and Sentry Monitoring Circuit to monitor output signal and prevent overload of the output transistors. Features Power Guard circuit to eliminate amp clipping due to overdrive. Front panel is anodized gold; chassis is chrome and black. 250 W/ch min continuous average power output, both ch operating into 1 ohm, 2 ohms, 4 ohms, or 8 ohms load imp; THD 0.02%; IM 0.02%; FR (at 1 W output) 20-20,000 Hz +0, -0.25 dB; noise and hum 95 dB; 16"W x 6 $\frac{1}{2}$ "H x 14 $\frac{1}{2}$ "D; 80 lbs ..... \$2,300

**2155 Power Amplifier**

Power amp with Sentry Monitoring circuit and Power Guard Protection circuit to prevent clipping so THD does not exceed 2% with up to 20 dB overdrive at 1,000 Hz. 150 W/ch min continuous average power input both ch operating into 1 ohm, 2 ohms, 4 ohms or 8 ohms load imp; THD 0.02%; IM 0.02%; FR (at 1 W output) 20-20,000 Hz +0, -0.25 dB; noise and hum 95 dB; 16"W x 5 $\frac{7}{16}$ "H x 13"D; 65 lbs ..... \$2,150

**2150 Power Amplifier**

Power amp with Sentry Monitoring circuit and Power Guard. Front panel is anodized gold; chassis is chrome and black. 150 W/ch min continuous average power output, both ch operating into 1 ohm, 2 ohms, 4 ohms, or 8 ohms load imp; THD 0.02%; IM 0.02%; FR (at 1 W output) 10-100,000 Hz +0.25 -1 dB; noise and hum 95 dB below rated output; 16"W x 5 $\frac{7}{32}$ "H x 14 $\frac{1}{2}$ "D; 58 lbs ..... \$1,800

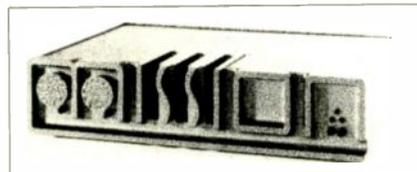
**MC 502 Power Amplifier**

Basic stereo power amp with each channel consisting of an input preamp, a power amp section, three separate protecting control circuits and a phase inverter which is integral with the left channel. Anodized gold and black. Min sine-wave continuous average power output from 20-20,000 Hz, both ch operating, 75 W/ch into 2.7 to 4 ohm loads; 50 W/ch into 8 ohms loads; 0.02% max harmonic distortion from 250 mW to rated power per ch from 20-20,000 Hz, both ch operating; FR (at 1 W output) 20-20,000 Hz +0, -0.25 dB; 10-100,000 Hz +0,-3.0 dB; 16"W x 3 $\frac{3}{8}$ "H x 14 $\frac{1}{2}$ "D; 27 lbs ..... \$1,100

**MISSION**

**777 Power Amplifier**

Perfectly symmetrical dc-coupled class-A (except for output devices which operate in class AB mode) amp utilizing two identical mono amps. All active components are discrete. Casting works as giant heat sink. Totally modular in construction, features instrument-type line connector; cast aluminum amp case; very high local feedback loops; output fuse incorporated in



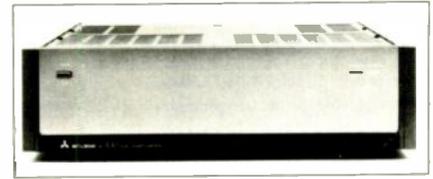
feedback loop. Output power 100 W/ch into 8 ohms, 175 W/ch into 4 ohms continuous with both chs driven from 20-20,000 Hz; slew rate 180 Vm; rise time 0.32  $\mu$ sec; negative feedback <14 dB; THD <0.2% DC-40,000 Hz; TIM immeasurable; S/N >100 dB ..... \$1,400

**MITSUBISHI**

**DA-A30 Power Amplifier**

Dual-monaural dc amp with linear cross-bias power supply sections, comprehensive protection, indica-

tion, and ac or dc amplification. Power output 105 W/ch rms into 8 ohms, 20-20,000 Hz at 0.008% THD; dynamic headroom 2.0 dB; damping factor 100; slew rate 200 V/ $\mu$ sec at 100 V p-p; input 1 V



(variable)/50k ohms; sep 100 dB at 1 kHz; S/N 122 dB (IHF-A, closed circuit); power consumption 400 W; 18 $\frac{1}{2}$ " x 5 $\frac{5}{8}$ " x 14" ..... \$500

**NAD**

**2150 Power Amplifier**

Stereo/mono power amplifier with Soft Clipping" circuitry. Features speaker-matching impedance switch; Soft Clipping", overload indicators; bridging capability for mono operation. Output power 50 W/ch into 8 ohms, 20-20,000 Hz at 0.02% THD, 125 W mono damping factor 100; 16.5"W x 11.4"D x 3.8"H ..... \$278

**NAIM by AUDIOPHILE SYSTEMS**

**NAP250 Power Amplifier**

Features gain-decoupling capacitor, passive single-pole filter with no slew rate limit within bandwidth; heavy aluminum extruded heatsink; toroidal main transformers; 4 regulated power supplies. 70 W continuous into 8 ohms, 20-20,000 Hz at 0.02% THD and IM distortion; FR 5-40,000 Hz & 3 dB; transient capability 400 VA; sens 1.6 V; imp 22k ohms; can drive reactive loads with phase angles from 90° to +9° with no appreciable distortion change; 17"W x 12"D x 5"H ..... \$2,250

**NAP 160.** Similar to NAP 250 except has 24-V regulated power supply (powers Naim preamps); output power 50 W; transient capability 250 VA; sens 1.4 V ..... \$1,350

**NAP110 Power Amplifier**

Stereo amp with 40 W continuous output power into 8 ohms, 20-20,000 Hz at 0.02% THD. Transient power capability VA 150 V; dynamic headroom 4.5 dB; reactive-load response, distortion, response same as for NAP 300 ..... \$750

**NIKKO**

**Alpha-450 Power Amplifier**

Features high-speed bipolar-output transistors with DC servo feedback loop; nonswitching output and dual-FET input circuitry; dual vertical LED bar-graph peak-power indicator display; separate input level controls; relay-controlled speaker selectors; LED power and protection circuit indicators; headphone jack. Output power 220 W/ch continuous both chs driven into 8 ohms from 20-20,000Hz with 0.008% THD; slew rate 100 V/V sec; 240 W/ch continuous into 7 ohms; S/N 115 dB; rack mountable; matte black finish; 19"W x 18.1"D x 7.2"H ..... \$1,050

**Alpha-230 Power Amplifier**

Features high speed bipolar output transistors; DC servo feedback loop; dual FET input and nonswitching output circuitry; speaker selector switches; LED peak power and protection circuit indicators; headphone jack; 120 W/ch continuous both chs driven into 8 ohms; from 20-20,000Hz with 0.008% THD; slew rate 100 V/V sec; S/N 115 dB; matte black finish; rack mountable; 19"W x 13.5"D x 5.4"H.. \$560

**ONKYO**

**M-5090 Power Amplifier**

Limited-edition dual Super-Servo stereo power amp with very large power supply. Features high head-

room, dynamic stability; linear switching; auto-tracking bias; extra-large peak power meters. Output power 200 W/ch rms into 8 ohms, 20-20,000 Hz at 0.003% THD; S/N 120 dB. .... \$1,800

**M-5060R Power Amplifier**

Two independent mono amps on same chassis. Features dual Super Servo, linear switching circuitry; 2 large power transformers; peak-hold 2-color power meters; stable protection circuitry with IC voltage, current-sensing device; two-speaker switching; separate left/right gain controls. Output power 120 W/ch continuous into 8 ohms, 20-20,000 Hz at 0.005% THD. .... \$796

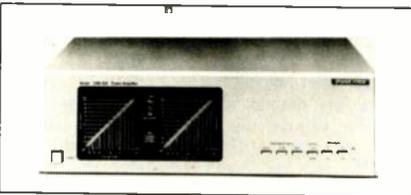
**M-5030 Power Amplifier**

Dynamic Super Servo power amp. Features Delta power supply; linear switching; large peak reading power meters; 100 W per ch, min rms, at 8 ohms both chs driven from 20-20,000 Hz with no more than 0.005% total harmonic distortion. .... \$600

**PHASE LINEAR**

**DRS 900 Power Amplifier**

Stereo power amp with average/peak-responding meters. Features separate input sens controls for each ch; light brushed-silver anodized panel. Output power



150 W/ch continuous into 8 ohms, 20-20,000 Hz at no more than 0.015% THD; frequency range 10-40,000 Hz at 1 W output through direct-coupled inputs; sens 0.8 V; S/N 100 dB; load imp 4-16 ohms; 17½"W x 13"D x 5¼"H. .... \$1095

**DRS 400 Power Amplifier**

Stereo power amp with power, clipping, DRS LEDs. Features light brushed-silver anodized panel. Output power 50 W/ch continuous into 8 ohms, 20-20,000 Hz at no more than 0.015% THD; frequency range 10-40,000 Hz at 1 W output through direct-coupled inputs; load imp 4-16 ohms; 17½"W x 13"D x 3½"H. .... \$695

**QUAD**

**Quad 405-2 Power Amplifier**

Voltage power current controlled amp with feed-forward current error-correction dumping output circuitry. Load-sensitive time-dependent current limiter protection circuit; dc offset voltage confined to negligible values even under gross overload; fixed high-pass filter; clamp circuit interrupts output to speaker in case of component failure. Output power 100 W continuous sine wave into 8 ohms, 100-1,000Hz at 0.01% THD, FR -1 dB at 20 Hz, low frequency, -.5 dB at 20,000 Hz; slew rate 0.1 V/μsec; hum and noise -96 dB; 4.5"H x 13.4"W x 7.7"D; 20 lb. .... \$695

**Quad 303 Power Amplifier**

Employs symmetrical triple circuitry; no controls. Output power 45 W continuous sine wave into 8 ohms, 100-1,000 Hz at 0.03% THD, 0.1% THD at 10 kHz; FR 30-35,000 Hz -1 dB, 8 ohms; hum and noise -100 dB A-weighted; 324 mmD 159 mmH x 120 mmW. .... \$395

**REVOX**

**B740 Power Amplifier**

Basic stereo power amp with peak power meters. Features fully complementary push-pull circuitry at every stage, low negative feedback; full electronic protection without relays; 3-dB stepped input level controls; front-panel headphone jacks; front-panel carrying

handles; RCA and XLR input connectors; switchable subsonic filter. Output power 100 W/ch into 8 ohms, 20-20,000 Hz at 0.1% THD; FR 20-20,000 Hz +0/-0.75 dB; sens 1 V for rated output; 17"W x 14"D x 6"H. .... \$2,299

**RG DYNAMICS**

**Model 200K Amplifier**

Dual mono high-current power amp with separate power supplies for each ch including 2 transformers and 2 x 100,000 mfd storage capacity. Features high-resolution circuitry in all stages; full protection; thermal, operating protection indicators; heavy-duty rack mount handles. Output power 150 W/ch into 8 ohms; output current 60 amperes/ch. .... \$2,295

**Model 5-1 High-Current Power Amplifier**

High-current stereo amp with no current limitations. Features full protection; thermal, operating protection indicators; 100,000 Mfd storage capacitance; heavy-duty rack mount handles. Output power 100 W/ch into 8 ohms, 20-20,000 Hz at 0.04%; 0.08% THD/IM distortion; output current 50 amperes/ch; input sens/imp 1.1 V/47,000 ohms; slew rate 60 V/micro sec; S/N 96 dB; 19"W x 13½"D x 7"H; 33 lb. .... \$1,195

**SAE**

**A1001 Power Amplifier**

Stereo power amp with 500-W/ch continuous output power into 8 ohms, 20-20,000 Hz at 0.25% THD and IM distortion, 750 W into 4 ohms at 0.025% THD. Features high current capability, full complementary speaker circuitry. FR 20-20,000 Hz +0/-0.3 dB; S/N 125 dB A-weighted; input sens 2.5 V; 19"W x 17¼"D x 8¾"H. .... \$1,550

**A501 Power Amplifier**

Stereo power amp with 250-W/ch continuous output power into 8 ohms, 20-20,000 Hz at 0.025% THD and IM distortion. Features relay protection for speakers; complementary series-connected output stages; LED level display; feedback level control. FR 20-20,000 Hz +0/-0.5 dB; S/N 125 dB A-weighted; input sens 2.24 V; damping factor 50; 19"W x 12½"D x 7"H; 47 lb. .... \$1,050

**A301 Power Amplifier**

Stereo power amp with 150-W/ch continuous output power into 8 ohms, 20-20,000 Hz at 0.025% IM and THD distortion. Features high-current capability; fully complementary circuitry; toroidal power supply; full protection; LED displays for output monitoring. FR 20-20,000 Hz +0/-0.3 dB; S/N 120 dB A-weighted; input sens 1.87 V; 19"W x 12½"D x 5¼"H; 35 lb. .... \$850

**A201 Power Amplifier**

Stereo power amp with 100-W/ch continuous output power into 8 ohms, 20-20,000 Hz at 0.025% THD and IM distortion. FR 20-20,000 Hz +0/-0.3 dB; S/N 110 dB A-weighted; sens 1.42 V rms for rated output power; features LED output power display; 19"W x 12½"D x 3½"H; 28 lb. .... \$650

**SAE Two P10 Power Amplifier**

Stereo power amp with 100-W/ch continuous output power into 8 ohms, 20-20,000 Hz at 0.025% THD and IM distortion. Features high current capability; individual peak-power indicators; speaker switching. FR 20-20,000 Hz +0/-0.5 dB; S/N 100 dB A weighted; input sens 1.5 V; 18¼"W x 14¼"D x 5¼"H; 28 lb. .... \$399

**SAE X Series**

**X-25A Power Amplifier**

Stereo power amp with 250-W/ch continuous output power into 8 ohms at 0.025% THD and IM distortion. Features LED-type true power-level display; wide/narrow-band inputs; gray anodized aluminum finish. Class-A FR 20-20,000 Hz +0/-0.5 dB; S/N 125 dB A-weighted; input sens 2.24 V; 19"W x

12½"D x 7"H; 47 lb. .... \$1,500  
**X-15A**. Similar to X-25A except output power 150 W/ch; input sens 1.87 V. .... \$1,100  
**X-10A**. Similar to X-15A except output power 100 W/ch; input sens 1.42 V. .... \$900

**SHERWOOD**

**S-6040 CP Power Amplifier**

Individually tested and certified basic stereo power amp with MOSFET dc circuitry. Features full push-pull dc circuitry with complementary symmetry JFET input stage; cascode driver stage; second-order low-pass filter; complete relay protection; fuses in feedback circuit; min current limiting. Output power 100 W/ch into 8 ohms, 20-20,000 Hz at 0.03% THD and IM distortion; clipping/dynamic headroom 0.88/1.67 dB at 8 ohms; damping factor 90; FR dc-40,000 Hz with low-pass filter; S/N 100 dB; input sens 900 mV; power/consumption 30-550 W; 17¾"W x 15½"D x 4¾"H; 30 lb. .... \$380

**SOUNDCRAFTSMEN**

**DDR1200 Power Amplifier**

1,200 W power amp with 100-LED frequency spectrum analyzer display. Features class H vari-portional circuitry; autobuffer circuitry for continuous 2 ohm operation; 40-LED power output meter from 0.02 up to 2,000 W; Truclip clipping indicators for each ch; mono bridging switch on rear panel; TIM < 0.02% 250 W/ch into 8 ohms; 375 W/ch into 4 ohms continuous rms, 20-20,000 Hz, THD < 0.09%; 750 W at 8 ohms; 7" x 19" x 12" D; 58 lb. .... \$1,199  
**A5001**. Same as A5002 except no LED meters and no input level controls. .... \$749

**A5002 Power Amplifier**

Power amp with class-H Vari-Proportional circuitry and Autobuffer for continuous operation into 2 ohms. Features auto crowbar protection circuit for output protection without current limiting; 20 LED/ch 0-1,000 W & 3 dB (4 ohms) meters; front-panel switching for 2 pairs of speakers; true clipping indicators; input level controls. Output power 250 W/ch into 8 ohms, 375 W into 4 ohms continuous rms, 20-20,000 Hz at < 0.09% THD; S/N > 105 dB; slew rate > 50 V/μsec; TIM < 0.02%; dynamic headroom > 2 dB. .... \$899

**A2502 Power Amplifier**

MOSFET stereo power amp with 20-LED 0-500 W (4 ohms) power meters. Features switching for 2 pairs of speakers; input level controls; true clipping indicators; brushed aluminum with charcoal finish rack-mount front panel. Output power 125 W/ch into 8 ohms, 190 W/ch into 4 ohms, continuous rms, 20-20,000 Hz at < 0.05% THD; S/N > 105 dB; damping factor 200. .... \$649

**DDX410 Power Amplifier**

Digital switch-mode MOSFET amp. 205 W/ch continuous rms; 20-20,000 Hz into 2 ohms, 4 ohms, 8 ohms; THD 0.05%; TIM unmeasurable; S/N > 105 dB; 16 lb; 5" x 13½" x 8½"D. .... \$449

**SUMO by ALL-AMERICAN AUDIO**

**The NINE+ Power Amplifier**

Class A power amp without any active bias circuits or thermal tracking networks. Features balanced-bridge configuration; push-pull quadrature feedback circuits; Discrete-Darlington output stage; direct-coupled circuitry from input to output. Power output 60 W/ch into 8 ohms from 20-20,000 Hz with < 0.1% THD; IM distortion 0.05% from 0.25 W to rated output; hum and noise 100 dB (wide band) below rated power; input sens for rated output 1.0 V rms; FR 20-20,000 Hz ±0.25 dB; 14"W x 8.5"H x 7"D; 35 lbs. .... \$1,000

**Andromeda Power Amplifier**

Class AB power amp with full-wave quadrant differential balanced-bridge topology using 4 independent push-pull feedback loops. Power output 200 W/ch

continuous average into 8 ohms; THD 0.05%; IM 0.05%; slew rate 20 V $\mu$ sec; sens 1.8 V for rated output; dynamic headroom 1.5 dB; 19"W  $\times$  8.75"H  $\times$  7"D; 35 lbs ..... \$749  
With custom front panel and handles ..... \$849

#### The NINE Power Amplifier

Class A power amp with auto-biasing technology obviating thermal tracking, conventional bias, and protection circuitry. Power output 60 W/ch continuous average into 8 ohms; THD 0.25%; IM 0.05%; slew rate 15 V $\mu$ sec; sens 1.1 V for rated output; 19"W  $\times$  8.75"H  $\times$  7"D; 35 lbs ..... \$679  
With custom front panel and handles ..... \$779

#### Polaris Power Amplifier

Class AB power amp that does not invert phase. Power output 100 W/ch continuous average into 8 ohms; THD 0.05%; IM 0.05%; sens 1.5 V for rated output; dynamic headroom 1.5 dB; 25 lbs ..... \$399  
With custom front panel and handles ..... \$479

### TANDBERG

#### TPA-3003A Power Amplifier

Basic stereo power amp with toroidal power transformer. Audio circuitry includes selected all-metal film resistors, polystyrene capacitors, and min negative feedback. Features large chimney-type heat sinks; separate left/right LED peak-clipping indicators. Output power 150 W/ch into 8 ohms at <0.02% THD; clipping headroom 1.05dB; FR 5-100,000 Hz  $\pm$  0/-1.5dB; sens 1V; S/N 120dB (A-weighted) at 150W, 8 ohms; slew rate > 70V/ $\mu$ sec; damping factor 100 wideband; sep > 75 dB ..... \$895

### TECHNICS

#### SE-A3MK2 Stereo DC Power Amplifier

Power amp with computer-drive class-A circuitry. Features linear feedback circuitry; new class-A synchro bias; concentrated power block; extra-large transformers and capacitors for stable power supply; 4-stage Darlington output circuitry; auto-load imp detector; computer protection circuitry; large, fast peak power meters; extra 2 Hz low-cut input terminals; main/remote/main and remote/off pushbutton speaker selectors on front panel; thick aluminum cabinet construction. Output power 300 W/ch into 8 ohms; THD 0.002%; IMD 0.002%; FR dc-200,000 Hz -3dB; input sens/imp 55 mV/4-16 ohms main or remote, 8-16 ohms main and remote; S/N 100 dB; damping factor 200 8 ohms, 100 4 ohms; 16<sup>13</sup>/<sub>16</sub>"W  $\times$  8<sup>7</sup>/<sub>16</sub>"H  $\times$  19<sup>31</sup>/<sub>32</sub>"D; 86 lb. \$2,200

#### SE-A7 Stereo/Mono DC Power Amplifier

Class-A 60-W stereo power amp can be strapped for 120 W output. Features linear feedback; auto-load imp detection; compact dual power transformers; fluorescent peak power meters read power levels from 1 mW to 100 W; main, remote, or main and remote

speaker switches with LED indicators; LED indicators for meter range and strapped operation; headphone jack for low- or high-imp headphones. THD at 1 kHz 0.007% at 60 W/ch into 8 ohms, 0.007% at 75 W/ch 4 ohms; IMD 0.003%; FR 20-20,000 Hz  $\pm$  0 dB, -1 dB; input sens/imp 130mV/47 kilohms; load imp: stereo operation 4-16 ohms main or remote, 8-16 ohms main and remote, monaural operation 8-16 ohms main or remote; 16<sup>13</sup>/<sub>16</sub>"W  $\times$  2<sup>3</sup>/<sub>32</sub>"D  $\times$  14<sup>3</sup>/<sub>8</sub>"H; 20.9 lbs ..... \$500

### THRESHOLD

#### Model S/1000 Series II Amplifier

Single ch, noninverting complimentary-symmetry audio power amp employing Stasis circuitry to create a tandem output stage in which linear-state voltage amp dominates performance and is connected directly to the load, and operates in conjunction with a current mirror bootstrap also connected directly to the load which current shields the performance amp and provides the working power through the load; circuit boards are military grade glass-epoxy with gold plated traces; resistors are wire-wound or metal-film; power transistors and jfets are hermetically sealed and all gain devices are tested and selected for linearity and breakdown resistance; modular design of ch assemblies allow replacement of complete chs including input/output connectors and power supply fusing in minutes; large illuminated front panel peak power meter covers range of  $\pm$ 3, -3 dB; rated power 500 W rms into 8 ohms; 20-20,000 Hz at 0.1% THD; bandwidth -3 dB points, 4Hz and 100,000 Hz; gain +26.6 dB; input imp 75,000 ohms; output imp .1 ohm; output transistor complement 44 250 W rated devices; power supply 1 kw toroidal transformer; 120,000  $\mu$ F capacitance; max output current 2 amps rms; 50 amps peak; noise < 200 microvolts out; heat sinking better than .1 deg.C/W; 19"W  $\times$  9"H  $\times$  17"D ..... \$3,300

**Model S/500 Series II.** As model S/1000 series II except dual ch, lesser power, without meters; rated power 250 W/ch rms into 8 ohms; both chs driven 20-20,000 Hz at .1% THD; output transistor complement 22 250W rated devices/chn; power supply 1,000 W toroidal transformer; 120,000  $\pm$   $\mu$ F capacitance; max output current 16 amps rms; 35 amps peak; 19"W  $\times$  9"H  $\times$  17"D ..... \$2,970

**Model S/300 Series II.** As model S/500 series II above except rated power 150 W/chn rms into 8 ohms; both chs driven 20-20,000 Hz at .1% THD; output transistor complement fourteen 250 W rated devices/ch; power supply 700 W toroidal transformer, 60,000 $\mu$ F capacitance; max output current 12 amps rms; 25 amps peak; 19"W  $\times$  9"H  $\times$  13"D ..... \$1,980

**Model S/150 Series II.** As model S/300 series II above except rated power 75 W/ch rms into 8 ohms; both chs driven 20-20,000 Hz at .1% THD; output transistor complement eight 250 W rated devices/chn; power supply 400 W toroidal transformer;

20,000 $\mu$ F capacitance; max output current 8 amps rms; 20 amps peak; 19"W  $\times$  9"H  $\times$  9"D . \$1,320

### VSP

#### Trans Mos Power Amplifier

Stereo power amp with 150 W/ch continuous power at 8 ohms, 20-20,000 Hz at 0.05% THD. Features output stage transconductance mode of operation; low noise design; DC, MOSFETs for accurate wideband response and low distortion; self-limiting transconductance output circuitry; optimally balanced output stage for instant power-on without thump; controlled amp behavior under input overload with no power supply stick; over 1,100 sq. inches of heat-sink area; exceptional stability into all loads; switch for more efficient operation at low imps; switchable 18 dB/octave active infrasonic filter; zero group delay distortion high frequency filter; switch for mono operation; modular construction with plug-in boards; 5<sup>1</sup>/<sub>2</sub>" optional rack mount available; slew rate > 70 V/ $\mu$ sec; output current instantaneous 44 amps peak to peak; damping factor > 200 20-20,000 Hz; input sens 2 Vrms to 200 W output at 8 ohms; input imp 130k ohm resistive 20-20,000 Hz; 5"W  $\times$  15"D  $\times$  14"H; 40 lbs, assembled ..... \$975  
Kit ..... \$850  
**Gold Edition.** Similar to Trans Mos except 200 W/ch power output; gold-plated input connectors; heavy-duty hand-soldered wiring; hand-matched MOSFETs for ultimate sound quality; 19" rack mount \$1,400

### YAMAHA

#### BX-1 Mono Power Amplifier

Single-ch high-power class-A power amp with fully regulated power supply, massive toroidal transformer, 40,000  $\mu$ F chemical filter capacitance. Output power 100 W into 4 and 8 ohms, 20-20,000 Hz at 0.02% THD; power bandwidth 10-100,000 Hz at 50 W, 0.005% THD; IM distortion 0.001% at 4 and 8 ohms; S/N 123 dB; rise time 0.3  $\mu$ sec; slew rate 600 V/ $\mu$ sec; damping factor 160; 19<sup>1</sup>/<sub>16</sub>"D  $\times$  10<sup>1</sup>/<sub>16</sub>"W  $\times$  9<sup>1</sup>/<sub>16</sub>"H; 40.5 lb ..... \$2,000

#### M-70 Power Amplifier

Zero Distortion Rule stereo power amp with X power supply. Features power sensor that controls amount of ac delivered to amp; A/B speaker selectors; independent left, right level controls for each stereo pair of speaker systems; 20-LED peak power meters with switchable range, peak-hold feature. Output power 200 W/ch into 8 ohms, 20-20,000 Hz at 0.002% THD; input sens/imp 1.41 V/25k ohms; S/N 124 dB; IM distortion 0.002%; sep 95 dB at 1 kHz; damping factor > 200; slew rate 200 V/ $\mu$ sec; power consumption 600 W; 17<sup>1</sup>/<sub>16</sub>"W  $\times$  15"D  $\times$  5<sup>1</sup>/<sub>4</sub>"H; 30 lb 3 oz ..... \$950

**M-50.** Similar to M-70 except output power 120 W/ch and has level control for each set of speakers; power bandwidth at 0.01% THD; S/N 122 dB; power consumption 350 W; 26 lb ..... \$650

## Preamplifiers

### 2

## Preamplifiers

### ACOUSTAT

#### Trans-Nova<sup>™</sup> Preamplifier

Full FET preamplifier with single phono gain stage for all types of low- or high-output phono cartridges and new RIAA network. Features 4 high-level inputs; 2 tape monitors with dubbing in both directions; output switching; passive high filter and loudness compensation; convenience outlets. FR 3-750,000 Hz  $\pm$  3 dB; 10 lb \$795

### ACCPHASE

#### C-222 Stereo Preamplifier

Preamplifier with all-stage push-pull arrangement with cascode amplification and all signal paths directly coupled by the DC Servo Control circuit. Rated output 2V: <0.005% (20-20,000 Hz); rated input: disc:

2mV disc (head amp. on); 0.1 mV/0.05 mV selectable aux/tuner; 126mV; S/N 85 dB aux/tuner 110dB (head amp on); 72dB. Features built-in head amp (+26 dB//+32 dB selectable); selectable MC input imp; selectable MM load capacitance; twolevel selectable loudness compensator; 17<sup>1</sup>/<sub>16</sub>"W  $\times$  5"H  $\times$  14<sup>1</sup>/<sub>16</sub>"D ..... \$1250

#### C-280 Stereo Preamplifier

Preamplifier, with all-stage Class-A push-pull arrangement and all DC servo controlled direct-coupled unit amplifiers and signal paths. Total Distortion: <0.005% (20-20,000 Hz); rated input disc: 2mV, disc (head amp on): 0.1 mV/0.5mV selectable; line/tuner: 126mV; rated output: 2V; S/N: line/tuner: 110dB, disc: 85 dB, disc (head amp on): 72 dB. Features built-in head amp separate power transformers

for each ch (+26 dB/+32 dB selectable); MC input imp selector switch; right and left separate input level control (balance control); 2-stage selectable loudness compensator; 18<sup>7</sup>/<sub>16</sub>"W  $\times$  6<sup>1</sup>/<sub>16</sub>"H  $\times$  15<sup>1</sup>/<sub>16</sub>"D compatibility with MC cartridges ..... \$3,670

### ADCOM

#### GFP-1A Preamplifier

Features two separate phono-input circuits; inputs for DAD and wide-range VCR audio; signal processor loop; switchable phono-input capacitance; CX noise reduction; THD <0.007% 20-20,000 Hz unweighted; IM distortion (SMPTE) <0.0012%; max output level 10 V 20-20,000 Hz; tape output level 150 mV; input sens/imp phono 1: 2.5 mV/47k ohms 0.5 mV/100 ohms phono 2: 2.5 mV/47k ohms tun-

er, tape: 150 mV/100k ohms; phono input-capacitance 85 pF overload at 1,000 Hz; 290 mV; S/N 15 mV input, IHF load -85 dB phono 1, 2.5 V output; >100 dB DAD/video tuner, tape; loudness: +3.5 dB/100 Hz; +2.5 dB/10,000 Hz; FR 20-20,000 Hz



±0.25 dB; crosstalk: 100 Hz, 80 dB; 1,000 Hz, 75 dB; 10,000 Hz, 60 dB; 19"W × 3"H × 12½"D; shipping weight 16 lb. .... \$375

**AUDIONICS**

**SC-3 Preamplifier**

Class A straight-line high-performance preamp. Features phono (MC and MM inputs); aux, tuner and tape monitor inputs; infrasonic filter; selectable cartridge loading; gain switch for MC input; stereo/mono switch; ch-reverse switch; output mute; AC accessory outlet; volume and balance controls; gold-plated input/output jacks; dual-mono power supply. Phono sens MC .25 mV, MM 1.5 mV; phono S/N -85dB ref 5 mV input; source imp 50 ohms; THD and IMD <.01% at 5 V output; RIAA EQ ±.2 dB from 20-20,000 Hz; rack mountable. 19"W × 3½"H × 10"D; anthracite grey or optional black finish \$800

**SC-5 Preamplifier**

Class A stereo control center. MM phono, tuner, aux inputs; 2 tape monitors with bidirectional dubbing; stereo/mono; output mute; tone controls with bypass switch; AC accessory output; phono sens 2mV; phono S/N -85dB ref 10 mV input A-weighted; source imp 50 ohms; THD and IMD <0.02% at 5 V output; RIAA EQ ±.25 dB from 20-20,000 Hz; 17" × 3" × 10"; anthracite grey or optional black finish. .... \$500

**AUDIO RESEARCH**

**SP-10 Preamplifier**

Vacuum-tube stereo preamplifier with additional gain for use directly with MC cartridges. Features auto muting for repeat settings, etc; power switch for activating 1,600 W capacity power receptacles; selectable front panel impedance matching for optimizing MC and MM cartridge performance; gain selection for matching cartridges; bypass switch defeats all functions for optimum performance; FR (high level, ±.25 dB) 5-30,000 Hz; magnetic phono, ±.25 dB of RIAA, 30-40,000 Hz; input imp 50k ohms (all high level); MM, 10, 30, 100, 10k, 47k ohms; 19"W × 5.25"H × 10.25"D; 33 lbs. .... \$3,450

**SP-8 Preamplifier**

Vacuum-tube stereo preamplifier with 1.5-minute warm-up timer. Features continuous protection against line-voltage dropouts; high-accuracy, close-tracking segmented gain control; front panel receptacle switch that operates 2 relay-controlled outlets with 1600-W capacity; isolated ground construction that floats all inputs and outputs; rejection filters for minimizing or eliminating CB, TVI, r-f interference. FR 5-30,000 Hz & 0.25 dB high-level, to 40 kHz phono; harmonic/IM distortion <0.01%/0.002% at 2 V rms; gain phono/high-level to main output 26/60 dB; input/output imp 50k/1k ohms; phono overload 900 mV; output level 2 V rms; noise 250 µV rms max high-level; 5 µV phono; power consumption 60 W; 19"W × 10¼"D × 5¼"H; 22 lb. .... \$1,795

**SP-7 Preamplifier**

Solid-state stereo preamplifier with Analog Module™ technology. Features close-tolerance segmented gain control; front-panel receptacle switch that operates 3 relay-controlled outlets with 1600-W capacity; low-surge turn-on circuitry; isolated ground construction

that floats all inputs and outputs; rejection filters for minimizing RFI, TVI, CB interference. FR 1-50,000 Hz & 0.25 dB high-level, 10-40,000 Hz phono; harmonic and IM distortion <0.002% at 2 V rms; gain phono/high-level to main outputs 60/26 dB; input/output imp 50k/250 ohms; phono overload 500 mV at 1 kHz; output level 2 V rms; noise high-level/phono 250/2 µV; 19"W × 8½"D × 3½"H; 16 lb. .... \$1,295

**SP-12 Preamplifier**

Vacuum-tube stereo preamplifier with front-panel muting for warm-up protection, repeat settings, etc. Features front-panel power switch for activating back-chassis, plug-in power receptacles; high accuracy, close-tracking, segmented gain control; optional auto mute kit version available; FR (high level) 5-30,000 Hz ±.5dB; MM, ±.25 dB of RIAA 30-20,000 Hz; input imp, 50k ohms phono, 100k ohms high level; 19"W × 5.25"H × 8.9"D; 19 lbs. .... \$995  
Rack mount version. .... \$1,195

**BRYSTON**

**1 B Preamplifier**

Low-level, low-noise preamplifier designed for max musical accuracy. Features open-loop linearity circuit; noise-free, voltage-stabilized power supplies; defeatable 6 dB/octave at 30 Hz rumble filter; phono 1 and 2, tape 1 and 2, aux, tuner selector; stereo/mono switch; balance, volume controls. Gain 50 dB phono, 20 dB line; noise -80 dB at 5 mV input, 1 kHz unweighted; distortion 0.005%, 20-20,000 Hz through phono stage at 5 V output ..... \$735

**CONRAD-JOHNSON**

**Premier Three Preamplifier**

Vacuum-tube preamplifier constructed with low-noise precision metal-film resistors, polystyrene capacitors in audio circuitry. Features facilities for 2 tape recorders, 2-way dubbing, phono, tuner, aux inputs, 2 amplifier outputs; front-panel mute control. FR 20-20,000 Hz ±0.25 dB phono; S/N 70 dB below 10 mV phono, 84 dB below 2.5 V output high level; TH and IM distortion 0.05%; gain 40 dB phono, 29 dB high level; max output 25 V; phono overload 500 mV at 1 kHz; 14"W × 11¼"D × 4¼"H ..... \$2,850

**PV Vacuum Tube Preamplifier**

Vacuum tube preamplifier with cathode follower outputs and solid-state voltage regulator designed for minimal ac imp; regulated filament supplies virtually eliminate infrasonic noise resulting from ac line fluctuations. Features 1% tolerance mil-spec deposited tin-oxide audio circuit resistors; audio circuit capacitors are polystyrene di-electric; tracks within .5 dB volume control; auto muting at turn-on, turn-off; 2 tape recorder loops with 2-way dubbing; 5-function mode switch; precision tracking volume control. Max output 40 V rms; FR 2->100,000 Hz; distortion <0.5% TH and IM; hum and noise 20-20,000 Hz, phono 72 dB below 10 mv input, high level 84 dB below 2.5 V output; output imp <200 ohms; 16" × 10" × 3¼"; 15 lbs. .... \$1,485

**PV2a Preamplifier**

Vacuum-tube stereo preamplifier features low-noise metal film resistors, polypropylene and polystyrene capacitors in audio circuitry, vacuum-tube design; 2-deck tape monitoring with one-way dubbing; input selector for phono, tuner, tape, aux; reverse/stereo/mono mode selector; 2 amplifier outputs. FR & 0.25 dB 20-20,000 Hz phono; S/N 70 dB below 10 mV in phono, 84 dB below 2.5 V out high-level; THD and IM distortion 0.05%; gain 35 dB phono, 28 dB high-level; max output 25 V; phono overload 500 mV at kHz; 14"W × 11¼"D × 4¼"H ..... \$685

**PV3 Preamplifier**

Basic preamplifier with simple vacuum-tube circuitry. FR 20-20,000 Hz ±5 dB phono RIAA; S/N 70 dB below 10 mV phono, 84 dB below 2.5 V high-level output; THD and IM distortion 0.05%; gain 34 dB phono, 24 dB high-level; max output 10 V; phono overload 400 mV at 1 kHz; 10½"W × 7"D ×

3¼"H ..... \$399  
PV3k. Kit version of PV3 ..... \$299

**CROWN**

**DL-2 Control Center/Preamplifier**

Three-piece stereo control preamplifier: Switching Module with all controls, power supply, phono module A (phono preamp stage for placement at turntable). Switching Module features digital control-setting displays, digital interface for wireless remote control system, 8 dual-ch touch-button selectable inputs, 2 for external signal processors, mixable input. FR 1-100,000 Hz & 0.5 dB; max output 11 V rms before overload; hum and noise 97 dB below rated output, unweighted, 101 dB A-weighted; max TH and IM distortion 0.0003% below 10-V output, 20-20,000 Hz; input gain/imp (3 circuit, ¼" jack) 178 V rms max/1 ohm min, 10-50,000 Hz & 0.1 dB at rated output; 63.5 dB dynamic range (displayed with 7-segment LEDs); frequency adjust controls set at 20, 40, 80, 400, 800, 1.6k, 5k, 10k, 20k Hz; 18 dB/octave roll-off; 31-position switched attenuators for & 0.2 dB adjustment over 50-dB range; 17"W × 7½"D × 3½"H. Phono Module A: FR 20-20,000 Hz & 0.25 dB RIAA, 10-30,000 Hz & 0.1 dB flat; hum and noise -88 dB RIAA unweighted, -.94 dB RIAA A weighted, -84 dB flat unweighted, -89 dB flat A weighted; IM/THD 0.0005%/0.02% min, 20-20,000 Hz at rated output; input gain 30-50 dB, 2.5 V, 1 kHz; input imp 47k/100k ohms; output level/imp 11 V rms max/600 ohms; 6¼"D × 3¼"H × 1¼"D. Switching Module and power supply have satinized aluminum front panel with charcoal Lexan inlay, other surfaces black anodized; Phono Module A has black anodized steel finish ..... \$2,899

**Straight-Line Two Preamplifier**

Straight-wire-signal-path preamplifier with auto muting. Features tuner, phono, aux 1, aux 2, tape 1, tape 2, processor signal/source selector; 6 outputs, including headphone monitor; detented level, loudness, & 10-dB boost/cut detented bass and treble, tape-cup, tape-monitor, balance, mode, low-frequency filter, phono-level controls; rumble, signal-present, overload, tone-activated indicators; 1¼"H front panel ..... \$549

**CARVER**

**C-4000 Preamplifier**

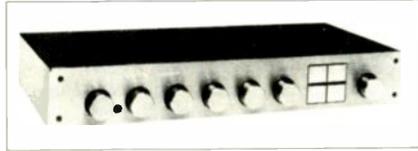
Features Sonic Hologram Generator™ designed to recreate vector sound field present during original recording and to locate musical instruments precisely in space (enlarged zone of coherence enables three people sitting side by side to experience the holographic effect—older units upgraded by dealer for modest charge); 3-ch time-delay system with 40 W combined amplifier, user-selectable 35/50-msec initial delay with variable echo density; third-generation Auto-Correlator noise-reduction system, Peak Unlimiter; separate left and right bass and treble controls with turnover frequency switches, tone defeat; cartridge matching; 2-way tape dubbing, monitoring; external signal processor input; infrasonic filter. FR & 0.25 dB 20-20,000 Hz phono RIAA, 5-200,000 Hz -1 dB high level; input sens 0.85 mV phono, 50 mV high level; phono overload 150 mV at 1 kHz; phono gain 35 dB; noise reduction 20 dB (20-200 Hz), 10 dB (2,000-20,000 Hz); Sonic Hologram™ image resolution 5° horizontally, 20° vertically; Peak Unlimiter total dynamic-range recovery 6 dB; time delay 50 msec max; distortion 0.2%; bandwidth 20-10,000 Hz, feed forward to 19 kHz. 19"W × 8"D × 6¼"H \$1,099

**C-1 Preamplifier**

Features Sonic Hologram Generator™ dimensional sound imager; separate left and right bass and treble tone controls, tone defeat; MC phono input; 18 dB/octave infrasonic filter; tape/source monitor with 2-way tape-dubbing; provision for external processor. FR ±0.25 dB extended curve phono RIAA, 5-200,000 Hz high level; phono overload 150 mV at 1 kHz, 1,500 mV at 20 kHz; image resolution 5° horizontal, 20° vertical ..... \$549

**C-2 Preamplifier**

Preamp features switchable phono input for MM or MC cartridges; infrasonic filter (18 dB/octave below 20 Hz); bass and treble controls; tone control bypass; 2 tape inputs; provision for 2-way dubbing; aux input; external processor loop; mode switch; rear-panel jack for high-level gain (choice of 15 or 25 dB); anodized aluminum front panel finished in dark pewter. FR -3 dB at 3 Hz and 80 kHz (infrasonic filter out); noise



77 dB MC, 83 dB MM; THD 0.05%; output imp 600 ohms; TIM immeasurable; 17.3"W x 9"D x 2.55"H..... \$350

**DB SYSTEMS**

**DBR-15B & 2A Preamplifier**

Rack-mount precision preamplifier and tone control with power supply; combines DB-1B, DB-5 in a 19" rack unit. Auxiliary cable include GS 3..... \$825

**DB-1A Preamplifier**

Stereo preamplifier with separate DB-2A regulated power supply. THD <0.0008%, 20-20,000 Hz; IM distortion <0.001%; FR phono 10-40,000 Hz & 0.07 dB, high-level 2-50,000 Hz +0, -1 dB; S/N A-weighted 89 dB phono, 90 dB line; filters: low-cut flat, 20 Hz, 36 Hz at 6 dB/octave phono only, high-cut flat, 5 kHz, 10 kHz at 6 dB/octave; output imp 1k ohms; max output voltage 6 V into 10k ohms/3,000 pF; input sens for 1 V output: phono 2 mV into 50k ohms/100 pF, high-level 120 mV into 50k ohms; 8.5" x 7" x 3.2"..... \$475

**DB-1B and 2A Preamplifier**

DB-1A with low-noise high-level stage (-94dB ref 1 V), reduced crosstalk, tight tracking volume control, all gold-plated jacks and solid oak cabinet with hand-rubbed tung-oil finish. 12"W x 3.6"H x 7"D \$575  
**DBR-1A.** Same as DB-1A except mounted on 19" rack; with DB-2 A power supply..... \$511

**DENON**

**PRA-6000 Preamplifier**

All-direct-coupled stereo preamp with pure non-NFB circuitry from MC head amp to high-output amp section. Features electronic switching; super phono equalizer; DAD input; real-time tone controls with 5-stage turnover switch, center defeat. Designed as companion to Denon POA-8000 power amplifier..... \$3,000

**PRA-1000 Stereo Preamplifier**

Wood-trimmed, Class-A, non-NFB, electronic switching preamp. Features all dc construction with front-panel tone controls, filters. Features tape dubbing, oversized transformer and power supply. FR RIAA deviation tuner DAD, etc., 20-100 Hz ±0.2dB, 1-300 Hz +0, -3dB; THD <0.002%, EQ 1 Hz 8 V, <0.002%, aux 1 Hz 5 V; filter 18 Hz 6 dB/octave, 7 Hz 6 dB/octave; loudness control 100 Hz +8dB, 10 Hz +8dB; S/N phono MM 90 dB (2.5 mV input), MC 75 dB (0.25 mV input), tuner 105 dB (150 mV input); 22 lb..... \$495

**FISHER**

**CC 3000 Preamplifier**

Stereo preamplifier with moving-coil phono preamp. Features 3-position phono imp switch; defeatable bass, treble controls; subsonic filter; loudness switch; 2-way tape dubbing. Input sens/imp 2.5 mV/33k and 47k ohms MM, 60 µV/22 ohms MC, 150 mV/100k tuner, aux, tape 1, 2; FR ±0.2 dB phono, ±0.5 dB

aux; THD 0.007%; IM distortion 0.005%; S/N 86 dB MM, 70 dB MC, 105 dB tuner, aux, tape .... \$250

**HAFLER**

**DH-110**

Preamplifier operates all discrete devices (no integrated circuits in the signal) path in a full complimentary symmetry format. Features rack mounting capability; single active circuit board; step-action volume control; switchable high-pass filter; integral muting circuit; 2 pairs of audio outputs; low-imp power supply; full power bandwidth to 200,000 Hz; 2 phono, tuner, aux, 2 tape deck, EPL inputs; 2 tape (buffered), 2 line, EPL outputs; headphone jack; controls: volume, balance, bass, treble, input selector phono selector, monitor selector, mono/stereo, filter, external processor loop, tone control engage. THD <0.0006% at 1,000 Hz, 3 V rms; FR +0.0-0.25 dB, 20-20,000 Hz; S/N weighted 87 dB; rated output 3 V rms, 4-210,000 Hz; THD <0.001% 20-20,000 Hz; 17"W x 3"H x 8 1/2"D; 10 lbs.  
 Assembled..... \$400  
 Kit..... \$300

**DH-100 Preamplifier**

"No frills" preamp with low-imp power supply; delay circuit; sufficient line output. Features tape deck line outputs; volume, balance, treble, bass, push button input select, tape monitor, power controls; 2 switched outlets; 13 1/2"W x 3"H x 10"D; 7 lbs.  
 Assembled..... \$200  
 Kit..... \$150

**HARMAN/KARDON**

**hk825 Preamplifier**

Stereo preamplifier with dual-RIAA equalization circuitry; low-noise FETs in low-level and high-level input stages; MC head amplifier; capacitance trim; switchable bass and treble turnover frequencies; tone defeat; 2-deck tape monitor; two-way tape dubbing; loudness; subsonic and high-cut filters; AUX, DAD, tuner, and phono input selectors. Input sens/imp: phono MM 22mV/47k ohms/135 pf, phono MC 150 V/100 ohms, AUX, tape 135mV/25 ohms; phono overload 200mV (MM)/12mV (MC), FR (AUX, 1.0 V) .1-180,000 Hz +0, -3 dB; RIAA accuracy +2 dB; S/N phono MM-83 dB, phono MC -80 dB, AUX, tape 92 dB; slew rate 120 V/sec; THD (AUX 1 V) .05%; turnover frequencies 100 Hz/400 Hz, 2 kHz/6 kHz. 17 3/16"W x 4"H x 14 1/2"D..... \$400

**HITACHI**

**HCA-7500MKII Preamplifier**

Stereo preamp with complementary push-pull dc equalizer amplifier circuitry, dc push-pull FET differential tone control amplifier circuitry, MC phono head amp. Features defeatable bass, treble controls with turnover frequency selectors; low, high filters; 2-way tape dubbing and monitoring; -20-dB muting; separate MM/MC phono cartridge load selector. Input sens/imp 2 mV-6 mV/50k ohms phono 1, 2 mV/50k



ohms phono 2, 100 mV/50k ohms tuner, aux, tape 1 and 2; max input level 350 mV at 1 kHz phono 1 and 2; output level/imp 1 V/600 ohms preamp out, 100 mV/600 ohms tape out, PIN, DIN; max output level > 7 V preamp out; FR 20-20,000 Hz ±0.2 dB phono 1 and 2, 5-100,000 Hz +0/-1 dB tuner, aux, tape 1 and 2; THD 0.005% at 1 V phono 1 and 2, tuner, aux, tape 1 and 2; residual hum and noise preamp out 8 mV; soft gray finish; 18 1/4"W x 13 3/4"D x 6 1/2"H..... \$370

**KENWOOD**

**Basic C1 Control Amplifier**

Hi-speed basic control amplifier. Features MM or MC phono cartridge selection; low phonos S/Ns; continuously variable loudness control; two tape monitors; dubbing tape A to B; subsonic filter; Compact Disc player input. 12 lbs..... \$225

**KYOCERA**

**C-901 Control Preamplifier**

Stereo control preamplifier with separate bass, mid-range, treble controls with an adjustable parametric graphic equalizer for bass and treble controls. Features class-A circuitry throughout; 2-pole phase compensation; MM and MC phono inputs; selectable 27k/47k/100k ohms MM imp; 2-way tape monitor/dub; subsonic filter. FR 20-20,000 Hz & 0.2 dB all inputs; S/N MM/MC 86/70 dB; MC preamp sens 120µV at 1k ohm; MM sens 2.5 mV..... \$1,290

**LUXMAN**

**CL-34 Preamplifier**

Tube-type preamp with solid-state Duo-Beta circuitry, designed to accompany MQ-68C power amplifier but easily interfaces with any modern solid-state amp. Features gold-plated input connectors; tape monitor, out capability; tone-control defeat; low-cut filter; attenuator. S/N 80 dB phono 1/2, 100 dB aux; 17.3"W x 12.7"D x 3.1"H; 14 lb..... \$700

**MARANTZ**

**SC 9 Stereo Preamplifier**

Features Moving coil head amplifier; variable resistive loading for MM and MC phono cartridges; 18 dB/octave low group delay high and infrasonic filters; full tape dubbing facilities with tone controls; 3-bank tone controls with bypass and selectable turnover frequencies; 2 preamp outputs with individual switch selection; separate headphone amplifier with individual power supply; fully buffered record outputs; exclusive linearized loop design; high level amplifier bypass switch; 16 1/4"W x 10 1/2"D x 5"H..... \$750

**SC 6 Stereo Preamplifier**

Features MC head amplifier; adjustable resistive loading for MM phono cartridges; separate tone controls for left and right chs with defeat switch; 2-position loudness compensation; tape copy and tape monitor provisions; 2 switch-selected preamp outputs; 16 1/8"W x 9 3/8"D x 5 1/4"H..... \$550

**MARK LEVINSON**

**ML-6A Preamplifier**

Monophonic modular preamplifiers, housed in individual chassis, with separate power supplies, offering only the most essential control functions and connection capabilities. Utilizes L-series open-frame plug-in modules. All audio circuitry is completely discrete and operates in Class-A mode. In each chassis is one L1 line amplifier and one (L2, L3, or L3A) to accommodate any cartridge phono amplifier module. The L1 provides up to 26 dB of gain with typical distortion specifications of 0.003% THD and 0.002% IMD and typical S/Nf 100 dB (unweighted below a 2 V reference). The L2 phono module offers selectable gain of 38 or 44 dB. L3 and L3A modules offer 67 and 55 dB of gain respectively. <Less than 0.008% THD and 0.005% IMD for all 3 phono modules. The PLS-154 power supply maintains load regulation of 0.05% and has a wideband noise output of 18µV.

**NEED MORE INFORMATION?**

Write directly to the manufacturer or distributor. A list of names and addresses starts on page 25.

ML-6A features Camac connectors for all input and output connections; gold-plated cartridge loading sockets on main circuit board and internal switches to select 10, 20 or 26 dB of line gain. Hand-brushed black anodized finish. ML-6A: 2 1/4"H x 19"W x 8"D. PLS-154: 4 3/4"H x 4"W x 10 1/2"D. 12 lbs. With L2 ..... \$5,950/pr  
With L3 or L3A ..... \$6,490/pr

**ML-7 Preamplifier**

Versatile stereo preamplifier offering connection capability for 5 line-level sources, monitor facilities for two tape machines, and several plug-in phono systems to accommodate virtually any cartridge. Utilizes L-series open-frame plug-in modules. All audio circuitry is completely discrete and operates in the Class-A mode. Fitted with two L1 line amplifiers and two (L2, L3 or L3A) phono modules. The L1 provides up to 26 dB of gain, with typical distortion specifications of 0.003% THD and 0.002% IMD, and typical signal to



noise ratio of 100 dB unweighted below a 2 V reference. The L2 phono module offers selectable gain of 38 or 44 dB. The L3 and L3A modules offer 67 and 55 dB of gain respectively; <0.008% THD and 0.005% IMD for all three phono modules. The PLS-154 power supply maintains load regulation of 0.05% and has a wideband noise output of 18uV. An external five-pin self-locking connector parallels. Features the Camac phono inputs for cartridge loading; A gain switch selects either 10 or 20 dB of line gain. Hand-brushed black anodized finish; ML-7: 2 1/4"H x 19"W x 10 1/2"D; PLS-154: 4 3/4"H x 4"W x 10 1/2"D; 14 lbs. With L2 ..... \$4,325  
With L3 or L3A ..... \$4,865

**ML-10 Preamplifier**

Stereo preamplifier incorporating a simplified version of the L-series circuitry in a single circuit board configuration. All audio circuitry is completely discrete and operates in the Class A mode. Connection capability for 2 line-level sources, monitor facilities for 1 tape machine, and universal phono section that will accept virtually any cartridge. Line section provides up to 22 dB of gain with typical distortion specifications of 0.004% THD and 0.004% IMD and typical signal to noise ratio of 95 dB unweighted below a 2 V reference. Phono section offers selectable gain of 42, 53 or 63 dB. Six internal switches and gold plated loading sockets allow infinite cartridge loading capability. Typical distortion specifications for phono circuit are 0.014% THD and 0.005% IMD and S/N typically -72 dB. Features internal power supply with a high-speed; push-pull regulator; biased for Class-A operation; capable of maintaining load regulation of 0.05% and has a wideband noise output of 23uV; gain switch selects either 7 or 17 dB of line gain. Features Camac input and output connectors; hand-brushed black anodized finish. 2 1/4"H x 19"W x 10 1/2"D; 8 lbs ..... \$2,870

**ML-12 Preamplifier**

Stereo preamplifier that is a dedicated control unit for the ML-11 power amplifier. Offers connection capability for two line-level sources, monitor facilities for one tape machine, and a universal phono section to accept virtually any cartridge. All audio circuitry is completely discrete and operates in the Class-A mode. Phono section offers selectable gain of 42, 53 or 63 dB. Gold-plated sockets allow infinite cartridge loading capability. Typical distortion specs for this phono circuit are 0.008% THD and 0.005% IMD and S/N is typically -75 dB. ML-12 receives power from the ML-11 via 2 6-conductor cables. Discrete voltage regulators for each ch maintain load regulation of 0.04% and input noise rejection >38 dB. A standby switch mutes the preamplifier and reduces power consumption of the ML-11 and ML-12 by 50% and

allows all audio circuitry to remain active. Features gold-plated Camac connectors for input and output connections and 2 level controls; hand-brushed and black anodized front panel. 2 1/4"H x 19"W x 9 1/2"D; 9 lbs ..... \$1,240

**McINTOSH**

**C33 Preamplifier**

Stereo preamp with dual preamp system. Features low-noise electronic input switching system; two 7-source input selector switches for 3 tape decks, 2 turntables, 1 tuner, and 1 aux; record monitor switch; 5-band program equalizer; high and low frequency filters; compandor; front-panel tape recorder jacks. Frequency response +0, -0.5 dB from 20 Hz to 20,000 Hz; THD 0.01%; S/N, A-weighted, phono 90 dB below 10 mV input (84 dB IHF), high level 100 dB below rated output (86 dB IHF); compandor ratios from 1:2 compression to 2:1 expansion; 16"W x 5 7/8"H x 13"D; 26 lbs ..... \$2,299

**C29 Preamplifier**

Stereo preamp with 1% metal film resistors and 5% poly film capacitors; high frequency filter, low-frequency filter; 20,000 Hz low-pass filter; transient-free turn on and turn off; auto turn on. Frequency response +0 -0.5 dB 20-20,000 Hz; front panel is anodized gold and black with special gold/teal nomenclature illumination. black chassis; 16"W x 5 7/8"H x 13"D; 19 lbs ..... \$1,299

**C27 Preamplifier**

Stereo preamp with 7 different program sources; 4-position filter switch; stepped tone controls independent in each channel; continuously variable loudness control. Frequency response +0 -0.5 dB 20-20,000 Hz; distortion <0.05%; hum and noise aux 1 and 2, tuner, tape 1 and 2, 85 dB unweighted, 90 dB IHF A-weighted; phono 1 and 2, 80 dB below 10 mV input, unweighted, 85 dB IHF A-weighted; 16"W x 5 7/8"H x 13"D; 20 lbs ..... \$999

**C504 Preamplifier**

Stereo preamp with 1% metal film resistors and 5% poly film capacitors; equalizer amplifier; output/headphone amplifier; input selector switching; tripe shielded power supply. Frequency response +0 -0.5 dB 20-20,000 Hz; distortion 0.02%; S/N tuner, tape 1 and 2, aux -100 dB IHF A-weighted; equalizer center frequencies 30, 750, and 10,000 Hz; boost and cut ±12 dB; 16"W x 3 3/4"H x 14 1/2"D; 14 lbs ..... \$975

**MERIDIAN**

**101B Control Unit**

Stereo preamplifier with choice of tuner, tape, phono inputs. Has no tone controls to deteriorate sound. Power switch in volume control. Replaceable phono input module (specify MM or MC). Matched to Meridian power amplifiers, speaker systems ..... \$565  
Balanced line output for long leads ..... \$595

**MISSION**

**Model 776 Preamplifier**

Stereo preamplifier with power derived from rechargeable, sealed heavy-duty batteries that eliminate line-induced hum, provide very low imp, excellent interch power supply rejection. Designed around 2 identical chs consisting of phono and line sections. Input sens 2 mV phono, 100 mV line for 1 V rms output; phono overload 150 mV at 1 kHz; output level nominal/max 1 V rms/10 V peak; input imp 47k ohms/150 pF; output imp 250 ohms/4.7 uF; S/N phono/line 80/95 dB; hum 100 dB below rated output; THD/IM/TIM <0.05%/<0.05%/0; FR 20-20,000 Hz & 0.2 dB phono, -0.1 dB line .... \$997

**MITSUBISHI**

**DA-P30 Preamplifier**

Stereo preamplifier with dual-mono construction. Features 4 power-supply voltage regulator circuits; wire-

operated remote switches; built-in head amp; MM equalizer amp with dc-optimized negative feedback; low-noise, high-capacity, rapid-response, power-sup-



ply circuits; muting circuit; infrasonic filter; tone-bypass switch; docking, speaker selection, protection-circuit indication. Input sens/imp 0.13 mV/10 ohms MC, 2.8 mV/47k ohms MM, 150 mV/47k ohms tuner, aux, play 1, 2; THD 0.004% MC, 0.002% MM, 0.0015% tuner, aux, play 1, 2; sep 75 dB at 20 kHz MC and MM, 80 dB tuner, aux, play 1, 2; FR 20 Hz-20 kHz & 2 dB; 18 1/2"W x 9 1/2"D x 5 3/4"H ... \$400

**NAD**

**1020A Stereo Preamplifier**

Stereo preamp designed for audiophile performance at bargain cost. Features wide-range phono preamp; precise RIAA equalization; rear-panel switch for low-output MC cartridges; infrasonic filtering; high current output buffer. Power consumption 5 W. Phono input: Input sens (1kHz) for 0.5 V out MM 1.25 mV MC 90 uV for 2 V out MM 5 mV, MC 360 uV; S/N with cartridge connected, A-weighted MM 75 dB re 5 mV in, MC 72 dB re 0.5 mV in; RIAA accuracy, MM and MC ±0.5 dB. High-level inputs (tuner, aux, tape); input sens for 0.5 V out 80 mV, for 2 V out 320 mV; S/N A-weighted 86 dB re 0.5 V out; input overload >25V; FR 20-20,000 Hz ±0.5 dB. Tape outputs: output imp high level source Z + 1 kΩ; nominal level 320mV. Line output: output imp 600Ω; rated output 2 V; rated distortion (THD and IM) 0.02%; max output level 250 mV into 8 Ω; 3.8"H x 16.5"W x 9.5"D; 8.3 lb ..... \$198

**NAIM by AUDIOPHILE SYSTEMS**

**NAC 32 Preamplifier**

Features input selector for MM, MC cartridges, tuner, 2 tape; volume, balance controls; mode switch; normal, mute, tape monitor switch. Input sens 2.0 mV MM, 0.1 mV MC, 75 mV high-level; phono overload 200 mV MM, 10 mV MC; FR 20-20,000 Hz & 0.5 dB; THD and IM distortion 0.02%; 12"D x 8"W x 3"H ..... \$1,050

**NAC 42 Preamplifier**

Features input selector for MM, MC cartridges, tape, tuner. FR 20-20,000 Hz & 0.5 dB; THD and IM 0.02%. sens 0.1 mV MC phono/2.0 mV MM phono, 75 mV high-level; phono overload 10 mV MC, 200 mV MM; 3"H x 8"W x 12"D; 6 lb ..... \$560

**PNAG Moving Coil Preamp**

FR 20 Hz-20 kHz ±0.5 dB; sens 0.1 mV; 3 lb \$199

**NIKKO**

**BETA-50 Preamplifier**

Featres CX decoder; dual line input and output selectors; 2 sound processor loops; MC head amp; toroidal power transformer; FETs in all signal stages; full tape dubbing facilities; 32-position attenuator volume control; 12 dB/octave infrasonic filter; switchable tone controls; audio muting switch (-20 dB); stereo/mono switch; line 1 and 2 mix control; rack mountable; matte black finish. THD (phono MC) 0.006%; THD (phono MM) 0.004%; THD (line level) 0.004%; S/N (MC) 70 dB; S/N (MM) 88 dB; S/N tuner, aux, tape 100 dB; 19"W x 10.2"H x 2.8"D .... \$495

**BETA-30 Preamplifier**

Features MC head amp; dual line input and output switching; switchable sound processor loop; full tape dubbing facility; 12 dB/octave infrasonic filter; 32-position attenuator volume control; ±8 dB stepped

tone controls; advanced reel relay eliminates turn-on transients; rack mountable; matte black finish. THD (MC) 0.006% (MM) 0.004% (line level) 0.004%; S/N (MC) 70 dB (MM) 88 dB (line level) 100 dB; 19"W x 10.2"H x 2.8"D ..... \$325

**ONKYO**

**P-3090 Preamplifier**

Limited-edition Super-Servo stereo preamplifier with variable-gain equalizer for compatibility with all MC cartridges, selectable loading for MM cartridges. Features direct bus-bar feeder power supply for transient, dynamic distortion elimination; passive-element tone controls; infrasonic filter; headphone amp; microprocessor "Waiting Monitor" to indicate optimum performance status. THD 0.002% MM and high-level, 0.008% MC; S/N high-level/MC/MM 100/88/70 dB ..... \$1,250

**P-3060R Preamplifier**

Stereo preamplifier with dual Super-Servo, variable-gain equalizers for full compatibility with MM and MC phono cartridges. Features direct bus-bar feeder power supply for transient, dynamic distortion elimination; all passive tone controls. FR 0.8-17,000 Hz & 0.2 dB; THD high-level/MM/MC 0.003%/0.004%/0.018%; S/N MM/MC 82/76 dB ..... \$559

**P-3030 Preamplifier**

Preamplifier with Super Servo; MM and MC compatible, switchable-gain MC input; switchable-imp MM input; 78 rpm record equalization; infrasonic filter; all-passive-element tone controls; headphone amp; CD/Aux input; 2 tape monitors; THD 0.003% (high level), 0.004% (MM), 0.006% (MC and 78); S/N phono MM; 82 dB MC; 76 dB IHFA ..... \$380

**PHASE LINEAR**

**P3800 Preamplifier**

Stereo preamplifier with parametric controls, moving-coil (MC) phono input (requires no external transformer). Features moving-magnet (MM) phono input; subsonic filter; dual tape deck copying; loudness contour switch; muting; stereo/mono switch; headphone amplifier with front-panel jack; boost/attenuate frequencies over 20-20,000-Hz range; light brushed-silver anodized front panel. Output 2.0 V rms; THD <0.003% at rated output; FR 20-20,000 Hz & 0.1 dB RIAA MM and MC phono; S/N MM/MC 97/94 dB; slew rate 10V/μsec; sep 70 dB at 1 kHz; 17½"W x 13"D x 3½"H ..... \$650

**P3600 Preamplifier**

Stereo preamplifier with separate moving-magnet (MM) and moving-coil (MC) phono inputs. Features bass and treble controls; cartridge loading capacitance selector; loudness contour switch; muting; stereo/mono switch; front-panel headphone jack; light brushed-silver anodized front panel. Output 2.0 V rms; THD <0.003% at rated output; FR 20-20,000 Hz & 0.1 dB RIAA MM and MC phono; slew rate 10 V/μsec; sep 70 dB at 1 kHz; 17½"W x 13"D x 3½"H ..... \$450

**QUAD**

**Quad 44 Control Unit**

Preamplifier/control system features lift/step bass control to boost low-FR of small speakers, attenuate bass output when operating as filter to give 5 dB drop

at 2 frequencies; ±2 dB tilt control to shift tonal balance; variable filter slope control at 5,000, 7,000, 10,000 Hz; all tone controls have defeat positions; balance/mono switch; radio, Aux, disc, tape 1, tape 2 input selectors with optional microphone or MC phono inputs available. Input sens/imp 1 mV at 35 mV in/47k ohms phono, 100 mV at 5 V in/39k ohms tape, 1M ohm radio and aux; FR 30-20,000 Hz ±0.5 dB phono RIAA, 30-20,000 Hz +0/-1dB high level; distortion 0.02%; residual noise -104 dB A-weighted; 321mmW x 208mmD x 103mmH ..... \$800

**Quad 34 Control Preamplifier Unit**

Preamp/control unit. Fully isolated pushbutton controlled inputs and filters; disc, tape, radio and aux inputs; inputs for MM and MC cartridges; aux input compatible with Compact Disc players; features tilt control, a highly sophisticated 8-pole filter to produce gradual, smooth change in balance with no changes of response and no unwanted coloration; bass lift/step control that boosts low FR of small speakers and corrects frequency exaggerations caused by speaker placement. THD .05%; residual noise -105 dB A-weighted; FR ±0.3dB, disc RIAA ±0.5dB, 12.8"W x 25.6"H x 11.9"D; 7.04 lb ..... \$595

**SAE**

**X-1P Direct-Line Preamplifier**

Features touch switching with computer control, adjustable R and C; MC input, external power supply. FR 20-20,000 Hz & 0.1 dB; max output 17 V; THD and IM distortion 0.01%; MM phono sens 7 mV; MM phono overload 250 mV; 19"W x 9"D x 3"H; 12 lbs ..... \$1200

**SAE P101 Preamplifier**

Computer direct-line preamplifier. Features touch switching with computer control; adjustable R and C; phase switching; moving-coil input. FR 20-20,000 Hz & 0.1 dB; max output 11 V; 19"W x 12½"D x 3½"H ..... \$650

**SAE Two PA-10 Preamplifier**

Preamplifier with MC phono input with adjustable R and C, and 3-band tone controls. FR 20-20,000 Hz & 0.5 dB; THD and IM distortion 0.01%; S/N 95 dB Aux, 80 dB MC, 74 dB MM; 18.25"W x 14.3"D x 3.5"H; 12 lb ..... \$350

**RG DYNAMICS**

**Model 4-2 Preamplifier**

Stereo preamp with switchable dual-gain circuit for using MC cartridges without head amp. Features 2 tape monitors with 2-way dubbing; 2 phono, 2 aux inputs; infrasonic filter; defeatable bass, treble controls; phase polarity switch; true-step volume control; discrete circuitry throughout; plug-in modular construction; 30,000 mfd storage capacitance; available in black rack mount or standard black panel with walnut end pieces. FR 20-20,000 Hz ±0.05 dB phono, 0.5-300,000 Hz ±3dB other inputs; input sens/imp 0.1 mV rms/selectable 47k/1k/100 ohms MC, 1.1 mV rms (MM), 220mV/47k ohms high level; phono overload 11 mV rms (MC), 150 mV rms (MM) at 1,000 Hz; output level/imp 2 V/180 ohms; S/N 80 dB phono, 88 dB line; IM distortion 0.007% at 2 V output; max output level 10 V at 1,000 and 100,000 Hz; gain 20.5 dB high level, 37 and 57 dB phono; 19"W x 12"D x 3½"H rack mount, 17"W standard; 13 lb ..... \$795

**Model 200K Dual Mono Preamplifier**

Separate power supplies for each ch including 2 transformers and 2 x 120,000 mfd storage capacity. Features high-resolution circuitry in all stages; dual-gain phono circuits for MM or MC cartridges; straight-through wiring, 1 phono input; 2 aux inputs; 1 tape monitor; separate volume controls for each ch; infrasonic filter; 19"W x 12"D x 3½"H rack mount ..... \$1,595

**SOUNDCRAFTSMEN**

**SP4002 Signal Processor/Preamp**

Combination preamp/10-band octave equalizer. Preamp section features 2 separate phono preamps with variable cartridge loading (0-750 pF) and variable imp (100/47k ohms); variable & 20 dB gain stage; S/N 97 dB; 300 mV overload; will accept MC, variable-reluctance, MM cartridges; 6 input sources; 2 external processing loops, equalizer, mono A+B mixing switchable to 2 tape or 2 line outputs; switchable tape monitoring/dubbing. Graphic equalizer: & 15 dB control/octave; spectrum-level control and LEDs for input-to-output balancing; EQ S/N 114 dB at full output; Tape 2 jack duplicated on front panel; click-stop stepped volume control; infrasonic filter ..... \$699

**DX 4200 Signal Processor/Preamp**

Combination preamplifier/equalizer with digital audio and video audio inputs. Features in/out balancing to 0.1 dB; phono preamp has variable cartridge loading 50-800 pF, 100/47,000 ohm adjustable ±20 dB gain MC variable reluctance or MM cartridge inputs; 3-way tape dubbing; 2 external-signal processor loops; conventional line outputs plus separate autobridge line outputs for auto mono bridging of most amplifiers; EQ S/N 114 dB; passive coil filters with 15 dB boost and cut for each octave; differential/comparator circuitry for true 0.1 dB unity gain EQ balancing; 19" rackmount front panel; includes frequency spectrum analyzer test record and instant re-set Computone charts; 5¼" x 19" x 11"D ..... \$699

**CX4100 Preamplifier Signal Processor**

Combination preamp/equalizer with built-in CX decoder for additional 20 dB dynamic range from CX-encoded records. Features external signal-processor loop; 2 phono inputs; 2 tape inputs with 3-way dubbing; phono S/N 97 dB, THD 0.01%; 12 dB EQ boost and cut for each octave; differential/comparator circuitry for 0.1 dB unity gain; 19" rack mount front panel; includes frequency spectrum analyzer test record and instant re-set Computone charts; 15 lb ..... \$549  
**CX4000.** Same as CX4100 without graphic equalizer but with 2 external signal-processor loops; 3½" x 19" x 11"D ..... \$419

**SP4001 Signal Processor/Preamp**

Combination preamp, 10-band stereo graphic equalizer. Preamp features 2-way tape monitor/dub; signal-processing section with infrasonic filter, 2 external loops, EQ defeat, mono switch (can be applied to line or tape outputs for recording); phono 1 and 2, tuner, and Aux input selectors; phono S/N 97 dB; THD 0.01%. Equalizer center frequencies 30, 60, 120, 240, 480, 960, 1,920, 3,840, 7,680, 15,360 Hz; boost/cut range & 12 dB; has dual zero-gain slide controls with LEDs for input/output balancing \$549  
**SP4000.** Same as SP4001 minus graphic equalizer; has third external loop with front-panel access, headphone outputs ..... \$399

**SHERWOOD**

**S-6020 CP Preamplifier**

Individually tested, certified stereo preamplifier with FET differential input. Features FET differential tone-control amplifier; push-pull output; 2 tape monitors; 2-way tape dub; output for 2 main amps; feather-touch up/down volume control with 10-segment LED level indicator; relay audio-mute circuit. Output 10 V max; THD and IM distortion 0.005% at 1 V output;

**NOTICE TO READERS**

**Prices of items described are manufacturers' suggested prices only and are subject to change without notice. Actual selling prices are determined by the dealers.**

# illinois audio



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● time  
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### AKAI CASSETTE DECKS

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MODEL GXF-31 COMPUTER CONTROL	198.00
MODEL GXF-71	IN STOCK!

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### MARANTZ SPECIALS!!!

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### SANSUI ELECTRONIX

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Z-5000 SUPERB RECEIVER DEAL	CALL

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MODEL V-4RX dbx deck	SPECIAL!

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### SPECIALS

AUDIO CONTROL C-101 Equalizer/Analyzer	\$290.00
TOSHIBA KTV-S1 AM/FM Cass. Pers. Port.	94.00
SHURE V-15LT 'P' MOUNT CART.	55.00

### CASSETTE TAPES

MAXELL XL 90 TYPE I OR II	\$34.00/12
SONY UCXS-90 NEW HIGH BIAS	32.00/10
TDK SA-90 SUPER AVALIN	24.50/10
BASF 90 PRO I OR II	22.00/10
SONY METAL 90 CASS. SPECIAL	30.00/10
SONY FECR 90 FECR-CHROME	20.00/10
L-SONY VIDEO - CHOOSE FROM 5 BRANDS.	8.00 EA.

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## Preamplifiers

2

## Preamplifiers

FR dc-100,000 Hz; S/N 100 dB; phono overload 250 mV at 1 kHz; RIAA phono equalization & 0.5 dB; power consumption 14 W; 17 1/2"W x 15 1/2"D x 2 3/8"H; 11 lb..... \$250

### SUMO by ALL-AMERICAN AUDIO

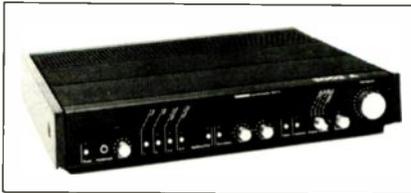
#### Electra Preamplifier

Stereo preamp with dc-coupled differential FET phono stage and head amp for MC cartridges. Features STEREO, MONO, A, B, A+B mode switching; laser-trimmed stepped controls; gold-plated phono input jacks; double-action switching; all 1% metal-film resistors in audio circuits; fully regulated power supplies. FR 20-20,000 Hz  $\pm 0.1$  dB; crosstalk -80 dB or better at 1 kHz and below; THD and IM 0.01% below 3V for TUNER, AUX, TAPE inputs; sens 315 mV 3V rms at 1 kHz for TUNER, AUX, TAPE inputs..... \$435

### TANDBERG

#### TCA-3002A Control Preamplifier

Wireless control amplifier with MC input designed as complete preamplifier stage employing 11 discrete semiconductor devices in each ch. Features MM phono input with capacitance, resistance adjustments; bass, treble controls with tone defeat; digital disc input capable of handling >20 V. Audio circuitry in-



cludes selected all-metal film resistors, polystyrene capacitors, min negative feedback; 2 butterworth infrasonic filters; mono, loudness switches; 2 deck tape monitors with 2-way dub; headphone amp with separate volume control..... \$795

### TECHNICS

#### SU-A4MK2 Stereo DC Control Amplifier

Preamp with built-in amorphous step-up transformer for extended linear response. Features full matching phono equalizer for all types of cartridges; all class A with ICL ultra-low-noise FET input; low output imp allows remote power amp placement; shelving tone controls for equalization; presettable CD/aux/video input selector; 4-ganged master volume control; infrasonic and high filter switches; loudness switch; separate rec selector with 2-way dubbing; 2 tape monitors THD <0.006% MM, 0.01% MC, 0.006% line; FR 20-100,000 Hz  $\pm 0.2$  dB phono, DC-100,000 Hz +0 dB line; S/N (A-weighted) 77 dB MM, 76 dB MC, 100 dB line; input imp 47 kilohms 1, 2, MM, 30/470 MC, 47 kilohms line; output imp 600 ohms tape 1, rec out, 2 ohms pre out; max output voltage 8 V; input sens 0.26/0.64 mV 1 MM, 20/65  $\mu$ V MC, 0.64 mV 2MM, 38 mV line; 16 1/2"W x 3 1/16"H x 14 3/16"D; 17.6 lbs..... \$1,100

#### SU-A8 Stereo DC Control Amplifier

Straight DC preamp with complete class A-circuitry. Features full control flexibility; convenient program selectors; MC and MM inputs; tape mode selector; dubbing selector; control status indicators. THD <0.003% MM, 0.01% MC, 0.002% line; FR RIAA standard curve Hz +0.2 dB MM, RIAA standard curve  $\pm 0.5$  dB MC phono, DC-20,000 Hz +0.2 dB line; S/N (A-weighted) 79 dB MM, 75 dB MC, 100 dB line; output imp 2 ohms, rec out 600 ohms; input sens 1.25 mV MM, 85  $\mu$ V MC, 75 mV line; 16 1/2"W x 2 3/32" x 14 1/8"; 7.6 lbs..... \$350

### THRESHOLD

#### Model FET one preamplifier

Dual-ch noninverting FET preamplifier employing proprietary gain circuits for max accuracy through a min

of components; FET one gain cells use 2 matched low-noise cascoded JFETs and constant-current sources in a unique topology which achieves full voltage gain across a single JFET for maximal transmission of information and minimal coloration; provisions for two tape recorders. RIAA equalization .1 dB deviation from phase and amplitude accuracy; .015% THD at 3 V preamp out; 20-20,000 Hz into 10,000 ohms; max output 15 V peak at 1% THD; bandwidth -3 dB points 5 Hz and 100,000 Hz; phono section noise MM -79 dB unweighted; -5 mV 20-20,000 Hz; mc -78 dB unweighted, -83 dB A-weighted ref to 5 mv 20-20,000 Hz; phono overload 200 mV peak at 1,000 Hz; input imp MM 47,000 ohm; adjustable capacitance 40 ohm MC; line level 25,000 ohm; output imp 470 ohms; slew rate 25 v/ $\mu$ s; rise time 2 $\mu$ s; power-supply rejection ratio -80 dB; power-supply noise 100 mV; power supply stability 95-140 V; 17"W x 2.5"H x 12"D;..... \$2,200

#### Model FET two series II Preamplifier

Dual-ch, noninverting FET preamplifier; required gain for each stage of FET two series II is achieved through three FETs for a simple gain path topology employing minimal phase compensation; input/output connectors are Threshold designed, gold plated with a positive "make" inner conductor supported in a machined Teflon insulator. .02% THD at 3 V preamp out 20-20,000 Hz into 10,000 ohms; max output 20 V peak at 1% THD; bandwidth -3 dB points 8 Hz and 100,000 Hz; phono noise MM -78 dB unweighted, -83 dB A-weighted ref to 5mV out 20-20,000 Hz; MC -75 dB unweighted; -80 dB A-weighted ref to 5 mV out 20-20,000 Hz; phono overload 500 mV peak at 1,000 Hz; input imp MM 47 ohm; adjustable capacitance MC; 10-100 ohm adjustable resistance; output imp 470 ohms; slew rate 25 v/m; rise time 2 $\mu$ s; power-supply rejection ratio -80 dB; 17"W x 2.5"H x 9"D;..... \$1,100

### VSP

#### Straightwire Preamplifier

Stereo preamplifier with computer-controlled front end for auto muting and DC offset sensing. Features 8-bit Z80 microprocessor; sensi-touch input selectivity with computer-controlled LED feedback; modular construction, board swap serviceability; DC servo phono and amplifier stage; isolated shielded power supply; high-resolution phase accuracy; dual tape monitoring with tape-to-tape copying; RIAA open-loop contoured active equalization. Phono preamp section: max output 27 V rms 20-20,000 Hz, phono preamp THD <.01% at rated output, phono preamp. High-level amp section: max output 9 V rms 20-20,000 Hz, amp THD <.01% at rated output, high-level amp; FR 1-20,000 Hz, -3 dB amp..... \$995

### YAMAHA

#### C-70 Preamplifier

Stereo preamplifier with 2-band parametric equalizer. Features Varigain volume control that reduces residual noise with volume reduction; Linear Transfer circuit; Extended Roll-off Equalizer; inverting preamp outputs; direct phono inputs; MM cartridge load capacitance selector; rec out selector; switchable infrasonic, high filters. Input sens/imp 100  $\mu$ V/100 ohms MC, 2.5 mV/100 ohms MM; 150 mV/47k ohms aux, tuner, tape; phono overload MC/MM 13/300 mV; max output 10 V; FR 5-100,000 Hz +0/-0.5 dB aux, tape, and tuner, 20-20,000 Hz & 0.2 dB MC, 10-100,000 Hz & 0.3 dB MM; THD 0.001%; IM distortion 0.002%; S/N MC/MM/ all others 90/94/105 dB; residual noise 1.8  $\mu$ V; EQ frequency control low/high 31.8-800 Hz/800-20,000 Hz & 12 dB; power consumption 50 W; 17 1/2"W x 14 1/2"D x 3 3/4"H; 15 lb 13 oz..... \$780

C-50. Similar to C-70 except no equalizer; has continuously variable tone control turnover frequencies; 4-gang volume control. Phono overload MC/MM 8.5/220 mV; THD 0.002%; MM S/N 93 dB; bass/treble turnover frequency range 100-500 Hz/1k-5k Hz & 10 dB; residual noise 2.5  $\mu$ V; 15 lb..... \$530

**ADS**

**ADS Atelier A2 Amplifier**

Stereo integrated amp with separate input selectors for recording and listening. Features two tape deck monitor loops; two separate phono inputs; one for moving magnet cartridges and one for moving coil cartridges; preamp output and main amp input jacks; fast-response linear LED displays; clipping indicators; power output 4 ohm load 100 W/ch, THD <0.08%, 8 ohm load 80 W ch, THD <0.05%, 2 ohm load 70 W ch, THD <0.2%; FR tuner, video, tape +0, -1.5 dB from 5-90,000 Hz, phono conforms to RIAA equalization ± 0.5 dB from 50-20,000 Hz; S/N tuner, video, tape > 80 dBa, phono MM > 80 dBa; phono MC > 60 dBa; IMD <0.05% with 4 ohm loads; 17.52" W x 2.76" H x 14.84" D; 20 lbs .... \$580

**ACCUPHASE**

**E-303 Integrated Stereo Amplifier**

Integrated amp with MOSFET, parallel push-pull output stage. Features built-in MC head amp; 3-step loudness compensator; disc 1 input imp selector. Rated output 130 W/ch (both chs driven, at 8 ohms, 20-20,000 Hz, distortion 0.02% below); damping factor 80 (at 8-ohm, 40 Hz); rated input disc 2.5mV, disc (head amp on) 0.125mV; S/N aux/tuner 100 dB, disc 86 dB, disc (head amp on) 72 dB; 17 1/2" W x 6 7/16" H x 14 7/16" D. .... \$1700

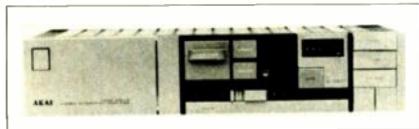
**E-204 Integrated Stereo Amplifier**

Integrated amp with MOSFETs in a Complementary-Symmetry push-pull power output stage and pure DC amps in both the voltage amp and power amp sections. Features DC servo control of both sections; built-in MC head amp; 2-step loudness compensator; tone control with turnover selector switch; active subsonic filter; disc input imp selector; -20 dB attenuator. Rated output 75 W/ch, both channels driven into 8 ohms, 20-20,000 Hz, with <0.02% distortion; damping factor 80 (at 8 ohms, 50 Hz); rated input disc 1/MM 1.9mV, disc 2/MC 0.09mV; S/N aux/tuner 100 dB, disc 1 80 dB, disc 2 77 dB \$800

**AKAI**

**AM-U7 DC Stereo Integrated Amplifier**

Zero drive amp with open loop circuit. Features dual pole DC servo circuit; line straight switch; tape dub-



bing switch; MC/MM cartridge capability; loudness control; infrasonic filter; audio mute switch; 80 W/ch rms ..... \$400

**AM-U5 DC.** Similar to AM-U7 except 60 W/ch rms ..... \$300

**AM-U3 DC Stereo Integrated Amplifier**

Zero drive amp with DC servo circuit, operational fluorescent display, 2 tape monitors and direct access volume control. Power output 45 W/ch rms; . \$250

**DENON**

**PMA-750 Integrated Amplifier**

Stereo integrated amp with 0-dB power amp. Features Direct-A amp; zero cross linear bias circuit; real-drive to reduce distortion with varying loads; real-time tone controls; super phono equalizer; MC phono head amp; separate tape-source and REC out selector for dubbing independent of program; A/B speaker switching; wood end panels optional. Output power 80 W/ch into 8 ohms, 20-20,000 Hz at no more than 0.02% THD; damping factor 100; RIAA accuracy ± 0.2 dB, 20-20,000 Hz; S/N (A-weighted) 88 dB MM, 72 dB MC, 110 dB tuner, tape, aux; power consumption 230 W; 17.4" W x 16.3" D x 5.3" H; 26.4 lb ..... \$450

**PMA-770.** Similar to PMA-750 except output power 100 W/ch; has dual phono inputs, massive toroidal transformer ..... \$620

**PMA-730 Integrated Amplifier**

Stereo integrated amp with 0-dB power amp. Features real-drive; real-time tone controls; phono equalizer; MC phono head amp; dual tape source switching, REC out selector for dubbing independent of program; A/B speaker switching; wood panels optional. Output power 60 W/ch into 8 ohms, 20-20,000 Hz at no more than 0.05% THD; damping factor 100; input sens/imp 2.5 mV/47k ohms MM, 200 µV/100 ohms MC, 150 mV/47k ohms tuner, tape, aux; RIAA accuracy ± 0.3 dB, 20-20,000 Hz; S/N (A-weighted) 86 dB MM, 70 dB MC, 106 dB tuner, tape, aux; power consumption 150 W; 17.4" W x 15.6" D x 4.5" H ..... \$299

**FISHER**

**CA550 Integrated Amplifier**

Stereo integrated amp with 9-LED power-level meters. Features class-A-II dc power amp; pushbutton function selectors with LED indicators; bass, treble controls; loudness, infrasonic filter and high-filter switches. Output power 70 W/ch rms into 8 ohms, 20-20,000 Hz at 0.009% THD and IM distortion; damping factor > 50; preamp FR 20-20,000 Hz ± 0.5 dB; input sens/imp 250 µV/22 ohms MC, 2.5 mV/50k ohms MM, 150 mV/50k ohms tape monitors, tuner, aux; phono overload MC/MM 6/180 mV; subsonic-filter response 12 dB/octave below 10 Hz; hum and noise MC/MM/tape monitor, tuner, aux 65/75/100 dB; preamp output 1000 mV/1.5k ohms; power consumption 320 W; 17 1/2" W x 14 1/2" D x 4 1/2" H; 20 lb ..... \$450

**CA 660 Integrated Amplifier**

Stereo amp with dual power and 5-LED peak-level indicators. Features bass, treble controls; loudness switch; source/mic mixing level/record control; input selector with illuminated indicators. Output power 40 W/ch continuous into 8 ohms from 20-20,000 Hz with 0.07% THD and IM distortion; input sens 2.5 mV phono, 150 mV tuner, aux, tape 1, 2, S/N 78 dB phono, 95 dB tuner, aux, tape ..... \$300

**HARMAN/KARDON**

**PM660 Integrated Amplifier**

Stereo integrated amp with high current capability, dc circuitry, switching for 2 pairs speakers. Features MC phono head amp; variable loudness; main direct; phono load capacitance trimmer; defeatable bass, treble controls; 2 tape monitors; 2-way tape copy; subsonic, high filters; stereo/mono/reverse switch. Output power 80 W/ch continuous into 8 ohms, 20-20,000 Hz at 0.02% THD; frequency range 4-140,000 Hz; slew rate 80 V/µsec; S/N phono/aux 84/94 dB; phono overload 200 mV MM ..... \$530

**PM650.** Similar to PM660 except output power 50 W/ch at 0.03% THD; S/N phono/aux 80/92 dB ..... \$370

**PM640.** Similar to PM 650 except single tape copy. Output power 35 W/ch at 0.05% THD; aux S/N 90 dB; MM phono overload 120 mV ..... \$270

**HITACHI**

**HA-1 Integrated Stereo Amplifier**

Integrated stereo amp with infrasonic filter and loudness compensation circuit. Features dual speaker set; slim profile and convenient controls. 28 W/ch min rms from 40-20,000 Hz; THD 0.5%; IMD 0.1%; S/N 72 dB (phono), 95 dB (CD, tuner, tape); 17 1/2" W x 3 1/4" H x 9" D; 8 lb 13 oz ..... \$140

**HA-2 Integrated Stereo Amplifier**

Integrated stereo amp with a infrasonic filter and loudness compensation control. Features feather-touch controls; fluorescent indicators; infrasonic filter; audio muting; dual speaker set; input selector for Compact Disc digital audio; volume level indicator; min rms output power 50 W/ch at 8 ohms from 40-

20,000 Hz; frequency response phono RIAA 20-20,000 ±0.5 dB line 20-20,000 Hz +1 dB, -2 dB; total harmonic distortion 0.05%; IM distortion 0.05%; S/N phono 72 dB, CD, aux, tuner, tape 95 dB; 17 1/2" W x 3 1/4" H x 11 1/4" D; 12 lb 6 oz \$250

**JVC**

**A-X77 Stereo Integrated Amplifier**

Stereo integrated amp with Dynamic Super-A power amp. Features pure negative feedback; triple power protection; 3 tape deck connections; flipdown hinged panel; MM/MC high-gain phono equalizer amp. Output power 90 W/ch into 8 ohms; THD 0.003% at 20-20,000 Hz; IMD 0.001%; FR dc-300,000 Hz ± 3 dB; S/N 84 dB; 24.2 lbs ..... \$650

**A-X50 Stereo Integrated Amplifier**

Stereo integrated amp with 5-band SEA graphic equalizer, Super-A power amp. Features triple power protection; spectrum analyzer display; 2 tape deck connections; touch-button volume control; MM/MC high-gain phono equalizer amp. Output power 65 W/ch into 8 ohms; FR 3-200,000 Hz +0, -3 dB; THD 0.007% at 20-20,000 Hz; IMD 0.001%; S/N 81 dB; 17 1/2" W x 4 3/8" H x 14 1/2" D; 18.9 lbs ..... \$430

**A-X40 Stereo Integrated Amplifier**

Stereo integrated amp with Super-A power amp, and 5-band SEA graphic equalizer. Features 12-dot fluorescent power meters; 2 tape deck connections. Output power 50 W/ch into 8 ohms; FR 10-100,000 Hz -0, -3 dB; THD 0.007% at 20-20,000 Hz; IMD 0.001%; S/N 75 dB 17 1/2" W x 4 3/8" H x 11 1/2" D; 13.9 lbs ..... \$280

**A-X30 Stereo Integrated Amplifier**

Stereo integrated amp with Super-A power amp. Features triple power protection; 12-dot fluorescent peak power meters; 2 tape deck connections. Output power 40 W/ch into 8 ohms; FR 10-100,000 Hz +0.5, -3 dB; THD 0.007% at 20-20,000 Hz; IMD 0.007%; S/N 75 dB 17 1/2" W x 4 3/8" H x 11 1/2" D; 13.2 lbs ..... \$230

**A-K22 Integrated Amplifier**

Integrated amp with triple power protection that protects speakers from power abnormalities. Features a two-amp design configuration; tone control circuitry in the power amp; A/B speaker switch; loudness switch. Output power 40 W/ch into 8 ohms; FR 10-30,000 Hz +1, -3 dB; THD 0.01% at 40-20,000 Hz; S/N 75 dB 17 1/2" W x 3" H x 11 1/4" D; 9.5 lbs ..... \$190

**KENWOOD**

**KA-71 Integrated Amplifier**

Integrated amp with two tape monitors and tape-to-tape dubbing facility. Features infrasonic filter; two pair speaker capability; 65 w/ch min rms into 8 ohms from 20-20,000 Hz; 16 lbs ..... \$265

**KA-71B.** Same as KA-71 but black ..... \$265

**KA-9 Integrated Amplifier**

Integrated amp with built-in 5 elements graphic equalizer. Features motorized volume control; 10 point 3 color LED peak power meters. 40 w/ch min rms into 8 ohms from 20-20,000 Hz < THD; 14lbs .. \$235

**KA-5X Integrated Amplifier**

High-speed amp with MM/MC phono cartridge switch and dc amp. 40 w/ch min rms into 8 ohms from 20-20,000 Hz <0.003% THD; 18 lbs ..... \$210

**KA-51 Integrated Amplifier**

Integrated amp with 2 tape monitors, tape-to-tape dubbing facility and 2-pair speaker capability. 50 W/ch min rms into 8 ohms from 20-20,000 Hz with < 0.09% THD; 13 lbs ..... \$175

**KA51B.** Same as KA-51 but black ..... \$175

**L-02A Integrated Amplifier**

Separate hi-speed integrated amp with dynamic linear drive. Features SIGMA drive; logic control function

switches; non-magnetic design and separable power transformer; MM/MC phono input. 170 W/ch min rms into 8 ohms from 20-20,000 Hz <0.003% THD; 78 lbs ..... \$3000

**KA-9XG Integrated Amplifier**

High-speed amp with exclusive SIGMA drive, MM/MC phono cartridge switch and dc amp. 120 W/ch min rms at 8 ohms from 20-20,000 Hz <0.008% THD; 25 lbs ..... \$495

**KA-7X Integrated Amplifier**

High-speed amp with dynamic linear drive and MM/MC cartridge switch. 100 w/ch min rms into 8 ohms from 20-20,000 Hz <0.008% THD .. \$400

**KLH**

**A-601 Integrated Amplifier**

Stereo integrated amp with discrete-LED power meters with switchable range. Features low, high filters; A, B, A + B speaker switching; defeatable bass, treble controls; 2-deck tape copy; 2 sets phono inputs; LED function indicators. Output power 60 W/ch into 8 ohms, 20-20,000 Hz at 0.02% THD; IM distortion <0.02%; FR 20-20,000 Hz & 0.5 dB; hum and noise phono/all other inputs -84/-100 dB ... \$300

**A-351 Integrated Amplifier**

Stereo integrated amp with discrete-LED power displays with switchable ranges. Features low, high filters; A, B, A + B speaker switching; bass, treble controls. Output power 35 W/ch into 8 ohms, 20-20,000 Hz at 0.08% THD; IM distortion <0.08% FR 20-20,000 Hz & 0.5 dB; hum and noise phono/other inputs -76/-95 dB ..... \$220

**LUXMAN**

**LX-104 Integrated Amp**

Digital-ready integrated amp features high-speed fluorescent peak power indicators with optional 2-sec peak-power hold; 5 volume-level LEDs; mono subwoofer output with selectable crossover points at 50, 100 and 150 Hz; Servo-face; remote signal indicator; full-function control of cassette and turntable; pre-out main input; MC input; bass/treble control; turnover frequency switch (bass, 200/400 Hz; treble, 2,000/4,000 Hz); tone circuitry switch; infrasonic filter (38 Hz, 6 dB/octave); tape 1 or 2 monitoring; tape 2 to 1 dubbing; A/B speaker switch; mono switch. 120 W/ch min continuous power into 8 ohms <0.012% THD; FR 10 to 100,000 Hz, S/N MM 86 dB (IHF A-weighted); 17 1/4" W x 5 1/2" H x 17 1/4" D .. \$900

**L-450 Integrated Stereo Amplifier**

Duo-Beta dc integrated amp with discrete circuitry. Features low boost switch; recording selector switch; peak power indicator; tape dubbing switch; MC equalizer circuit. 55 W/ch continuous both chs driven into 8 ohms from 20-20,000 Hz <0.03% THD; input sens 2.0 mV (phono MM), 2.0 mV (phono MC-1), 190 mV (tuner, aux and main in; S/N (IHF A-weighted) 90/76/105 dB phono (MM)/phono (MC)/others. 18.6" W x 5.8" H x 13.3" D; 23.1 lbs ..... \$400

**MARANTZ**

**PM750 Integrated Amplifier**

Stereo dc integrated amp with 5-band stereo graphic equalizer. Features gold-plated input, output jacks; 2-way tape dub; MC head amp; EQ output jacks; LED power-level indicator; loudness control; infrasonic filter; 9-kHz filter; FM muting; 2 tape monitors; independent record mode selector; fully complementary symmetry output. Output power 75 W/ch into 4 ohms, 20-20,000 Hz at 0.06% THD and 0.04% IM

**Audio terms are defined in the glossary on page 19.**

**For an explanation of abbreviations, turn to the list on page 22.**

distortion; damping factor 50; FR 10-50,000 Hz & 1 dB; S/N MM/MC/high-level 85/60/94 dB; phono overload MC/MM 22/220 mV; input sens MC/MM/high-level 0.28/2.8/150 mV; power consumption full power/idling 290/25 W; 16 3/4" W x 13" D x 4 1/4" H; 20 lb 15 oz ..... \$450

**PM 730 Integrated Amplifier**

70 W/ch into 8 ohms from 20-20,000 Hz no more than 0.03% THD. Features gold-plated input/output jacks; moving magnet and moving coil inputs; 2 tape monitors with bidirectional tape dubbing; separate preamp and power amp; touch volume control with LED indicators; 3 preset memory; volume levels; wireless remote controllable with optional RC 430/RMC 12; 16 1/4" W x 3 10/11" H x 11 2/3" D ..... \$420

**PM 225 Integrated Amplifier**

33 W/ch into 4 ohms from 20-20,000 Hz with no more than 0.09% THD. Features gold-plated input/output jacks; bass and treble controls; infrasonic filter; tape monitoring function; loudness control; 5 segment peak power LED indicators; 16 3/4" W x 3 1/2" H x 12 1/2" D ..... \$250

**PM 225 Integrated Amplifier**

33 W/ch into 4 ohms from 20-20,000 Hz with no more than 0.09% THD; gold-plated input/output jacks; bass and treble controls; infrasonic filter; tape monitoring function; loudness control; 5 segment peak power LED indicators; 16 3/4" W x 3 1/2" H x 12 1/2" D ..... \$190

**McINTOSH**

**MA 6200 Integrated Amplifier**

Stereo integrated amp with 1% metal film resistors and 5% poly film capacitors; 2 feedback loops; equalizer amplifier; power guard; turn-on delay. Power output 100 W min sine wave continuous average power per channel, both chs operating into 4 ohms, 20-20,000Hz, with <.05% THD; output load impedance 4 ohms, 8 ohms; THD .05%; IM FR 20-20,000 Hz +0, -0.5 dB at rated power; 16" W x 5 1/2" H x 13" D; 30 lbs ..... \$1,649

**MCS by JC PENNEY**

**3860 Integrated Amplifier**

Stereo integrated amp with LED power meters. Features infrasonic and high filters; meter range selector; loudness control; treble and bass controls. Output power 60 W/ch rms into 8 ohms, 20-20,000 Hz at 0.05% THD ..... \$300

**3822 Integrated Amplifier**

Stereo integrated amp with LED indicators. Features treble, bass, microphone level and loudness controls. Output power 20 W/ch rms into 8 ohms, 20-20,000 Hz at 0.1% THD; 15 3/4" W x 8 1/4" D x 3" H .. \$150

**NAIM by AUDIOPHILE SYSTEMS**

**NAIT Integrated Amplifier**

NAIM Audio Integrated Thing with MM phono, tape, tuner, inputs. Phono input sens 2.5 mV; 11" D x 8" W x 3" H ..... \$399

**NEC**

**A-10E Integrated Amplifier**

Integrated amp designed for Compact Disc players. Features NEC Reserve Power Supply to charge one filter the moment the other filter stops charging and starts discharging; power supply design that uses independent supplies for the phono amps, buffer, voltage amp, and current amp; high-gain head amp for MC cartridges; no tone control system for simple and straight signal path. 120 W/ch into 4 ohms, 60 W/ch into 8 ohms, both chs driven at 20-20,000 Hz; THD 0.003%; IMD 0.003%; S/N 90 dB (-142 dBV) phono MM, 72 dB/80 μV(-154 dBV) phono MC1, 83 dB/250μV(-154 dBV) phono MC2, 110 dB (-126 dBV) line; 430mmW x 150mmH x 430mmD; 20 kg ..... \$1,300

**NIKKO**

**NA-2000 Integrated Stereo Amplifier**

Integrated amp with monaural stereo and wide stages continuously switchable; Features rec out selector makes it possible to record any program from any source; bidirectional dubbing system; dual speaker selector system; low harmonic distortion DC power amp system features a high-gain phono-equalizer circuit which permits using MC cartridges plus 3-stage high stability differential circuitry ..... \$340

**NA-700II Integrated Amplifier**

Stereo integrated amp with 10-LED power meters, MC head amp. Features monitor switches that allow tape dubbing; infrasonic, high filters; loudness-contour switch; A/B/A + B speaker switching. Output power 60 W/ch into 8 ohms, 20-20,000 Hz at 0.03% THD ..... \$300

**NA-500II.** Similar to NA-700II except no MC head amp, high filter; has circuit-breaker protection. Output power 40 W/ch at 0.06% THD ..... \$240

**ONKYO**

**Integra A-8017 Integrated Amplifier**

Dynamic Super Servo digital ready amp; delta power supply; linear switching; MM and MC/Hi MC phono inputs; 2 tape monitors; DC/aux input; 2-way tape dubbing; direct tone circuitry; 20 dB muting; infrasonic filter; nonmagnetic materials. 75 W/ch min rms both chs driven into 8 ohms from 20-20,000 Hz with <0.015% THD; also available with black matte finish A-8017B ..... \$400

**Integra A-8015 Integrated Amplifier**

Dynamic super servo digital ready amp; Delta power supply; linear switching; MC phono input; record selector; 2 tape monitors; DC/Aux input; 2-way tape dubbing; direct tone circuitry; 20 dB muting; infra-



sonic filter; nonmagnetic materials; 55 W/ch min rms both chs driven into 8 ohms; from 20-20,000 Hz; <0.018% THD; also available with black matte finish A-8015B ..... \$320

**A-44 Integrated Amplifier**

Stereo integrated equalizer amp with five bank graphic equalizer and pan pot. Features keyboard input; 2 tape inputs; A,B, A&B speaker select; 50 W/ch min rms both chs driven into 8 ohms from 40-20,000 Hz with <0.5% THD; also available with black matte finish ..... \$240

**PA-33 Integrated Amplifier**

Integrated amp with touch volume and preset power indicators. Features super bass low frequency EQ; mic input; 30 W/ch min rms at 8 ohms both chs driven from 40-20,000 Hz <0.08% THD ..... \$230

**A-22 Integrated Amplifier**

Stereo integrated ampr. Features keyboard input; 2 tape inputs; A,B, A&B speaker select; direct tone circuitry; 40 W/ch min rms both chs driven into 8 ohms from 40-20,000 Hz <0.5% THD ..... \$150

**SAE**

**A14 Integrated Amplifier**

Features LED power, tape output bargraph meters; parametric equalization with tape EQ; MC phono input; infrasonic filter. 140 W/ch continuous into 8 ohms, 20-20,000 Hz, at 0.05% THD ..... \$799

**I102 Integrated Amplifier**

60 W/ch integrated amp incorporating the direct line concept. Computer system eliminates dependency be-

tween front panel layout and internal location of audio circuits. Features phono power amp; high current main power amp; alpha numeric and digital readouts for indication of selected input; tone settings; volume and balance settings; fast response LED level display for tone memory, tape, tape dubbing and external processor; touch-buttons on front panel. .... \$450

**SANSUI**

**AU-D11 MK II Super GF Integrated Amplifier**

Stereo integrated amp with DD/dc circuitry, New Ground Floating Circuit, plus advanced Super Feedforward error correction amp. Features loop heat sinking; moving-coil head amp; defeatable bass, treble controls with 150/300-Hz bass, 3k/6k-Hz treble turnover frequencies; high, low filters; audio muting; 2-way tape dub; rec selector; input selector with separate MM/MC selector, high/low MC gain switch. Output power 130 W/ch continuous into 8 ohms, 10-20,000 Hz at 0.0025% THD; FR 0-300,000 Hz -3 dB; slew rate 400 V/ $\mu$ sec; S/N 90 dB MM, 110 dB aux, tuner, tape ..... \$1,000

**AU-D77X. Super GF Integrated Amplifier**

Stereo integrated amp with Ground Floating Circuit, Super Feedforward System, proprietary DD/DC (Diamond Differential DC) circuit, and five-range tone control system (super bass, bass, midrange, mid highrange, and treble). Features large input-selector pushbuttons with LED indicator; horizontal fluorescent peak indicators for power output. 110 W rms into 8 ohms, from 10 to 20,000 Hz; THD <0.0028%; S/N 115 dB. In black finish ... \$650

**AU-D55X Integrated Amplifier**

Integrated stereo amp with Super Feedforward error correction circuitry. Features fluorescent peak power level meter; monitoring and dubbing for two decks; bass and treble controls; tone control defeat; loudness control; MM and MC phono cartridge inputs; speaker switching for A, B, or A&B. 70 W/ch continuous into 8 ohms, 20 to 20,000 Hz, with no more than 0.004% THD. Phono FR 20 to 100,000 Hz; black (AU-D55XB) or silver (AU-D55S) ..... 370

**AU-D33 Integrated Amplifier**

Stereo integrated amp with Super Feedforward circuitry, dc coupling throughout. Features MM and MC inputs; defeatable bass; treble controls; direct-access inputs; high filter; 2-way tape dub; black finish. Output power 50 W/ch continuous into 8 ohms, 20-20,000 Hz at 0.004% THD; FR dc-300,000 Hz; S/N 84 dB MM ..... \$350

**AU-D101 Integrated Amplifier**

Slim-design integrated stereo amp with Super Feedforward error correcting circuitry. Features two tape monitors with dubbing one to the other; loudness switch; high filter; bass and treble controls with center defeat switch; phone jack; speaker switch. Output power 30 W/ch continuous into 8 ohms from 20-20,000 Hz, with <0.009% THD; S/N at MM phono input >80 dB; black or silver finish ..... \$210

**H.H. SCOTT**

**458A Integrated Amplifier**

Stereo integrated amp with dual-range fluorescent power meter calibrated in W using auto-ranging for accurate display from 0.001 W to full power. Features MM, MC phono preamps; center-detented tone, bass, midrange, treble controls; infrasonic, high filters; protection LED. Output power 65 W/ch rms into 8 ohms, 20-20,000 Hz at 0.05% THD; input sens 0.25 mV MC, 2.5 mV MM, 150 mV all others; S/N 70 dB MC, 86 dB MM, 102 dB all others; FR 20-20,000 Hz & 0.5 dB; sep 65 dB MM, 70 dB all others at 1 kHz; damping factor 60; 3.5"H x 17"W x 8.7"D\$350

**438A Integrated Amplifier**

Stereo integrated amp with dual-range fluorescent power meters. Features infrasonic, high filters; 2 tape monitors with 2-1 dubbing; center-detented balance, tone controls. Out power 45 W/ch rms into 8 ohms.

20-20,000 Hz at 0.05% THD; input sens 2.5 mV MM, 150 mV all others; FR 20-20,000 Hz & 0.5 dB; sep 60 dB phono, 65 dB all others at 1 kHz; damping factor 50; 3.5"H x 17"W x 8.7"D ..... \$265

**428A Integrated Amplifier**

Stereo integrated amp with dual-range fluorescent power meters. Features infrasonic filter; center-detented tone, balance controls. Output power 35 W/ch rms into 8 ohms, 20-20,000 Hz at 0.05% THD; input sens 2.5 mV phono, 150 mV all others; S/N 80 dB phono, 100 dB all others; FR 20-20,000 Hz & 0.5 dB; sep 55 dB phono, 60 dB all others at 1 kHz; damping factor 40; 17"W x 8.7"D x 3.5"H\$225

**418A Integrated Amplifier**

Stereo integrated amp with infrasonic filter, 2 switched, 1 unswitched accessory outlets. Output power 30 W/ch rms into 8 ohms, 20-20,000 Hz at 0.08% THD. Input sens 2.5 mV phono, 150 mV all others; S/N 80 dB phono, 100 dB all others; FR 20-20,000 Hz & 0.5 dB; sep 55 dB phono, 60 dB all others at 1 kHz; damping factor 40; 17"W x 8.7"D x 3.5"H ..... \$165

**SHERWOOD**

**AD-2220 CP Integrated Amplifier**

Nonswitching full DC integrated amp with relay protection; 65 W/ch, min rms, 20-20,000 Hz with no more than 0.02% THD at 8 ohms; IMD at 65W (SMPTE) 0.02%; dynamic headroom 1.3 dB; S/N phono (5 mV input) 92 dB; aux 105 dB; phono input FR with built-in LPF DC-40,000 Hz; input sens for rated output, phono 2.5mV, aux 150mV; 17<sup>3</sup>/<sub>8</sub>" x 4<sup>3</sup>/<sub>8</sub>" x 11<sup>13</sup>/<sub>16</sub>" ..... \$300

**AD-2210 CP Integrated Amplifier**

Pure complimentary integrated amp with push volume control; power output 35 W/ch.min rms at 40-20,000 Hz with 0.5% THD into 8 ohms; IMD at 30 W (SMPTE) 0.08%; dynamic headroom 1.4 dB; damping factor 50 at 8 ohms; S/N phono (5 mV input) 88 dB, aux 95 dB; aux FR with built-in LPF 10-40,000 Hz; input sens for rated output 2.5 mV (phono), 150 mV (aux); 17<sup>3</sup>/<sub>8</sub>" x 2<sup>3</sup>/<sub>16</sub>" x 11<sup>13</sup>/<sub>16</sub>" ..... \$200

**SONY**

**TA-V7 Integrated Amplifier**

Integrated amp with acoustic memory and audio signal processor. Features electronic feather-touch controls; Compact Disc player inputs; tape monitor switch with equalizer functions; tape 2/aux inputs; fluorescent display; auto muting; last-function memory; switchable 20-dB muting; MNOS memory IC; pulse power supply; switchable infrasonic, high filter; electronic relay protection. Output power 80 W/ch into 6 ohms; THD 0.09% from 20-20,000 Hz; IMD 0.09%; FR standard RIAA curve  $\pm$ 3 dB phono, 5-100,000 Hz -3 dB, (tuner, tape, aux, CD); S/N (A-weighted) phono/tuner/CD 80/89/100 dB; 14" x 3<sup>1</sup>/<sub>4</sub>" x 9<sup>7</sup>/<sub>8</sub>"; 8 lbs ..... \$400

**TA-AX500 Integrated Amp**

Amp with Audio Current Transfer makes left, right, preamp and power amp function independently of each other. Features low-noise phono input; two tape monitors; center defeat position on bass and treble controls; A,B,A&B,OFF speaker switch; outboard graphic equalizer; switchable infrasonic filter; linear gain volume control; Compact Disc player direct input; Legato Linear power amp; dc power amp; electronic relay protection. 80 W/ch into 8 ohms from 20-20,000 Hz with 0.008% THD ; dynamic headroom 1.8 dB. FR standard RIAA curve +2,-2 dB (phono), 5-150,000 Hz -3 dB (tuner,tape, aux 1 and 2, CD); S/N (A-weighted) phono MM/phono MC/tuner/CD/are 88/68k/98/98/98 dB; 17" x 5<sup>1</sup>/<sub>8</sub>" x 14<sup>3</sup>/<sub>8</sub>"; 24 lbs, 5 oz ..... \$320

**TA-AX6 Integrated Amplifier**

Stereo integrated amp with audio signal processor IC that prohibits wide dynamic range, short signal path, feather-touch operation. Features 3-position acoustic

memory tone/filter settings; Legato Linear non-switching dc power amp; wide-response output transistors; ThermoDynamic Cooling heatpipe; infrasonic, high filters; 2-way tape monitor/copy; auto muting; wireless remote control capability. Output power 40 W/ch into 8 ohms, 20-20,000 Hz at 0.008% THD ..... \$280

**TA-AX35 Integrated Amplifier**

Integrated amp with 5-band graphic equalizer. Features feather-touch controls; two tape monitors; A,B,A&B,OFF speaker switch; CD/AUX input jacks on front and back; electronic relay protection. 30 W/ch into 8 ohms 20-20,000 with 0.08% THD and 0.08% IMD; FR standard RIAA curve  $\pm$ 5 dB phono, 10-100,000 Hz +1,-3 dB all other inputs; S/N (A-weighted) 73 dB phono, 93 dB others; 17" x 3<sup>1</sup>/<sub>8</sub>" x 11<sup>3</sup>/<sub>8</sub>"; 19 lbs, 10 oz ..... \$160

**TANDBERG**

**TIA 3012 Integrated Amplifier**

Features MOSFET output, passive calibrated tone controls utilizing metal film resistors (1% tol), no electrolytic or ceramic capacitors from phono input to speaker output. Thermic servo loop to detect dc offset on the output. Minimized "Miller Effect," no current or voltage limiting on output stages. 100 W/ch rms into 8 ohms <.02% THD. May be combined with Tandberg tuners and a pair of rosewood side panels to create a receiver ..... \$995

**TEKNIKA**

**8851 Integrated Amplifier**

Stereo integrated amp with fluorescent peak power display. Features infrasonic, high filters; 2-way tape monitor/dub; tape record switch; MM and MC phono inputs; loudness switch; muting. 50 W/ch into 8 ohms, 20-20,000 Hz at 0.04% THD; FR 20-20,000 Hz  $\pm$ 2 dB aux,  $\pm$ 0.5 dB MM; S/N aux/MM 96/84 dB; phono overload 150 mV; 17<sup>1</sup>/<sub>8</sub>"W x 12<sup>3</sup>/<sub>8</sub>"D x 4<sup>1</sup>/<sub>2</sub>"H ..... \$250

**8451.** Similar to 8751 except no power meters, single tape monitor. 20 W/ch at 0.5% THD; FR 20-20,000 Hz  $\pm$ 0.5 dB aux, 20-35,000 Hz  $\pm$ 1 dB phono; S/N 75 dB phono; 14<sup>3</sup>/<sub>8</sub>"W 9<sup>13</sup>/<sub>16</sub>"D x 2<sup>7</sup>/<sub>8</sub>"H ..... \$140  
**8351.** Similar to 8451. 12 W/ch at 1% THD; FR 10-20,000 Hz -3 dB aux,  $\pm$ 2 dB phono; 14<sup>3</sup>/<sub>8</sub>"W x 11<sup>7</sup>/<sub>8</sub>"D x 3"H ..... \$120

**YAMAHA**

**A-1000 Integrated Amplifier**

Integrated amp with Auto class A/class AB power switching with power levels of up to 10 W handled in a pure class A mode. Features extended rolloff equalizer; larger capacity chemical capacitors; Zero Distortion Rule system; direct switch; direct coupled servo power stages with dual differential FET input circuitry; black anodized finish; 130 W/ch min rms output power into 8 ohms at 1,000 Hz with 0.005% THD; THD aux/DAD/tape/tuner 0.002%; FR 20-20,000 Hz; S/N aux/DAD/tape/tuner 89 dB; 17<sup>1</sup>/<sub>8</sub>" x 3<sup>1</sup>/<sub>4</sub>" x 16<sup>3</sup>/<sub>8</sub>"; 28 lbs, 10 oz ..... \$590  
**A-700.** Similar to A-1000 except 100 W/ch min rms output power into 8 ohms from 20-20,000 Hz with no more than 0.005% THD; FR 20-20,000 Hz  $\pm$ 0.5 dB ..... \$450

**A-500 Integrated Amplifier**

Integrated amp designed with Zero Distortion Rule circuitry; built-in head amp; DAD input; continuously variable loudness control; independent record-out/source-in selector; center-defeat bass and treble control; continuous power 70 W/ch from 20-20,000 Hz into 8 ohms with 0.01% THD; THD aux/tape/tuner 0.005% (1 W/8 ohms); S/N aux/tape/tuner 100 dB; FR aux/tape/tuner 20-20,000 Hz  $\pm$ 0.5 dB; 17<sup>1</sup>/<sub>8</sub>" x 4<sup>3</sup>/<sub>8</sub>" x 12<sup>7</sup>/<sub>8</sub>" ..... \$300  
**A-400** Similar to A-500 except lacks Zero Distortion Rule circuitry and record-in/source-out selector; continuous power 40 W/ch from 20-20,000 Hz into 8 ohms; THD 0.015% ..... \$220

# 3

# Tuners

## ACCUPHASE

### T-105 FM Tuner

Quartz-locked synthesizer FM tuner incorporating microprocessor technology. Features scan tuning; manual tuning; memory tuning with 6 stations preset; IF sel control switch; multi-function meter for signal/modulation/multipath; bulk wave filters in IF section. IHF sens mono 11.2 dBf (2.0 $\mu$ V), stereo 28.8 dBf (15 $\mu$ V); S/N mono 80 dB, stereo 75 dB; distortion mono 0.04% (1 kHz), stereo 0.04% (1 kHz); stereo sep 50-dB (1 kHz), 45 dB (10 kHz); 17 $\frac{1}{2}$ " $\times$  5 $\frac{1}{8}$ " $\times$  14 $\frac{1}{8}$ " $\times$  D ..... \$950

## ADS

### ADS Atelier T2 Tuner

AM/FM digital synthesizer tuner with 16 station presets and auto FM search tuning. Features flywheel manual tuning; fine tuning control; switchable muting; high blend control; LED frequency display; center tuning plus signal strength displays; AC outlets. FM usable sens mono 1.0  $\mu$ V (11.0 dBf) stereo 5.5  $\mu$ V (26.1 dBf); stereo 50-dB quieting sens 15  $\mu$ V (34.8 dBf); THD mono <0.15%, stereo <0.20%; S/N mono >70 dB, stereo >65 dB; FR 10-14,500 Hz, +0, -1 dB; ch sep >38 dB at 1 kHz; capture ratio <2.5 dB; quieting sens <5  $\mu$ V for 6 dB S/N; image rejector >55 dB; S/N with 1 kHz, 5 mV signal >44 dB; 17.52" $\times$  2.76" $\times$  14.84" $\times$ ; 13.2 lbs \$400

## ADCOM

### GFT-1A AM/FM Stereo Tuner

AM/FM-stereo tuner with quartz-referenced, digitally synthesized tuning, auto up/down scan and instant-recall preset tuning, LED digital frequency display. Features 8 AM/8 FM station presets; 5-LED signal-strength display; recording calibration tone (400 Hz at 50% FM modulation); high-blend mono/mute switches; tuning accuracy 0.00025%; FM usable sens 2  $\mu$ V; S/N 75 dB mono, 70 dB stereo; THD 0.15% mono, 0.22% stereo at 1 kHz, 100% modulation; alternate-ch sel 70 dB; FM-stereo sep 40 dB at 1 kHz; 19" $\times$  11 $\frac{1}{2}$ " $\times$  3" $\times$  H ..... \$375

### GFT-2 Tuner

Digitally-synthesized quartz-referenced tuner with fluorescent digital frequency display. Features auto scan tuning; 7 FM and 7 AM presets; 5-segment LED signal-strength indicator; 50-dB quieting sens 38.5 dB



stereo; FR 30-15,000 Hz  $\pm$ 2 dB; THD at 1 kHz 0.09% mono, 0.18% stereo; S/N 75 dB mono, 70 dB stereo; alternate ch sel 70 dB; capture ratio 1.2 dB; sep 50-dB at 1 kHz ..... \$250

## AKAI

### AT-S7 AM/FM Stereo Tuner

Features quartz synthesizer tuner, operational fluorescent display; 20 station random presets with station indicator c&rd; auto/manual scan; AM-IF bandwidth selector; pulse count detector; detachable AM loop antenna ..... \$250

### AT-S3 AM/FM Stereo Tuner

Features quartz synthesizer tuning; fluorescent digital frequency display; 16 station random presets; auto/manual scan; detachable AM loop antenna \$200

## CARVER

### TX-11 FM-Stereo Tuner

Quartz-synthesized FM-stereo tuner with Asymmetrical Charge Coupled FM detector that virtually eliminates multipath distortion, distant-station noise without reducing separation. Features Charge-Coupling Delay; leading-edge detector; 16 station presets with last-station-tuned memory; digital-tuning; wide/narrow bandwidth selector. Supplied with FM ribbon antenna, phono-type cables; rack-mount kit optional Usable sens 11.3 dBf mono, 34 dBf stereo without CCD, 16.3 dBf stereo with CCD; 50-dB quieting sens 16.4 dBf mono, 37 dBf stereo without CCD, 21 dBf stereo with CCD; S/N at 85 dBf, 75/300 ohms 82 dB mono, 74 dB stereo without CCD, 85 dB stereo with CCD; FR 20-15,000 Hz  $\pm$ 1 dB; sel wide/narrow 35/90 dB; capture ratio 1.0 dB; AM suppression without/with CCD 65/50-dB; image, i-f, spurious-response ratio 110 dB; output level/imp 700 mV/600 ohms; power consumption 15 W; 17 $\frac{1}{2}$ " $\times$  12 $\frac{1}{2}$ " $\times$  D  $\times$  3 $\frac{1}{2}$ " $\times$  H; 11.25 lb ..... \$549

## CROWN

### FM-1 FM Tuner

Features quartz-crystal IC frequency synthesizer tuning with auto continuous scan, auto search-and-stop operations. Features 5-station memory preset; LED digital frequency display; 20-LED analog tuning indicator dial; LED signal-strength, multipath meter displays; 25/75- $\mu$ sec deemphasis; carrier band filter, muting selectors. IHF usable sens 10.8 dBf mono; 50-dB quieting sens mono/stereo 2.75/35  $\mu$ V (stereo); S/N mono/stereo 70/65 dB; THD mono/stereo 0.1%/0.09%; frequency response 30-15,000 Hz  $\pm$ 0.5 dB; capture ratio 2.0 dB; alternate-ch sel 75 dB; image and spurious rejection 114 dB; sep 45 dB at 1 kHz; 19" $\times$  15" $\times$  D  $\times$  5 $\frac{1}{4}$ " $\times$  H ..... \$995

### FM Two Tuner

FM-stereo tuner with JFET front end, 6-station preset

Audio terms are defined in the glossary on page 19.

For an explanation of abbreviations, turn to the list on page 22.

memory tuning. Features linear ceramic filters; pulse-counting digital circuit; crystal-controlled PLL tuning; digital frequency display; signal-strength display; stereo and mono indicators; scan/tune, dim/bright, stereo/mono, mute, high-blend filter, equalization, scan/lock switches ..... \$699

## DENON

### TU-750 Synthesized Tuner

AM/FM-stereo quartz-locked frequency-synthesized tuner with auto fine tuning, 7 AM/7 FM station presets. Features digital tuning display; recording level check circuit; AM loop antenna; auto station scanning; panel illumination dimmer switch; interstation muting. FM usable sens 1.8  $\mu$ V; alternate-ch sel 60 dB; S/N 76 dB stereo; THD 0.008% stereo; sep 55 dB; 17.1" $\times$  9.8" $\times$  D  $\times$  2.95" $\times$  H; 11 lb ..... \$285

### TU-720 Stereo Tuner

AM/FM-stereo tuner with high-performance front end. Features 3-stage linear-phase ceramic filter; PLL MPX circuit; LED-assisted center tuning with servo lock; direct-coupled audio section; electronic switching; muting; record-calibration oscillator. FM usable sens 0.85  $\mu$ V (9.8 dBf); sel 65 dB; S/N mono/stereo 86/84 dB; THD mono/stereo 0.04%/0.06%; capture ratio 1.0 dB; AM suppression/image rejection/i-f rejection 55/56/95 dB; sep 55 dB at 1 kHz; AM usable sens 15  $\mu$ V; AM THD 0.4%; power consumption 11 W; 17.4" $\times$  12.3" $\times$  D  $\times$  2.6" $\times$  H; 8.5 lb ..... \$225

## FISHER

### FM2421B AM-FM Stereo Tuner

Features digital frequency-synthesized tuning with auto/manual search, scan; LED digital frequency display; 6-station memory preset for AM or FM with LEDs; wide/narrow i-f bandwidth selector; multiplex filter; FM muting; 5-LED signal-strength indicators. FM section: usable sens 9.8 dBf (1.7  $\mu$ V) mono, 1.9 dBf (4.3  $\mu$ V) stereo; 50-dB quieting 13.2 dBf (2.5  $\mu$ V) mono, 35.9 dBf (34  $\mu$ V) stereo; S/N 75 dB mono, 70 dB stereo; THD at 50-dB quieting 0.3% mono, 0.4% stereo; FR 20-15,000 Hz  $\pm$ 1 dB; capture ratio 0.8 dB; alternate-ch sel 75 dB; image rejection 80 dB; i-f and spurious rejection 100 dB; sep 46 dB at 1 kHz. AM section: usable sens 280  $\mu$ V/m; sel 45 dB; S/N 55 dB; 17 $\frac{1}{2}$ " $\times$  W  $\times$  13" $\times$  D  $\times$  3 $\frac{1}{2}$ " $\times$  H \$400

### FM660 Stereo Tuner

AM/FM-stereo synthesizer tuner with fluorescent digital frequency display, 5 AM/5 FM station presets. Features quartz PLL digital synthesizer; auto/manual scan tuning; 5-LED signal-strength meter; slim-line push-bar switches for all functions; touch-bar tuning; memory, stereo, manual indicators; FM usable sens mono/stereo 10.77 dBf (1.9  $\mu$ V)/18.45 dBf (4.6  $\mu$ V); S/N 72 dB mono, 68 dB stereo; capture ratio 1 dB; alternate-ch sel 70 dB; image/spurious/i-f-response ratio 70/85/100 dB; AM-suppression ratio 85 dB; THD at 50-dB quieting mono/stereo 0.3%/0.4%; sep at 100/1k/10k Hz 40/46/36 dB; FR 20-15,000 Hz  $\pm$ 1 dB; AM sens 300  $\mu$ V/m; power consumption 20 W; 17 $\frac{1}{2}$ " $\times$  W  $\times$  11 $\frac{1}{4}$ " $\times$  D  $\times$  3 $\frac{1}{2}$ " $\times$  H; 12 lb ..... \$380

**FM350 Stereo Tuner**

AM/FM-stereo with servo-lock tuning. Features MPX filter; mode/FM muting switch; 5-LED signal-strength meter; 3-LED center-tuning indicator; illuminated slide-rule tuning dial; flywheel tuning. FM usable sens mono/stereo 10.77 dBf (1.9 $\mu$ V/18.45 dBf (ratio 1 dB); alternate-ch sel 60 dB; image/spurious/i-f response ratio 60/85/110 dB; AM-suppression ratio 60 dB; THD mono/stereo 0.3%/0.4%; FR 20-15,000 Hz  $\pm$  1 dB; AM sens 300  $\mu$ V/m; power consumption 14 W; 17 $\frac{1}{2}$ " $\times$  13 $\frac{3}{4}$ " $\times$  2 $\frac{1}{8}$ " $\times$  H; 8 lb ..... \$200

**HAFLER****DH-330 Tuner**

Tuner provides exact station selection with a quartz controlled, digitally synthesized tuning system. Features multipath distortion and noise-sensing circuit; 5-station memory; Autosearch; digital readout; non-volatile memory; 3 dual-gate MOSFETs; triple-tuned RF stage in volume control and a separate output on front panel for taping or headphones; kit is comprised of 4 fully assembled, tested, and aligned circuit boards which plug together. Useable sens 2.4  $\mu$ V (12.8 dBf); 50-dB quieting sens mono 4.8  $\mu$ V (18.8 dBf); stereo 4.6  $\mu$ V (38.5 dBf); 1 kHz, 100% modulation mono-0.1%, stereo-0.18%; capture ratio 1.5 dB; alternate ch sel 70 dB; stereo sep 45 dB at 1,000 Hz; 35 dB at 10,000 Hz; S/N, mono, 72 dB, stereo, 66 dB.  
Kit ..... \$300  
Assembled ..... \$400

**HARMAN/KARDON****TU615 AM/FM-Stereo Tuner**

Digitally synthesized quartz-locked AM/FM-stereo tuner with auto/manual tuning. Features 6 AM/6 FM station presets; high-blend filter; MPX null filter; electronic scanning; memory back-up; 5-LED signal-strength meter; FM mute. FM usable sens 1.8  $\mu$ V; 50-dB quieting sens mono/stereo 3.2/33  $\mu$ V; S/N mono/stereo 78/72 dB; THD mono/stereo 0.08%/0.1%; capture ratio 1.0 dB; alternate-ch sel 70 dB; image/i-f/spurious response ratio 75/90/95 dB; sep 50-dB 17 $\frac{1}{2}$ " $\times$  14 $\frac{1}{4}$ " $\times$  2 $\frac{1}{2}$ " $\times$  H. \$350  
**TU610.** Similar to TU615 except has analog tuning dial, no station presets; has tuning indicator in dial lights. FM usable sens 1.9  $\mu$ V; 50-dB quieting sens mono/stereo 3.8/44  $\mu$ V; S/N mono/stereo 77/71 dB; THD mono/stereo 0.09%/0.15%; capture ratio 1.5 dB; alternate-ch sel 70 dB; image/i-f/spurious response ratio 55/75/70 dB; sep 45 dB ..... \$220

**HITACHI****FT-5500 Tuner**

AM/FM stereo tuner with Field Condition Compute System reception. Features IF wide/high sel switching and RF normal/high sel mode in front end; brightener MPX circuit; 10-station random-access presets; high-gain AM loop antenna circuit; FET RF amp; 4-element ladder ceramic filters; FM rec level check switch; memory backup power supply; FM auto sweep tuning; 9 kHz/10 kHz ch spacing selector; FM section usable sens IHF, RF normal mode mono 10.8 dBf 1.0  $\mu$ V, 75 ohms; quieting sens 50-dB mono 19.2 dBf, stereo 38.2 dBf; S/N at 65 dBf mono 85 dB, stereo 78 dB; THD IF wide mode 1 kHz mono 0.04%, stereo 0.06%; FR 20-15,000 Hz  $\pm$  0.5 dB; capture ratio wide 1.0 dB; AM suppression ratio 65 dB; stereo sep 60 dB; AM section sens IHF, loop antenna 12  $\mu$ V, 250  $\mu$ V/m; sel 1 kHz  $\pm$  10 kHz 50-dB; S/N 54 dB; image rejection ratio 1 kHz 50-dB; 17 $\frac{1}{2}$ " $\times$  2 $\frac{1}{8}$ " $\times$  12 $\frac{1}{16}$ " $\times$  D; 8 lb 13 oz ..... \$350

**FT-2 Digital Synthesized Tuner**

Digital synthesized tuner with quartz locked tuning system and 16 AM/FM memory preset. Features fluorescent digital frequency readout; memory scanning system; high gain AM loop antenna; slim line styling; usable sens IHF mono 10.8 dBf 1.0  $\mu$ V; 50-dB quieting sens mono 19.2 dBf, stereo 39.2 dBf; S/N

IHF mono 75 dB, stereo 70 dB; THD 1 kHz mono 0.15%, stereo 0.3%; FR 30-15,000 Hz  $\pm$  2 dB; capture ratio 1.0 dB; stereo sep 45 dB; AM section, sens loop antenna 46 dB  $\mu$ V/m; sel 1 kHz  $\pm$  10 kHz 40 dB; S/N 48 dB; image rejection ratio 1 kHz 43 dB; 17 $\frac{1}{2}$ " $\times$  2 $\frac{1}{8}$ " $\times$  9 $\frac{1}{4}$ " $\times$  D; 5 lb 5 oz ..... \$210

**FT-1 Stereo Tuner**

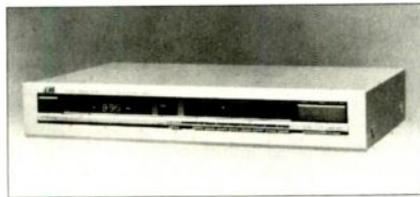
AM/FM stereo tuner with vector tuning system. Features high-gain AM loop antenna; illuminated dial pointer; slim profile; usable sens IHF mono 11.2 dBf 1.0  $\mu$ V/75; 50-dB quieting sens 19.2 dBf mono, 38.2 dBf stereo; S/N IHF mono 75 dB, stereo 70 dB; THD at 1 kHz, mono 0.3%, stereo 0.4%; FR 30-12,000 Hz  $\pm$  3 dB; capture ratio 1.0 dB; stereo sep 45 dB. AM section: sens, loop antenna, IHF 250  $\mu$ V/m, 18  $\mu$ V; sel at 1 kHz,  $\pm$  10 kHz 40 dB; S/N 48 dB; image rejection ratio at 1 kHz 40 dB; 17 $\frac{1}{2}$ " $\times$  2 $\frac{1}{8}$ " $\times$  9 $\frac{1}{4}$ " $\times$  D; 5 lb 5 oz ..... \$120

**JVC****T-X55 Stereo Tuner**

Quartz PLL digital synthesizer AM/FM-stereo tuner with computer-controlled tuning for sens, i-f bandwidth, FM mode. Features QSC for optimum reception; 8 AM/8 FM station presets; digital frequency display; digital signal-strength display. FM section: FM usable sens 10.3 dBf ( $\mu$ V) mono; 50-dB quieting sens 16.4 dBf ( $\mu$ ) stereo, 31.0 dBf ( $\mu$ V) mono; THD 0.07%; S/N 84 dB mono, 80 dB stereo; FR 30-15,000 Hz; capture ratio 1.0 dB; sep 50-dB; AM suppression 67 dB. AM section: quieting sens  $\mu$ V built-in antenna,  $\mu$ 20V external antenna; S/N 50-dB; sel 32 dB. 17 $\frac{1}{2}$ " $\times$  3" $\times$  12 $\frac{1}{16}$ " $\times$  D; 7.0 lbs ..... \$350

**T-X22 FM/AM Tuner**

Quartz-locked digital synthesizer FM/AM tuner with auto scan and 7 FM and AM presets. Features signal strength indicator; static driver; digital frequency display. FM section: FM usable sens 10.3 dBf mono; 50-



dB quieting sens 38.1 dBf stereo, 16.3 dBf mono; THD 0.10%, 0.15% stereo; S/N 80 dB mono; FR 30-15,000 Hz  $\pm$  3 dB; capture ratio 1.0 dB; sep 50-dB; AM suppression 67 dB. AM section: quieting sens  $\mu$ 30V external antenna; S/N 50-dB; sel 40 dB. 17 $\frac{1}{2}$ " $\times$  3" $\times$  12 $\frac{1}{16}$ " $\times$  D; 6.8 lbs ..... \$180

**T-K10 AM/FM Stereo Tuner**

AM/FM stereo tuner with an illuminated tuning dial and flywheel-driven tuning pointer. Features PLL stereo demodulator IC for FM; LED signal strength indicator; FM muting. FM section: FM usable sens 10.3 dBf mono; 50-dB quieting sens 43.2 dBf stereo, 22.1 dBf mono; THD .2% mono, .3% stereo; S/N 74 dB mono, FR 20-12,500 Hz; capture ratio 1.0 dB; sep 37 dB; AM suppression 0 dB. AM section: quieting sens  $\mu$ 30V external antenna; S/N 50-dB. 17 $\frac{1}{2}$ " $\times$  3" $\times$  11 $\frac{1}{8}$ " $\times$  D; 6.4 lbs ..... \$130

**KENWOOD****L-02T FM Tuner**

FM tuner with nonspectrum IF system; features nonstep sample and hold MPX system; pulse count detector; quartz digital frequency readout; exclusive Sigma drive audio output; 29 lbs ..... \$3,000

**KT-9XG AM/FM Tuner**

Tuner with quartz PLL synthesizer tuning. Features pulse count FM detector; 8 station random FM or AM memory bank; digital frequency display; selectable direct RF conversion; selectable IF bandwidth; dual power supply; 12 lbs ..... \$400

**KT-7X AM/FM Tuner**

Quartz PLL synthesizer tuner with 12 stations memory bank; digital frequency display; 3-way program timer; 11 lbs ..... \$250

**KT-9 Stereo Tuner**

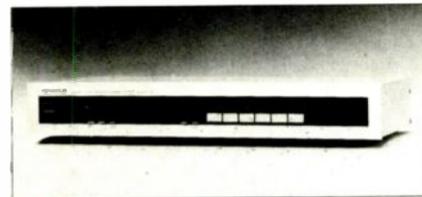
Quartz synthesized tuner with 6 AM and 6 FM preset station memory bank. Features auto or manual or direct preset tuning system and built-in program timer; 6 lbs ..... \$235

**Basic T1 Tuner**

Quartz PLL synthesizer tuner with fluorescent digital frequency readout. Features 6 AM/6 FM memory presets; auto seek and manual tuning; PLL multiplex stereo decoder IC; all electronic touch-switch operation with LEDs; 8 lbs ..... \$200

**KT-51 Tuner**

Quartz synthesizer AM/FM tuner. Digital frequency counter; 6 AM/FM presets; 7 lbs ..... \$200



**KT-51B** Same as KT-51 but black ..... \$200

**KT-31 Tuner**

Analog AM/FM tuner; 7 lbs ..... \$120  
**KT-31B.** Same as KT-31 but black ..... \$120

**KLH****T-210 AM/FM-Stereo Tuner**

Digital-synthesized AM/FM-stereo tuner with fluorescent digital frequency display. Features 7 AM/7 FM station presets; signal-strength, in-tune LEDs; auto/manual tuning; high-blend button. FM usable sens 1.75  $\mu$ V; 50-dB quieting sens mono/stereo 3.8/45  $\mu$ V; S/N mono/stereo 70/65 dB; capture ratio 1.5 dB; alternate-ch selectivity 60 dB; image/i-f/spurious response ratio 60/90/90 dB; distortion mono/stereo 0.1%/0.2% sep 45 dB at 1 kHz; AM sens 300  $\mu$ V/m ..... \$300

**T-101 AM/FM-Stereo Tuner**

Analog-dial AM/FM-stereo tuner with signal-strength, in-tune LEDs. Features high-blend switch; FM muting. FM usable sens 2.0  $\mu$ V; 50-dB quieting sens mono/stereo 4.0/48  $\mu$ V; S/N mono/stereo 68/62 dB; alternate-ch sel 40 dB; image/i-f/spurious response ratio 45/80/70 dB; THD mono/stereo 0.15%/0.3%; sep 40 dB at 1 kHz; AM sens 300  $\mu$ V/m ..... \$180

**LUXMAN****TX-1Q1 FM Stereo/AM Tuner**

PLL frequency synthesizer FM stereo/AM tuner with computer analyzed tuning. Features 24-station memory; auto seek; memory scan; CS filter, LED memory indicator; IF narrow band switch with memory for narrow and wide bands of each station; remote control capability (when used with the Luxman LX-104 integrated amplifier). 17 $\frac{1}{2}$ " $\times$  3" $\times$  12 $\frac{1}{16}$ " $\times$  D ..... \$350

**MARANTZ****ST 530 AM/FM Digital Synthesized Tuner**

Digital synthesized tuner features gold-plated output jacks; 16 station preset memory; up/down touch controls for tuning; LED indicators for all functions; wireless remote controllable with optional RC 430/RMC 12; memory back-up; program recording allows consecutive recording of 6 separate FM or AM stations with an external timer; 16  $\frac{1}{8}$ " $\times$  2 $\frac{1}{32}$ " $\times$  11  $\frac{13}{16}$ " $\times$  D ..... \$265

## McINTOSH

## MX 117 Tuner/Preamp

Stereo tuner/preamplifier with MOSFET RF amp, MOSFET buffer amp, PLL stereo decoder, FM muting circuit, FET analog switches, EQ amp. FR 20-20,000 Hz +0 -0.5 dB; distortion 0.02%; equalizer center frequencies 30, 750, and 10,000 Hz; boost and cut  $\pm 12$  dB;  $16\frac{1}{2}''\text{W} \times 5\frac{1}{4}''\text{H} \times 13\text{D}$ ; 24 lbs \$1,649

## MR 74 AM-FM/FM Stereo Tuner

AM/FM stereo tuner with multiple selectivity; linear phase (constant delay) IF amp; staggered tuning condenser elements. Sens  $2.5 \mu\text{V}$  at 100% modulation 3% THD; S/N 70 dB; harmonic distortion stereo 0.5%; FR 20-15,000 Hz  $\pm 1$  dB; capture ratio 1.5 dB min ..... \$849

## MR 75 Tuner

AM/FM stereo tuner with MOSFET RF amp; PLL stereo decoder; FM muting circuit; loopstick antenna; output/headphone amp; turn-on delay; triple-shielded power transformer. FR 20-15,000 Hz +0, -1 dB; capture ratio 1.8 dB; usable sens  $2 \mu\text{V}$  (11.2 dBf) IHF; harmonic distortion 0.38%;  $16''\text{W} \times 5\frac{1}{4}''\text{H} \times 13\text{D}$ ; 23 lbs ..... \$1,349

## MR 80 Digital Tuner

AM/FM stereo tuner with 4 differential amps; 3-position deemphasis switch; 19 and 38 kHz filters; headphone amp; touch sensor; preset scan; control logic; lock circuit; scan circuit. Sens 14.7 dBf  $3 \mu\text{V}$  for 50 dB of quieting; S/N 75 dB; harmonic distortion 0.2%; IM 0.15%; FR mono and stereo 20-15,000 Hz  $\pm 1$  dB; capture ratio 1.5 dB;  $16''\text{W} \times 5\frac{1}{4}''\text{H} \times 13\text{D}$ ; 28 lbs ..... \$2,499

## MR 78 Tuner

AM/FM stereo tuner with junction field-effect transistor; IC balanced mixer; linear-phase filter; IF amp; constant-delay design; linear-phase bridge discriminator. Sens  $2 \mu\text{V}$  for 35 dB of quieting; S/N 75 dB; harmonic distortion 0.2%; FR stereo 20-15,000 Hz  $\pm 1$  dB; capture ratio 2.5 dB; IM 0.2%; sep 40 dB at 1 kHz;  $16''\text{W} \times 5\frac{1}{4}''\text{H} \times 13\text{D}$ ; 27 lbs ..... \$1,699

## MCS by JC PENNEY

## MCS 3760 AM/FM Stereo Tuner

AM/FM-stereo tuner with digital frequency display. Features 5 LED signal-strength, 3-LED center-tune meters; FM muting; flywheel tuning. FM 50-dB quieting sens 18.3 dBf (4.5  $\mu\text{V}$ ) mono; pilot rejection 35 dB; hum and noise -72 dB; i-f spurious response 75 dB; AM sens 300  $\mu\text{V}/\text{m}$  ..... \$170

## MERIDIAN

## THE TUNER 104

FM stereo tuner features a min of controls; 6 station presets accessible with rotary knob; front-panel meter that indicates frequency tuned or center-tune during preset stage; mono switch; FM mute switch .. \$595

## MITSUBISHI

## F30 Digital FM Stereo Tuner

Quartz crystal PLL frequency synthesizer tuning system with pulse swallow counter, dual modulus prescaler. Features auto tuning; 8 preset stations; linear-phase ceramic filters; auto-switched sel; hi-blend function; multipath signal-level indicator. Usable sens 10.3 dBf; alternate-ch sel wide/narrow 45/75 dB; S/N 78 dB stereo; THD 0.08% stereo; sep 20 dB at 1 kHz with hi-blend on; FR 30-16,000 Hz +0.5/-1 dB; image/i-f/spurious response ratios 100 dB; capture ratio 1.0 dB wide; output level/imp 600 mV/1 k ohms;  $18\frac{1}{2}''\text{W} \times 10\frac{1}{2}''\text{D} \times 5\frac{1}{4}''\text{H}$ ; 11 lb... \$350

## M-F04 AM/FM Stereo Tuner

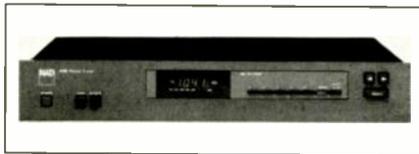
Micro-tuner with advanced front-end circuitry, touch-sensor tuning. Features 2-color tuning scale; interstation muting/mode selection. Usable sens 11.2 dBf; alternate-ch sel 60 dB; S/N 73 dB stereo; THD 0.4% at 1 kHz 65 dBf; sep 40 dB at 1 kHz; FR 40-

15,000 Hz  $\pm 3$  dB; capture ratio 1.5 dB;  $10\frac{1}{4}''\text{W} \times 10\frac{1}{4}''\text{D} \times 2\frac{1}{4}''\text{H}$  ..... \$270

## NAD (USA)

## 4150 AM/FM Stereo Tuner

Digitally synthesized AM/FM-stereo tuner with patented variable bandwidth. Features PLL detector; 5 AM/5 FM station presets; search; scan; mute; output level control. FM usable sens  $< 1.0 \mu\text{V}$  (5 dBf) mono;



50-dB quieting sens mono/stereo  $< 2.3 \mu\text{V}$  (12 dBf)/ $< 20 \mu\text{V}$  (30 dBf); capture ratio 0.5 dB; AM rejection 70 dB; alternate-ch sel 70 dB; THD mono/stereo 0.05%/0.08%; S/N mono/stereo 83/80 dB; sep 40 dB broadband; input overload 10 V ..... \$318

## 4020A AM/FM Stereo Tuner

Analog AM/FM-stereo tuner with junction-FET front end. Features PLL MPX demodulator; LED tuning indicators. FM usable sens  $1.9 \mu\text{V}$  mono; 50-dB quieting sens mono/stereo 3.5/40  $\mu\text{V}$ ; S/N mono/stereo 75/70 dB; FR 30-15,000 Hz  $\pm 0.5$  dB; THD mono/stereo 0.2%/0.3%; capture ratio 1.5 dB; sel 65 dB; image rejection 50 dB; i-f rejection 75 dB; sep 42 dB at 1 kHz. AM sens 250  $\mu\text{V}$ ;  $16.5''\text{W} \times 9.5''\text{D} \times 3.8''\text{H}$  ..... \$218

## NIKKO

## NT-990 Stereo Tuner

AM/FM-stereo tuner with digital frequency display. Features 6 AM/6 FM station presets; quartz synthesized tuning; up/down tuning buttons; AM/FM, stereo/mono switches; 5-LED signal-strength meter; high-blend switch.  $16.5''\text{W} \times 12.75''\text{D} \times 3.6''\text{H}$  ..... \$320

## NT-700II Stereo Tuner

AM/FM-stereo tuner with digital quartz synthesizer tuning circuitry, digital frequency display, 6 AM/6 FM station presets. Features 3-LED signal-strength meter; AM/FM, stereo/mono switches; up/down scan tuning buttons.  $17.3''\text{W} \times 11.6'' \times 3.8''\text{D}$  .. \$280

## GAMMA-30 AM/FM Stereo Tuner

frequency synthesized tuner with 4-digit fluorescent



display; 7 AM and 7 FM presets; pilot cancel IC; IF linear phase ceramic filters for improved group-delay characteristics; front panel adjustable muting threshold; illuminated preset buttons; switchable high-blend filter; stereo/mono switch; auto/manual tuning switch; AM loop antenna; usable sens 11.2 dBf; 50-dB quieting sens mono 14 dBf; S/N stereo 67, mono 70 dB; THD stereo 0.20%, mono 0.15%; stereo sep at 1,000 Hz 45 dB; output level 550 mV; AM S/N 50 dB; rack mountable; matte black finish;  $19''\text{W} \times 11.8''\text{H} \times 2.8''\text{D}$  ..... \$245

## NT-500II Stereo Tuner

AM/FM-stereo tuner with slide-rule dial. Features LED signal-strength tuning indicators; 3-LED center-tune indicator; signal and stereo indicators; illuminated dial; lighted dial pointer; AM/FM, stereo/mono switches;  $17.3''\text{W} \times 9.9''\text{D} \times 3.8''\text{H}$  ..... \$180

## ONKYO

## T-9060 Stereo Tuner

Quartz digitally synthesized stereo tuner with 7 AM/7 FM station presets. Features selectable i-f bandwidth; auto high blend; LED signal and deviation indicators; switchable deemphasis; output level control. FM sens  $1.7 \mu\text{V}$ ; THD  $< 0.15\%$  stereo; black matte panel ..... \$490

## T-4017 Integra Tuners

Quartz digitally synthesized stereo tuner that automatically determines best FM quality by adjusting IF bandwidth; DX/local antenna sens; stereo-muting/mono-mute off; auto high blend; 16 random



memory presets (16 AM or FM); memory scan; auto scan; mute and IF APR override; battery-free backup; THD stereo; 0.1%; FM sens  $1.8 \mu\text{V}$  IHF; also available with matte black finish (T-4017B) ..... \$350

## T-4015 Integra Tuner

Quartz digitally synthesized stereo tuner; 8 AM/8 FM preset memories; auto scan; auto high-blend circuit; local/DX switch; battery-free memory backup; THD (stereo) 0.2% FM sens  $1.9 \mu\text{V}$  IHF; also available with black matte finish ..... \$250

## T-44 Tuner

Quartz digitally synthesized stereo tuner; 16 preset memories (8 AM/8 FM); auto scan; auto high blend circuit; LED function and signal displays; FM sens  $1.9 \mu\text{V}$ ; also available with black matte finish (T-44B) ..... \$250

## T-22 Tuner

AM/FM stereo tuner. Features high blend circuit; two pole multiplex filter; LED signal display; FM sens 2.0  $\mu\text{V}$ ; also available with black matte finish ..... \$110

## PT-33 Radian Series Tuner

Quartz digitally synthesized stereo tuner. Features 12 preset memories (6 AM/6 FM); auto high blend; LED signal indication; FM sens 2.0  $\mu\text{V}$  IHF ..... \$110

## PHASE LINEAR

## T5200 Digital Synthesized Tuner

AM/FM-stereo digitally synthesized tuner with manual/auto up/down scan tuning, 6 station memory presets with LEDs. Features LED digital tuning display; FM mute, record-level switches; 5-LED signal-strength meter; LED stereo indicator; PLL MPX decoder with auto pilot cancelling; wide/narrow bandwidth selector for AM and FM; AM-stereo output for future adapter; brushed-silver anodized panel. FM usable sens mono/stereo 0.95/19.5  $\mu\text{V}$ ; S/N mono/stereo 90/85 dB; FR 20-15,000 Hz +0.2/-0.5 dB; distortion 1.0 dB at 1 kHz; alternate-ch sel 60 dB; image/i-f/spurious response ratio 70/100/80 dB; sep 40 dB at 1 kHz; AM usable sens 300  $\mu\text{V}$ ; S/N 50 dB;  $17\frac{1}{2}''\text{W} \times 13''\text{D} \times 3\frac{1}{2}''\text{H}$  ..... \$450

## PIONEER

## F-9 Stereo Tuner

Digital quartz synthesizer AM/FM-stereo tuner with 6 AM/6 FM station presets. Features digital frequency display; drop-down hinged front panel that hides all controls except AM and FM push-type, preset-station selectors; LED signal-strength meter; up/down scan tuning; rec-cal oscillator; wide/narrow bandwidth selector. FM usable sens 10.8 dBf (0.95  $\mu\text{V}$ ) mono; S/N mono/stereo 90/85 dB; capture wide/narrow 1.0/-2.5 dB; alternate-ch sel wide/narrow 40/85 dB; sep 55 dB at 1 kHz wide, 48 dB 50-10,000 Hz wide;  $16\frac{1}{2}''\text{W} \times 14\frac{1}{4}''\text{D} \times 2\frac{1}{4}''\text{H}$ ; 9 lb 15 oz .. \$425

F-7. Similar to F-9 but minus wide/narrow selector; FM S/N mono/stereo 85/80 dB; capture ratio 1.0 dB; alternate-ch sel 60 dB; sep 50 dB at 1 kHz \$325

**F-5 Stereo Tuner**

Servo-locked digital AM/FM-stereo tuner with digital frequency display. Features up/down scan tuning; LED signal-strength meter; FM stereo LED indicator. FM usable sens 10.8 dBf (0.95  $\mu$ V) mono; S/N mono/stereo 75/70 dB; sep 40 dB at 1 kHz, 30 dB; 16 $\frac{1}{16}$ "W x 14 $\frac{1}{16}$ "D x 2 $\frac{3}{4}$ "H; 9 lb 15 oz . \$225

**F-90 Stereo AM/FM Tuner**

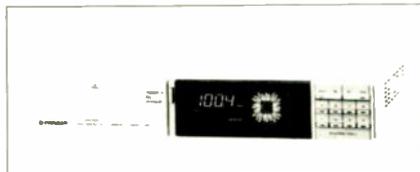
Quartz digital synthesis AM/FM stereo tuner with 8 AM/8 FM presets. Features Digital Direct Decoder; LED tuning indicator; station search tuning; AM stereo adaptor jack; FM usable sens 10.8 dBf; Distortion (at 1 kHz); 0.0095% (mono), 0.02% (stereo); alternate-ch sel 90 dB; 16 $\frac{1}{2}$ " W x 12 $\frac{1}{2}$ " D x 2 $\frac{3}{4}$ " H; 11 lbs ..... \$320

F-70. Similar to F-90 except no DDD; Distortion (at 1 kHz) 0.05% (mono), 0.8% (stereo); alternate-ch sel 56 dB; 16 $\frac{1}{2}$ " W x 9 $\frac{1}{8}$ " D x 2 $\frac{3}{4}$ " H; 7 lbs. 1 oz ..... \$200

**F-X9 Stereo AM/FM Tuner**

Shelf-sized quartz digital synthesis AM/FM stereo with 8 AM/FM presets. Features digital/analog clock; program/sleep timer; auto function; LED signal-strength meter; FM usable sens 10.8 dBf; stereo S/N 70 dB; 2 $\frac{1}{2}$ "H x 12 $\frac{1}{4}$ "W x 8 $\frac{1}{4}$ "D; 6 lb 12 oz \$250

F-X7. Similar to F-X9 except 6 AM/FM presets; sleep timer; stereo indicator; no digital/analog clock or



program/sleep timer; 2 $\frac{1}{8}$ "H x 12 $\frac{1}{2}$ "W x 8 $\frac{1}{2}$ "D; 6 lbs. 4 oz ..... \$170

F-X5. Similar to F-X7 except no auto function or sleep timer ..... \$130

**F-X3 AM/FM Stereo Tuner**

Shelf-sized analog AM/FM stereo tuner. Features FM muting switch; center tuning indicator; stereo indicator. 2 $\frac{3}{8}$ "H x 12 $\frac{1}{2}$ "W x 9"D; 5 lb 8 oz ..... \$90

**QUAD**

**FM4 FM Tuner**

FM-stereo tuner designed to be used with Quad 44 preamplifier. Features no controls except 8 push-buttons to store/recall station presets, tuning knob, power switch; bargraph meter to indicate signal strength, center-ch tuning; dedicated microprocessor that recalls desired station from memory, tunes it, autoally sets muting, auto frequency control levels. Stations stored in memory remain there for up to 5 years, even with power disconnected. Mono/stereo 50-dB quieting sens 2.7/25  $\mu$ V; mono/stereo S/N 76/70 dB at 1 kHz, 1 mV A-weighted; mono/stereo distortion 0.05%/0.10% stereo; capture ratio 2.5 dB; sel 53 dB; image/i-f rejection 80/100 dB; FR 20-15,000 Hz  $\pm$ 0/-1 sB; crosstalk 40 dB at 1 kHz; pilot-tone suppression 60 dB; deemphasis switchable 50/75  $\mu$ sec; power consumption 6 V; 321mmW x 207mmD x 64mmH; 3 kg ..... \$625

**REVOX**

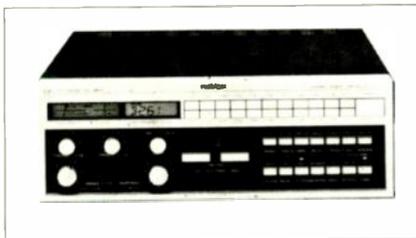
**739 FM/Tuner/Preamplifier**

Combination FM tuner and preamplifier. Preamplifier section features line amplifiers for two different levels A and B with for XLR and RCA phono (2/4 V, 220 ohms, unbalanced) output connectors. Input signals switched by a microprocessor with noncontacting FET

switches that allow independent selection of recording circuits while listening to any other source; selected functions indicated on digital display, frequency response 20-70,000 Hz  $\pm$ 0/-0.7 dB; total harmonic distortion with less than 0.02% at 1,000 Hz, 2 volt output; 17 $\frac{3}{4}$ "W x 13 $\frac{3}{4}$ "D x 6"H ..... \$2,399

**B261 Tuner**

Microcomputer-controlled tuner with programming feature covering I.D. and frequency of the 20 pretuned stations and includes preferred mode of reception for each station. Features 20 station selector buttons; infrared remote control; two separate muting threshold controls; high-blend button; auto station scanning; liquid crystal display indicates stations and frequency alphanumerically; sensitivity 0.5 $\mu$ V on 75 ohms for 26-dB signal-to-noise ratio with 40 Hz deviation; usable sens mono 2  $\mu$ V, stereo 20  $\mu$ V on 75 ohms for a signal-to-noise ratio of 46 dB with 40,000 Hz deviation; capture ratio 0.8 dB for a signal-to-noise ratio of 30 dB at 40,000 Hz deviation and an input of 1 mV on 75 ohms; sel 80 dB tuned-in signal 100  $\mu$ V on 75 ohms interfering signal 1mV on 75



ohms modulated to a deviation of 40,000 Hz; frequency response 30 Hz 15,000 Hz  $\pm$ 1 dB measured with 40,000 Hz deviation and 1 mV input on 75 ohms; harmonic distortion 0.07% at 1,000 Hz and 40,000 Hz deviation mono and stereo L-R mV input on 75 ohms; signal-to-noise ratio 75 dB, 30 Hz 15,000 Hz linear referred to a deviation of 75,000 Hz with an input of 1 mV on 75 ohms stereo separation 100 Hz 10,000 Hz, 40 dB 1,000 Hz, 43 dB referred to a deviation of 40,000 Hz and an input of 1 mV on 75 ohms; 18 lbs 12 oz; 17 $\frac{3}{4}$ " x 6" x 13 $\frac{1}{16}$ " ..... \$1,500

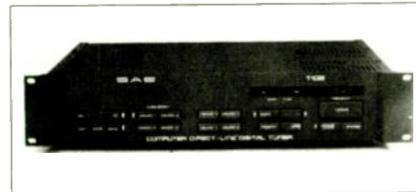
**SAE**

**T14 AM/FM-Stereo Tuner**

Features varactor front end; LED digital frequency readout; quartz-lock, synthesized touch tuning; 5-station memory preset; LED signal-strength/multipath, output-level bargraph meters; variable i-f bandwidth selector; linear phase filters; PLL multiplex filter. 50-dB quieting 34.8 dBf (stereo); S/N 76 dB; THD 0.15% (stereo) ..... \$600

**T102 AM/FM Stereo Tuner**

Stereo tuner with linear phase IF filters, complemen-



tary ratio detector, fully complementary MPX drive and quartz-controlled varactor RF stages. Features touch tuning; 16 station memories (8 AM and 8 FM); manual or auto search operation; auto stereo switching ..... \$350

**T6 AM/FM-Stereo Tuner**

Features digital frequency display; bargraph signal-strength meter; 50-dB quieting 36.11 dBf (stereo), S/N 67 dB (stereo); THD 0.25% (stereo) 0.10% (mono) ..... \$330

**SANSUI**

**TU-S77AMX AM Stereo and FM Stereo Tuner**

Quartz-PLL synthesizer tuner receives all four FCC-approved AM stereo broadcasting methods, and autoally switches to format being used by selected station. Features 8 AM and 8 FM station presets; preset scan; wide/narrow IF bandwidth selection; Locked and Stereo indicators; special Sansui demodulator to eliminate "anti-birdie" filter; black finish ..... \$390

**TU-S77X AM/FM-Stereo Tuner**

Features quartz PLL digital synthesizer tuning with auto/manual up/down scan tuning, fluorescent digital frequency display. Features 8 AM, 8 FM presets with lighted indicators; FM noise canceller, FM auto/mono



mode, AM/FM selector switches; 5-LED signal, LED stereo and search indicators. FM usable sens 10.5 dBf; S/N 83 dB; THD 0.02%; capture ratio 1.0 dB, in black finish; ..... \$350

TU-S77XW. Same as TU-S77X but with wood side panels ..... \$370

TV-S55X. Same features as TU-S77X with FM sens of 10.8 dBf; S/N 85 dB and capture ratio 1.0 dB. Black (TU-S55XB) or silver (TU-S55XS) ..... \$280

**TU-S33 AM/FM-Stereo Tuner**

AM/FM-stereo tuner with servo-locked tuning system, "Just Tuned" pointer. Features floating circuit system that improves AM performance. FM sens 10.6 dBf (1.85  $\mu$ V); S/N mono/stereo 81/76 dB; THD mono/stereo 0.08%/0.09%; capture ratio 1.0 dB; sep 50 dB at 1 kHz; FR 30-15,000 Hz  $\pm$ 3/-1.0 dB. TU-S33S has silver finish; TU-S33B has black finish, rack-mount handles ..... \$200

**H.H. SCOTT**

**558T Tuner**

Quartz PLL synthesizer tuner with 7 AM/7 FM presets, touch-control memory, full-function fluorescent display. Features auto scan up/down tuning; active high-blend filter for min noise on FM-stereo; 4-gang electronic front end; 1.7- $\mu$ V IHF usable sens; 0.8- $\mu$ V DIN sens; S/N 75 dB (mono) at 65 dBf; distortion 0.08% (mono) at 65 dBf; frequency response 30-15,000 Hz  $\pm$ 0.5 dB; capture ratio 1.2 dB; sep 55 dB at 1 kHz; 17"W x 11.8"D x 1.7"H ..... \$280

**528T Tuner**

AM/FM-stereo tuner with 5-LED signal-strength, 3-LED center-tuning meters on dial pointer. Features heavy metal flywheel; linear FM dial; 1.8- $\mu$ V IHF usable sens, 1.2- $\mu$ V DIN sens; S/N (mono) 72 dB at 65 dBf; distortion (mono) 0.15% at 65 dBf; FR 30-15,000 Hz  $\pm$ 0.5 dB; capture ratio 1.2 dB; sep 50 dB at 1 kHz; 17"W x 8.7"D x 3.5"H ..... \$160

**SHERWOOD**

**S-6010 CP AM/FM-Stereo Tuner**

Digitally synthesized AM/FM-stereo tuner with dual-gate MOSFET front end. Features Varactor-diode front-end; 3 pairs matched linear-phase ceramic i-f filters, fluorescent digital frequency display; 8 AM/8 FM station presets with battery memory backup. FM usable sens 1.8  $\mu$ V (10.3 dBf); 50-dB quieting sens

**NEED MORE INFORMATION?**

Write directly to the manufacturer or distributor. A list of names and addresses starts on page 25.

mono/stereo 3.2  $\mu$ V (15.3 dBf)/35  $\mu$ V (36.1 dBf); capture ratio 1.0 dB; alternate-ch sel 80 dB; S/N mono/stereo 80/75 dB; FR 20-15,000 Hz  $\pm$ 0.5 dB; power consumption 10-12 W; 17 $\frac{1}{8}$ "W  $\times$  15 $\frac{1}{2}$ "D  $\times$  2 $\frac{1}{8}$ "H; 10 lb ..... \$250

#### TD-2010 CP AM/FM Tuner

Digitally synthesized tuner with 6 FM and 6 AM presets. Usable sens 1.9  $\mu$ V (10.8 dBf); 50-dB quieting sens mono 3.5  $\mu$ V (15.8 dBf), stereo 50  $\mu$ V (39.2 dBf); THD mono 0.1%, stereo 0.15%; S/N mono 80 dB, stereo 75 dB; stereo sep 50 dB; capture ratio 1.5 dB; alternate ch selectivity 65 dB; FR at 25-15,000 Hz  $\pm$ 1 dB; usable sens at 20 dB 300  $\mu$ V/m; S/N at 5 mV input 50 dB; sel at 10,000 Hz 50 dB; spurious response ratio 60 dB; audio output voltage at 30% mod 150 mV; 17 $\frac{1}{8}$ "W  $\times$  2 $\frac{1}{8}$ "H  $\times$  11 $\frac{1}{16}$ "D .. \$200

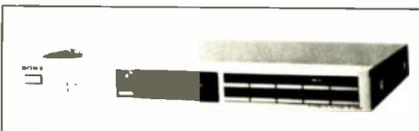
### SONY

#### ST-V7 AM/FM Stereo Tuner

Quartz frequency-synthesis FM-stereo tuner with Direct Comparator low-noise tuning circuit. Features multiprocess memory; auto, 8-station memory preset, memory-scan tuning; microprocessor step up/down tuning; 3-LED signal-strength meter for antenna positioning; fluorescent multi-function display. FM section: S/N mono/stereo 84/78 dB; THD mono/stereo 0.08%/0.15%; FM usable sens 10.3 dBf (1.8  $\mu$ V); 50-dB quieting sens 16.1 dBf (3.5  $\mu$ V) mono, 37.9 dBf (43  $\mu$ V) stereo; FR 30-15,000 Hz, -2 dB; image/i-f/spurious response 80/100/90 dB; sep 50 dB at 1 Hz; muting/tuning threshold 25 dBf. AM section: quieting sens 200  $\mu$ V built-in antenna, 30  $\mu$ V external antenna; S/N 55 dB (50 mV/m); THD 0.3%; 14"  $\times$  2 $\frac{1}{8}$ "  $\times$  10 $\frac{3}{16}$ "; 6 lbs, 10 oz ..... \$300

#### ST-JX500 AM/FM Stereo Tuner

Quartz frequency-synthesized AM/FM-stereo tuner with Direct Comparator low-noise circuit. Multiprocess memory; auto/manual 10-station memory preset/memory scan tuning; fluorescent display; 4-



station programming.; FM section is same as ST-V7 except S/N 84 dB mono, 78 dB stereo; THD 0.15% stereo; THD 0.10% stereo; IMD 0.10% stereo; S/N 90 dB mono, 84 dB stereo; AM section: 100  $\mu$ V with external antenna; 17"W  $\times$  2 $\frac{1}{4}$ "D  $\times$  11 $\frac{1}{8}$ "H; 6 lbs 14 oz ..... \$250

#### ST-JX44 AM/FM Stereo Tuner

Quartz frequency-synthesis AM/FM-stereo receiver with Direct Comparator low-noise tuning circuit. Features Uniphase i-f filters; multiprocess memory; manual/8 AM or FM memory preset/memory scan tuning; memory back-up; facility for optional RM-44 wireless remote controller. S/N mono/stereo 82/77 dB; THD mono/stereo 0.08%/0.15% ..... \$200

#### ST-JX35 AM/FM Tuner

Quartz frequency synthesis tuner with microprocessor tuning. Features 5 AM and 5 FM station memory presets; multifunction LCD; FM between station muting. FM section: FM usable sens 10.3 (1.8190uV) mono; 50-dB quieting sens 16.1 (3.5cf90u) stereo, 38.3 (4590uV) mono; THD at 1 kHz 0.15% mono, 0.3% stereo; IMD 1.5% mono, 0.3% stereo; S/N 82 dB mono, 77 dB stereo; FR 30-15,000 Hz  $\pm$ 0.5 dB, -2.0 dB; capture ratio 1.0 dB; sep 45 dB at 1 kHz; AM suppression 54 dB. AM section: quieting sens 200  $\mu$ V built-in antenna, 30  $\mu$ V external antenna; S/N 54 dB (50 mV/m); sel/image rejection 38/45 dB. 17" W  $\times$  2 $\frac{1}{8}$ " H  $\times$  11 $\frac{1}{8}$ " D; 6 lbs, 10 oz \$150

### SOUNDCRAFTSMEN

#### T6002 AM/FM Stereo Digital Tuner

Digital quartz PLL tuner with 14 station presets, 5-

station digital readout, auto scan tuning and active high blend filter. 19" rack-mount front panel; 1.6  $\mu$ V IHF sens; S/N 75 dB; distortion 0.08%; 2"  $\times$  19"  $\times$  12"D ..... \$299

### SUMO by ALL-AMERICAN AUDIO

#### Charlie FM Digital Tuner

Quartz-controlled digitally synthesized FM tuner with separation and de-emphasis adjustments made independently of multiplex. Features blend; filter; mono; mute; IF narrow; single-step tuning; 5 station presets; 4-LED signal-strength meter; 5-LED multipath indicator. Usable sens 13 dBf (2.5  $\mu$ V) mono, 18 dBf (4  $\mu$ V) stereo IHF; 50-dB quieting sens 17 dBf (3.7  $\mu$ V); mono, 38 dBf (40  $\mu$ V) stereo; capture ratio 1.0 dB wide, 1.5 dB narrow; alternate ch sel 50 wide, 80 narrow; sep 50 dB at 1 kHz; THD 0.05% stereo at 1 kHz with 100% modulation; max S/N 74 dB stereo; 19W"  $\times$  3.5"H  $\times$  9"D; 12 lbs ..... \$505

### TANDBERG

#### TPT 3001A Programmable FM Tuner

Features computer-type logic servo tuning system; 8-ganged varactor tuning diodes in front end, dual-gate MOSFETs in r-f and mixer stages; 8-station memory preset with touch-button recall and LED program



readout; wide/normal/narrow i-f bandwidth selector; autorange signal-strength with  $\times$  1,000 meter range LED, center tuning/preset frequency meters. Audio circuitry includes selected all-metal film resistors, polystyrene capacitors, and min negative feedback; mono, ANC, servo, mute switches with LEDs; 3-circuit muting; output level control; S/N 90 dB; narrow sel 125 dB ..... \$1,195

#### TPT 3011A Programmable FM Tuner

Computerized FM-stereo tuner with 8 programmable station presets, auto servo tuning released by touch sensor in tuning knob. Audio circuitry includes selected all-metal film resistors, polystyrene capacitors, and min negative feedback. Features 5-ganged electronic tuning circuits; 12-bit microprocessor pretuning, memory system. FM sens for 50-dB quieting mono/stereo 14.8 dBf (1.5  $\mu$ V)/37.3 dBf (20  $\mu$ V); S/N at 65 dBf mono/stereo 78/75 dB; distortion at 50-dB quieting mono/stereo 0.3%/0.3%; capture ratio 0.9 dB; alternate-ch sel  $>$  100 dB; spurious-response  $>$  70 dB; AM-suppression ratio  $>$  70 dB; 43.5cmW  $\times$  35cmD  $\times$  8.3cmH ..... \$695

### TECHNICS

#### ST-S8 FM/AM Digital Tuner

Quartz synthesizer DC tuner with 25 kHz reference frequency and narrow IF bandwidth. Features FM/AM 16 station random access memory; multi-function digital readout; back-up memory system; switchless wing antenna terminal. FM usable sens 10.8 dBf

(0.95  $\mu$ V); 50-dB quieting sens mono/stereo 16.3 dBf (1.8  $\mu$ V)/37.2 dBf (20  $\mu$ V); S/N mono/stereo 80/74 dB; THD mono/stereo 0.04%/0.06%; alternate-ch sel 55 dB; AM sens 250  $\mu$ V/m; 16 $\frac{1}{16}$ "W  $\times$  15 $\frac{1}{32}$ "D  $\times$  2 $\frac{1}{32}$ "H; 9 lb ..... \$500

#### ST-S707 FM/AM Stereo Tuner

Quartz synthesizer tuner with 32k bit microcomputer control to assure optimum reception. Features DC construction with DC peak sample and hold MPX; computer-controlled auto IF bandwidth selector; FM auto RF band selector; multi-function 2-color display; ch number readout; signal-strength readout; scan level readout; recording level check button; AM/FM allocation selector button; 19 kHz pilot signal cancel circuit; 16-station random access preset memory;



auto-scan and auto-memory; memory backup protection; F-connector FM antenna terminal; detachable AM loop antenna; SH-F101 FM wing antenna terminal. FM usable sens 10.8 dBf (0.95  $\mu$ V); 50-dB quieting sens mono/stereo 18.1 dBf (2.2  $\mu$ V)/38.1 dBf (22  $\mu$ V); THD mono/stereo 0.03%/0.04%; S/N mono/stereo 80/70 dB; FR 5-18,000 Hz  $\pm$ 0.2 dB, -0.5 dB; capture ratio 1.0 dB; stereo sep at 1 kHz 65 dB; 16 $\frac{1}{16}$ "W  $\times$  2 $\frac{1}{32}$ "H  $\times$  9 $\frac{1}{32}$ "D; 5.7 lb \$270

#### ST-S6 AM/FM Digital Tuner

Quartz synthesized AM/FM-stereo tuner. Features dc stereo tuning; dc peak/sampling/hold multiplex circuit; 16-station full random-access preset memory tuning; auto station memory; digital display for signal strength; LED multipath/signal-strength indicator; normal/narrow i-f band width selector; slim body ..... \$380

#### ST-S505 Quartz Synthesizer AM/FM Stereo Tuner

Quartz synthesizer tuner with dc circuit construction and computer-controlled auto bandwidth selector for optimum reception. Features 16-station random-access memory; auto-scan and auto-memory; multi-function digital display; 19 kHz pilot signal cancel circuit; displays for quartz lock, FM signal quality, and IF bandwidth; jitter distortion cancelling circuit; back-up memory protection; slim design. FM usable sens 10.8 dBf (0.95  $\mu$ V); 50-dB quieting sens mono/stereo 18.1 dBf (2.2  $\mu$ V)/38.1 dBf (22  $\mu$ V); THD mono/stereo 0.04%/0.05%; S/N mono/stereo 78/70 dB; FR 5-18,000 Hz  $\pm$ 0.2 dB, -0.5 dB; capture ratio 1.0 dB; stereo sep 1 kHz 60 dB; 16 $\frac{1}{16}$ "W  $\times$  2 $\frac{1}{32}$ "H  $\times$  9 $\frac{1}{32}$ "D; 5.3 lb ..... \$220

#### ST-C03 AM/FM Stereo Tuner

Quartz synthesizer AM/FM-stereo tuner with Varactor/4-pole MOSFET front end. Features digital frequency display; SAW filter in i-f stage; 2-color, 5-LED signal-strength meter; 8 AM/8 FM station presets; up/down scan tuning. FM usable sens 10.8 dBf (1.9  $\mu$ V); 50-dB quieting sens mono/stereo 17 dBf (3.9  $\mu$ V)/38.3 dBf (45  $\mu$ V); S/N mono/stereo 77/72 dB; THD mono/stereo 0.08%/0.15% alternate-ch sel 75 dB; capture ratio 1.0 dB; IM distortion 0.03%; image/i-f/spurious response rejection 65/85/90 dB; FR 20-15,000 Hz  $\pm$ 0.5/-1.5 dB; sep 55 dB. \$370

## NOTICE TO READERS

Prices of items described are manufacturers' suggested prices only and are subject to change without notice. Actual selling prices are determined by the dealers.

**ST-C01 AM/FM-Stereo Tuner**

Analog-dial AM/FM-stereo tuner with bow-tie center tune display on dial pointer. FM usable sens 10.8 dBf (1.9  $\mu$ V); 50-dB quieting sens mono/stereo 17 dBf (3.9  $\mu$ V)/38.3 dBf (45  $\mu$ V), S/N mono/stereo 75/70 dB; THD 0.1%/0.15%; alternate-ch sel 75 dB; capture ratio 1.0 dB; image/i-f/spurious response ratio 50/85/80 dB; FR 20-15,000 Hz + 0.5/-1.5 dB; sep 45 dB at 1 kHz; AM sens 250  $\mu$ V/m; power consumption 8 W;  $11\frac{1}{8}''\text{W} \times 10\frac{1}{32}''\text{D} \times 1\frac{1}{8}''\text{H}$  ..... \$250

**ST-S4 AM/FM Digital Tuner**

Quartz synthesizer AM/FM-stereo tuner with 16-station full random-access auto scanning tuning. Features auto station memory; full digital display; digital display of signal strength; normal/narrow i-f bandwidth selector; slim body ..... \$280

**ST-C04 AM/FM-Stereo Tuner**

Quartz-synthesizer AM/FM-stereo tuner with digital frequency display, 6 AM/6 FM station presets, auto/manual up/down scan tuning. FM usable sens 11.2 dBf (2.0  $\mu$ V); 50-dB quieting sens mono/stereo 17.5 dBf (4.1  $\mu$ V)/39 dBf (49  $\mu$ V) S/N mono/stereo 78/73 dB; THD mono/stereo 0.1%/0.15%; alternate-ch sel 60 dB capture ratio 1.0 dB; image/i-f/spurious response ratio 55/80/80 dB; FR 20-15,000 Hz + 0.5/-1.5 dB; sep 50 dB at 1 kHz; AM sens 250  $\mu$ V/m; power consumption 8 W;  $11\frac{1}{8}''\text{W} \times 9\frac{1}{8}''\text{D} \times 1\frac{1}{8}''\text{H}$ ; 4 lb ..... \$250

**ST-5 AM/FM-Stereo Tuner**

Quartz synthesizer digital/analog tuner with digital frequency display, analog tuning dial. Features 8 AM/8 FM station presets; auto/manual up, down scan tuning; 3-LED signal-strength meter; 1-week batteryless memory back-up. FM usable sens 11.2 dB (2.0  $\mu$ V); 50-dB quieting sens mono/stereo 17.5 dBf (4.1  $\mu$ V)/39 dBf (49  $\mu$ V); S/N mono/stereo 78/73 dB; THD mono/stereo 0.08%/0.15%; alternate-ch sel 60 dB; FR 20-15,000 Hz + 0.5/-1.5 dB;  $12\frac{1}{32}''\text{W} \times 9\frac{1}{32}''\text{D} \times 1\frac{1}{32}''\text{H}$ ; 4.2 lb ..... \$230

**TEKNIKA**

**8841 AM/FM-Stereo Tuner**

Digital AM/FM-stereo quartz-locked PLL tuner with manual/auto-search/memory/direct-entry tuning. Features 5 AM/5 FM station presets; LED signal-



strength meter; feather-touch controls; output level control. FM usable sens 1.9  $\mu$ V stereo; S/N 70 dB stereo; capture ratio 1.5 dB; alternate-ch sel 70 dB; i-f/spurious response rejection 90/90 dB; THD 0.5% stereo; sep 50 dB at 1 kHz;  $17\frac{1}{8}''\text{W} \times 12\frac{1}{4}''\text{D} \times 4\frac{1}{4}''\text{H}$  ..... \$300

**8441 AM/FM-Stereo Tuner**

Analog-dial AM/FM-stereo tuner with LED tuning direction indicator; feather-touch controls; FM muting. FM usable sens 1.2  $\mu$ V; 50-dB quieting sens 25.7  $\mu$ V stereo; S/N 62 dB stereo; capture ratio 2 dB; alter-

nate-ch sel 70 dB; i-f/spurious response rejection 79/79 dB; THD 0.7% stereo; sep 40 dB at 1 kHz;  $15\frac{1}{4}''\text{W} \times 11\frac{1}{8}''\text{D} \times 3''\text{H}$  ..... \$150

**8441 AM/FM-Stereo Tuner**

Analog-dial AM/FM-stereo tuner with LED tuning direction indicator; feather-touch controls; FM muting. FM usable sens 1.2  $\mu$ V; 50-dB quieting sens 25.7  $\mu$ V stereo; S/N 68 dB stereo; capture ratio 2 dB; alternate-ch sel 70 dB; i-f/spurious response rejection 83/83 dB; THD 0.6% stereo; sep 40 dB at 1 kHz;  $14\frac{1}{8}''\text{W} \times 11\frac{1}{8}''\text{D} \times 2\frac{3}{4}''\text{H}$  ..... \$140  
**8341.** Similar to 8441 except no LED tuning direction indicator, feather-touch controls; has LED signal-strength meter. FM usable sens 4  $\mu$ V; S/N 64 dB; THD 0.8% stereo;  $11\frac{1}{8}''\text{D} \times 3''\text{H}$  ..... \$100

**YAMAHA**

**T-2 FM-Stereo Tuner**

Features digital frequency display; r-f mode selector; i-f mode selector; auto DX; digital display; slide-rule dial, 330-Hz record calibration; signal Q meter. FM usable sens 8.8 dBf (1.5  $\mu$ V); 50-dB quieting sens 13.2 dBf (2.5  $\mu$ V) mono, 34.2 dBf (28  $\mu$ V) stereo; THD 0.05% mono, stereo; S/N 88 dB mono; FR 10-18,000 Hz + 0.3/-3 dB; capture ratio 1 dB; alternate-ch sel 100 dB; image response -120 dB; i-f response -120 dB; AM suppression 60 dB; sep 55 dB at 1 kHz; output 0.5 V fixed, 1 V variable;  $17\frac{1}{8}''\text{W} \times 13\frac{3}{4}''\text{D} \times 2\frac{3}{4}''\text{H}$  ..... \$750

**T-70 AM/FM-Stereo Tuner**

Computer servo-locked synthesizer AM/FM-stereo tuner with 10 AM/FM station presets. Features manual, auto-search tuning modes; initial station set; auto local/distant switching; low-imp AM loop antenna; selectable AM sel; recording calibration oscillator; sig-

nal-quality indicator. FM usable sens at 300/75 ohms 1.2  $\mu$ V/C.6  $\mu$ V; 50-dB quieting sens 32  $\mu$ V (35.2 dBf) stereo; capture ratio local/DX 1.2/2.5 dB; S/N 83 dB; stereo distortion IM local/DX 0.04%/0.6%; sep local DX 60/28 dB at 1 kHz; FR 30-15,000 Hz + 0.3/-0.5 dB; AM S/N 50 dB;  $17\frac{1}{8}''\text{W} \times 12\frac{1}{4}''\text{D} \times 2\frac{3}{4}''\text{H}$ ; 8 lb 13 oz ..... \$370

**T-1000 AM/FM Tuner**

Incorporates computer Servo lock tuning system to auto select FM servo tuning mode or high-precision PLL mode. Features zero intermodulation mixer; Servo gain control; ultra-linear direct FM detector; auto DX; programming of up to 10 AM or FM stations; direct coupled CMOS DC NFB multiplex demodulator; pushbutton auto search/manual mono tuning; digital station frequency display; interchangeable station indicator cards; S/N, IHF, mono/stereo of 92/85 dB; 50-dB quieting sens of 40  $\mu$ V (37.2 dBf) stereo; spurious response ratio 110 dB ..... \$320  
**T-700.** Similar to T-1000 S/N IHF, mono/stereo of 89/84 dB; 50-dB quieting sens of 40  $\mu$ V (37.2 dBf) in stereo, spurious response ratio 70 dB ..... \$280

**T-500 AM/FM Tuner**

AM/FM tuner with quartz PLL digital synthesizer tuning and 10 programmable station presets. Features digital frequency readout, manual single-step and auto search tuning; 3-LED signal level meter. 50-dB quieting sens stereo 42  $\mu$ V (37.7 dBf); capture ratio (IHF) 1.5 dB; stereo 70 dB; harmonic distortion stereo 0.2% at 1,000 Hz ..... \$180  
**T-300.** Similar to T-500 except analog tuning; 50-dB quieting sens (IHF) stereo 42  $\mu$ V (37.7 dBf) capture ratio (IHF) 1.5 dB; stereo 70 dB; harmonic distortion stereo 0.3% at 1,000 Hz; stereo sep 40 dB at 1,000 Hz ..... \$150

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Audio terms are defined in the glossary on page 19.

For an explanation of abbreviations, turn to the list on page 22.

# 4

# Turntables

## ADC

### LT-31 Turntable

Fully automatic single-play turntable. Features integrated low-mass ADC L-3 magnetic cartridge; repeat/reject functions; precision nonferrous metal platter with soft rubber mat; automatic set-down function compatible with both 12<sup>7</sup>/<sub>33</sub> rpm and 7<sup>7</sup>/<sub>45</sub> rpm records; ultra-quiet, precision belt-drive system; 4<sup>1</sup>/<sub>2</sub>"H × 13<sup>7</sup>/<sub>8</sub>"W × 14<sup>1</sup>/<sub>4</sub>"D; 9 lb ..... \$130

### LT-30 Linear-Tracking Turntable

Semiautomatic single-play turntable. Features platter belt driven by electrically governed DC motor. Tonearm belt driven by separate servo-controlled electronically governed DC motor; straight tangential movement; electro-optically controlled to within 0.5°; electronic push-button viscous cue and pause control. 4<sup>1</sup>/<sub>2</sub>"H × 13<sup>7</sup>/<sub>8</sub>"W × 14<sup>1</sup>/<sub>4</sub>"D; 9 lb ..... \$100

## ADS

### ADS Atelier P2 Turntable

Direct-drive fully automatic turntable. Features frequency generator servo-controlled motor; isolated tonearm; ultra-low-mass tonearm; integrated cartridge; universal mounting shell; operating controls outside dustcover; silicone-damped cueing mechanism; switchable indexing. W&F <0.05% DIN/-0.03% wrms; rumble >48 dB DIN A/70 dB DIN B; platter diecast aluminum with mass concentrated at perimeter, platter diameter 300mm/11.81"; platter weight 1.1 kg/2 lb, 7 oz; vertical tracking error 2.2° max; vertical tracking force adjustment range 0 to 2 grams; anti-skating adjustable to the tracking force range for elliptical and spherical styli; 17.52"W × 4.53"H × 14.25"D; 11 lbs ..... \$400

## AKAI

### AP-B1 Turntable

Belt-drive semiautomatic turntable. Features front panel controls, low-mass straight tonearm.... \$100

### AP-D2 Turntable

Direct-drive semiautomatic turntable. Features discolith DC servo motor, low-mass straight tonearm \$135

### AP-D3 Turntable

Direct-drive fully automatic turntable. Features disco-



lith DC servo motor, quick repeat, low-mass straight tonearm, electronic brake for platter..... \$150

### AP-M5-S Turntable

Direct-drive fully automatic turntable. Features auto homing arm, discolith DC servo motor, DC tonearm drive motor, 2-speed cueing control, quick repeat, auto disc size/speed selector, low-mass straight tonearm, feather-touch controls, LED function indicator..... \$200

### AP-M7-S Turntable

Linear-tracking turntable. Features direct drive, fully automatic, discolith DC servo motor, DC tonearm drive motor, 2-speed cueing control, quick repeat, auto disc size/speed selector, feather-touch controls, electronic brake for platter, LED function indicator..... \$250

### AP-Q41 Automatic Turntable

Quartz-locked direct-drive fully automatic turntable with automatic homing tonearm system. Features low-mass straight tonearm; servo-motor turntable drive; dc-motor tonearm drive; feather-touch controls; electronic inside-force canceller; automatic repeat; automatic speed/disc-size selector; quick tonearm return; electronic platter brake ..... \$250

### AP-Q310 Automatic Turntable

Quartz-locked direct-drive fully automatic turntable with low-mass straight tonearm. Features Discolith Coil dc servo motor; automatic repeat 0/1/2/3/; quick tonearm return; electronic platter brake; non-resonant-compound base ..... \$175

### AP-D210 Semiautomatic Turntable

Direct-drive semiautomatic turntable with low-mass straight tonearm. Features fixed headshell; antiskate control; oil-damped cue; detachable dustcover; Discolith Coil dc servo motor; quick tonearm return; non-resonant-compound base; slim design. W&F DIN/JIS 0.045%/0.03%; rumble 73 dB DIN-B; speed deviation ±0.5% ..... \$135

### AP-B110 Semiautomatic Turntable

Belt-driven semiautomatic turntable with automatic tonearm return. Features 4-pole synchronous motor; straight tonearm with antiskate control; removable headshell; front-panel controls; detachable dustcover; low-resonance-compound base. W&F 0.05%, JIS; rumble 65 dB, DIN-B ..... \$100

## AR

### The AR Turntable

Two-speed belt-drive manual turntable with cast-aluminum T-bar subchassis; 3-point spring suspension; 24-pole synchronous motor. W&F 0.03% max IEE; rumble -40 dB unweighted, -65 dB DIN B weighted. Tonearm is medium mass, straight tube; viscous-damped cueing; plug-in headshell; length 229mm pivot to stylus tip; tracking error .53° per inch max at 6" and .37° per inch at 3"; stylus force range 0-3 g; antiskating range 0-3 g; cable capacitance 85 pF. 368mmW × 467mmD × 140mmH; 15 lb... \$430 Without tonearm ..... \$300

## BANG & OLUFSEN

### Beogram 8002 Turntable

Tangential-drive 33<sup>1</sup>/<sub>3</sub>, 45-rpm turntable with patented light/shutter tangential-tracking tonearm. Features low-mass tonearm, patented leaf-spring/pendulum suspension system. W&F & 0.04% DIN; rumble >70 dB DIN ..... \$695

### Beogram TX Turntable

Features tangential tonearm; precision-ground belt drive; patented suspension; integrated tonearm/cartridge system. W&F wrms <±0.025%; rumble DIN weighted >70 dB; speed deviation <0.02%; 19<sup>1</sup>/<sub>8</sub>" × 3<sup>1</sup>/<sub>2</sub>" × 14<sup>1</sup>/<sub>4</sub>"; 19.8 lbs..... \$495

### Beogram 2404 Turntable

Features stainless steel tonearm; low-mass MMC cartridge; tonearm/cartridge integration; electronically controlled self-correcting drive system; 1-touch music. W&F wrms <±0.03%; rumble >65 dB; speed deviation <0.05%; 17<sup>1</sup>/<sub>4</sub>" × 3<sup>1</sup>/<sub>2</sub>" × 13" .. \$330

### Beogram 5000 Turntable

Designed to be incorporated into Beosystem 5000 stereo component system; can be operated by remote control via the system's master control panel. Features dual-chassis design; radial arm; effective mass



of the tonearm/cartridge combination 6.8 grams; tonearm resonance 14 Hz; W&F wrms <±0.035% rumble DIN weighted >75 dB; 16<sup>1</sup>/<sub>2</sub>"W × 3"H × 12<sup>3</sup>/<sub>4</sub>"D; 13.2 lb ..... \$295

### Beogram 1800 Turntable

Radial-arm turntable with stainless steel tonearm; self-correcting electronically-controlled drive system; integrated tonearm/cartridge; 3-point suspension. W&F wrms <±0.035%; rumble >70 dB; speed deviation <0.05% ;16<sup>1</sup>/<sub>2</sub>"W × 2<sup>1</sup>/<sub>2</sub>"H × 12<sup>7</sup>/<sub>8</sub>"D ..... \$250

### Beogram RX Turntable

Turntable with electronically controlled drive system; automatic anti-skating; pendulum suspension; 1-touch music. W&F wrms <±0.45%; rumble DIN weighted >62 dB; speed deviation <0.1%; 17<sup>1</sup>/<sub>8</sub>"W × 3<sup>1</sup>/<sub>8</sub>"H × 13<sup>1</sup>/<sub>4</sub>"D ..... \$195

## BENJAMIN ELECTROPRODUCTS

### B55BR Variable Speed Turntable

Manual turntable offering continuously variable speed from 30-86 rpm and adjustable detents for 33<sup>1</sup>/<sub>3</sub>, 45 and 78 rpm. Features 4-pole constant-velocity motor; straight tonearm; rumble -60 dB; 18<sup>1</sup>/<sub>16</sub>"W ×

14 1/4" D x 5 1/4" H; includes base and dustcover; 25 lb ..... \$210  
 B55B. Same as B55BR except chassis only .. \$165

**BSR**

**Mini Turntables**

Single-play semiautomatic units featuring cue and pause control.

**MT-1.** Includes tetrad stereo ceramic cartridge with diamond stylus ..... \$80

**MT-2.** Includes ADC SM-2 solid-state magnetic cartridge ..... \$80

**DENON**

**DP-80 Single Play**

Quartz-PLL direct-drive 33 1/2- and 45-rpm turntable without tonearm. Features 3-phase out-rotor ac servo motor; 308-mm double aluminum alloy platter with lower platter mounted to motor shaft, connected to disc platter by spring, damper; quartz-crystal PLL variable/normal speed control with & 6% servo speed control; variable mode and magnetic record detection system. W&F 0.015% wrms; rumble -77 dB DIN B; 100 V, 50 VA ac output stepdown transformer; optional cabinets available; 140mmH x 376mm dia x 140mmH ..... \$895

**DP-62L Semiautomatic Single Play**

Dynamic servo tracer "nonresonance concept" design in heavy wood base. Electronic tonearm damping system. Noncontact antiskate, warp control, and lift function. Diecast platter and tonearm base. High-torque AC servo direct-drive motor. Quartz lock magnetic speed system. Speed deviation < 0.002% SN 82 dB; tonearm interchangeable (straight and S-shaped); effective length 24mm, overhang 14mm, tracking error within 2.5"; stylus force range 0-3g. S-shaped arm. 19.5"W x 7.5"H x 16.5"D ..... \$595

**DP-72L.** Similar to DP62L with heavier base and motor; tonearm assembly of special nonresonant material ..... \$695

**DP-75 Single-Play**

Quartz-locked direct-drive 33 1/2- and 45-rpm turntable without tonearm. Features ac servomotor; double-damped platter; quartz-controlled speed; electronic function controls. W&F 0.015% wrms; rumble -80 dB DIN B; speed accuracy ± 0.002% ..... \$550

**DP-52F Automatic Single-Play**

Automatic single-play turntable with Dynamic Servo Tracer noncontact microprocessor-controlled tonearm. Features automatic record-size, speed selection, quartz ac direct-drive motor with magnetic speed detection, program scan feature; variable electronic stylus-force, antiskate, resonance damping; wood-veneer cabinet. W&F < 0.01% wrms; S/N 78 dB DIN-B; speed deviation < 0.002%; 18.2"W x 17"D x 5.2"H ..... \$525

**DP-51F.** Same as DP-52F except no program scan; woodgrain veneer finish ..... \$425

**DP-45F Auto Single Play**

Flat twin DC motor in high-gloss finished wood base. Features auto speed and record sizing; front apron control of arm position, lifter, start/stop and manual override; dynamic servo tracer damps resonances in low-mass straight tonearm. Noncontact microprocessor control of all arm functions and antiskate; speed deviation > 0.002%; W&F 0.012% wrms; S/N 78 dB; tonearm effective length 220mm; overhang 16mm; tracking error within 2.5"; stylus force range 0-3 g; accepts cartridges 4-9 g; 17.4"W x 5.4"H x 16.5"D ..... \$350

**DP-35F Auto Single Play**

Flat twin DC motor in high-density compound base. Dynamic servo tracer controls resonances in low-mass straight tonearm; quartz magnetic speed control; all noncontact microprocessor control of lifter, repeat and antiskate; quick repeat system and front apron controls; speed deviation < 0.002%; W&F 0.012% wrms; SN 78 dB; tonearm effective length

220mm; overhang 16mm; tracking error within 2.5"; stylus force range 0-3g; acceptable cartridge weight 4-9 g; 17.4"W x 5.4"H x 16.5"D ..... \$300

**DP-30L II Semiautomatic Single-Play**

Direct-drive 33 1/2- and 45-rpm turntable with auto lift/shutoff tonearm. Features ac servomotor; 220-mm static-balanced straight low-mass tonearm with



touch-control cueing, separate motor; high-density resin-compound base; antivibration feet; brown finish cabinet. W&F 0.018% wrms ..... \$275

**DP-11F Automatic Single-Play**

Fully automatic direct-drive 33 1/2- and 45-rpm turntable with magnetic speed detection, noncontact automatic functions. Features compact cabinet with Flat-Twin motor; low-mass electronically controlled tonearm for resonance damping, warp handling; quartz speed control; repeat function. W&F < 0.02% wrms; S/N 75 dB DIN-B; speed deviation < 0.002%; 14.6"W x 13.4"D x 4"H ..... \$200

**Compressed Beechwood Cabinets**

**DK-300.** For DP-800, DP-6000 ..... \$400

**DK-110.** For DP-80, DP-75 ..... \$260

**DUAL**

**CS630Q Turntable**

Quartz-PLL controlled direct-drive turntable with integrated microprocessor. Features Ultra-Low-Mass tonearm; 4-point gimball tonearm bearing; anti-skating; floating chassis with shock absorbers; electronic pitch control (± 10%); full-size platter with special mat providing high damping; servo operated viscous-damped tonearm lift; front controls with electronic buttons. W&F DIN/wrms 0.035/0.02%; S/N -54 dB unweighted, -80 dB weighted; effective tonearm mass 7 g; finish satin-metallic; 17 1/2" x 4 1/2" x 1 1/2" ..... \$250

**CS620Q.** Similar to CS630Q except W&F ± 0.05% din, 0.025 wrms; S/N -52 dB unweighted, -78 dB weighted ..... \$200

**CS616Q.** Similar to CS620Q except no pitch control. Semiautomatic, auto return ..... \$180

**CS530 Belt Drive Fully Automatic Turntable**

Fully automatic belt-drive turntable with ULM tonerem and floating chassis. Features four-point gimbal tonerem bearing; anti-skating; floating chassis with shock absorbers; high-torque electronic DC motor; full-size platter; high damping mat; viscous-damped tonearm lift; pitch control (± 6%); illuminated strobe; tilt and hold dustcover; front controls with soft-touch buttons. W&F ± 0.06% din, 0.035% rms; rumble -50 dB unweighted, -75 dB weighted; effective tonearm mass 7 g; finish satin metallic; 17 1/2" x 4 1/2" x 1 1/2" ..... \$150

**CS515.** Similar to CS530 except semiautomatic with auto return. W&F ± 0.07% DIN, ± 0.045 wrms; rumble -48 dB unweighted, -72 dB weighted .. \$135

**CS1254 Automatic Multi-Play Changer**

Belt-drive multiple-play changer. Features automatic start and stop; manual start and stop; damped cue-control; pitch-control range (± 6%); 4-point bearing tonearm; hi-torque synchronous motor; 10 1/4" platter; rumble > 68 dB weighted DIN B; W&F wrms ± 0.05%; min tracking force 1.0 g; 16 1/4" x 14 1/2" x 7 1/4" ..... \$160

**1268 Single Play/Multiple Play Turntable**

Fully automatic multiple-play turntable with elevator-action changer spindle that holds up to 6 records, interchanges with rotating single play spindle. Rumble -70 dB; W&F ± 0.04%; 17 1/2" x 15 1/4" x 7 1/4" \$150

**1258 Automatic Turntable**

Fully automatic multiple-play turntable with elevator-action changer spindle that holds up to 6 records; interchanges with rotating single play spindle; dynamically balanced ULM tonearm; vernier-adjustable counterbalance; tracking force applied around vertical pivot; antiskating calibrated for all stylus types; illuminated strobe; ± 6% pitch control; cueing damped in both directions. Rumble -68 dB; W&F ± 0.05%; 16 3/4" x 4 1/2" x 7 1/4" \$190

**505-1 Semiautomatic Single Play Turntable**

Semiautomatic single-play turntable with ULM dynamically balanced tonearm system, low-friction gyroscopic gymbal, Vario-belt drive. Rumble -70 dB; W&F ± 0.04% ..... \$130

**FISHER**

**MT6360 Automatic Single-Play**

Remote-control programmable direct-drive 33 1/2- and 45-rpm turntable with automatic tonearm. Features 12D-pole linear ac servomotor; J-shaped tubular arm with viscous-damped cueing. Features infrared wireless remote control unit; programmable microcomputer for track selection; disc track sensor/counter; LED digital track display; strobe with speed control. W&F 0.035% wrms; rumble -70 dB; 17 1/2"W x 14 1/2"D x 6"H ..... \$350

**MT M301C Automatic Single-Play**

Fully automatic dc servo direct-drive 33 1/2- and 45-rpm turntable with straight Z-balanced tonearm, magnetic stereo cartridge. Features detachable headshell; strobe light; pitch control; motor-controlled cueing; record-jacket size. W&F 0.04% wrms; rumble -70 dB ..... \$290

**MT 300C.** Similar to MT 301C except semiautomatic operation ..... \$220

**MT650 Automatic Turntable**

Fully automatic quartz-locked direct-drive turntable with straight low-mass tonearm. Features direct-drive brushless dc servo motor; detachable cartridge shell; heavy cast-aluminum platter; viscous-damped cueing mechanism; adjustable calibrated antiskate control; up-front controls. W&F 0.035% wrms; rumble -70 dB DIN 45539B, tracking-force range 0.6-3.5 g; speeds 33 1/2 and 45 rpm; silver finish; 45-rpm adapter included; 17 1/2"W x 14 1/2"D x 4 1/2"H; 13.2 lb \$200

**MT650C.** 650 with cartridge ..... \$220

**MT640 Automatic Turntable**

Fully automatic direct-drive turntable with straight low-mass tonearm. Features direct-drive brushless dc servo motor; pitch control; heavy cast-aluminum platter; viscous-damped cueing mechanism; adjustable calibrated antiskate control; removable cartridge shell. W&F 0.035% wrms; rumble -70 dB DIN B; speed variation/control range 0.5%/& 3%; tracking-force range 0.6-3.5 g; tonearm resonance < 10 Hz; effective tonearm mass without cartridge 6.5 g; max tracking error & 1.8"; silver finish; 45-rpm adapter supplied; 17 1/2"W x 14 1/2"D x 4 1/2"H; 13 lb \$180

**MT640C.** 640 with cartridge ..... \$200

**MT 125C Semiautomatic Single-Play**

Semiautomatic 33 1/2- and 45-rpm turntable with straight low-mass tonearm, magnetic stereo cartridge. Features dc servo direct drive; pitch control; front-panel operation; detachable headshell; antiskate control. W&F 0.035% wrms; rumble -68 dB; pitch control range & 3%; 45-rpm adapter; 15 3/4"W x 13 3/4"D x 4 1/4"H; 9 lb ..... \$150

**MT6410 Semiautomatic Turntable**

Belt-drive turntable with precision low-mass straight tonearm. Features detachable cartridge shell; strobe,

33 $\frac{1}{3}$  and 45-rpm speed-adjust controls; viscous-damped cueing mechanism; auto tonearm return/shutoff. W&F 0.04% wrms; rumble -68 dB DIN B; speed variation/adjustment range  $\pm 0.5\%/ \pm 3\%$ ; tracking force range 0.6-3.5 g; tonearm resonance < 10 Hz; effective tonearm mass without cartridge 6.5 g; max tracking error  $\pm 2.0^\circ$ ; silver finish; supplied with 45-rm adapter; 17 $\frac{1}{2}$ "W x 14 $\frac{1}{2}$ "D x 5 $\frac{1}{2}$ "H; 10.2 lb ..... \$130  
**MT6410C**. 6410 with cartridge ..... \$150

**GEM by SUMIKO**

**GEM Turntable**

Belt-drive turntable integrated with Grace 707 II tonearm. Features 4-point suspension combined with mass loading for dynamic stability; inverted sapphire thrust bearing; platter mass concentration, belt contact at rim for best flywheel effect; low-resonance platter mat; vibration isolation ..... \$725  
 With Grace 747 tonearm with detachable headshell ..... \$800

**HARMAN/KARDON**

**T60 Semiautomatic Single-Play**

Belt-drive 33 $\frac{1}{3}$  and 45-rpm semiautomatic turntable with auto-lift tonearm. Features 3.3-lb platter; 3-point floating suspension with counterweighted subchassis; quartz-lock (defeatable) high-torque dc servo motor;  $\pm 3\%$  speed pitch control; removable ultra-low-capacitance cables with gold-plated plugs; highly absorbent platter mat; disc stabilizer. W&F 0.035% wrms; rumble -67 dB DIN B; effective tonearm mass without cartridge 8 g; capacitance trim 100, 200, 300 pF \$400  
**T40**. Similar to T60 except has 2.2-lb platter, speed-lock (defeatable) FG servo motor; no removable cables but gold-plated plugs. W&F 0.04% wrms; rumble -65 dB; capacitance trim 160, 250, 350 pF . \$280  
**T20**. Similar to T40 except nondefeatable FG servo motor. 1.1-lb platter. W&F 0.045% wrms. .... \$200

**HEYBROOK by MECOM**

**Heybrook TT-2**

Belt-drive 33 $\frac{1}{3}$ -45 rpm manual turntable. Features low-speed synchronous motor driving massive 2-piece platter; adjustable 3-point spring suspension



subchassis constructed of cast aluminum; laminated armboard; massive wood base. Finished in real walnut or gloss black. W&F < 0.1% din peak weighted; rumble -73 dB weighted DIN B. 6 $\frac{1}{4}$ "H x 17 $\frac{1}{2}$ "W x 14 $\frac{1}{4}$ "D; 26 lbs ..... \$580

**HITACHI**

**HT-L70 Linear-Tracking Turntable**

Fully automatic microcomputer-controlled linear-tracking 33 $\frac{1}{3}$  and 45-rpm turntable with quartz lock PLL servo, Utorque direct drive, digitally controlled track selection. Features low-mass dynamically balanced linear-tracking tonearm; specially developed MM phono cartridge; compact size; muting switch; independent dc tonearm motor; timer start capability.

W&F 0.025% wrms; S/N 78 dB DIN B; speed accuracy 0.003%; tracking error  $\pm 0.1^\circ$ ; tracking-force range 0-2 g; cartridge weight 6 g; MT-70 cartridge output 2.5 mV at 5 cm/sec. 1 kHz; frequency range 10-25,000 Hz; 12 $\frac{3}{4}$ "W x 12 $\frac{3}{4}$ "D x 3 $\frac{3}{4}$ "H \$300

**HT-68 Automatic Single-Play**

Fully automatic direct-drive quartz-locked 33 $\frac{1}{3}$  and 45-rpm turntable with Utorque motor, straight tonearm. Features hi-tech damping; automatic size/speed selector; feather-touch IC logic control; front-panel operation; Hitachi Anti-Resonance Compound base material; antifeedback insulator feed plug-in dual-magnet phono cartridge. W&F 0.025% wrms; S/N 78 dB DIN B; speed accuracy 0.003%; tracking error  $\pm 2^\circ$ ; MT-35 cartridge output 2.5 mV at 5 cm/sec. 1 kHz. 17 $\frac{1}{4}$ "W x 14 $\frac{1}{4}$ "D x 4 $\frac{3}{16}$ "H; 13 lb 3 oz ..... \$260  
**HT-67**. Similar to HT-68 except no auto/size speed selector, no cartridge ..... \$200

**HT-L55 Linear-Tracking Turntable**

Direct-drive quartz servo turntable with microcomputer-controlled program repeat. Features low-mass gimbal-suspension linear-tracking tonearm; fully automatic operation; up/down tonearm control buttons; auto cut button; program repeat; timer start at an arbitrary preset position with external timer unit; plug-in cartridge system; muting switch. W&F 0.025% wrms; S/N 78 dB DIN B; tracking error  $\pm 0.1^\circ$ ; 12 $\frac{3}{4}$ "W x 3 $\frac{1}{4}$ "H x 12 $\frac{3}{4}$ "D; 9 lb 14 oz ..... \$240

**HT-L303 Linear-Tracking Turntable**

Two-speed belt-drive fully automatic turntable with program repeat. Features low-mass linear-tracking tonearm; microcomputer control; auto setting of record speed and size; auto control of tonearm movements both in/out and up/down; auto return and shutoff; auto cut; precise manual control; DC servo motor; plug-in connector type cartridge; speed indicator; repeat indicator; smoked dustcover. S/N 70 dB DIN B; W&F 0.045% wrms; tracking error  $\pm 2^\circ$ ; 17 $\frac{1}{4}$ "W x 3 $\frac{3}{4}$ "H x 12 $\frac{3}{4}$ "D; 8 lb 13 oz ..... \$180

**HT-L33 Linear-Tracking Turntable**

Two-speed, DC servo belt drive, fully automatic turntable. Features low-mass, linear-tracking tonearm; microcomputer control; program repeat; auto size and speed control; precise manual cueing; plug-in connector cartridge; speed indicator; repeat indicator; S/N 70 dB DIN B; W&F 0.045% wrms; 12 $\frac{3}{4}$ "W x 3 $\frac{1}{2}$ "H x 12 $\frac{3}{4}$ "D; 8 lb 13 oz ..... \$180

**HT-2 Automatic Turntable**

Two-speed, direct drive, semiautomatic turntable with straight-line, gimbal-suspension tonearm with hi-tech damping. Features uitorque motor; plug-in connector cartridge; automatic controls; oil-damped tonearm lifter; antiskating device; S/N 78 dB DIN B; W&F 0.025% wrms; tracking error 2 $^\circ$ ; 17 $\frac{1}{4}$ "W x 14 $\frac{1}{4}$ "H x 4 $\frac{3}{16}$ "D; 11 lb ..... \$130



tor cartridge; automatic controls; oil-damped tonearm lifter; antiskating device; S/N 78 dB DIN B; W&F 0.025% wrms; tracking error 2 $^\circ$ ; 17 $\frac{1}{4}$ "W x 14 $\frac{1}{4}$ "H x 4 $\frac{3}{16}$ "D; 11 lb ..... \$130

**HT-1 Semiautomatic Turntable**

Two-speed DC servo belt-drive turntable with straight-line gimbal-supported tonearm. Features plug-in con-

necter cartridge; front-panel controls; antiskating device; S/N 70 dB DIN B; W&F 0.045% wrms; 17 $\frac{1}{4}$ "W x 14 $\frac{1}{4}$ "H x 4 $\frac{3}{16}$ "D; 8 lb 13 oz ..... \$90

**JVC**

**L-F71 Automatic Single-Play**

Fully automatic turntable with straight low-mass Music Scan tonearm for random cueing, magnetic cartridge. Features remote controllability; E-D Servo for horizontal tonearm movement; cog-free dc coreless servo motor; front-panel controls. W&F < 0.03% wrms; S/N > 75 dB DIN B ..... \$350  
**RM-71**. Wired controller for L-F71 turntable. .... \$50

**QL-A75 Quartz-Locked Turntable**

Features double-servo quartz control; dynamic Q damping system for tonearm. Tapered, low-mass straight tonearm; gimbal support; replaceable arm shaft; Chuck'N'Lock head connector; high-torque coreless DC servo motor and heavy platter. Mirror-finished multi-layer solid cabinet. W&F 0.018% wrms; S/N 80 dB; 19 $\frac{1}{2}$ " x 8 $\frac{1}{4}$ " x 16 $\frac{1}{2}$ "; 30.8 lbs \$650

**QL-Y55F Quartz-Locked Turntable**

Features E.D. Servo tonearm; double-servo quartz control; cog-free coreless DC servo motor; electronic resonance-damping; tracking force and anti-skate controls; computerized convenience, repeat; solid cabinet with mirror finish; light-touch controls; S-shaped replacement arm included. W&F 0.015% wrms; S/N 78 dB; 19 $\frac{1}{2}$ " x 7 $\frac{1}{16}$ " x 16 $\frac{1}{2}$ "; 26.4 lbs ..... \$500

**QL-L2 Quartz-Locked Turntable**

Quartz-locked fully automatic linear-tracking turntable. Features quartz motor with double servo control; optical system maintains arm tangent to groove; W&F 0.025%; plug-in cartridge connectors; fully automated operation; manual switch; pulse count tonearm cueing system. W&F 0.025% wrms; S/N 78; 17 $\frac{1}{4}$ " x 3 $\frac{3}{16}$ " x 14 $\frac{1}{16}$ "; 11.2 lbs ..... \$240

**L-L1 Linear-Tracking Turntable**

Fully automatic, zero-tracking error turntable; 4 inches high. Features computer-supervised control; P-Mount design; independent suspension; DC servo motor. W&F 0.045% wrms; S/N 70 dB; 17 $\frac{1}{4}$ " x 3 $\frac{1}{16}$ " x 14 $\frac{1}{16}$ "; 10.8 lbs ..... \$190

**L-E33 Linear-Tracking Turntable**

Fully automatic, zero-tracking error turntable. Plug-in cartridge connector; independent suspension; cog-free coreless DC FG servo motor; low-mass straight tonearm; computer-supervised operation; automatic disc size/speed selector. W&F 0.025% wrms; S/N 78 dB; 13 $\frac{3}{8}$ " x 3 $\frac{3}{8}$ " x 14 $\frac{1}{16}$ "; 10.8 lbs. .... \$220  
**L-E22**. Similar to L-E33 except no independent suspension. W&F 0.06% wrms; S/N 60 dB; 13 $\frac{3}{8}$ " x 3 $\frac{1}{8}$ " x 13 $\frac{3}{8}$ "; 8.4 lbs ..... \$175

**QL-F300 Quartz-Locked Turntable**

Quartz-locked fully automatic direct-drive turntable. Features cog-free coreless DC servo motor; independent suspension; repeat feature; up-front controls; space-efficient dustcover. W&F 0.025% wrms; max tracking error 2 $^\circ$  52'; 17 $\frac{1}{4}$ " x 4 $\frac{1}{4}$ " x 14 $\frac{1}{16}$ "; 11 lbs ..... \$160

**QL-A200 Quartz-Locked Turntable**

Quartz-locked auto-return direct-drive turntable features double-servo quartz control; cog-free coreless DC servo motor; lightweight straight tonearm; independent suspension system; auto-return; space-efficient dustcover. W&F 0.025% wrms; max tracking error 2 $^\circ$  52'; 17 $\frac{1}{4}$ " x 4 $\frac{1}{4}$ " x 14 $\frac{1}{16}$ "; 11 lbs \$140

**Audio terms are defined in the glossary on page 19.**  
**For an explanation of abbreviations, turn to the list on page 22.**

## Turntables

### L-A100 Auto-Return Turntable

Auto return belt-driven turntable features precision DC servo motor; lightweight straight tonearm, inde-



pendent suspension; up front cueing control; space-efficient dustcover. W&F 0.045% wrms; max tracking error 2.52; 17 $\frac{1}{8}$ " $\times$  4 $\frac{1}{4}$ " $\times$  14 $\frac{1}{16}$ " $\times$  9.5 lbs ..... \$100

## KENWOOD

### L07DN Direct-Drive Turntable

Direct-drive turntable features quartz PLL logic controlled motor; high rigidity triple-layer base and low-resonance triple-layer platter; aluminum-carbon-boron laminated tonearm and isolated power supply, 80 lbs. .... \$2,500

### KD-9XG Direct-Drive Turntable

Linear tracking quartz-PLL direct-drive turntable. Features direct music search for up to 9 tracks; computerized fully automatic repeat, cut, disc-size selection; 10 pole 6 coil slotless and coreless unit-que dc servo motor, low-resonance tonearm; integrated photo-sensor cartridge; 16 lbs ..... \$450

### P-9 Linear-Tracking Turntable

Fully automatic linear-tracking turntable with auto size and auto speed selector system, cueing device, and synchro start stop; 20 lbs ..... \$329

### KD-7X Direct-Drive Turntable

Quartz PLL direct-drive fully automatic turntable with rigid, low-mass low-resonance straight tonearm; 12 lbs. .... \$200

### KD-51F Quartz Turntable

Fully automatic direct-drive turntable with cueing sys-



tem and static balance type high-compliance straight tonearm; 13 lbs. .... \$190

### KD-41R Quartz-Locked Turntable

Semiautomatic direct drive turntable with cueing system and static-balance type high-compliance straight tonearm, 13 lbs ..... \$145  
**KD-41RB.** Same as KD-41R except black ..... \$145

### KD-31F Automatic Turntable

Fully automatic belt-drive turntable with cueing system and static balance high-compliance straight tonearm 12 lbs ..... \$135

### KD-21R Semiautomatic Turntable

Semiautomatic belt drive turntable with cueing sys-

## 4

tem and static-balance high-compliance straight tonearm, 12 lbs ..... \$115  
**KD-21RB.** Same as KD-21R but black ..... \$145

## Disc Stabilizers

**DS-20.** Outer disc stabilizer for L-07DN 7 lbs \$150  
**DS-21.** Inner disc stabilizer for L-07db, 2 lbs... \$40

## KYOCERA

### PL-901 Ceramic-Platter Turntable

Belt drive manual turntable with antistatic nonmagnetic 11 $\frac{1}{16}$ " turntable platter. Features adjustable insulation system that isolates transmission of vibration from base to chassis. Requires separate tonearm ..... \$3,500

## LINN SONDEK by AUDIOPHILE SYSTEMS

### LP12 Manual Single-Play

Belt-drive 33 $\frac{1}{3}$ -rpm turntable with manual tonearm. Features 24-pole synchronous motor, 12" zinc-aluminum alloy die-cast platter with felt mat, single-point oilbath bearing, hardened tool steel spindle; adjustable 3-point spring-suspension subchassis; heavy-gauge stainless-steel base plate, solid hardwood base. W&F 0.04% wrms; rumble -60 dB unweighted; speed accuracy  $\pm$  0.04%; optional 45-rpm adapter available. 17 $\frac{1}{2}$ " $\times$  14" $\times$  5 $\frac{1}{2}$ " $\times$  H. .... \$995

## LUXMAN

### PD-300 Stabilizer Turntable

Belt-drive Disc Stabilizer System 33 $\frac{1}{3}$  and 45-rpm turntable without tonearm. Features stroboscope, double-insulation system with horizontal balance adjust facility;  $\pm$ 3% speed pitch control; high-inertia platter. W&F 0.03% wrms; S/N 72 dB DIN B; 19.6" $\times$  15.6" $\times$  8" $\times$  39.6 lb ..... \$1,000

### PD-375 Stabilizer Turntable

Quartz-lock dc-servo fully automatic vacuum disc stabilizer turntable that bonds record to heavy die-cast aluminum platter. Features vacuum-pump system; integrated platter spindle receptacle, low-mass straight tonearm isolated from base. W&F 0.03%, S/N 60 dB; 19.3" $\times$  15.4" $\times$  7.9" $\times$  25 lb ..... \$600

### PX-101 Linear-Tracking Turntable

Fully automatic tangential tracking 33 $\frac{1}{3}$  and 45-rpm turntable with optical sensing. Features direct drive; stroboscope;  $\pm$ 3% speed pitch control; up-front controls. W&F 0.045% wrm; S/N 70 dB DIN B; 17.6" $\times$  16.2" $\times$  4.6" $\times$  16.3 lb ..... \$400

### PX-100 Direct-Drive Turntable

Two-speed, quartz locked direct-drive fully automatic turntable with straight static balanced, low-mass tonearm and Auto Disc Pause function. Accurate place of tonearm with electrical cueing and with arm speed switches; remote control capability (when used



with Luxman's LX-104 integrated amplifier and the RX-103 receiver); auto start/stop repeat, auto and manual switch. Aluminum diecast platter. W&F

## Turntables

0.045% S/N 60 dB IEC-B; 17 $\frac{1}{4}$ " $\times$  W  $\times$  6 $\frac{1}{4}$ " $\times$  H  $\times$  14 $\frac{3}{4}$ " $\times$  D. .... \$300  
**PX-99.** Similar to PX-100, but semiautomatic \$230

### VS-300 Disc Stabilizer System Unit

Disc stabilizer works with the Luxman PD-30 turntable to remove air between disc and platter to eliminate vinyl resonances that cause loss of sep. ambience and groove information. 3 $\frac{1}{2}$ " $\times$  W  $\times$  5 $\frac{1}{4}$ " $\times$  H  $\times$  14 $\frac{1}{2}$ " $\times$  D, 9 lbs. .... \$250

## MARANTZ

### TT 530 Direct-Drive Turntable

Fully automatic direct-drive turntable with linear-tracking tonearm. Features gold plated output plugs; auto record size selection; auto record speed selector;



auto repeat; pitch control with stroboscope; front-panel oil-damped cueing; die-cast aluminum platter; feather touch controls; P-Mount magnetic cartridge; 16 $\frac{1}{2}$ " $\times$  3 $\frac{1}{4}$ " $\times$  H  $\times$  13 $\frac{3}{8}$ " $\times$  D ..... \$250

### TT 510 Direct-Drive Turntable

Fully automatic quartz lock direct drive turntable. Low-mass straight tonearm; gold-plated lead wires, headshell terminal pins and output plugs; front-mounted controls; viscous oil-damped cueing; isolated subchassis suspension system; die-cast aluminum platter; calibrated counter-balance and anti-skate; 16 $\frac{1}{2}$ " $\times$  W  $\times$  4 $\frac{1}{2}$ " $\times$  H  $\times$  14 $\frac{1}{2}$ " $\times$  D ..... \$180

### TT 1080 Direct-Drive Turntable

Semiautomatic direct drive turntable with coreless DC servo; low-mass straight tonearm; gold-plated lead wires; headshell terminal pins and output plugs; viscous oil damped cueing; 33 $\frac{1}{3}$  and 45 RPM speed selector; pitch control with illuminated strobe; auto return and auto shutoff; die-cast aluminum platter; calibrated counter-balance and anti-skate; 16 $\frac{1}{2}$ " $\times$  W  $\times$  4 $\frac{1}{2}$ " $\times$  H  $\times$  14 $\frac{1}{2}$ " $\times$  D ..... \$139

### TT 1060 Semiautomatic Turntable

Semiautomatic belt-drive turntable with 4-pole AC synchronous motor; low-mass straight tonearm; gold-plated lead wires, headshell terminal pins and output plugs; viscous oil-damped cueing; 33 $\frac{1}{3}$  and 45 RPM speed selector; auto return and auto shutoff; die-cast aluminum platter; calibrated counter-balance and anti-skate; 16 $\frac{1}{2}$ " $\times$  W  $\times$  4 $\frac{1}{4}$ " $\times$  H  $\times$  14 $\frac{1}{2}$ " $\times$  D ..... \$99

## MCS by JC PENNEY

### MCS 6730 Linear-Tracking Turntable

Microprocessor/optoelectronic-controlled 33 $\frac{1}{3}$  and 45-rpm linear tracking turntable. Features dynamically balanced linear-tracking tonearm; Technica EPCP23 phono cartridge; automatic record-size selector auto cue mute control; automatic search forward/backward; auto repeat; front-panel control center; 45-rpm adapter. W&F 0.035% wrms; rumble -78 dB DIN B; 16.9" $\times$  W  $\times$  13" $\times$  D  $\times$  3.5" $\times$  H. .... \$250

### MCS 6725 Linear-Tracking Turntable

Belt-drive fully automatic turntable. Features front-panel controls; front-panel cue lever; neon lamp strobe; magnetic plug in cartridge; linear tonearm; 33 $\frac{1}{3}$  and 45 electronic speed controls; repeat control. W&F weighted 0.05%; rumble 70dB; 17" $\times$  W  $\times$  3 $\frac{1}{2}$ " $\times$  H  $\times$  13 $\frac{1}{2}$ " $\times$  D; 12 lb ..... \$200

**MCS 6710 Semiautomatic Single/Multi-Play**

Direct-drive 33 $\frac{1}{3}$ - and 45-rpm turntable with tonearm. Features dc servomotor; 12" aluminum diecast recessed platter with strobe; &6% pitch control; straight tonearm with damped cue/pause. Features single/multi-play capability (up to 6 records); manual size selector for 7" and 12" discs; 6-program selector; repeat; electronic speed change. W&F 0.05% wrms JIS; rumble -65 dB IEC A-weighted; tracking force range 0-3 g; includes manual, umbrella spindles, 45-rpm adapter, removable tinted plastic dustcover; 6 $\frac{1}{2}$ "H x 16 $\frac{1}{4}$ "W x 14"D - 6 $\frac{1}{2}$ "H..... \$150

**MCS 6205 Automatic Turntable**

Belt-drive fully automatic turntable with front-panel controls. Features front control cue lever; magnetic cartridge; straight tonearm; repeat control; strobe scope; W&F weighted 0.05%; rumble 70dB; 17"W x 4"H x 15"D; 11 lb ..... \$130

**MICRO SEIKI**

**RX 5000 Turntable**

Aramid-fiber belt-drive turntable with remote motor unit. Features 35-lb copper platter; oil-bath bearing system; resonance-absorbing metal base; adjustable height via brass feet; accommodates up to 4 tonearms simultaneously. Rumble -90 dB; 135 lb ..... \$4,000

**RX-1500VG Turntable**

Features ceramic bearing with oil-bath suspension combining mechanical spring; air suspension and oil damping; vacuum hold down; utilizes brass platter and a vacuum pump to provide a positive seal between record and platter ..... \$2,000  
**RX-1500.** Identical model to RX-1500VG except no vacuum-assisted record hold ..... \$1,000

**BL-10X Semiautomatic Turntable**

Belt-drive semiautomatic system with a 6.8 lb platter to isolate any motor noise; oil-bath system for main platter ceramic bearing; MA-500X tonearm; knife-edge bearing design; stainless steel bearings; optically sensed auto lift; variable pitch control ..... \$650

**BL-51X Armless Turntable**

Belt-drive armless turntable. Features solid-wood base with ebony finish; oil-bath bearing system; 5-lb die-cast aluminum platter; dc servo-controlled motor. Speed variable &3% ..... \$500

**BL-41 Fully Automatic Turntable**

Belt-drive turntable with microprocessor circuit that controls all tonearm movement through a separate motor. Features low-mass carbon-fiber tonearm; 4.5 lb platter; oil-bath suspension system for main platter ceramic bearing; auto function control with dustcover down; variable pitch control; base of rigid particle board braced with aluminum plate and finished in simulated ebony ..... \$350

**BL-31 Manual Turntable**

Belt-drive manual system with a 4.5 lb platter and oil-bath suspension for main platter ceramic bearing. Features carbon-fiber straight tonearm with optimized geometry base of real wood and aluminum brace ..... \$250

**MB12ST Semiautomatic Turntable**

Belt-drive turntable with low-mass straight tonearm. Features carbon-fiber headshell; decoupled counterweight; spring-mounted rubber antifeedback feet; damped cue control; 4-pole synchronous motor. W&F 0.055%; rumble -62 dB ..... \$150

**MISSION ELECTRONICS**

**775 SM Manual Turntable**

Manual 33 $\frac{1}{3}$ " and 45-rpm belt-drive turntable with 24-pole synchronous motor. Features die-cast aluminum platter with lead-lined circumference, medium-density fiberboard base with lead infill to minimize resonances, eradicate mechanical hum; sorbothane



gasket motor isolation; sorbothane feet for turntable isolation; universal baseplate that accepts wide range of tonearms. W&F 0.5% DIN; rumble -80 dB DIN B wt; speed accuracy and variation 0.1% ..... \$999

**775S Turntable**

24-pole synchronous-motor belt-drive turntable. Features 33 $\frac{1}{3}$ " and 45 rpm; constrained layer damped M.D.F. plinth; high moment of inertia constrained layer damped platter; absolute speed accuracy  $\pm$ 0.3%; speed variation 0.1%; W&F DIN 0.05%; rumble (DIN B) bearing less than 80 dB, motor less than 75 dB; 145mmH x 428mmH x 343mmD; 12 kg.. \$649

**775 Turntable**

12-pole synchronous-motor belt-drive turntable. Features constrained layer damped MDF plinth; speed accuracy 0.15%; speed variation 0.15%; W&F DIN <0.1%; rumble -75 dB DIN; 1354mm x 430Wmm x 330" D; 6 kgs..... \$449

**MITSUBISHI**

**LT-30 Automatic Single-Play**

Linear-tracking 33 $\frac{1}{3}$ - and 45-rpm PLL quartz crystal direct-drive turntable with automatic tonearm. Features slotless brushless servomotor; separate dc motors for arm/automatic operations; 12 $\frac{1}{4}$ " aluminum diecast platter with 14-oz mat; 6 $\frac{1}{4}$ " statically-bal-



anced straight stainless-steel tonearm with ultralight-weight magnesium diecast shell, chuck-type headshell mount; LSI electronic pushbutton controls for stop,

start, lift/cue, repeat, speed selector, platter on/off with LED indicators; auto disc size detector through photo-optical sensors; LED tracking error, arm movement indicators; &3-mm arm height adjustment; counterweight with antiresonance filter. W&F 0.025% wrms; S/N 78 dB DIN B; tracking force range 0-3 g; cartridge weight range 4-10 g with 6-g headshell, to 20 g with subweight; includes height-adjustable feet, detachable dustcover; 19 $\frac{1}{4}$ "W x 16 $\frac{1}{4}$ "D x 5 $\frac{1}{4}$ "H ..... \$690

**LT-22 Automatic Single Play**

Linear-tracking PLL quartz crystal direct-drive 33 $\frac{1}{3}$ - and 45-rpm turntable with automatic tonearm. Features precision dc servo motor; 12" diecast aluminum platter; 6 $\frac{1}{4}$ " effective length straight, static balance tonearm; auto lead-in/auto return; free-access lead-in; auto repeat; free travel, quick response, stylus protection; speed selector switch; start, stop, lift/cue, repeat controls; light and rigid GFRP headshell for cartridges up to 18 grams. W&F 0.025% wrms; S/N 75 dB DIN B; effective tonearm mass 13.9 g without cartridge; offset angle 0"; tracking angle error max 0.1"; 16 $\frac{1}{4}$ "W x 16 $\frac{1}{4}$ "D x 5 $\frac{1}{4}$ "H ..... \$350

**LT-10V Vertical Turntable**

Vertical linear-tracking automatic turntable with computerized auto control. Features auto lead-in; auto return; auto cut; free access lead-in, lift up and cueing; stylus protection; front panel controls for start, stop, lift cue, repeat and manual speed select, plug-in headshell; dual-magnet phono cartridge; W&F 0.055% wrms; S/N 73 dB DIN B. effective tonearm mass 6.0 without cartridge; tracking error  $\pm$ 0.1"; offset angle 0"; 14"W x 14"H x 5 $\frac{1}{4}$ "D ..... \$250

**DP-52 Automatic Turntable**

Fully automatic direct-drive turntable with cartridge function controls located outside the dustcover, including start, stop, repeat, size, pitch adjustment, speed control; straight low-mass tonearm with removable headshell and cartridge premounted. W&F .047 wrms; tonearm static balance; effective length 8 $\frac{1}{2}$ " overhang  $\frac{3}{4}$ ", offset angle 24" tracking error +3 $\mu$ -1" 16 $\frac{1}{2}$ "W x 5 $\frac{1}{4}$ "H x 15 $\frac{1}{4}$ "D ..... \$150

**DP-12 Automatic Turntable**

Fully automatic belt-drive turntable with cartridge function controls located outside the dustcover, including start, stop, size and speed selection; straight low-mass tonearm with dual-magnet stereo phono cartridge premounted. W&F .06% wrms; static balance tonearm effective length 8 $\frac{1}{2}$ ", overhang  $\frac{3}{4}$ ", offset angle 24", tracking error +3 $\mu$ 1; 16 $\frac{3}{4}$ "W x 5 $\frac{1}{4}$ "H x 15 $\frac{1}{4}$ "D ..... \$110

**NAD (USA)**

**5120 Semiautomatic Turntable**

Semiautomatic belt-drive turntable designed to provide exceptionally vibration-free environment for the record, plus a radically new tonearm design that serves as a stable, nonresonant carrier for the phono cartridge. Features floating subchassis; ac synchro-



nous motor; thin disc platter with thick rubber mat; floppy tonearm; replaceable tonearm assembly; dynamic vibration absorber. W&F 0.04% wrms; rumble

**NEED MORE INFORMATION?**

Write directly to the manufacturer or distributor. A list of names and addresses starts on page 25.

-43dB; effective tonearm mass without cartridge 7.9g; max tracking error ±0.4/inch; 1 1/2" W × 4 1/8" H × 14"D; 11 lbs ..... \$248

**NAKAMICHI**

**Dragon-CT Turntable**

Dual-suspension direct-drive turntable that eliminates eccentricity wow with Absolute Center Search System to compensate for off-center record holes. Features "Cog-Free" Super Linear Torque motor; high-strength rigid viscous-damped straight tonearm; decoupled counterweight; auto return and ultra-smooth cueing; quartz PLL DC brushless slotless coreless motor; cut switch; indicators for center search in progress, not achieved, and achieved; pitch control range ±6%; 33 1/3 and 45 rpm. Turntable specs: Main platter (aluminum) 1.4 kg; center search platter (glass) 550 g; start-up within 1 revolution; speed deviation unmeasurable; speed drift unmeasurable; W&F 0.008% (wtD rms, fg direct), 0.03% (wtD rms, after center search); S/N > 78 dB DIN B. Tonearm specs: total length 305mm; effective length 237mm; effective mass 14 g without cartridge; VTF adjustment range 0-3 g; allowable cartridge weight 4-11 g; cartridge offset angle 21° 30'; stylus overhang 15mm; max tracking error ±2.5° to -1°. 21.5"W × 9.06"H × 16.5"D; 44 lbs 1 oz ..... \$1,750

**NIKKO**

**NP-800II Semiautomatic Turntable**

Quartz lock crystal controlled direct drive 33 1/3 and 45 rpm turntable with improved straight low-mass tonearm. Features DC servo motor; front panel controls; direct reading vertical tracking force gauge; calibrated antiskate control; viscous-damped cueing system; ±4% speed pitch control; illuminated strobe; hinged dustcover; matte-black base finish; W&F .035% wrms; S/N 68 dB DIN B; 16.5"W × 15"H × 4.3"D ..... \$200

**NP-500II Semiautomatic Belt-Drive Turntable**

Belt-drive turntable with tonearm. Features 4-pole synchronous motor; improved straight low-mass tonearm; direct reading vertical tracking force gauge; calibrated antiskate control; viscous damped cueing; dustcover; silver. W&F .08% wrms DIN B; S/N 45 dB; 16.5"W × 15"H × 4.8"D ..... \$120

**ONKYO**

**CP-1055FB Integra Turntable**

Triple-isolated quartz-locked fully automatic turntable. Features direct drive; quartz PLL DD/DC motor; computer-controlled tonearm motor; optical shutoff sensor; high-mass resincrete cabinet; strobe; optimum-mass straight tonearm; all feather-touch front-mounted controls; gyroscopic gimbal tonearm mount. W&F 0.023% wrms; rumble 78 dB DIN B; can use RC-5T remote (option); available in black matte finish only ..... \$300

**PL-33 Linear-Tracking Turntable**

Linear-tracking turntable. Features DC brushless direct drive; scan; heavy die-cast chassis; integrated dual-magnet cartridge (OC-56V) in carbon-fiber arm; motorized cover lift; full automatic play; wow and flutter 0.027% wrms; rumble 72 dB DIN B; \$290

**CP-1028R Automatic Single-Play**

Fully automatic direct-drive 33 1/3- and 45-rpm turntable with programmable search, tonearm. Feature programmability to randomly play up to 8 selections. Infrared opto-sensing phono cartridge with user-replaceable stylus; 2 motors; soft-touch front-mounted controls; fluorescent microprocessor display; variable speed with LED indicator; detachable headshell; triple-insulated feet. W&F 0.025% wrms; rumble 72 dB DIN B ..... \$260

**CP-1044F Automatic Turntable**

Triple-isolated quartz-locked fully automatic turntable. Features direct-drive quartz PLL DD DC motor; computer-controlled tonearm motor allows search

and optical shutoff sensor; optimum-mass straight tonearm, all feather-touch controls front-mounted on dense front board; gyroscopic gimbal tonearm mount. W&F 0.025% wrms; rumble 75 dB DIN B; can use RC-5T remote (option) ..... \$200

**CP-1033A Quartz Turntable**

Triple-isolated quartz-locked semiautomatic turntable. Features direct-drive quartz PLL DD DC motor; quartz-locked indicator; optimum-mass straight tonearm; adjustable anti-skate; all controls front mounted on dense front board; gyroscopic gimbal tonearm mount. W&F 0.025% wrms; rumble 75 dB DIN B ..... \$155

**CP-1022A Belt-Drive Turntable**

Triple-isolated semiautomatic turntable. Features belt drive; optimum-mass straight tonearm; detachable headshell; adjustable anti-skate; front-panel controls and cueing. W&F 0.045% wrms; rumble 70 dB DIN B ..... \$100

**PHASE LINEAR**

**8000 A Automatic Single-Play**

PLL quartz locked direct-drive 33 1/3- and 45-rpm turntable with manual/automatic tonearm. Features PLL Hall-effect motor; 12.2" aluminum die-cast plat-



ter; 7.5" linear-motor tangential-tracking statically-balanced straight tonearm; 3-diameter disc size selector; automatic repeat. W&F 0.013% wrms; rumble -78 dB DIN B. cartridge weight range 4-14.5 g; 19.4"W × 17.5"D × 6"H ..... \$650

**PIONEER**

**PL-88FS Automatic Single Play**

Computerized front-loading fully automatic programmable turntable with PC-41MC moving-coil cartridge. Features quartz-PLL direct-drive Stable Hanging Rotor™ motor; index scan; repeat; deck synchro capability. W&F 0.025% wrms; rumble -78 dB DIN B; 16 1/2" W × 13 1/4" D × 3 3/4" H; 22 lbs ..... \$400

**PL-44FS**

Similar to PL-88FS except belt-drive, no computerizer. Includes PC-5MC moving-coil cartridge. W&F 0.045% wrms; rumble -70 dB DIN B; 19 lbs 8 oz ..... \$250

**PL-L800S Automatic Single Play**

Fully automatic quartz-PLL direct-drive, linear-tracking 33 1/3 and 45-rpm turntable. Features Stable Hanging Rotor™ motor; repeat; linear tracking; direct readout counterweight, electronic cueing; Polymer Graphite™ straight tonearm; coaxial suspension; front operation; PC-6MC MC cartridge. W&F 0.025% wrms; rumble 78 dB DIN B; 16 1/8" W × 16 1/4" D × 4 3/8" H; 20 lbs. 9 oz ..... \$375

**PL-707 Automatic Single Play**

Fully automatic quartz-PLL direct drive turntable. Features Stable Hanging Rotor™ motor; Dynamic Resonance Absorber; Polymer Graphite™ straight tonearm; front operation. W&F 0.035% DIN; rumble -80 dB DIN B; 18" W × 16 1/4" D × 6 1/2" H; 20 lb 5 oz \$300

**PL-S70 Automatic Single Play**

Quartz-PLL fully automatic direct-drive turntable. Features Stable Hanging Rotor™ motor; repeat function; auto disc-size selector; Polymer Graphite™ straight tonearm; Dynamic Resonance Absorber; front operation; zero rear clearance dustcover. W&F 0.035% DIN; rumble -78 dB DIN B; 16 1/2" W × 14 3/8" D × 4 3/8" H; 14 lbs. 3 oz ..... \$190

**PL-S50**. Similar to PL-S70 except no repeat function. 13 lbs 4 oz ..... \$165

**PL-S40**. Similar to PL-S50 except semiautomatic; no auto disc-size selector. 13 lbs 2 oz ..... \$140

**PL-S30**. Similar to PL-S40 except belt-drive DC servo



motor; no Stable Hanging Rotor™ motor. W&F 0.07% DIN; rumble -68 dB DIN B; 10 lbs 8 oz \$110

**REALISTIC**

**LAB-210D Linear-Tracking Turntable**

Direct drive turntable with built-in microprocessor. Features logic-controlled tonearm for absolute zero tracking error; 2-speed bidirectional search push-buttons to control tonearm; countersunk neon stroboscope with accurate pitch control; front-access controls; LED indicators for disc size, speed, repeat and power on; low-profile styling; Realistic/Audio Technica dual-magnet cartridge; built-in computer circuitry. Rumble -75dB; W&F <0.025%; 4 1/2"W × 13 3/4"H × 15"D ..... \$220

**LAB-440 Semiautomatic Single Play**

Direct-drive semiautomatic turntable with straight low-mass tonearm. Features selectable repeat; front-mounted controls; dc servo motor; damped cue control. W&F 0.035% wrms; rumble -70 dB; 16 1/2"W × 14 3/8"D × 5 1/8"H ..... \$180

**LAB-1500 Linear-Tracking Turntable**

Belt-drive automatic with cover-mounted tonearm and programmable repeat. Features noncontact, photo-sensing size finder that automatically detects size of disc; Realistic/Audio Technica dual-magnet cartridge; search pushbuttons; LED repeat indicator. Rumble -70dB; W&F 0.045%; 3 3/4"W × 12 3/4"H × 12 3/8"D ..... \$160

**NOTICE TO READERS**

Prices of items described are manufacturers' suggested prices only and are subject to change without notice. Actual selling prices are determined by the dealers.

**LAB-395 Semiautomatic Single Play**

Direct-drive semiautomatic turntable with S-shaped tonearm. Features front-mounted controls; dc servo motor; stroboscope; pitch control; damped cue control. W&F 0.05% wrms; rumble -70 dB; 16<sup>1</sup>/<sub>2</sub>"W × 15<sup>1</sup>/<sub>8</sub>"D × 5<sup>1</sup>/<sub>8</sub>"H ..... \$160

**LAB-290 Semiautomatic Single Play**

Belt-drive semiautomatic turntable with straight tonearm. Features dc servo motor; damped cue control. W&F < 0.05% wrms; rumble -70 dB; 17<sup>1</sup>/<sub>2</sub>"W × 14<sup>1</sup>/<sub>8</sub>"D × 5<sup>1</sup>/<sub>8</sub>"H ..... \$100

**LAB-77 Multiple-Play Turntable**

Multiple-play turntable handles up to 4 records. Features electronically-controlled dc motor; neon stroboscope; straight tonearm; cue lever. 15"W × 13"D × 5<sup>1</sup>/<sub>2</sub>"H ..... \$120

LAB-75. Budget version of LAB-77 ..... \$100

**LAB-90 Manual Turntable**

Compact manual turntable with auto return and straight tonearm. Plays 7, 10 and 12" records manually; cueing lever raises and lowers tonearm; solid-state cartridge with diamond stylus; 10"W × 11<sup>1</sup>/<sub>2</sub>"H × 10<sup>1</sup>/<sub>4</sub>"D ..... \$60

**LAB-59 Multiple Play Turntable**

Automatic changer stacks up to 4 records. Features cue lever; factory balanced straight-line tonearm, simulated walnut finish; plays 7, 10 and 12" discs at 33<sup>1</sup>/<sub>2</sub> and 45 rpm; ceramic cartridge with diamond stylus; 7"W × 17"H × 14<sup>1</sup>/<sub>2</sub>"D ..... \$70

**REVOX**

**B791 Tangential Tracking**

Tangential-tracking direct-drive automatic turntable with quartz-accurate variable-speed control. Features front-panel controls; 5-digit LED display of nominal speed (33 or 45 rpm), exact deviation & percentage when vari-speed is activated; exclusive Linatrack\* lin-



ear-tracking system; 8-pole Hall Effect direct-drive motor with separate 200-pole tachogenerator; precision diecast chassis; Shure Tracer TXE-SR phono cartridge with carbon antistatic/antiresonance brush. Vari-speed control range & 9.9% in 0.1% steps; suspension resonance 3 Hz; tonearm/cartridge resonance 11 Hz ..... \$749

**B795 Tangential Tracking**

Quartz-controlled direct-drive 33<sup>1</sup>/<sub>2</sub> and 45-rpm turntable with tangential-tracking arm; quartz-regulated Hall commutated dc motor with permanent magnet; platter start-up time < 1 sec; speed accuracy & 0.01%. Arm section: 1.5" tonearm mounted in overhead tangential tracking trolley with optoelectronic LED sensing, servo guidance system; auto lift/return/shut off; servo-electronic, dc motor arm follow-up; cartridge output electronically muted except when stylus in groove; pneumatically-damped cartridge lowering. Front-panel controls operable with dustcover down; 4-digit quartz LED readout; automatically-activated run-out switch. W&F 0.05% DIN weighted, 0.1% DIN unweighted; rumble -68 dB (A-

weighted); includes cartridge; 17<sup>1</sup>/<sub>2</sub>"W × 15"D × 5<sup>1</sup>/<sub>2</sub>"H ..... \$599

**SANSUI**

**XR-Q7 Automatic Single-Play**

Fully automatic direct-drive turntable with vibration-cancelling exclusive Silent Synchrotor System. Features carelessly linear-drive motor; quartz servo system; straight Dyna Optimum Balanced tonearm, separately motor operated; microprocessor automation via front-panel soft-touch buttons. W&F < ± 0.009% wrms; rumble > -80 dB DIN B weighted; speed deviation < 0.002% ..... \$500

XR-Q5. Similar to XR-Q7 except W&F 0.019% wrms; rumble > -78 dB ..... \$370

**P-L50 Linear-Tracking Turntable**

Features 7-selection random programming linear-tracking tonearm; FG-servo direct drive; speed-lock indicator; phono cartridge; Compu Edit for use with some Sansui amplifiers/receivers for one-touch operation. W&F 0.028% wrms; rumble -72 dB DIN B-weighted. Available in black (P-L50B) or silver (P-L50S) ..... \$340

**P-L40 Linear-Tracking Turntable**

Automatically selects record size. Features FG-servo direct drive; speed-lock indicator; Compu Selector System; linear-tracking tonearm; cartridge. W&F 0.028% wrms; rumble -72 dB DIN B-weighted. Available in black (P-L40B) or silver (P-L40S) ..... \$270

**P-D30 Automatic Single-Play**

Direct-drive FG-servo turntable with speed-lock indicator. Features Compu Selector System; straight tonearm. W&F 0.038% wrms; rumble -72 dB DIN B-weighted. Available in black (P-D30B) or silver (P-D30S) ..... \$200

P-D20. Semiautomatic version of P-D30 but without Compu Selector System. Available in black (P-D20B) or silver (P-D20S) ..... \$160

P-D10. Similar to P-D20 except basic model. Available in black (P-D10B) or silver (P-D10S) ..... \$120

**SANYO**

**P33 Linear-Tracking Turntable**

Direct-drive 33<sup>1</sup>/<sub>2</sub> and 45-rpm turntable with dc-motor-controlled statically balanced low-mass linear-tracking tonearm. Features integral magnetic cartridge; motorized cueing; servo-controlled brushless dc direct-drive motor; top-mounted controls; fully automatic operation; auto repeat; electronic speed control with digital display; ± 3% pitch control. W&F 0.04% wrms; rumble -78 dB; cartridge frequency range 20-20,000 Hz; 13<sup>3</sup>/<sub>16</sub>"D × 13<sup>3</sup>/<sub>16</sub>"W × 3<sup>3</sup>/<sub>16</sub>"H ..... \$180

**PJ20 Turntable**

Jacket-size direct-drive turntable. Features servo-controlled brushless DC direct drive motor governed by feedback servo system that senses speed variations and corrects them instantly; built-in neon stroboscope, pitch control; straight, tubular low-mass tonearm and lightweight detachable headshell; calibrated counterweight; rotary anti-skate control; push-button speed control; viscous-damped cueing; auto arm return; top-mounted controls. W&F 0.003% wrms; rumble -65 dB; 13.2"W × 3.9"H × 13.2"D; lbs ..... \$130

**TPD4 Turntable**

Fully automatic direct-drive turntable. Features brushless motor; repeat switch; damped cueing control; built-in stroboscope, anti-skating control; auto-return mechanism; one-touch manual reject; modular plug-in headshell. W&F 0.05% wrms; rumble -70dB; 16.8"W × 4.4"H × 13.6"D ..... \$120

**TPJ10 Jacket-Size Turntable**

Jacket-size belt-drive turntable. Features DC servo-controlled belt-driven platter; built-in neon stroboscope; adjustable anti-skate control; tubular low-mass tonearm with lightweight, plug-in headshell; viscous-

damped cueing; automatic arm return; aluminum diecast platter. W&F 0.06% wrms; rumble -65dB; 13.4"W × 3.9"H × 13.4"D ..... \$100

**TPD2 Semiautomatic Turntable**

Semiautomatic direct-drive turntable. Features brushless motor; built-in stroboscope; pitch control (± 3%); anti-skating control; viscous-damped cueing; one-touch manual reject; modular, plug-in headshell. W&F 0.05% wrms; rumble -70dB; 16.8"W × 4.4"H × 13.6"D ..... \$100

**TPB3 Belt-Drive Turntable**

DC servo-controlled belt-drive turntable. Features servo-controlled motor; adjustment for varying platter speed ± 3%; built-in stroboscope; anti-skating control; adjustable tracking force; damped cueing lever; auto return; reject mechanism; modular, plug-in headshell. W&F 0.05% wrms; rumble -70dB; 16.8" × 4.4"H × 13.6"D ..... \$80

**TPB1 Semiautomatic Turntable**

Semiautomatic belt-drive turntable features servo-controlled motor; aluminum platter; straight, low-mass tonearm; adjustable anti-skate mechanism; calibrated stylus counterweight; viscous-damped cueing lever; automatic arm return; shock-absorbent feet. W&F 0.06% wrms; rumble -60dB; 16.8" × 4.4"H × 13.6"D ..... \$70

**SCOTT**

**PS88 Direct-Drive Turntable**

Fully automatic turntable features 5 front push-buttons to control speed and record size selection as well as the reject, start and repeat functions; rotary control to adjust platter speed as indicated by the lighted, recessed strobe with 50 and 60 cycle notations for both 33<sup>1</sup>/<sub>2</sub> and 45 rpm speeds; viscous damped cueing lever; straight, low-mass tonearm; anti-skating control; adjustable counterweight; dustcover; spring-loaded feet; damped base; FGDC servo motor. Speed control ± 3%; S/N 60dB; W&F 0.035%; 5-<sup>3</sup>/<sub>4</sub>"H × 16<sup>1</sup>/<sub>2</sub>"W × 14<sup>1</sup>/<sub>4</sub>"D ..... \$225

**PS68A Semiautomatic Single-Play**

Direct-drive semiautomatic 33<sup>1</sup>/<sub>2</sub> and 45-rpm turntable with low-mass straight tonearm with removable headshell. Features one-touch reject/return/shut-off; direct-readout stylus-pressure, antiskate controls; ± 3% speed pitch control; tonearm cueing; spare headshell receptacle; front-panel controls; dustcover. W&F 0.045%; S/N 60 dB; stylus pressure range 1-3 g; 17<sup>1</sup>/<sub>4</sub>"D × 14<sup>1</sup>/<sub>2</sub>"W × 5<sup>1</sup>/<sub>4</sub>"H ..... \$190

**PS48A Semiautomatic Single-Play Turntable**

Belt-drive semiautomatic 33<sup>1</sup>/<sub>2</sub> and 45-rpm turntable with low-mass tonearm with removable headshell. Features 12" die-cast platter with strobe pattern; ± 3% speed pitch control; direct-readout stylus-pressure, antiskate controls; strobe light; one-touch reject/return/shut-off; tonearm cueing; spare headshell receptacle; low-capacitance phono cables. W&F 0.05%; S/N 55 dB; stylus pressure range 1-3 g; 17<sup>3</sup>/<sub>8</sub>"D × 14<sup>1</sup>/<sub>4</sub>"W × 5<sup>1</sup>/<sub>4</sub>"H ..... \$160

**SHARP**

**RP-117/C "Both Sides Play" Turntable**

Auto-reverse linear-tracking belt-drive programmable turntable with 2 tonearms and cartridges to play both sides of a record without it being removed from the sliding drawer. Features Automatic Programmable Music Selector for up to 14 cuts on sides A and B; auto play of side A, B, or A and B; soft-touch switches; VM cartridges; auto disc size and speed selection; dc motor. W&F 0.06% wrms; rumble 65 dB; FR 20-20,000 Hz; stylus force 3 g 330mmW × 104mmH × 345mmD; 15.4 lbs ..... \$250

**RP-113 Linear-Tracking Turntable**

Stereo belt-drive fully automatic turntable with linear-tracking arm, plug-in cartridge, and automatic record-size and speed selectors. Features dial scale for cueing; LED indicators for power and repeat; front-panel

controls. W&F 0.06% wrms; rumble 65 dB DIN-B. Tonearm: effective length 147mm; tracking error  $\pm 0.2^\circ$ ; resonance 13 Hz. Cartridge: FR 20-20,000 Hz; tracking force 1.25  $\pm 0.25$  g. 13"W x 4"H x 13 $\frac{3}{4}$ "D; 8.8 lbs ..... \$170  
 RP-113N. Same as RP-113 but lacks cartridge \$150

**SHERWOOD**

**ST-905 Linear-Tracking Turntable**

Linear-tracking turntable with tonearm designed for LT P-mount cartridge. Features lighted strobe; repeat functions;  $\pm 6\%$  speed pitch control; quartz-locked direct drive. W&F 0.05%; S/N 70 dB DIN; tracking force 1.25 g; tracking error  $\pm 0.5^\circ$  ..... \$250  
**ST-903.** Similar to ST-905 except has FG servo-motor belt-drive. W&F 0.05% ..... \$200

**ST-890 MTD Turntable**

Two-speed direct-drive semiautomatic turntable. Features DC FG servo platter motor; pitch control  $\pm 4\%$ ; W&F 0.05% wrms; rumble DIN B 65 dB; tracking error  $+3^\circ-1^\circ$ ; 17 $\frac{1}{4}$ "W x 5"H x 14 $\frac{1}{4}$ " ..... \$150

**ST-880 MTD Turntable**

Two-speed belt-drive semiautomatic turntable; 4 pole ac synchronous platter motor. W&F wrms 0.08%; rumble DIN B 55 dB; tracking error  $+3^\circ-1^\circ$ ; 16 $\frac{1}{4}$ "W x 4 $\frac{3}{4}$ "H x 14 $\frac{1}{4}$ " ..... \$100

**SONY**

**PS-X800 Automatic Single Play**

Quartz-locked fully automatic direct-drive turntable with Uni-Motion tangential Biotracer tonearm. Features brushless, slotless motor; Magnedisc servo control; total electronic-controlled tonearm tracking, damping operation; 4-way disc detection; SBMC nonresonant cabinet; electromagnetic braking; repeat option; 2-speed electronic tonearm indexing, height-adjustable gel-filled feet; optional synchronization with some Sony products. W&F 0.025% wrms; S/N 78 dB DIN B ..... \$850

**PS-X600 Automatic Single Play**

Quartz-locked fully automatic direct-drive turntable with Biotracer tonearm. Features brushless, slotless motor; Magnedisc servo control; electronic-controlled tonearm tracking, damping; 4-way disc detection; SBMC nonresonant cabinet; electromagnetic braking; repeat option; variable-speed electronic tonearm indexing; height-adjustable gel-filled feet; optional synchronization with some Sony products. W&F 0.025% wrms; S/N 78 dB DIN B ..... \$400

**PS-X500 Manual Single Play**

Quartz-locked manual direct-drive turntable with Biotracer tonearm. Features brushless, slotless motor; Magnedisc servo control; electronic-controlled tonearm tracking, damping; end-of-play tonearm lift/shut-off; 2-way disc detection; SBMC nonresonant cabinet; electromagnetic braking; height-adjustable gel-filled feet. W&F 0.025%; S/N ..... \$350

**PS-FL3 Automatic Single Play**

Fully automatic servo-locked front-loading direct-drive turntable with brushless, slotless motor, straight low-mass tonearm. Features microprocessor-controlled 3-motor front-loading operation with full logic control; Magnedisc servo control; repeat option; 4-way automatic disc detector; SBMC nonresonant cabinet; internal isolation suspension; wireless remote control with some Sony products. W&F 0.025% wrms; S/N 78 dB DIN B ..... \$300

**PS-FL77 Front Loading Automatic**

Fully automatic front-loading direct-drive turntable can be stacked with other equipment. Features linear-tracking; Biotracer design; P-mount tonearm; safety system for loading drawer; feather-touch operation; auto disc-size selector; audio muting; quick repeat; tonearm indexing right and left at high or low speed; damped tonearm cueing; disc-centering guides; linear-torque brushless, slotless motor; luminous end-of-

record sensor; SBMC nonresonant cabinet; optional remote control. W&F 0.035% wrms; S/N 75 dB DIN B; 15 lbs, 7 oz ..... \$290  
**PS-FL1.** Similar to PS-FL3 except no Magnedisc servo control. W&F 0.035% wrms; S/N 75 dB ..... \$230

**PS-LX5 Automatic Single-Play**

Quartz-locked direct-drive automatic turntable with brushless, slotless motor, straight low-mass tonearm. Features Magnedisc servo control; record setting guides; repeat option; 3-way disc detection; SBMC nonresonant cabinet, electromagnetic braking; remote control with some Sony products. W&F 0.025% wrms; S/N 78 dB DIN B ..... \$220  
**PS-LX3.** Similar to PS-LX5 except has servo-locked motor ..... \$210  
**PS-LX2.** Similar to PS-LX3 except semiautomatic operation. Has no repeat option, disc detection, remote control option. S/N 75 dB DIN B ..... \$150

**PS-LX500 Linear-Tracking Turntable**

Direct-drive turntable with fully automatic operation. Features microprocessor feather-touch control; remote-control capability; P-mount plug-in connector cartridge; tonearm indexing with dust-cover down; damped tonearm cueing; auto disc-size selector; audio muting; disc-centering guides; linear-torque brushless, slotless motor; luminous end-of-record sensor; optional remote control. W&F 0.035% wrms; S/N 75 dB DIN B; 11 lbs ..... \$200  
**PS-LX55.** Similar to PS-LX500 except no remote option or damped tonearm cueing; 8 lbs, 13 oz ..... \$180

**PS-F5 Portable Turntable System**

Portable system that can be used with headphones, Sony's APM-090 stereo speakers, radio cassette recorders with aux or external inputs, and with home stereo systems. Can be used vertically, horizontally, or hanging on a wall. Features linear-tracking arm; direct drive; linear torque motor; moving-magnet cartridge; fully automatic start and stop; feather-touch controls; 33 $\frac{1}{3}$ , and 45 rpm 7" and 12" records; tonearm indexing; tonearm cueing; works on batteries, ac adaptor, or external dc sources. S/N 59 dB DIN B; W&F 0.06% wrms; 3 lbs, 12 oz ..... \$150

**PS-LX22 Direct Drive Turntable**

Semiautomatic turntable with linear brushless, slotless motor. Features front controls; disc-centering guides; straight duraluminum tonearm; long span pivot; MM cartridge; removable headshell. W&F 0.04% wrms; S/N 72 dB DIN B; 17" x 4 $\frac{1}{2}$ " x 14"; 8 lbs, 13 oz ..... \$140

**TECHNICS**

**L-15 Programmable Turntable**

Linear-tracking turntable with automatic selection of program material, built-in optical infrared sensor for music selections, straight-line tracking. Features dynamic balanced tonearm gimbal suspension; ac/12-volt dc operation; auto repeat; speed auto cueing; auto speed selection; auto stop/repeat/return; phase-locked direct drive assembly. Replacement cartridge/stylus EPC-P 205CMK3/EPC-P05ED3 ..... \$875

**SL-10 Turntable**

Record-size turntable with straight-line tracking, built-in switchable moving-coil pre-preamp, MC-310 moving-coil cartridge. Features ac/12-volt dc operation; gimbal suspension; auto repeat/stop/return/cueing; quartz-controlled direct-drive motor system. Replacement stylus/cartridge EPS-310MC ..... \$620

**SL-QL1 Linear-Tracking Turntable**

Quartz direct-drive 33 $\frac{1}{3}$ , and 45-rpm turntable with linear-tracking tonearm. Features fully automatic operation; high-performance plug-in MM cartridge; manual override; tonearm position scale with LED indicator. W&F 0.012% wrms; rumble -78 dB DIN B; cartridge output 2.5 mV at 1kHz, 5 cm/sec; FR 20-35,000 Hz  $\pm 3$  dB; sep  $> 22$  dB at 1 kHz; effective moving mass 0.29 mg; 16 $\frac{1}{4}$ "W x 13 $\frac{3}{4}$ "H x 3 $\frac{1}{2}$ "H; 16.3 lb ..... \$470

**SL-1200WKII Disco Turntable**

Quartz-controlled, direct-drive disco-type 33 $\frac{1}{3}$ - and 45-rpm manual turntable with tonearm. Features  $\pm 8\%$  quartz-locked pitch control; quick startup/braking; pop-up stylus illuminator; gimbal-suspended tonearm with height adjustment; brushless dc motor; aluminum diecast cabinet; antiresonant viscoelastic main base. W&F 0.025% ..... \$400

**SL-DL1 Turntable**

Fully automatic linear-tracking, direct-drive 33 $\frac{1}{3}$ - and 45-rpm turntable with full-size straight-line tracking. Features dynamic balanced tonearm/gimbal suspension; Technics premounted phono cartridge; dc motor;  $\pm 1\%$  variable pitch control, strobe; auto speed selection; front-panel controls. Replacement cartridge/stylus EPC-P23/EPS-23ES (elliptical) or EPS-23CS (conical) ..... \$360

**SL-7 Linear-Tracking Turntable**

Compact fully automatic turntable features quartz phase-locked control direct drive motor with full-cycle detection FG servo system; sealed upper and lower sections; provision for DC power supply; disc stabilizer; 45 rpm adapter; scale above tonearm with LED pointer. Speed accuracy within  $\pm 0.002\%$ ; W&F 0.012% wrms; rumble 78 dB DIN B; tracking error angle within  $\pm 0.1^\circ$ ; effective tonearm mass 9 g including cartridge; 12 $\frac{1}{2}$ " x 3 $\frac{1}{2}$ " x 12 $\frac{1}{2}$ "; 14.5 lbs ..... \$300

**SL-QL-15 Programmable Turntable**

Full size programmable linear-tracking turntable; quartz-phase-locked direct-drive motor; fully automatic; program music selection; program jump selection, program repeat, program music search; automatic speed and disc size selection; auto lead-in; dynamic-balanced tonearm with gimbal suspension ..... \$280

**SL-6 Linear-Tracking Turntable**

Programmable fully automatic 33 $\frac{1}{3}$ - and 45-rpm turntable with linear-tracking tonearm. Features plug-in cartridge connector; 12" diecast aluminum platter; direct drive; full cycle detection FG servo mechanism; built-in 45-rpm adapter; tonearm position LED; front-panel controls; isolator feet; manual override; turntable/tape deck synchronization; programmable music select/jump/repeat/music search; automatic speed, disc-size select; automatic lead-in, disc detection, tonearm search. W&F 0.012% wrms; rumble -78 dB DIN B; 12 $\frac{1}{2}$ "W x 12 $\frac{1}{2}$ "D x 3 $\frac{1}{2}$ "H; 9.9 lb ..... \$240  
**SL-V6.** Vertical version of SL-V ..... \$260  
**SL-5.** Similar to SL-6 except no programmability. 9.7 lb ..... \$200

**SL-D5 Automatic Changer/Turntable**

Direct-drive automatic-change 33 $\frac{1}{3}$ - and 45-rpm turntable with integral rotor/platter for stable rotation, low-mass low-friction gimbal-suspension tonearm. Features B-FG servo speed control; front-panel controls; acoustic shield base material; automatic changer with Memo-Gram; stroboscope with pitch control; viscous-damped cueing. W&F 0.014% wrms, rumble -75 dB DIN B; offset angle 22"; tracking-force range 0-2.5 g; cartridge weight range 6-9.5 g (3-6.5 g included weight); 16 $\frac{1}{4}$ "W x 14 $\frac{1}{2}$ "D x 7 $\frac{1}{4}$ "H; 16.5 lb ..... \$250  
**SL-B5.** Similar to SL-D5 except belt-drive via FG servo dc motor. W&F 0.045% wrms; rumble -70 dB DIN B; 16 $\frac{1}{4}$ "W x 14 $\frac{1}{4}$ "D x 7 $\frac{1}{4}$ "H; 10.6 lb ..... \$205

**SL-DL5 Linear-Tracking Turntable**

Fully automatic direct-drive 33 $\frac{1}{3}$ - and 45-rpm turntable with linear-tracking tonearm. Features microprocessor-controlled tonearm; integral rotor/platter direct-drive ultra-low-speed dc motor; 12" diecast aluminum platter; built-in 45-rpm adapter; front-panel controls; tonearm position indicator LED and scale. W&F 0.012% wrms; rumble -78 dB DIN B; 16 $\frac{1}{4}$ "W x 12 $\frac{3}{4}$ "D x 3 $\frac{1}{2}$ "H; 11 lb ..... \$220

**SL-QX30 Automatic Single Play**

Fully automatic quartz-phase-locked direct-drive

33 $\frac{1}{3}$  and 45-rpm turntable with straight low-mass tonearm with plug-in connector. Features ultra-low-speed brushless dc motor; 12 $\frac{1}{2}$ " diecast aluminum platter; soft-touch front-panel controls; disc-size detector; single-row strobe; ultra-slim design.  $\pm 6\%$  variable pitch control. W&F 0.025% wrms; rumble -78 dB DIN B; 16 $\frac{1}{16}$ "W  $\times$  14 $\frac{1}{4}$ "D  $\times$  4 $\frac{1}{16}$ "H; 13.2 lb ..... \$220  
**SL-QX200.** Semiautomatic version of SL-Q30; lacks disc-size detector. 13.4 lb ..... \$200  
**SL-Q300.** Similar to SL-QX300 except no variable speed control. 10.0 lbs ..... \$160  
**SL-Q200.** Similar to SL-QX200 except semiautomatic; 9.8 lbs ..... \$140

**SL-BL3 Belt-Drive Turntable**

P-mount fully automatic linear-tracking tonearm. Features microcomputer operation;  $\pm 6\%$  pitch control with illuminated stroboscope; FG servo DC motor; anti-resonant cabinet; 12" diameter aluminum die-cast platter; built-in 45 rpm adapter; front-panel controls; manual speed selection for nonstandard discs; tonearm position indicator and scale. W&F 0.045% wrms; rumble -70 dB DIN B; tracking error angle within  $\pm 0.1^\circ$ ; tonearm mass 9 g with cartridge; 16 $\frac{1}{16}$ "W  $\times$  3 $\frac{1}{2}$ "H  $\times$  13 $\frac{1}{4}$ "D; 9.7 lbs.... \$180

**SL-B300 Automatic Single Play**

Fully automatic 33 $\frac{1}{3}$  and 45-rpm turntable with low-mass straight tonearm. Features belt-drive; plug-in cartridge connector; FG servo motor; front-panel controls; electronic speed switching; pitch control with strobe; disc-size selector. W&F 0.045% wrms; rumble -70 dB DIN B; pitch-control range  $\pm 3\%$ ; 16 $\frac{1}{16}$ "W  $\times$  14 $\frac{1}{4}$ "D  $\times$  3 $\frac{1}{2}$ "H; 8.6 lb ..... \$130  
**SL-B200.** Semiautomatic version of SL-B300; has no disc-size selector; 3 $\frac{1}{2}$ "H; 8.4 lbs ..... \$110  
**SL-B100.** Manual version of SL-B200; 8.2 lb... \$90

**Turntables Without Tonearms**

**SP-10MK3 Direct Drive Turntable**

Quartz synthesizer direct-drive 33 $\frac{1}{3}$ , 45-rpm, 78-rpm turntable without tonearm. Features high torque to bring up to full speed in 30" of rotation; electronic, mechanical braking for speed change in 0.3 second; ultra-high precision integral rotor-platter quartz direct-drive motor; quartz synthesizer pitch control (0.1% steps to  $\pm 9.9\%$  all speeds); separate power supply, remote-control unit. RC unit features numeric LED speed, pitch displays; soft-touch switches (start/stop duplicated on turntable). W&F 0.015% wrms  $\pm 0.001\%$ ; 14 $\frac{1}{32}$ "W  $\times$  14 $\frac{1}{32}$ "D  $\times$  4 $\frac{1}{16}$ "H; 40 lb turntable; 16 $\frac{1}{32}$ "D  $\times$  6 $\frac{1}{32}$ "W  $\times$  3 $\frac{1}{2}$ "H, 13.2 lb power supply/control unit ..... \$1,700  
**SH-10B5.** Optional turntable base ..... \$800

**SP-10M2A Direct-Drive Turntable**

Quartz synthesizer direct-drive 33 $\frac{1}{3}$ , 45- 78-rpm turntable without tonearm. Features high torque to bring up to full speed in 25" of rotation; electronic, mechanical braking for speed change in 0.3 second; separate power supply, remote-control unit. W&F 0.025% WRMJ  $\pm 0.035\%$ ; rumble -70 dB DIN B; speed drift within  $\pm 0.002\%$ ; 14 $\frac{1}{16}$ "W  $\times$  14 $\frac{1}{16}$ "D  $\times$  4 $\frac{1}{16}$ "H, 20.9 lb turntable... \$1,100  
**SH-10B3.** Optional turntable base ..... \$520

**SP-15 Direct-Drive Turntable**

Quartz-synthesized direct-drive 33 $\frac{1}{3}$ , 45-, 78-rpm turntable without tonearm. Features full speed in 0.4 second (40" of rotation); brake to full stop in 0.4 second (40" of rotation) at 33 $\frac{1}{3}$  rpm;  $\pm 9.9\%$  quartz-locked pitch control. W&F 0.025% wrms; rumble 56 dB DIN A, 78 dB DIN B weighted ..... \$700  
**SP-25.** Similar to SP-15 except no 78-rpm speed,  $\pm 6\%$  pitch control ..... \$400

**SH-B10 Turntable Stand**

45" angle TNRC turntable stand; use on following linear-tracking turntables: SL-7, SL-10, SL-15 only ..... \$32.00

**Turntable Bases**

**SH-15B2.** Base for SP-25 and SP-15 turntables. Has

heavy acoustic rubber base with simulated wood ..... \$280  
**SH-15B3.** Similar to SH-15B2 except heavy acoustic rubber base only ..... \$280

**Plug-In Headshell**

**SH-100.** Aluminum die-cast universal plug-in headshell with calibrated overhang cursor and gold-plated contacts for Technics tonearms ..... \$16.00

**THORENS**

Thorens turntables are belt-driven, single-play and have straight tubular tonearms with interchangeable shafts instead of headshells for lower effective mass; gimbal suspension; 9" effective tonearm length; tracking error  $< 0.18^\circ/\text{cm}$  (0.46"/in.).

**TD 226 Twin-Tonearm Semiautomatic**

Semiautomatic single-play 33 $\frac{1}{3}$  and 45-rpm turntable that can accommodate 2 tonearms, has automatic end-of-record tonearm lift, platter-shutoff function for one tonearm. Features motor-driven cueing for both tonearms; frictionless velocity-sensing system for shut-off actuation; electronic speed selection; magnetic antiskate system;  $\pm 6\%$  speed pitch control. Comes with blank tonearm position, one auto-lift SME tonearm. W&F  $< 0.035\%$ ; rumble -72 dB weighted, -52 dB unweighted ..... \$1,700

**TD-126III C Semiautomatic Single-Play**

Turntable with automatic tonearm lift, motor shutoff. Features 33 $\frac{1}{3}$ , 45-, 78 rpm speeds; electronic speed selection;  $\pm 6\%$  pitch control; stroboscope; electronic velocity sensor that actuates arm lift; frictionless magnetic antiskating; dust cover. W&F  $< 0.04\%$ ; rumble -72 dB weighted, -51 dB unweighted; 19 $\frac{1}{4}$ "W  $\times$  15 $\frac{1}{2}$ "D  $\times$  6 $\frac{1}{16}$ "H ..... \$800  
**TD-126III B.** Same as TD-126C MKIII but without tonearm ..... \$645  
**TD-126III SME.** Same as TD-126 III C but with 3009 Series III tonearm incorporated into shut-off system ..... \$1,175

**TD 147 Semiautomatic Single Play**

Belt-drive 33 $\frac{1}{3}$  and 45 rpm turntable with 16-pole synchronous motor. Features heavy-duty base and damped chassis to control feedback; Thorens' best tonearm; friction-free velocity sensing auto shut-off triggering system. W&F 0.04%, rumble 52 dB unweighted; 17 $\frac{1}{2}$ "W  $\times$  14 $\frac{1}{4}$ "D  $\times$  6 $\frac{1}{2}$ "H... \$525

**TD-115 3 MkII Semiautomatic Single-Play**

Dual-servo 33 $\frac{1}{3}$ , 45-, 78-rpm turntable with commutator-type pulse-modulated dc motor, automatic end-of-record shut-off tonearm. Features 72-pole tachogenerator for electronic speed selection; pitch control; fast start; current feedback that provides automatic pitch control to correct load variations; jeweled pivot bearings; magnetic antiskate device. W&F 0.05%; rumble -50 dB unweighted, -68 dB weighted; 11 $\frac{1}{16}$ " platter; arm length 8 $\frac{3}{4}$ "; tonearm mass 7.5 g; 17 $\frac{1}{2}$ "W  $\times$  14 $\frac{1}{16}$ "D  $\times$  5 $\frac{1}{4}$ "H ..... \$435

**TD160 Armless Turntable**

Belt-drive 33 $\frac{1}{3}$  and 45-rpm turntable without tonearm. Features 16-pole 2-phase synchronous motor; 12" dynamically balanced nonferrous diecast platter. W&F 0.04% DIN 45507; rumble 52 dB unweighted; 17 $\frac{1}{2}$ "W  $\times$  14 $\frac{1}{4}$ "H  $\times$  6 $\frac{1}{2}$ "D ... \$395

**TD 146 Semiautomatic Single Play**

Belt-drive 33 $\frac{1}{3}$  and 45 rpm turntable with 16-pole synchronous motor. Features floating subchassis suspension system; 9" low-mass, low-friction tonearm; friction-free velocity sensing auto shut-off triggering. W&F 0.05%; rumble 50 dB unweighted; 6"H  $\times$  17"W  $\times$  14"D; 17 $\frac{1}{4}$  lbs ..... \$350  
**TD 166 MK II.** Manual turntable, similar to TD 146 but without auto shut-off function ..... \$250

**TOSHIBA**

**SRB2L Automatic Turntable**

Belt-drive 33 $\frac{1}{3}$  and 45-rpm turntable with auto



return/shut off arm. Features straight statically balanced tonearm; synchronous motor; front-mounted controls; antifeedback cabinet. W&F 0.07% wrms; S/N 60 dB; 16.5"W  $\times$  14.8"D  $\times$  4.9"H .... \$110  
**SR-B2.** Similar to SR-B2L except has andrured magnet cartridge ..... \$120

**VECTOR RESEARCH**

**VT-250 Automatic Turntable**

Direct-drive fully automatic turntable with quartz-lock motor, straight tonearm, floating subchassis, gold contacts, all front controls ..... \$200

**VT-200 Automatic Turntable**

Direct-drive semiautomatic turntable with pitch control, straight tonearm, floating subchassis, gold contacts, all front controls ..... \$150

**VT-150 Automatic Single-Play Turntable**

Synchro-belt-drive automatic 33 $\frac{1}{3}$  and 45-rpm turntable with minimum-resonance straight tonearm. Features auto return/reject/shutoff; viscous-damped cueing; antiskate control; front-panel controls; 12" die-cast aluminum platter; low-mass headshell; direct stylus-force readout; removable dust cover. Wow and flutter 0.08% wrms; S/N 55 dB; tonearm length 215 mm; overhang 16 mm; useable cartridge weight 3.5-6.5 g; 16 $\frac{1}{16}$ "W  $\times$  14 $\frac{1}{4}$ "D  $\times$  5 $\frac{1}{8}$ "H; 9.5 lb \$120

**YAMAHA**

**PX-2 Automatic Single-Play**

Linear-tracking 33 $\frac{1}{3}$  and 45-rpm dual-quartz PLL servo direct-drive turntable with automatic/manual tonearm; 4-phase 8-pole coreless dc Hall-effect motor; 12 $\frac{1}{2}$ " aluminum diecast platter with rubber mat; 7 $\frac{1}{2}$ " linear-tracking straight tubular tonearm with opto-electronic tracking-error sensor, coreless dc servomotor, forged aluminum headshell. Features front-panel automatic electronic speed, auto repeat, cut, play, and 7", 10", 12" disc size selectors with LED record-size and repeat indicators; manual up/down cueing with 2-speed forward/reverse operations; LED quartz-lock indicator;  $\pm \frac{1}{4}$ " arm height adjustment (accommodates most cartridges). W&F 0.01% wrms; S/N 80 dB; tracking force range 0-2.5 g in 0.1-g increments, statically balanced; cartridge weight range 5-11 g (10-16 g with subweights); black-finish aluminum diecast base with removable free-stop hinged acrylic resin dustcover and spring/rubber insulators; 19 $\frac{1}{4}$ "W  $\times$  16 $\frac{1}{8}$ "H  $\times$  6 $\frac{1}{4}$ "D ..... \$900  
**PX-3.** Similar to PX-2 except more compact. Wow and flutter 0.015%; S/N 77 dB; 469mmW  $\times$  428mmD  $\times$  149mmH; 12 kg ..... \$670

**P-700 Automatic Single-Play Turntable**

Quartz PLL-locked direct-drive 33 $\frac{1}{3}$  and 45-rpm turntable with minimum-resonance straight tonearm. Features light front-panel touch-controls; 2 light-weight resin headshells. W&F 0.015% wrms; S/N 78 dB; 435mmW  $\times$  378mmD  $\times$  111mmH; 6 kg \$270  
**P-500.** Similar to P-700 except has direct servo drive, pitch control ..... \$220  
**P-300.** Similar to P-500 except semiautomatic operation. Weight 5.8 kg ..... \$190  
**P-200.** Similar to P-500 except belt-drive. W&F 0.04% wrms; S/N 70 dB; 5 kg ..... \$150

# 5

# Cartridges & Tonearms

## ACCUPHASE

### C-2 Moving-Coil Phono Cartridge

MC cartridge with high-stiffness, light-mass tubular sapphire cantilever. Features damped damper; rare-earth samarium-cobalt magnet; permalloy core; large-diameter coil wire; die-cast aluminum alloy hard housing. FR 20-60,000 Hz; ch sep at 1 kHz 30 dB; output 0.18 mV at 1 kHz, 5 cm/sec; balance at 1 kHz 0.5 dB; tracking force 1.0- 3.0 g ..... \$475

## ADC

### TRX .2 Phono Cartridge

Induced-magnet cartridge with line-contact nude rectangular diamond; precision die-cast metal body; sapphire cantilever (moving system); screw-down lock stylus system mount. FR 20-26,000 Hz  $\pm 1$  dB; recommended tracking force 1.2 g  $\pm 2$  g; output voltage 3 mV (5 cm/sec at 1 kHz); ch balance within 0.5 dB (1 kHz); ch sep > 30 dB (1 kHz); compliance 40 x 10<sup>-6</sup>cm/dyne (static); imp 3.9 ohms (1 kHz); dc resistance 650 ohms; load resistance 47k ohms; load capacitance 275 pf; weight 8 g (with adapter); stylus tip nude PH line contact: .12 x .06 x .05 (vital III) sapphire-tube cantilever ..... \$250

### TRX 1 Phono Cartridge

Induced-magnet cartridge with line-contact nude diamond; precision die-cast metal body; screw down lock stylus system mount; beryllium cantilever (moving system); FR 20-24,000 Hz  $\pm 1$  dB; recommended tracking force 1.2 g  $\pm 2$  g; output voltage 3 mV (5 cm/sec at 1 kHz); ch balance within 1 dB (1 kHz); ch sep > 30 dB (1 kHz); compliance 40 x 10<sup>-6</sup>cm/dyne (static); imp 3.9 ohms (1 kHz); dc resistance 650 ohms; load resistance 47k ohms; load capacitance 275 pf; weight 8 g (with adapter); stylus tip nude PH line contact .3 x .22 x .5 (vital III) sapphire tube cantilever ..... \$175

### PSX-40 Phono Cartridge

Induced-magnet phono cartridge with P-mount adapter so that cartridge is useable for both conventional and P-mount tone arms. Features .3 x .7 nude diamond; titanium tapered cantilever; FR 20-24,000 Hz; tracking force 1 1/4  $\pm 2$  g; output voltage 3.5mV (5 cm/sec at 1 kHz); ch balance within 1.5 dB (1 kHz); ch sep > 28 dB (1 kHz); compliance 35 x 10<sup>-6</sup>cm/dyne (static); imp 3.2 ohms (1 kHz); dc resistance 610 ohms; load resistance 47k ohms; load capacitance 275 pf; weight 5.9, 7.2 g (with adapter); stylus tip nude elliptical 0.2x0.7 mil; titanium tapered tube cantilever ..... \$135

### PSX-30 Phono Cartridge

Induced-magnet phono cartridge with P-mount adapter so that cartridge is useable in both conventional and P-mount tone arms. Features .3 x .7 nude diamond; aluminum tapered cantilever; FR 20-22,000 Hz; tracking force 1 1/2  $\pm 2$  g; output voltage 3.5mV (5 cm/sec at 1 kHz); ch balance within 1.5 dB (1 kHz); ch sep > 26 dB (1 kHz); compliance 35 x 10<sup>-6</sup>cm/dyne (static); imp 3.2 ohms (1 kHz); dc resistance 610 ohms; load resistance 47k ohms; load capacitance 275 pf; weight 5.9, 7.2 g (with adapter);

stylus tip nude elliptical 0.3x0.7 mil; aluminum tapered tube cantilever ..... \$110

### PSX-20 Phono Cartridge

Induced-magnet phono cartridge with P-mount adapter so that cartridge is useable for both conventional and P-mount tone arms. Features .3 x .7 bonded diamond; aluminum tapered cantilever; FR 20-20 K Hz; tracking force 1 1/2  $\pm 2$  g; output voltage 4mV (5 cm/sec at 1 kHz); ch balance within 2 dB (1 kHz); ch sep > 20 dB (1kHz); compliance 35 x 10<sup>-6</sup>cm/dyne (static); imp 4K ohms (1 kHz); dc resistance 1200 ohms; load resistance 47k ohms; load capacitance 275 pf; weight 5.9, 7.2 g (with adapter); stylus tip bonded elliptical 0.3 x 0.7 mil; aluminum tube cantilever ..... \$90

### PSX-10 Phono Cartridge

Induced-magnet phono cartridge with P-mount adapter so that cartridge is useable for both conventional and P-mount tone arms. Features .77 bonded conical diamond; aluminum tapered cantilever; FR 20-18,000 Hz; tracking force 1 1/2  $\pm 2$  g; output voltage 4mV (5 cm/sec at 1 kHz); ch balance within 2 dB (1 kHz); ch sep > 20 dB (1 kHz); compliance 30 x 10<sup>-6</sup>cm/dyne (static); imp 4k ohms (1 kHz); dc resistance 1200 ohms; load resistance 47k ohms; load capacitance 275 pf; weight 5.9, 7.2 g (with adapter); stylus tip bonded conical 0.65 mil; aluminum tube cantilever ..... \$60

## ADCOM

### XC-Sapphire Phono Cartridge

High output MC stereo phono cartridge with hollow cantilever and sapphire van den Hul stylus. Features 3.5-micron contact radius; vertical groove extended to 85 microns; aluminum cantilever; crosscoil armature. Output 2.5 mV at 5 cm/sec; FR 20-20,000 Hz  $\pm 1$  dB; ch balance within 1 dB; effective tip mass 0.27 mg; tracking force 1.8 g; square-wave rise time 10 msec; ch sep 20 dB 10-20,000 Hz; 4.7 g \$450

### XC-MR2 Moving Coil Phono Cartridge

High output phono cartridge with nude mounted stylus, square shank. Features thin walled aluminum cantilever; crosscoil armature; output 2.5 mV at 5 cm/sec; FR 20-20,000 Hz  $\pm 1$  dB; ch sep 28 dB at 1 kHz; tracking force 1.8 g; effective tip mass 0.35 mg; .1 mil x 2.8 mil scanning radius; weight 4.7 g \$325

### XC-LT Moving Coil Phono Cartridge

Low-output MC phono cartridge with Line-Trace stylus, large-diameter thin-wall aluminum cantilever, crosscoil armature; output 0.3 mV at 5 cm/sec; FR 20-20,000 Hz  $\pm 1$  dB; ch sep 28 dB at 1 kHz; tracking force 1.8 g; effective tip mass 0.35 mg; weight 4.7 g ..... \$260

### HC-VDH II Moving Coil Phono Cartridge

High-output MC stereo phono cartridge with van den Hul stylus. Features thin-wall aluminum cantilever; crosscoil armature. Output 2.5 mV at 5 cm/sec; FR 20-15,000 Hz + 1.5/-dB, 20-20,000 Hz + 2.5/-1 dB; ch balance within 1.5 dB; tracking force 2 g; effective tip mass 0.35 mg; 4.7 g ..... \$220

HC-E II. Similar to HC-VDH II except with elliptical stylus ..... \$140

## AKG

### P-25MD Phono Cartridge

Variable-reluctance induced-magnet cartridge with patented diamond-technology transverse-suspension system, cylindrical/magnet design. Features frequency-response/crosstalk curve; universal adjustment



gauge; carbon-fiber stylus brush; screwdriver; antiresonance compound. Output 2.7 mV at 3.54 cm/sec rms; FR 10-28,000 Hz; sep  $\pm 1$  dB; tracking-force range 0.75-1.25 g; diamond "Analog-Six" stylus mass 0.015 mg; 3.5 g ..... \$250

### P-15MD Phono Cartridge

Variable-reluctance induced-magnet cartridge with patented diamond-technology transverse-suspension system, cylindrical magnet. Features frequency-response/crosstalk curve; adjustment mirror; carbon-fiber stylus brush; screwdriver, antiresonance compound. Output 3.4 V rms at 3.54 cm/sec; FR 10-23,000 Hz; sep  $\pm 1.5$  dB; tracking force 1.0-1.5 g; elliptical diamond stylus; stylus mass 0.018 mg; 3.5 g ..... \$165

### P-10ED Phono Cartridge

Variable-reluctance, induced-magnet phono cartridge with patented transverse suspension, cylindrical magnet. Features carbon-fiber stylus brush; screwdriver; antiresonance compound. Output 5.8 mV rms at 3.54 cm/sec; FR 20-20,000 Hz; sep  $\pm 2$  dB; tracking force 1.25-2.0 g; elliptical diamond stylus; stylus mass 0.25 mg; 3.5 g ..... \$115

### P-5ED Phono Cartridge

Variable-reluctance induced-magnet cartridge with patented transverse suspension, cylindrical magnet. Features compatibility with automatic turntables, record changers; elliptical diamond stylus. Output 5.8 mV rms at 3.54 cm/sec; FR 20-20,000 Hz; sep  $\pm 2$  dB; tracking force 1.5-2.0 g ..... \$80

## ANDANTE by SUMIKO

### FGV Phono Cartridge

Stereo phono cartridge with stylus configuration virtu-

ally identical to cutting stylus shape. Features extended line contact diamond stylus modified to prevent accidental recutting of grooves; nude diamond-stylus mounted on aluminum-alloy tubular cantilever; micro-mass magnet; hand-wound coils. Output 5.0 mV; FR 10-35,000 Hz; sep 30 dB at 1 kHz; compliance 20 x 10<sup>6</sup> cm/dyne; tracking-force range 0.75-1.5 g; input imp 47k ohms; weight 6 g. . . . . \$200

#### E Phono Cartridge

Micro-mass magnetic phono cartridge with aluminum-alloy tubular cantilever, 0.2 x 0.8-mil polished bonded-diamond elliptical stylus; hand-wound coils; output 5.0 mV; FR 12-30,000 Hz; sep 30 dB at 1 kHz compliance 20 x 10<sup>6</sup> cm/dyne; tracking force range 1-1.9 g; input imp 47k ohms; 6 g. . . . . \$100  
**S.** Similar to E except uses 0.5-mil polished bonded-diamond spherical stylus; FR 18-27,000 Hz; sep 28 dB at 1 kHz; compliance 18 x 10<sup>6</sup> cm/dyne; tracking force range 1-2.5 g. . . . . \$75  
**H.** Similar to S except output 10 mV; FR 18-23,000 Hz; sep 27 dB at 1 kHz; compliance 15 x 10<sup>6</sup> cm/dyne. . . . . \$50

### AUDIO-TECHNICA

#### AT35E Phono Cartridge

Stereo phono cartridge with user-replaceable Moving MicroCoil<sup>®</sup> stylus assembly. Features low-mass design; 0.2 x 0.7-mil nude-mounted BiRadial square-shank diamond stylus. Output 0.4 mV at 5 cm/sec; FR 15-50,000 Hz; ch balance/sep 0.5/30 dB at 1 kHz; tracking force 1.2-1.8 g. . . . . \$250

#### AT152LP Phono Cartridge

Direct-plug-in stereo phono cartridge for SL series turntables. Features extremely stiff but lightweight beryllium cantilever and nude-mounted square-shank Linear Contact diamond stylus. . . . . \$225

#### AT31E Phono Cartridge

Stereo phono cartridge with user-replaceable Moving MicroCoil stylus assembly. Features square-shank 0.2 x 0.7-mil biradial diamond stylus. Output 0.4 mV at 5 cm/sec; FR 15-50,000 Hz; ch balance/sep 1/29 dB at 1 kHz; tracking force 1.21-1.8 g. . . . . \$175

#### AT132EP Phono Cartridge

Direct plug-in stereo phono cartridge for SL series turntables. Features Vector-aligned dual-magnet system with tapered alloy cantilever; 0.2 x 0.7-mil nude-mounted biradial diamond stylus. . . . . \$135

#### P-Mount Phono Cartridges

**AT122LP.** Linear contact diamond stylus . . . . . \$125  
**AT122EP.** 0.3 x 0.7-mil nude diamond stylus . . . . . \$95  
**AT112EP.** 0.4 x 0.7-mil diamond stylus . . . . . \$70

#### AT30HE Phono Cartridge

Stereo cartridge with user-replaceable Moving Micro-Coil stylus assembly. Features high output that eliminates need for transformer; 0.3 x 0.7-mil nude-mounted diamond stylus. Output 2 mV; FR 15-30,000 Hz; sep 29 dB at 1 kHz; tracking force 1.4-1.8g. . . . . \$135

#### "Vector-Aligned" Series

##### AT155LC Phono Cartridge

Output 5.0 mV at 5 cm/sec at 1 kHz; FR 5-35,000 Hz with class I tolerance; ch balance/sep 0.5/31 dB at 1 kHz; tracking force 0.8-1.6 g; nude mounted square shank linear contact stylus; beryllium cantilever; Vector-Aligned dual magnet; para-toroidal coil; replacement stylus ATN155LC (\$100) . . . . . \$255

##### AT140LC Phono Cartridge

Output 5.0 mV at 5 cm/sec.; FR 5-32,000 Hz with class II tolerance; ch balance/sep 0.75/30 dB at 1 kHz; tracking force 0.8-1.8 g; nude-mounted square shank linear contact stylus; Vector-Aligned dual magnet; para-toroidal coil replacement stylus ATN140LC (\$75) . . . . . \$175

##### AT125LC Phono Cartridge

Para-toroidal coil construction; output 5.0 mV at 5

cm/sec; FR 15-28,000 Hz with class II tolerance; ch balance/sep 1/29 dB at 1 kHz; linear contact titanium-bonded stylus; Vector-Aligned dual magnet; para-toroidal coil; replacement stylus ATN130E (\$60) . . . . . \$120

##### AT120E Phono Cartridge

Para-toroidal coil construction; output 5.0 mV at 5 cm/sec; FR 15-25,000 Hz with class II tolerance; ch balance/sep 1/29 dB at 1 kHz; tracking force 1-1.8 g; Vector-Aligned dual magnet; 0.3 x 0.7-mil BiRadial nude mounted diamond stylus; replacement stylus ATN120E (\$45) . . . . . \$90

##### AT110E Phono Cartridge

Output 4.5 mV at 5 cm/sec; FR 20-22,000 Hz; ch balance/sep 26 dB at 1 kHz; tracking force 1-2 g; 0.4 x 0.7-mil BiRadial bonded diamond stylus; replacement stylus ATN110E(\$35) . . . . . \$65

##### AT105 Phono Cartridge

Output 4.5 mV at 1 kHz; FR 20-20,000 Hz; tracking force 1.5-2.5 g; ch sep 26 dB at 1 kHz; 0.7-mil UniRadial bonded diamond stylus; dual magnet; replacement stylus ATN105 (\$30) . . . . . \$50

#### "The Professionals" Series

##### ATP-3 Phono Cartridge

For stereo operation; output 5.3 mV at 5 cm/sec; FR 15-25,000 Hz; ch balance/sep 1.5 dB/23dB at 1 kHz; load imp 47k ohms; tracking force 2-3 g; 0.3 x 0.7-mil elliptical diamond stylus; replacement stylus ATP-N2; weight 7.2 g. . . . . \$60  
**ATP-N3;** weight 7.2 g. . . . . \$80

##### ATP2 Phono Cartridge

For stereo operation; output 5.3 mV at 5 cm/sec; FR 15-22,000 Hz; load imp 47k ohms; tracking force 3-5 g; 0.4 x 0.7-mil elliptical diamond stylus; replacement stylus ATPN2; weight 7.2 g. . . . . \$60  
**ATP-2XN.** Same as ATP-2 with extra stylus. . . . . \$90

##### ATP-1 Phono Cartridge

For stereo operation; output 5.3 mV at 5 cm/sec; FR 20-20,000 Hz; ch balance/sep 1.5 dB/21 dB at 1 kHz; load imp 47k ohms; tracking force 3-5 g; 0.6 mil spherical diamond stylus; replacement stylus ATPN1; weight 7.2 g. . . . . \$45

#### AT1010 Tonearm

Features low-frequency resonance damping; silver wire used for all arm leads including AT-MS headshell; gold-plated contacts; lateral balance adjustment for tracking warped records, stylus pressure 0-2.5 g. . . . . \$350

#### Tonearm

##### AT-1005 II Tonearm

Features calibrated adjustments to permit exact selection of desired tracking force, antiskating, with stylus overhang; perforated plug-in shell, sliding cartridge mounting, attaches by means of knurled locking ring and spring-loaded contacts; sliding main counterweight along length of arm (calibrations permit adjustment to 0.5 g); one-hole installation of arm. Stylus force 0-3 g, calibrated to 0.5 g; cartridge weight 5-24 g; effective mass 20 g (set for AT14S cartridge) . . . . . \$150  
**AT-S.** Plug-in shell . . . . . \$8

### BANG & OLUFSEN

#### MMC Series Phono Cartridges

All MMC cartridges features armature mounted perpendicularly to the cantilever; crystal sapphire cantile-

ver; multi-radial diamond; four high output, low-imp coils wound on cores of very low permeability aligned in perfect symmetry with the magnet.

**MMC-1.** Diamond contact line 0.1 x 0.1 mm sq.; stylus bonding nude; cantilever sapphire tube; recommended tracking force 10 mN/1 g; FR 20-20,000 Hz±1 dB; 1.6 g. . . . . \$445

**MMC-2.** Diamond contact line 0.12 x 0.12 mm sq.; stylus bonding nude; cantilever sapphire tube; recommended tracking force 10 mN/1 g; FR 20-20,000 Hz±1.5 dB; 1.6 g. . . . . \$290

**MMC-3.** Diamond elliptical 0.15 x 0.15 mm sq.; stylus bonding nude; cantilever tapered aluminum tube; recommended tracking force 10 mN/1 g; FR 20-20,000 Hz±2 dB; 1.6 g. . . . . \$180

**MMC-4.** Diamond elliptical 0.20mm round; stylus bonding titanium; cantilever tapered aluminum tube; recommended tracking force 12 mN/1.2 g; FR 20-20,000 Hz±2.5 dB; 1.6 g. . . . . \$105

**MMC-5.** Diamond elliptical 0.25mm round; stylus bonding titanium; cantilever tapered aluminum tube; recommended tracking force 15 mN/1.5 g; FR 20-20,000 Hz±3 dB; 1.6 g. . . . . \$60

### DENON

#### DL-1000 Moving-Coil Cartridge

MC cartridge with lowest effective mass. Features twin damper construction, amorphous boron tubular cantilever; nonresonant frame of aluminum alloy and fiberglass mix with hard plastic; special metal cross-shaped generating coil. FR 20-110,000 Hz; output 0.12 mV at 1 kHz, 5 cm/sec horizontal; effective moving mass 0.007 mg; stylus pressure 0.8 g; ch balance < 1 dB at 1 kHz; sep > 30 dB at 1 kHz; compliance measured from record/static 20 x 10<sup>-6</sup> cm/dyne at 100 Hz/50 x 10<sup>6</sup> cm/dyne; stylus 0.06 mm square shank with elliptical tip; optional load resistance > 100 ohms. . . . . \$1,000

#### DL-305 Moving-Coil Cartridge

Lightweight MC phono cartridge with amorphous boron cantilever. FR 20-75,000 Hz; sep 28 dB at 1 kHz; dynamic compliance 14 x 10<sup>-6</sup> cm/dyne; 5.8 g. . . . . \$595

#### DL-303 Moving-Coil Cartridge

Lightweight MC phono cartridge with double-constructed aluminum tapered pipe cantilever, 0.1 x 0.05-mm rectangular stylus with elliptical solid diamond tip. Output 0.2 mV at 1 kHz, 5 cm/sec; FR 20-70,000 Hz; load imp 100 ohms (with optional QU-340 step-up transformer, 40 ohms); dynamic compliance 13 x 10<sup>6</sup> cm/dyne; stylus force 1.2 ±0.2 g; 5.8 g. . . . . \$385

**AU-340.** Audio step-up transformer with 3 ohms/40 ohms/pass switching; step-up ratio; 1:10 at 40 ohms, 1:33 at 3 ohms; primary imp 3 and 40 ohms, secondary 4k ohms; load imp 50k ohms; FR 10-120,000 Hz + 0.5/-1 dB; distortion 0.05%, 20-20,000 Hz, 40 ohms; ch balance 0.5 dB; 215 mmD x 155 mmW x 70 mmH . . . . . \$395

#### DL-103D Moving-Coil Cartridge

Moving-coil stereo phono cartridge with cross-shaped armature. Output 0.25 mV at 50 mm/sec; FR 20-65,000 Hz; sep 28 dB at 1 kHz; ch balance 1 dB at 1 kHz; load imp 100 ohms; compliance 12 x 10<sup>-6</sup> cm/dyne; tracking force 1.5 -0.2 g; elliptical diamond stylus; 7.5 g. . . . . \$295

#### DL-207 Moving-Coil Cartridge

Moving-coil cartridge with amorphous boron cantilever. Features direct linear flux system; 2-way damping; samarium-cobalt magnets in lightweight body; output 0.2 mV at 1 kHz, 5 cm/sec; imp 40 ohms; compliance 13 x 10<sup>-6</sup> cm/dyne at 100 Hz; effective mass 0.25 mg; tracking force 1.4 g ±0.2g; stylus tip 0.14 x 0.07 mm special elliptical diamond. . . . . \$275

#### DL-103 Moving-Coil Cartridge

Cartridge output 0.3 mV at 50 mm/sec; FR 20-45,000 Hz; sep > 25 dB at 1 kHz; ch balance 1 dB at 1 kHz; load imp 100 ohms; compliance 5 x 10<sup>-6</sup> cm/dyne; tracking force 2.5 ±0.3 g; conical stylus;

Audio terms are defined  
in the glossary on page 19.

For an explanation of abbreviations,  
turn to the list on page 22.

8.5 g. Transformer step-up ratio 10:1; primary/secondary imp 40/4k ohms; FR 20-40,000 Hz  $\pm$  1 dB; load imp 50k ohms; 115 mmD x 51 mmW x 38 mmH..... \$200

**DL-103S Moving-Coil Cartridge**

Output 0.3 mV at 50 mm/sec; FR 20-60,000 Hz; sep > 25 dB at 1 kHz; ch balance 1 dB at 1 kHz; load imp 100 ohms; compliance 8 x 10<sup>-6</sup> cm/dyne; tracking force 1.8  $\pm$  0.3 g; modified Shibata stylus; 7.8 g ..... \$195

**DL-301 Moving-Coil Cartridge**

Moving-coil phono cartridge with aluminum alloy tapered pipe cantilever, elliptical solid diamond stylus tip. FR 20-60,000 Hz; sep 28 dB at 1 kHz; compliance 13 x 10<sup>-6</sup> cm/dyne 4.7 g ..... \$175

**DL-160 High Output MC Cartridge**

1.6mV output, special elliptical diamond stylus 0.07 x 0.14mm with extended FR to 50,000Hz; over 28dB ch sep, compliance 10 x 10<sup>-6</sup> cm/Dyne; stylus force 1.6  $\pm$  0.3 g; load imp 160 ohm; 4.8 g . \$100

**DL-300 Moving-Coil Cartridge**

Features double-construction aluminum cantilever with 2-way damping; cross-shaped armature; high magnetic field strength direct linear flux system; one-point suspension system; special elliptical stylus. FR 20-40,000 Hz; imp 40 ohms; sep 25 dB at 1 kHz; ch balance 1.5 dB; dynamic compliance 8 x 10<sup>-6</sup> cm/dyne at 100 Hz; stylus force 1.8 g  $\pm$  0.3 g; 4.2 g ..... \$100  
**DL-300/T.** Same as DL-300 except has AU-250 inline MC step-up transformer ..... \$160

**DL-110 High Output Moving Coil Cartridge**

High compliance, high output MC with special elliptical diamond stylus does not require step-up device; lightweight design matches newer tonearm configurations; output voltage 1.6 mV; FR 20-45,000 Hz ch sep over 25dB; compliance 8 x 10<sup>-6</sup> cm/Dyne stylus force 1.8 + 0.3 g. Load imp 160 ohm; stylus diam 0.1 x 0.2mm ..... \$80

**DL-103 M/Moving-Coil Cartridge**

Amorphous boron cantilever technology; output voltage 0.12mV; FR 20-60,000Hz; output imp 40 ohm; ch sep > 25dB; stylus force 1.4 g  $\pm$  0.2 g dynamic compliance 13 x 10<sup>-6</sup> cm/Dyne; 5.6 g ..... \$200

**Tonearm**

**DA-401 Tonearm**

Lightweight 322-mm statically-balanced S-shaped tonearm with dynamically damped system. Features 2-piece high-rigidity headshell; oil-damped cue, non-contact magnetic antiskate control; tracking error 2.5"; tracking force 0-2 g in 0.1-g increments; height adjustment 42-70 mm; cartridge weight range 4-10 g; effective mass 7.5 g..... \$360

**DYNAVECTOR**

**Karat Diamond (100D)**

Moving coil stereo phono cartridge with line contact stylus and 2.5mm cantilever. Output 0.2mV at 1 kHz, 5 cm/sec; FR 20-70,000 Hz; tracking force 1.5 g; 5.3 g..... \$1,000

**DV-10X Type 3**

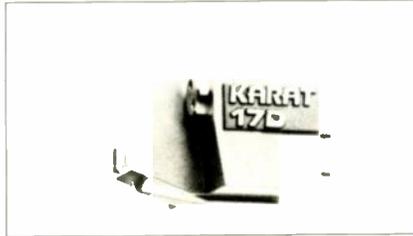
Low mass high output MC cartridge with tapered aluminum cantilever and elliptical stylus. Output 2.5mV at 1 kHz, 5 cm/sec; FR 20-20,000 Hz; tracking force 1.7 g; 4.6 g..... \$1,000

**Karat 17 Diamond (17D)**

Moving coil stereo phono cartridge with super-elliptical stylus and 1.7mm length diamond cantilever. Output 0.2mV at 1 kHz, 5 cm/sec; FR 20-70,000 Hz; tracking force 2.0 g; 5.3 g ..... \$700

**Karat 17 Diamond Super (17DS)**

Moving coil cartridge with a 1.7mm length tapered solid diamond cantilever and Micro Reach Stylus. Out-



put 0.2mV at 1 kHz, 5 cm/sec; FR 20-90,000 Hz; tracking force 1.8 g; 5.3 g ..... \$650

**Karat 23 Ruby (23R)**

Moving coil stereo phono cartridge with 2.3mm ruby cantilever. Output 0.2mV at 1 kHz, 5 cm/sec; FR 20-50,000 Hz; tracking force 1.5 g; 5.3 g ..... \$310

**DV-20B Type 2**

High-output MC phono cartridge, with cantilever and elliptical stylus straight solid beryllium. Output 3.6mV at 1 kHz, 5 cm/sec; FR 20-40,000 Hz; tracking force 1.8 g; 5.3 g..... \$298

**DV-20A Type 2**

High-output MC cartridge with tapered aluminum cantilever and elliptical stylus. Output 3.6mV at 1 kHz, 5 cm/sec; FR 20-40,000 Hz; tracking force 1.8 g; 5.3 g ..... \$240

**Karat 19A**

Moving coil cartridge with 1.9mm length tapered solid aluminum cantilever and very small size armature. Output 0.25mV at 1 kHz, 5 cm/sec; FR 20-70,000 Hz; tracking force 1.8 g; 5.3 g ..... \$230

**DV-50A**

Low-output MC cartridge with 5MM and nude elliptical diamond stylus straight aluminum cantilever. Output 0.2mV at 1 kHz, 5 cm/sec; FR 20-50,000 Hz; tracking force 1.5 g; 4.5 g ..... \$198

**DV-505 Tonearm**

Biaxis inertia-controlled dynamic-balanced tonearm with 2 pivots. Features dynamic damping system to eliminate arm resonance; electromagnetic damping system; free-standing mounting. Overall length 335 mm, effective length 241 mm; height 72-94 mm; offset angle 21.5"; lateral tracking error 0-2.2"; overhang 15 mm; height adjustable from 38-70mm; suitable cartridge weight 9-35 g; supplied with 1.2-m cable ..... \$700

**DV-501 Tonearm**

Biaxis tonearm with eddy current damping. Overall length 309 mm; effective length 241 mm; offset angle 21.5"; lateral tracking error 0-2.2"; overhang 15mm; height adjustable from 36-76 mm ... \$600

**EMPIRE**

**Plug-in Cartridges**

Designed for all Technics-type linear-tracking straight tonearms.

- 1080LT.** With antistatic stylus. Features micro gold-plated nude Para Linear diamond stylus mounted on gold-plated ultra-low-mass cantilever ..... \$150
- 980LT.** Similar to 1080LT except has 0.2 x 0.7-mil nude elliptical diamond stylus ..... \$125
- 580LT.** Similar to 980LT except no gold plating; has ultra-low-mass thin cantilever ..... \$100
- 480LT.** Similar to 580LT except for standard cantilever ..... \$90
- 380LT.** Similar to 480LT except has 0.3 x 0.7-mil elliptical diamond stylus ..... \$70
- 280LT.** Similar to 380LT except has 0.4 x 0.7-mil elliptical diamond stylus ..... \$50

**Standard Mount Cartridges**

Designed for use in standard tonearms.  
**1000GT.** With antistatic stylus. Features micro gold-plated nude Para Linear diamond stylus mounted on

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Write directly to the manufacturer or distributor. A list of names and addresses starts on page 25.

micro gold-plated ultra-low mass cantilever ... \$150  
**900GT**. Similar to 1000GT except has 0.2 x 0.7-mil elliptical diamond stylus ..... \$125  
**EDR.7**. High-performance cartridge with Para Linear diamond stylus mounted on low-mass cantilever \$100  
**MC Plus 20**. High-output MC cartridge with user-replaceable stylus assembly. Requires no step-up transformer ..... \$90  
**SLM44**. Super-low-mass cartridge with 0.3 x 0.7-mil elliptical diamond stylus mounted on low-mass cantilever ..... \$75  
**250E**. Stereo cartridge with 0.3 x 0.7-mil elliptical diamond stylus ..... \$50  
**150C**. Similar to 250E except has 0.6-mil conical stylus ..... \$40

**GOLDRING by AUDOSOURCE**

**G900/IGC Phono Cartridge**

Low-mass MM cartridge with van den Hul fine-line diamond stylus. Output 4.5 mV at 5 cm/sec, 1 kHz; FR 20-20,000 Hz  $\pm 2$  dB; balance/sep 2/25 dB at 1 kHz; static compliance 40 mm/N lateral, 20 mm/N vertical; tracking force range 0.75-1.5 g; load resistance 47k ohms; load capacitance 150-200 pF; 4 g ..... \$240  
**910 IGC**. Similar to G900/IGC except output 6.5 mV; static compliance 24 mm/N ..... \$240

**920/IGC Phono Cartridge**

Low-mass moving-magnet cartridge with van den Hul fine-line diamond stylus. Output 6.5 mV rms  $\pm 2$  dB at 1 kHz, 5 cm/sec; FR 20-20,000 Hz  $\pm 2$  dB; ch balance within 2 dB; ch sep 20 dB; equivalent tip mass 0.45 mg; vertical tracking angle 24°, static compliance 24 mm/N lateral, 16 mm/N vertical; load resistance 47k ohms; load capacitance 150-200 pF 4.25 g ..... \$125

**G900/E Phono Cartridge**

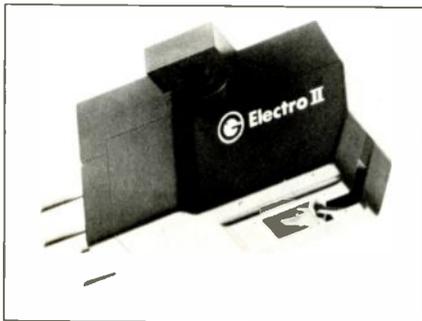
Low-mass cartridge. Output 6.5 mV at 5 cm/sec.; FR 20-20,000 Hz  $\pm 3$  dB; sep 20 dB at 1 kHz; tracking force 1-3 g; 0.7 x 0.3-mil elliptical stylus ..... \$65

**G950E Phono Cartridge**

Stereo cartridge with 0.0007" x 0.0003" elliptical diamond stylus. Output 6 mV rms at 1 kHz, 5 cm/sec; FR 10-20,000 Hz  $\pm 5$  dB; sep >20 dB at 1 kHz; static compliance 25 mm/N lateral, vertical; load resistance/capacitance 47k ohms/200-400 pF; 5g ..... \$40

**Electro II Stereo Moving Coil Cartridge**

High output MC cartridge with van den Hul stylus; FR 20-22,000 Hz  $\pm 3$  dB; ch balance 1 dB max; ch sep



25 dB at 1,000 Hz; sens 2.5mV at 5 cm/sec; vertical tracking angle 20°; equivalent tip mass 0.6 mg; tracking force 1.6-2 g (1.8 g nominal); 9 g ..... \$300

**GRACE by SUMIKO**

**F-9E Phono Cartridge**

Wide bandwidth stereo moving samarium-cobalt magnet cartridge with unique Omni Axial pivot for reduced longitudinal drag distortion. Features line-contact elliptical stylus shaped from reduced-mass Vital diamond for extremely low effective moving mass. Compliance 20 x 10<sup>-4</sup> cm/dyne; output 3.5 mV; ef-

fective moving mass 0.35 mg; tracking force 1.2 g; 6 g ..... \$200  
**F-9L**. Similar to F-9E except has Advanced Luminal Trace stylus with long, narrow contact line similar to original cutter diamond; Vital mount for total effective moving mass of 0.3 mg; 5.5-mV output; load capacitance 350 pF ..... \$180  
**F-9E Ruby**. Similar to F-9E except ruby cantilevered ..... \$300

**F-8L Phono Cartridge**

Matrical-flux stereo moving micro-magnet with Advanced Luminal Trace stylus similar to that in F-9L. Tracking force range 0.75-2.5 g; output 5 mV; effective tip mass 0.4 mg; 6.5 g ..... \$125

**Tonearms**

**747 Tonearm**

Low-mass highly rigid damped aluminum tubular straight tonearm with detachable headshell with wide-surface coupling mechanism; case-hardened orthogonal bearing system; decoupled counterweight isolated by damper; antiskate cue; overall length 293-321 mm; stylus overhang 15mm; cartridge weight range 4-10 g ..... \$300

**70711 Tonearm**

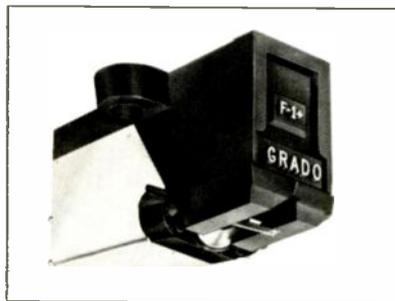
Low-mass highly rigid aluminum tubular straight tonearm with acrylic headshell; orthogonal gimbal bearing system incorporates cone mechanism made of solid base material with case-hardened bearing cone tip; decoupled counterweight isolated by small rubber damper; antiskate cue; overall length 288-313 mm; stylus overhang 15mm; cartridge weight range 4.5-12 g; available in black or silver ... \$225

**GRADO LABORATORIES**

All Grado stereo cartridges come with diamond styli. Input load 47k ohms with 10k ohms optimal; inductance 55 mH; weight 4.5 g.

**Super Fluxbridgeter Series**

**G2+**. With Twin Tip stylus. Output 3 mV; FR : 0-60,000 Hz; sep 25 dB, 10-30,000 Hz; tracking force 1.5 g ..... \$250  
**P-G2+**. P-Mount version of G2+ ..... \$265  
**G1+**. With true ellipsoid stylus. Specifications same as for G2+ ..... \$150  
**P-G1+**. P-Mount version of G1 ..... \$165  
**G+**. Similar to G1+ ..... \$100  
**P-G+**. P-Mount version of G+ ..... \$110



**GF1+**. With special Grado stylus, otherwise similar to G1+ ..... \$80  
**P-GF1+**. P-mount version of GF1+ ..... \$90  
**GF2+**. Similar to GF1+ ..... \$65  
**P-GF2+**. P-mount version of GF2+ ..... \$75  
**GF3E**. With elliptical stylus, otherwise similar to G1+ ..... \$55  
**P-GF3E**. P-mount version of GF3E+ ..... \$60

**Fluxbridgeter Series**

**GCE+1**. With elliptical diamond stylus. Output 3 mV; FR 10-50,000 Hz; sep 20 dB average, 20-20,000 Hz; tracking force 1.5 g ..... \$15  
**P-GCE+1**. P-Mount version of GCE+1 ..... \$47.50  
**GTE+1**. Similar to GCE+1 ..... \$45  
**P-GTE+1**. P-Mount version of GTE+1 ..... \$18

**Professional Series**

**GCE+**. With elliptical diamond stylus. Output 5 mV; FR 10-35,000 Hz; sep 20 dB average, 20-20,000 Hz; tracking force range 1.5-3 g ..... \$37.50  
**GTE+**. Similar to GTE+ ..... \$25

**HEYBROOK**

**Heybrook Tonearm**

Straight tonearm with 9<sup>1</sup>/<sub>2</sub>" nominal length; fixed headshell for rigidity; high tensile cartridge mounting screws and protractor; hydraulic cueing; gold-plated cartridge connectors; 1-m phono leads. Black finish ..... \$249

**INDUCED MAGNET SYSTEMS by NAGATRON**

**1400ER Universal-Mount Phono Cartridge**

Stereo induced magnet cartridge with 0.6 x 0.6-mil cross-grain-crystal natural diamond stylus. Aluminum alloy cantilever with special permalloy microtubular armature and permalloy case. FR 20-22,000 Hz; 0.52-mg effective mass; 1.75-2.25 g tracking force range ..... \$55  
**1440E**. Similar to 1400R except 0.4 x 0.7-mil elliptical cross-grain-crystal-natural diamond stylus, 0.48 mg effective mass ..... \$65  
**1466E**. Similar to 1440E except has boron bonded stylus. 0.45-mg effective mass; UT-58 alloy cantilever with permalloy microtubular armature; 1.5-2.0 g tracking force range ..... \$80  
**1460IE**. Similar to 1440E except cartridge in integrated headshell for low-mass tonearm ..... \$90

**JVC**

**MC-2E Phono Cartridge**

Micro-MC cartridge with direct-coupled transducer, duralumin cantilever; 0.07 x 0.14-mm diamond tip elliptical stylus; output 0.2 mV at 5 cm/sec; balance/sep 1/25 dB; imp 30 ohms; dynamic compliance 8 x 10<sup>-6</sup> cm/dyne at 1 kHz; optimum tracking force 1.5-0.15 g; FR 10-25,000 Hz; 8.7 g... \$200

**KOETSU by D&K IMPORTS**

**Phono Cartridges**

**EMC-1D (Koetsu Diamond)**. MC cartridge with solid onyx body and diamond cantilever ..... \$2,500  
**EMC-1G (Koetsu Gold)**. MC cartridge with body of solid onyx. Stepped boron cantilever; semi-line-contact stylus tip ..... \$1,400  
**1R Mark II (The Rosewood)**. MC cartridge hand-carved from solid rosewood block, parts inserted by hand. Stepped boron cantilever; semi-line-contact stylus tip ..... \$850  
**EMC-1B Mark II (Koetsu Black)**. Hand-made MC cartridge with removable boron cantilever for replacing stylus. Aluminum-alloy body; semi-line-contact stylus tip ..... \$660

**Tonearm**

**SA-1100D Mark II**. Tri-pivot tonearm with 3-point gimbal suspension system to eliminate antiskating mechanism; vertical balance system; minimal resonance; detachable headshell (zinc alloy standard, rosewood layered with onyx optional) ..... \$700

**LINN by AUDIOPHILE SYSTEMS**

**Asak DC2100K Moving-Coil Cartridge**

Stereo MC cartridge with 0.2 x 0.8-mil modified elliptical stylus. FR 10-50,000 Hz  $\pm 3$  dB; sep 27 dB; output 0.2 mV; imp 3.5 ohms; compliance 12 x 10<sup>-6</sup> cm/dyne; tracking angle 20°; tracking force 1.5-1.9 g. 6 g ..... \$495  
**Trak**. Moving-coil cartridge with 0.2 x 0.8 mil-modified elliptical stylus. Technical measurements same as for Asak ..... \$225

**Ittok LV-II Tonearm**

Tonearm with 11 1/2" overall length, 9" stylus-pivot distance, damped cueing mechanism. Features radial ball bearings. Effective mass 12 g; total cable capacitance 100 pF; cartridge weight range 3-12 g. \$650

**LUSTRE by SUMIKO**

**GST-801 Tonearm**

Moderate-mass tonearm with dual gimbal bearings. Features magnetic application of vertical tracking force; adjustable tracking angle during play via precision helicoid mechanism; high-rigidity stainless-steel antiresonant-material-filled tonearm tube; pure silver with Teflon coated internal wiring; magnesium headshell with silver wiring ..... \$500

**MAGNEPAN**

**Unitrac 1 Tonearm**

Low-mass universal tracking tonearm with unipivot design, detachable carbon fiber headshell. Features thin-walled carbon fiber tube; vertical tracking angle adjustment; optimum arm geometry; gold connectors; low-capacitance cable. Pivot/stylus distance 9 1/2"; effective mass 8 g; bearing friction < 5 mg; headshell offset 22.8"; cartridge weight range 7-12 g with auxiliary weight, 3-7 g without weight; stylus overhang 0.675"; maximum tracking error 1.77" ..... \$325

**MICRO-ACOUSTICS**

**System II Series**

**830 CSA Phono Cartridge**

Ultra-low-mass direct-coupled electret cartridge with Micro-Fine beryllium cantilever, twin-pivot revolver, ultralight-weight carbon-fiber housing. Designed for wide dynamic range digitally mastered recordings. Features internal warp stabilizer damping; microcircuit that matches output to any cable capacitance,



preamp input resistance; Vari-Balance system; independent damping, suspension systems; dynamic feedback system; cutting stylus analog; microphonically tuned and damped; gold wiring. Output 3.5 mV; FR 5-20,000 Hz  $\pm$  .75 dB (calibration curve supplied); sep 30 dB at 1 kHz; tracking-force range 0.7-1.4 g; rise time 4.5  $\mu$ sec; cable capacitance/load resistance 25-1500 pF/5k-100k ohms; 2.5-4 g, adjustable with Vari-Balance ..... \$335  
**630 MP.** Similar to 830 CSA but no Micro-point II diamond stylus and no cutting stylus analog. FR 5-20,000 Hz  $\pm$  1 dB ..... \$265  
**3002.** Similar to 630 minus iridium-platinum axial damper, calibrated curve. FR 5-20,000 Hz  $\pm$  1.25 dB; rise time 5  $\mu$ sec ..... \$170  
**382.** Similar to 3002 except has elliptical diamond stylus with beryllium cantilever; minus Vari-Balance. Tracking force 0.75-1.5 g; rise time 6  $\mu$ sec; 4 g \$140  
**309.** Similar to 382 except has aluminum cantilever. FR  $\pm$  2 dB; rise time 7  $\mu$ sec ..... \$120  
**100-e.** Similar to 309 except standard elliptical stylus. FR  $\pm$  2.5 dB; rise time 8  $\mu$ sec; tracking force 0.8-1.6 g ..... \$99

**309 Phono Cartridge**

Direct-coupled electret stereo cartridge. Features universal-match microcircuit, dynamic feedback dampers. Rise time 7  $\mu$ sec ..... \$120

**Stratus Phono Cartridges**

Stereo cartridges with direct scanning.

- S-1 ..... \$200
- S-2 ..... \$150
- S-3 ..... \$115

**MICRO SEIKI by SAE**

**LC80W Phono Cartridge**

Improved MC stereo cartridge with hyperelliptical stylus, individual response curve. FR 10-45,000 Hz  $\pm$  1 dB; sep 30 dB at 1 kHz, 25 dB at 10 kHz; tracking force 1.7 g; load resistance 3-100 ohms ..... \$400

**LF-7 Phono Cartridge**

Stereo moving-flux cartridge with user-replaceable elliptical stylus ..... \$100

**Tonearms**

**MAX 237 Tonearm**

Standard length dynamically balanced tonearm with interchangeable tubes. Features solid-brass bearing system, brass stabilizers; double-collet chuck system; gyroscopic mount; micro patented vertical and lateral bearings; fluid damping. Stylus-pivot distance 11.1"; tracking force range 0.5-3 g; cartridge-weight range 4-33 g ..... \$1,000

**MAX 505III Tonearm**

Dynamically balanced tonearm with fluid damping needle bearing. Features medium mass straight tonearm tube with nondetachable headshell; dual lateral bearing. Stylus-pivot distance 9.3"; tracking force range 0.5-3 g; cartridge-weight range 4-16 g ..... \$425

**CFX 1 Tonearm**

Dynamically balanced carbon-fiber tonearm with needle vertical bearing, dual-radial lateral bearing, decoupled counterweight. Stylus-pivot distance 9.3"; tracking-force range 0.5-3 g; cartridge-weight range 4-12 g ..... \$225

**MA500 Tonearm**

Stainless steel arm with medium-mass straight arm. Features knife-edge vertical bearing assembly; tracking force range 0.5-3 g; cartridge weight range 4-12 g ..... \$225

**MISSION ELECTRONICS**

**773 SM Phono Cartridge**

Low-output MC cartridge with 0.3 x 0.7-mm nude block elliptical stylus. Output 0.2 mV at 1 kHz, 5 cm/sec; sep 20 dB at 1 kHz; balance  $\pm$  0.5 dB, 20-20,000 Hz; tracking force 2.0 g ..... \$597

**773 HC.** Similar to 773 SM except has 0.6 x 0.8-mm stylus. Specs same as for 773 SM ..... \$227

**773 LC.** Similar to 773 SM except has 0.6 x 0.8-mm stylus. Specs same as for 773 SM ..... \$227

**773MM Moving-Magnet Cartridge**

0.3 x 0.8 mil elliptical whole diamond; output 4mV at 1,000 Hz, 3mV 50mm/sec at 1,000 Hz 28 dB at 1,000 Hz 1.5-2.5 ..... \$79

**Tonearms**

**774 SM Tonearm**

Direct-coupled tonearm with rigid 2-plane symmetric and concentric gimbel design bearings; fixed head-

shell; 23' 45' adjustable headshell offset; effective length 228mm; pivot to spindle length 210mm; overhang 18mm; effective mass 14 g; acceptable cartridge weight 2-10 g; suggested cartridge compliance 4-25 Cu; connection 1.200mm cable with gold phonos; adjustments: height, offset angle, overhang, bias; overall length 285mm; 340 g; black ..... \$499

**774 Tonearm**

Designed to direct couple cartridge assembly to turntable mass. Features unique bearing design that eliminates conventional "flapping" headshells; low effective mass; minimal pivot friction; interchangeable



tonearm tube/headshell assembly. Cartridge weight range 2-10 g; effective length 229 mm; effective mass < 5.5 g ..... \$397

**774 LC Tonearm**

Direct-coupled tonearm with rigid 2-plane symmetric and concentric gimbal-design bearings; fixed headshell. Features height, offset angle, overhang, bias adjustments; 23' 45' adjustable headshell offset angle; effective length 228mm; pivot to spindle length 210mm; overhang 18mm; effective mass 7 g; acceptable cartridge weight 2-10 g; suggested cartridge compliance 4-50 Cu; connection 1.200mm cable with gold phonos; overall length 285mm; 393 g; black ..... \$199

**NAGATRON**

**9600 Super IM Phono Cartridge**

Stereo induced-magnet aluminum magnesium alloy cartridge with tapered, tubular boron cantilever, samarium-cobalt magnet; FR 20-30,000 Hz; output 2 mV at 50 mm/sec, 1 kHz; recommended load 47k ohms; dynamic compliance 15 x 10<sup>6</sup> cm/dyne at 100 Hz; tracking force range 0.9-1.3 g; triangle-tip elliptical semi-line contact stylus; effective mass 0.031 mg; JIS and EIA standard mount; 7.6 g ..... \$275

**300 Series Phono Cartridges**

Features critically aligned samarium-cobalt alloy induced-magnet structure; universal mount; FR 10-25,000 Hz; balance/sep 1.0/25 dB at 1 kHz; output 4.0 mV at 50 mm/sec at 1 kHz; recommended load 30k-100k ohms, 50k ohms nominal; dynamic compliance 9 x 10<sup>6</sup> cm/dyne; static compliance 20 x 10<sup>6</sup> cm/dyne.

**300DJ.** Designed for broadcasters, discos, other commercial users; features back-cueing capability, low distortion, heavy-duty stylus, cantilever, suspension; tracking pressure 4-5 g; grain-oriented equiradial stylus ..... \$75

**200 Series Phono Cartridges**

Stereo cobalt-alloy magnet structure; universal mount; FR 10-25,000 Hz; balance/sep 1.0/25 dB at 1 kHz; output 4.0 mV at 50 mm/sec, 1 kHz; recommended load 30k-100k ohms, 50k ohms nominal; dynamic compliance 8 x 10<sup>6</sup> cm/dyne at 1 kHz; static compliance 20 x 10<sup>6</sup> cm/dyne.

**NOTICE TO READERS**

**Prices of items described are manufacturers' suggested prices only and are subject to change without notice. Actual selling prices are determined by the dealers.**

**220CE.** 0.3 x 0.7 mil shaped elliptical nude diamond stylus with tapered carbon-fiber cantilever; effective mass 0.60 mg ..... \$150  
**210E.** 0.3 x 0.7 mil elliptical nude diamond stylus with aluminum UT-58 cantilever; effective mass 0.65 mg ..... \$110

### 100 Series Phono Cartridges

Stereo induced magnet with super-permalloy shield; FR 20-20,000 Hz; effective mass 0.85 mg; balance/sep 1.5/24 dB at 1 kHz; output 4.0 mV at 50 mm/sec (1 kHz); recommended load 30k-100k ohms, 50k ohms nominal; dynamic compliance > 8 x 10<sup>6</sup> cm/dyne at 1 kHz; static compliance 20 x 10<sup>6</sup> cm/dyne; aluminum cantilever.

**195IE.** 0.3 x 0.7 Mil elliptical diamond stylus; integral headshell ..... \$75  
**185E.** 0.3 x 0.7 Mil elliptical diamond stylus; universal mount ..... \$65  
**165JS.** 0.5 Mil spherical diamond stylus; universal mount ..... \$55

## ONKYO

### MC-100 Moving-Coil Cartridge

Moving-coil cartridge features carbon fiber with extra thin super-duralumin; 3-layer cantilever. FR 20-50,000 Hz; tracking force 1.8 g ± 0.2 g ..... \$170  
**Replacement Stylus.** Must be purchased directly through the manufacturer ..... \$100  
**MT-2.** Transformer for MC-100 cartridge ..... \$98

## ORTOFON

### Moving-Coil Cartridges

**MC 30.** MC cartridge with fine-line diamond stylus. Features wide-range damping system. Output 0.08 mV at 5 cm/sec, 1 kHz; FR 20-20,000 Hz & 1 dB; balance 1 dB; sep 25 dB at 1 kHz; dynamic compliance 13 μm/mN vertical, horizontal; load imp 47k ohms; tracking force 1.5 g; 6-μm stylus tip radius; 7 g ..... \$850  
**MC 20.** MC cartridge with 0.14 x 0.07-mm nude fine-line diamond stylus. Features wide-range damping system, square magnetic pole. Output 0.09 mV at 5 cm/sec, 1 kHz; FR 20-20,000 Hz & 1 dB; balance/sep 1.5/25 dB at 1 kHz; dynamic compliance 12 μm/mN at 10 Hz; 8 x 40-μm stylus tip; tracking force 1.7 g; 7 g ..... \$300  
**MC 10 Super.** MC cartridge with elliptical nude stylus. Vertical tracking angle 20°; output 0.09 mV at 1 kHz, 5 cm/sec; balance 1.5 dB at 1 kHz; FR 20-20,000 Hz & 1 dB; tracking force 1.5 g; FIM distortion < 1%; 7 g ..... \$150

### Optimum Mass Cartridges

**OM-30.** Low-mass variable magnetic shunt cartridge. Features cartridge body of neryl plastic for rigidity and min weight; copper coils; mu-metal container for electrical system; nude fine line diamond stylus; tracking force 1.25; FR 20-27,000 Hz; output voltage at 1 kHz (5 cm/sec) 3.5 mV; 2.5 g; ch sep at 1 kHz -25 dB ..... \$225  
**OMP-30.** P-Mount version of the OM-30 cartridge; 6 gms ..... \$225  
**OM-20.** Similar to OM-20 except for a more rectangular nude elliptical diamond stylus. Designed for medium-weight tonearms. FR 20-22,000 Hz; output voltage at 1 kHz (5cm/sec) -4 mV ..... \$175  
**OMP-20.** P-Mount version of OM-20 cartridge; 6 gm ..... \$175  
**OM-10.** Similar to OM-20 except for a heavier stylus tip; designed for use with heavier tonearms; tracking force 1.5 g; FR 20-22,000 Hz; output voltage at 1 kHz (5 cm/sec) 4 mV; ch sep at 1 kHz 22 dB.. \$95  
**OMP-10.** P-Mount version of OM-10 cartridge; 6 gm ..... \$95

### FF15XE MkII Phono Cartridge

Variable magnetic shunt cartridge with 8-μm elliptical diamond stylus tip. Output 1.2 mV at 1 kHz, 1 cm/sec; FR 20-20,000 Hz; balance/sep 2/20 dB at 1 kHz; compliance 20 μm/mN horizontal, vertical; tracking force range 1.5-3 g; replacement stylus NF15XE MkII; 5 g ..... \$65

### Concorde Series

**STD.** Variable magnetic shunt stereo cartridge with elliptical diamond stylus. Output 5 mV; equivalent stylus tip mass 0.6 mg; ch sep 20 dB at 1 kHz; tracking force 1.7-2.3 g; vertical tracking angle 20°; 15 g ..... \$125  
**EC 10.** Variable magnetic shunt stereo cartridge with elliptical diamond stylus. Output 5 mV; equivalent tip mass 0.7 mg; sep 20 dB at 1 kHz; tracking force 1.7-2.3 g; 15 g ..... \$95  
**Pro.** Integrated elliptical cartridge. FR 20-20,000 Hz; output 5 mV at 1 kHz at 5 cm/sec; sep/balance at 1 kHz 20/2 dB; dynamic compliance horizontal/vertical 8/8 μm/mN; FIM distortion 1.8%; load resistance 47k ohms; 16 g ..... \$95

### VMS Series Phono Cartridges

**VMS 30 MkII.** Variable magnetic shunt stereo cartridge with axially oriented fine-line diamond stylus. Output 5 mV at 1 kHz, 5 cm/sec; equivalent stylus tip mass 0.45 mg; sep 27 dB at 1 kHz; tracking force 1.0-1.6 g; vertical tracking angle 20°; 5 g ..... \$185  
**VMS 20 E MkII.** Similar to VMS 30 MkII except has elliptical diamond stylus. Equivalent tip mass 0.5 mg; sep 25 dB; tracking force 0.8-1.2 g ..... \$155  
**VMS 10 E MkII.** Similar to VMS 20 E MkII except equivalent tip mass 0.65 mg; tracking force 1.7-2.3 g ..... \$130  
**VMS 5 E MkII.** Similar to VMS 10 E MkII except equivalent tip mass 0.8 mg; output 6 mV; tracking force 1.5-3.0 g ..... \$80  
**VMS 3 E.** Stereo cartridge with variable magnetic shunt system. FR 20-20,000 Hz; output 6 mV at 1 kHz, 5 cm/sec; sep 20 dB at 1 kHz; tracking force 20 mN (2.0 g); FIM distortion 1%; load resistance 47k ohms; 5 g ..... \$60

### Orthophase Moving-Coil Series

**MC 2000.** MC cartridge with low-mass (0.27 mg) moving system; wide-range damping and hard aluminum conical cantilever. Features symmetrical contact line diamond; aluminum armature for mass reduction of 66% in relation to traditional armature designs and to prevent magnetic noise; samarium cobalt magnet; pure silver coils. Output voltage at 1 kHz, 5 cm/sec 0.050 mV; ch sep at 1 kHz > 25 dB; FR 5-90,000 Hz; tracking ability at 315 Hz at recommended tracking force > 100 μm; 11g ..... \$1,000  
**MC 200 I.** MC cartridge. Output voltage at 1 kHz, 5 cm/sec 0.09 mV; ch balance at 1 kHz < 1.5 dB; ch sep at 1 kHz > 25 dB; FR 20-25,000 Hz +3/-1 dB tracking force 12-18 mN (1.2-1.8g); 16.5 g . \$400  
**MC 200 U.** Universal version of MC 200 I ..... \$350  
**MC 100 I.** Junior version of MC 200 I cartridge. Features same MC and wide range damping system ring magnet; aluminum cantilever ..... \$300  
**MC 100 U.** Universal version of MC 100 I ..... \$250

### TMC 200 Phono Cartridge

Moving-coil cartridge with wide range damping, pure boron cantilever. Output 0.9 mV at 1 kHz, 5 cm/sec; FR 20-35,000 Hz & 2 dB; balance < 1.5 dB; sep 18 dB at 15 kHz; dynamic compliance 13/13 μm vertical, lateral; load imp > 10 ohm; tracking force 1.25 g; equivalent stylus tip mass 0.5 mg; 6 g ..... \$350

### VMS P-Mount Series

**TM 30 H.** Moving-coil cartridge with fine line diamond stylus. Features variable magnetic shunt system. Output 3.5 mV at 1 kHz, 5 cm/sec; FR 20-20,000; balance 1.5 dB; sep 25 dB at 1 kHz; compliance 40 μm/mN static vertical, 35μm/mN dynamic lateral; load 47k ohms/200 pF; tracking force 1.25 g; equivalent stylus tip mass 0.35 mg ..... \$90  
**TM 20 H.** Moving-coil cartridge with fine line diamond stylus. Output 3.5 mV at 1 kHz, 5 cm/sec; FR 20-20,000 Hz; balance/sep 1.5/25 dB; compliance 40 μm/mN static vertical, 3 μm/mN dynamic lateral; load 47k ohms/200 pF; tracking force 1.25 g; equivalent stylus tip mass 0.45 mg; 6 g ..... \$60  
**TM 14.** Stereo cartridge with elliptical diamond stylus. FR 20-20,000 Hz; output 4.5 mV; sep/balance 25/1.5 dB at 1 kHz; equivalent stylus tip mass 0.5 mg; recommended load 47k ohms/200 pF; tracking force 1.25 g ..... \$30

**TM 7.** Stereo cartridge with elliptical diamond stylus. FR 20-20,000 Hz; output 5 mV at 1 kHz, 5 cm/sec; sep/balance 22/2 dB at 1 kHz; tracking force 1.25 g; equivalent tip mass 0.5 mg; recommended load 47k ohms/200 pF ..... \$25

### Tonearm/Cartridge Combination

#### Ortofon/SME 30 H Cartridge/Arm

Coupling of Ortofon's Concorde 30 low-mass cartridge/headshell with SME's Series III, IIS low-mass tonearm; uses solid nude fine-line diamond stylus and specially-hardened aluminum alloy cantilever in S-shaped arm. Output 3 mV at 5 cm/sec, 1 kHz; FR 20-20,000 Hz; balance/sep 1.5/25 dB at 1 kHz; dynamic compliance 35 μm/mN; tracking force range 0.8-1.2 g; tonearm resonant frequency 13 Hz; 10.5 g ..... \$260

## PIONEER

### Moving-Coil Cartridges

**PC-6MC.** High output MC type with stylus 0.3 x 0.7 mil elliptical, output voltage 2 mV; FR 10-32,000 Hz; tracking force 1.7-2.3g, user-replaceable stylus (PN-6MC) ..... \$75  
**PC-5MC.** Similar to PC-6MC except has 0.5 mil conical stylus, user-replaceable stylus (PN-5MC) ..... \$50  
**PC-4MC.** Similar to PC-5MC except FR 10-35,000 Hz, output voltage 1.5 mV; stylus 0.3 x 0.7 mil elliptical; user-replaceable stylus (PN-4MC) ..... \$75  
**PC-3MC.** High output MC type with stylus 0.5 mil conical, output voltage 2.5 mV; FR 10-32,000 Hz; tracking force 1.7-2.3g, user-replaceable stylus (PN-3MC) ..... \$50

## PICKERING

### XLZ/7500S Phono Cartridge

Cartridge with nude Stereohedron™ diamond stylus tip. Sensitivity 0.06 mV/cm/sec & 2 dB; FR 10-50,000 Hz; sep 35 dB; tracking force 0.5-1/5 g; includes Dustamatic brush; replacement stylus D7500 ..... \$220

### XLZ/4500S Phono Cartridge

Low-imp cartridge with long contact line Stereohedron™ stylus. Output 0.06 mV/cm/sec & 2 dB; FR 20-40,000 Hz; sep 35 dB; replacement stylus D4500S ..... \$150  
**XLZ/3500E.** Similar to XLZ/4500S except has 0.2 x 0.7-mil elliptical stylus. High-end response 30 kHz; sep 30 dB; replacement stylus D3500E ..... \$100

### XSV/5000 Phono Cartridge

Cartridge with nude Stereohedron™ diamond stylus tip. Output 5.5 mV at 5.5 cm/sec; FR 10-50,000 Hz; sep 35 dB; tracking force 1 g; includes Dustamatic brush; replacement stylus D5000 ..... \$220  
**XSV/4000.** Similar to XSV/5000 except FR 10-36,000 Hz; tracking force 1 g; replacement stylus D5000 ..... \$220

### XSP P-Mount Cartridge

Stereohedron™ series P-mount cartridge; output 0.9mV/cm.sec. FR 10-30,000 Hz; tracking force 1¼ g ± ¼ g ..... \$140

### XSV/3000 Phono Cartridge

Output 5 mV at 5.5 cm/sec; FR 10-30,000 Hz;



Stereohedron™ stylus tip; tracking force 0.75-1.5 g; sep 35 dB; features Dustamatic brush; replacement stylus D3000 ..... \$140

## Cartridges & Tonearms

### XV-15/1200 Phono Cartridge

Output 4.4 mV at 5.5 cm/sec; FR 10-30,000 Hz; 0.2 x 0.7-mil elliptical stylus; tracking force 0.5-1.25 g; sep 35 dB; features Dustamatic brush; replacement stylus D1200 ..... \$110

### XV-15/750E Phono Cartridge

Output 4.4 mV at 5.5 cm/sec; FR 10-25,000 Hz; 0.3 x 0.7-mil elliptical stylus; tracking force 0.5-1.5 g; ch sep 35 dB; features Dustamatic brush; replacement stylus D750 ..... \$80

### XV-15/625E Phono Cartridge

Output 4.4 mV at 5.5 cm/sec; FR 10-25,000 Hz; 0.3 x 0.7-mil elliptical stylus; tracking force 0.75-1.5 g; sep 35 dB; features Dustamatic brush; replacement stylus ..... \$80

### XV-15/625DJ Disco Cartridge

Designed for disco use. Output 0.8 mV/cm/sec; sep 30 dB; tracking force 1-4 g; 0.3 x 0.7-mil elliptical stylus ..... \$75

### XV-15/400E Phono Cartridge

Output 8 mV at 5.5 cm/sec; FR 10-25,000 Hz; 0.4 x 0.7-mil elliptical stylus; tracking force 1-1.5 g; sep 35 dB; features Dustamatic brush; replacement stylus D4000 ..... \$70

### Micro IV Series

**V-15 Micro IV AME.** Output 5.5 mV at 5.5 cm/sec; FR 20-20,000 Hz; 0.4 x 0.7-mil elliptical stylus; tracking force 1-2 g; sep 30 dB; features Dustamatic brush; replacement stylus DIV-AME ..... \$65

**V-15 Micro IV ATE.** Output 6.5 mV at 5.5 cm/sec; FR 20-18,000 Hz; 0.4 x 0.7-mil elliptical stylus; tracking force 2-4 g; sep 28 dB; features Dustamatic brush; replacement stylus DIV-ATE ..... \$50

**V-15 Micro IV AM.** Output 6 mV at 5.5 cm/sec; FR 20-20,000 Hz; 0.7-mil spherical stylus; tracking force 1-3 g; sep 30 dB; features Dustamatic brush; replacement stylus DIV-AM ..... \$45

**V-15 Micro IV ACE.** Output 8 mV at 5.5 cm/sec; FR 20-17,000 Hz; 0.5 x 0.7-mil elliptical stylus; tracking force 3-5 g; sep 26 dB; features Dustamatic brush; replacement stylus DIV-ACE ..... \$40

**V-15 Micro IV AT.** Output 8 mV at 5.5 cm/sec; FR 20-18,000 Hz; 0.7-mil spherical stylus; tracking force 2-4 g; sep 28 dB; features Dustamatic brush; replacement stylus DIV-AT ..... \$40

**V-15 Micro IV AC.** Output 8 mV at 5.5 cm/sec; FR 20-17,000 Hz; 0.7-mil spherical stylus; tracking force 3-7 g; sep 26 dB; features Dustamatic brush; replacement stylus DIV-AC ..... \$35

### P-Mount Cartridges

**XSP/4004.** Stereohedron™ stylus. Output 3.8 mV; tracking ¼ - 1½ g; FR 10-36,000 Hz ..... \$180

**TL-3.** Stereohedron™ stylus. Output 4.4mV; tracking ¼-1½ g; FR 10-25,000 Hz ..... \$125

**TL-2S.** Stereohedron™ stylus. Output 4.4mV; tracking ¼-1½ g; FR 10-22,000 Hz ..... \$100

**TL-2E.** Elliptical stylus. Output 4.4mV; tracking ¼-1½ g; FR 10-22,000 Hz ..... \$80

**TLE Type 2.** Elliptical stylus. Output 3.0mV; tracking 1-1½ g; FR 10-22,000 Hz ..... \$60

**TLE.** Elliptical stylus. Output 4.4mV; tracking 1-1½ g; FR 10-20,000 Hz ..... \$45

**TLC.** Spherical stylus. Output 4.4mV; tracking 1-1½ g; FR 10-20,000 Hz ..... \$40

## PREMIER by SUMIKO

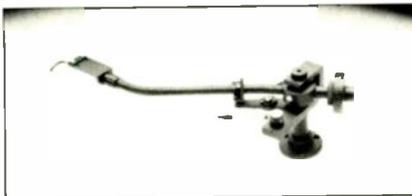
### Premier LMX Boron Cartridge

Low-mass MC stereo cartridge with hollow boron cantilever, hand-wound coils; samarium cobalt magnets. Features FGV cutter analog stylus configuration with long, constant-radius contact line for increased detail, better tracking, and reduced groove noise; output 0.3 mV ..... \$250

**Premier LMS Improved.** Similar to LME except has 0.6 spherical stylus ..... \$125

### Premier MMT Tonearm

Highly rigid medium-mass tonearm with double gim-

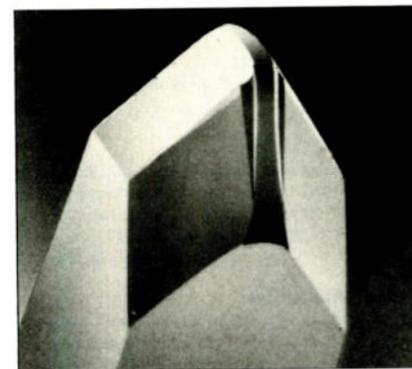


bal bearings; bearing design is same as Sumiko's the ARM for extremely free movement with no bearing play or chatter. Features decoupled counterweight optional damping; removable headshell ..... \$225

## SHURE

### V15 Type V-MR Phono Cartridge

Improved low-distortion Micro-Ridge stylus tip and Microwall beryllium stylus shank for incredible trackability. Features viscous-damped Dynamic Stabilizer and Side-Guard stylus protection system; includes Duo-Point Alignment Gauge and computer performance printout. Output 3.2 mV at 1 kHz (5 cm/sec peak velocity); FR 10-28,000 Hz; sep 25 dB



or greater at 1 kHz; tracking force 1.0 g; replacement stylus VN5MR ..... \$275

### V15 Type V-B Phono Cartridge

Shure's exclusive Hyperelliptical tip, Microwall beryllium stylus shank, Dynamic Stabilizer and Side-Guard stylus protection system. Includes individual computer performance printout. Output 3.2 mV at 1 kHz (5 cm/sec peak velocity); FR 10-28,000 Hz; sep 25 dB or greater at 1 kHz; tracking force 1.0 g; replacement stylus VN5HE; VN5MR upgrade ..... \$220

### V15 Type V-P Phono Cartridge

Specifically designed for ultimate performance in P-Mount tonearms. Features Hyperelliptical tip; microwall beryllium stylus shank; computer performance printout. Same specs as V15 type V-B. Replacement stylus VN5P ..... \$205

### ML140HE Phono Cartridge

Slim-line high-efficiency cartridge body provides an extremely flat frequency response from 20-22,000 Hz. Superb trackability with Microwall beryllium shank and accurate tracing with Hyperelliptical tip. Slim Dynamic Stabilizer combats record warp problems, while destaticizing and cleaning the record, and Side-Guard helps protect stylus from accidental damage. Includes overhang gauge. Output 4.0 mV at 1 kHz (5 cm/sec peak velocity); sep 25 dB or greater at 1 kHz; tracking force 1.0 g. Replacement stylus N140HE ..... \$190

### ML120HE Phono Cartridge

Slim-line high-efficiency cartridge body provides an exceptional flat frequency response from 20-22,000 Hz. Low-mass, high-stiffness telescoped stylus shank, Hyperelliptical tip, slim Dynamic Stabilizer and Side-Guard stylus protection system. Output 4.0 mV at 1 kHz (5 cm/sec peak velocity); sep 25 dB or greater at 1 kHz; tracking force 1.0 g. Replacement stylus N120HE ..... \$155

# PLUG-IN WITH PICKERING

We've been making plug-in cartridges for 35 years!

## 1947

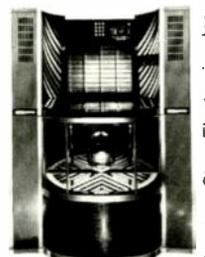
World's first magnetic cartridge was the Pickering S120. Acclaimed worldwide by radio D.J.'s, recording engineers and audiophiles alike, this monophonic pickup was easily plugged in with a simple slide-in motion, — great for "on-the-air" and entertainment security.



America's first magnetic cartridge — a plug-in

## 1954

Pickering introduced a plug-in for Juke boxes. The Pickering 303 provided the first slide-in slide-out stylus plus plug-in cartridge for simple user replacement.



Seeburg's "Phoenix" Juke Box Circa 1954

Courtesy Stern Electronics, Inc.

## 1959

When the world went stereo so did Pickering with plug-in cartridges for Juke boxes and turntables.

## AND IN 1983

Pickering offers a full line of "P-Mounts" for Technics and other linear and conventional type turntables. Plug-in with the one of your choice:



AND MODELS XSP/3003 XSP/4004

TL-3S TL-4S Super



"for those who can hear the difference..."

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CIRCLE NO. 14 ON READER SERVICE CARD

**M111HE Phono Cartridge**

Features telescoped stylus shank, Hyperelliptical tip, Dynamic Stabilizer, Side Guard stylus protection system; rigid, low mass converter allows mounting to either conventional 1/2" mount tonearms or most P-



Mount tonearms; output 5.0 mV at 1 kHz (5 cm/sec peak velocity); FR 20-20,000 Hz; sep 25 dB at 1 kHz; tracking force 1.25 g. Replacement stylus N111HE ..... \$135

**M110HE Phono Cartridge**

Features telescoped stylus shank, Hyperelliptical tip, and Side Guard stylus protection system; rigid, low mass easy to use convertor allows mounting to either conventional 1/2" mount tonearms or all P-Mount tonearms; same specs as M111HE. Replacement stylus N110HE ..... \$110

**M105E Phono Cartridge**

Features 0.2 x 0.7 mil elliptical tip and thin-walled, reinforced aluminum shank. Features Destaticizer Brush to clean dust from record grooves and remove static electricity from the record surface. Side-Guard stylus protection system helps prevent accidental stylus damage. Fits most P-Mount tonearms and includes rigid 1/2" mount converter; output 5.0 mV at 1 kHz (5 cm/sec peak velocity); FR 20-20,000 Hz; sep 25 dB at 1 kHz; tracking force 1.25 g. Replacement stylus N105E ..... \$100

**M104E Phono Cartridge**

Accurate tracing 0.2 x 0.7 mil elliptical stylus tip and tubular heat-treated aluminum stylus shank. P-Mount compatible and includes rigid 1/2" mount converter; output 5.0 mV at 1 kHz (5 cm/sec peak velocity); FR 20-20,000 Hz; sep 25 dB at 1 kHz; tracking force 1.25 g. Replacement stylus N104E ..... \$70

**M99E Phono Cartridge**

Heat-treated tubular aluminum stylus shank and 0.2 x 0.7 mil elliptical stylus tip, P-Mount compatible and fits conventional 1/2" mount tonearms with rigid, converter. Output 5.0 mV at 1 kHz (5 cm/sec peak velocity); FR 20-20,000 Hz; sep 20 dB at 1 kHz; tracking force 1.25 g. Replacement stylus N99E ..... \$50

**M92E Phono Cartridge**

Heat-treated tubular aluminum stylus shank and 0.4 x 0.7 mil elliptical stylus tip, P-Mount compatible and fits conventional 1/2" mount tonearms with rigid, converter; output 5.0 mV at 1 kHz (5 cm/sec peak velocity); FR 20-18,000 Hz; sep 20 dB at 1 kHz; tracking force 1.25 g. Replacement stylus N92E\$30

**M95HE Phono Cartridge**

Output 4.7 mV at 5 cm/sec peak velocity (1 kHz); FR 20-20,000 Hz; sep 25 dB (1 kHz); tracking force 0.75-1.5 g; hyperelliptical diamond tip; replacement stylus N95HE ..... \$119  
**M95ED.** Same as M95HE except with biradial (elliptical) tip; replacement stylus N95ED ..... \$99  
**M95EJ.** Same as M95ED except sep 20 dB at 1 kHz; tracking force 1.5-3 g; replacement stylus N95EJ ..... \$79

**M55E Phono Cartridge**

Moving-magnet type; output 6.2 mV at 5 cm/sec peak velocity (1 kHz); FR 20-20,000 Hz; tracking force 0.75-2 g; sep 20 dB (1 kHz); 0.2 x 0.7-mil bira-

dial (elliptical) stylus, replacement stylus N55E . \$65

**M44E Phono Cartridge**

Moving-magnet type; output 9.5 mV at 5 cm/sec peak velocity (1 kHz); FR 20-20,000 Hz; tracking force 1.75-4 g; sep 20 dB (1 kHz); 0.4 x 0.7-mil biradial (elliptical) stylus; replacement stylus N44E . \$57

**SC35C Phono Cartridge**

Professional moving-magnet type. Output 5 mV at 5 cm/sec peak velocity (1 kHz); FR 20-20,000 Hz; sep 20 dB at 1 kHz; tracking force 4-5 g; 0.6-mil spherical stylus; features band alignment point; replacement stylus SS35C ..... \$45

**SC39ED Phono Cartridge**

Professional moving-magnet cartridge. Output 4 mV at 5 cm/sec peak velocity (1 kHz); FR 20-20,000 Hz; sep 25 dB at 1 kHz; tracking force 0.75-1.5 g; 0.2 x 0.7-mil biradial (elliptical) stylus; features MASAR tip. Side-Guard stylus deflector; replacement stylus SS39ED ..... \$80  
**SC39EJ.** Same as SC39ED except tracking force 1.5-3 g; ch sep 20 dB at 1 kHz; 0.4 x 0.7-mil stylus; replacement stylus SS39EJ ..... \$70

**SIGNET**

**TK10ML Phono Cartridge**

Microline™ nude diamond stylus mounted on boron cantilever ..... \$375-400

**TK9LcA Phono Cartridge**

Stereo cartridge with Linear Contact miniature nude diamond stylus, tapered beryllium cantilever. FR 5-35,000 Hz; output 2.2 mV at 5 cm/sec; tracking force 0.8-1.6 g; balance/sep 0.5/35 dB at 1 kHz ..... \$325-350

**TK9Ea Phono Cartridge**

Stereo cartridge with 0.2 x 0.7-mil elliptical square-shank nude diamond stylus, tapered beryllium cantilever. FR 10-25,000 Hz; output 2.2 mV at 5 cm/sec; tracking force 0.8-1.6 g; balance/sep 0.5/35 dB ..... \$300-325

**TK7LcA Phono Cartridge**

FR 5-35,000 Hz; output 5.0 mV at 5 cm/sec; balance/sep 0.5/33 dB at 1 kHz; tracking force 3/4-1 3/4 g; nude square-shank miniature Straight Line Contact micromass beryllium tube cantilever . \$225-250

**TK7Ea Phono Cartridge**

FR 5-30,000 Hz; output 5.0 mV at 5 cm/sec; balance/sep 0.5/33 dB at 1 kHz; tracking force 3/4-1 3/4 g; 0.2 x 0.7-mil nude square-shank miniature elliptical stylus; micro-mass beryllium cantilever ..... \$200-225

**TK5Ea Phono Cartridge**

FR 10-30,000 Hz; output 5.0 mV at 5 cm/sec; balance/sep 0.75/29 dB at 1 kHz; tracking force .75-1.75 g; 0.2 x 0.7-mil nude square-shank elliptical stylus; tapered cantilever; uncore coils .. \$130-150

**TK3Ea Phono Cartridge**

FR 15-28,000 Hz; output 5.0 mV at 5 cm/sec; balance/sep 1.0/28 dB at 1 kHz; tracking force 1-1 3/4 g; 0.3 x 0.7-mil elliptical nude diamond stylus; thin-walled tube cantilever ..... \$85-100

**TK1Ea Phono Cartridge**

FR 15-25,000 Hz output 4.8 mV at 5 cm/sec; balance/sep 1.5/26 dB at 1 kHz; tracking force 1 1/2-2 1/2 g; 0.4 x 0.7-mil elliptical diamond stylus; thin-walled tubed cantilever ..... \$60-75

**XK50 Tonearm**

Integral tonearm to eliminate headshell connecting ring resonance and weight; has Signetrace damped planar tracking; designed to accommodate cartridges weighing 4-11 g; provides antiskating adjust for elliptical conical line type styli; tracking force adjust 1/10 g; increments 0-1.6 g; overhang adjustment 5 mm;

tracking error & 1.5" maximum; total arm, cable capacitance 80 pF; weight 9.5g ..... \$400-425  
**XKSP1.** Extra integral t1arm tube to XK50 . \$70-80

**SONY**

**XL-MC3 Phono Cartridge**

Low-mass high-compliance MC stereo cartridge. Features patented Figure 8 voltage-generating system; replaceable super-elliptical diamond stylus. FR 10-50,000 Hz; 3 g ..... \$200

**XL-MC2.** Similar to XL-MC3 except has standard elliptical stylus. High-end response 45 kHz ..... \$80

**XL-MC1.** Similar to XL-MC2 except high-end response 30 kHz ..... \$60

**XL-44L Phono Cartridge**

Figure 8 MC phono cartridge with nude super elliptical diamond stylus attached directly to cantilever; FR extends to 40,000 Hz ..... \$180

**XL-33 Phono Cartridge**

Figure-8 MC phono cartridge with elliptical diamond stylus mounted on rigid tempered aluminum cantilever, in 4-pin diecast aluminum headshell; response extended to 35,000 Hz ..... \$100

**VAL-7 Phono Cartridge**

Lightweight MM cartridge with elliptical diamond stylus, carbon fiber cantilever; extends FR to 25 kHz \$90

**VL-5 Phono Cartridge**

MM cartridge with low-mass aluminum cantilever, low-distortion moving system ..... \$50

**SONUS by SONIC RESEARCH**

**D-5 Dimension 5 Phono Cartridge**

Magnetic cartridge with Lambda diamond stylus, integrated tapered aluminum cantilever; micro-machined armature; designed to reproduce direct-to-disc and PCM-mastered recordings. Output 0.8 mV/cm/sec; FR 10-20,000 Hz & 1 dB, 20-40,000 Hz +2/-5 dB;



compliance 50 cm/dyne x 10<sup>-4</sup>; balance/sep & 1/30 dB at 1 kHz; tracking force range 1-1.5 g; 5.5 g (RCD-11 replacement stylus, \$125) ..... \$250  
**Calibrated D-5.** Similar to Dimension 5 except hand calibrated ..... \$350  
 Replacement stylus ..... \$175

**SB-2 Super Blue Phono Cartridge**

Moving-iron cartridge with Lamda stylus and super-lightweight moving system. FR to 35 kHz; sep 20 dB, 20-20,000 Hz; output 4 mV at 5 cm/sec; tracking force 1-1.5 g; 5.5 g (Replacement stylus No. RSB-11 \$98) ..... \$195

**GB-3 Gold Blue Phono Cartridge**

High-compliance cartridge with low moving mass, sophisticated modified line-contact stylus. FR to 35 kHz; output 4 mV at 5 cm/sec; compliance 50 cm/dyne x 10<sup>-4</sup>; vertical tracking angle 20°; sep 30 dB at 1 kHz; tracking force 1-1.5 g; 5.5 g (Replacement stylus No. RCG-12 \$87) ..... \$165

**BZ-5 Bronze Phono Cartridge**

Moving-iron magnetic cartridge with line-contact ellipsoid stylus for use in any modern lightweight t1arm;

## Cartridges & Tonearms

low-mass high-compliance balanced dynamic system. Output 0.8 mV at 1 kHz; FR 10-20,000 Hz  $\pm 1.5$  dB; compliance 42 cm/dyne  $\times 10^{-6}$ ; tracking angle 20°; balance  $\pm 2$  dB; cartridge weight 5.5 g; tracking force 1.0-1.5 g; features uni-pivot suspension; sep 30 dB at 1 kHz; recommended load imp 47k ohms (Replacement stylus No. RBC-Z 22 \$70)\$130

### Silver Phono Cartridges

Similar to Gold series. Output 1.0 mV/cm/sec at 1 kHz; compliance 40 cms/dyne  $\times 10^{-6}$ ; balance  $\pm 2$  dB; ch sep 30 dB at 1 kHz; load imp 47k ohms; tracking force range 1-1 1/2 g; 5.5g.

**SE-9 Silver E.** Biradial (elliptical) stylus (RCS-23 replacement stylus, \$45); response 10-20,000 Hz  $\pm 1.5$  dB .....\$95

### Black Phono Cartridge

Similar to Gold series; output 1.0 mV/cm/sec. 5 mV at 5 cms/sec; FR 10-10,000 Hz  $\pm 1$  dB, 10-20,000 Hz  $\pm 2/-1$  dB; balance/sep  $\pm 2/25$  dB at 1 kHz; compliance 30  $\times 10^{-6}$  cm/dyne; imp 47k ohms; 5.5 g.

**BA-11 Black A.** Precision-ground and polished biradial elliptical stylus; tracking force 1.5-2 g .....\$80  
**RCB-23.** Replacement stylus .....\$40

### SR-202 Stereo Cartridge

Moving-iron stereo phono cartridge with low-mass elliptical stylus; designed for moderate S- and J- shaped tonearms. Compliance 25  $\times 10^{-6}$  cm/dyne; FR to 20 kHz; balance sep  $\pm 2/25$  dB at 1 kHz; 5.5 g (RSR-25 replacement stylus, 25) .....\$60

### Plug-In Cartridges

**SPM-2.** For use with any tonearm with 4 pin locking screw; has 0.2  $\times$  0.7 mil elliptical stylus and light-weight hollow aluminum cantilever; FR 20-20,000 Hz -3 dB; sep 20 dB at 1 kHz; tracking force 1.25 g  $\pm 0.25$ ; output 4.0 mV at 5 cm/sec; 6.0 g (replacement stylus RSPM-2 \$45) .....\$95

**SPM-1.** For tonearms having 4 pin locking screw. Features 0.3  $\times$  0.7 mil elliptical stylus; 20-20,000 Hz; FR -3 dB; sep 20 dB at 1 kHz; tracking force 1.25 g  $\pm 0.25$ ; 4.0 mV output at 5 cm/sec; 6.0 g (replacement stylus RSPM-1, \$25) .....\$60

## SOUND AIDS

### Tonearm Modification

Converts tonearm on manual turntable to low-mass configuration. Includes thin lightweight straight arm tube, fixed headshell, resonance-isolated counterweight, high-frequency damping, overhang adjustment, low-capacitance leads. Retains original bearing assembly, cueing, antiskate control. Pivot to stylus distance variable; tracking force range 0.75-2 g; cable capacitance 90 pF; cartridge weight range 2-10 g; 4 g .....\$90

## STANTON

### 981 LZS Phono Cartridge

Low-imp cartridge, fully calibrated for exact precision, with nude Stereohedron™ diamond stylus. Comes with mounted "longhair" brush. Output 0.06 mV/cm/sec  $\pm 2$  dB cm/sec  $\pm 2$  dB; FR 10-50,000 Hz  $\pm 2$  dB; sep 35 dB; 5.5 g .....\$250

### 981 HZS Phono Cartridge

High-imp stereo cartridge with nude Stereohedron™ diamond stylus, fully calibrated. Comes with mounted "longhair" brush. Output 0.7 mV at cm/sec  $\pm 2$  dB; FR 10-50,000 Hz  $\pm 2$  dB; sep 35 dB at 1 kHz; 5.5 g .....\$250

### NEED MORE INFORMATION?

Write directly to the manufacturer or distributor. A list of names and addresses starts on page 25.

### 980 HZS Phono Cartridge

High-imp stereo cartridge with nude Stereohedron™ diamond stylus, mounted "longhair" brush. Output 0.8 mV/cm/sec  $\pm 2$  dB; FR 10-50,000 Hz; tracking force 0.5-1.5 g; sep 35 dB at 1 kHz; 5.5 g .. \$220

### 980 LZS Phono Cartridge

Low-imp phono cartridge with nude Stereohedron™ stylus tip; output 0.06 mV/cm/sec  $\pm 2$  dB; FR 10-50,000 Hz; sep 35 dB; tracking force range 0.5-1.5 g; includes Dustamatic brush; replacement stylus D98S .....\$220

### L-847S P-Mount Cartridge

Top of the line P-Mount cartridge. Features Stereohedron™ stylus; tracking  $3/4-1 1/2$  gs; output 0.7; FR 10-36,000 Hz; ch balance  $< 2$  dB; sep 35 dB, 5.9 g; replacement stylus D84S .....\$180

### 885LZS Low-Impedance Cartridge

Low-imp stereo cartridge with long-contact line Stereohedron™ stylus, mounted "longhair" brush. FR 20-40,000 Hz; sep 35 dB; 90-micron tracking at 1-g force; 5.5 g. Replacement stylus D88S .....\$150

### L-837S P-Mount Cartridge

Features Stereohedron™ stylus; tracks at  $3/4-1 1/2$  gs; output 0.9; FR 10-30,000 Hz; ch balance  $< 2$  dB; sep 35 dB; 5.9 g; replacement stylus D83S ..\$140

### 681 Triple-E S Type

Output 0.7 mV/cm/sec  $\pm 2$  dB; FR 10-12,000 Hz  $\pm 0.5$  dB; balance/sep  $\pm 2/35$  dB (1 kHz); load imp 47k ohms; load capacitance 275 pF; tracking force 0.75-1.5 g; Stereohedron™ stylus; weight 6.3 g with self-supporting (1 g) brush; replacement stylus 6800EEE-S, D6810 for LPs, D6827 for 78s. \$138

### 681 Triple-E Phono Cartridge

Output 0.7 mV/cm/sec  $\pm 2$  dB; FR 10-12,000 Hz  $\pm 1.5$  dB; balance/sep  $\pm 2/35$  dB (1 kHz); load imp 47k ohms; load capacitance 275 pF; tracking force 0.75-1.5 g; 0.2  $\times$  0.7-mil elliptical diamond stylus; weight 5.5 g with self-supporting (1 g) brush; replacement stylus D6800EEE, D 6810 for LPs, D6827 for 78s .....\$116

### L747S Plug-In Cartridge

Features Stereohedron stylus. FR 10-25,000 Hz; tracking force 0.75-1.25 g; output 4.4 mV; sep 35 dB; 5.7 g. Replacement stylus D747S .....\$110

### 680SL Disco Cartridge

Output 1.1 mV/cm/sec  $\pm 2$  dB; FR 20 20,000 Hz; balance/sep 2/30 dB; load resistance 47k ohms; load capacitance 275 pF; nude Stereohedron™ stylus tip; tracking force 3-6 g with brush; 5.5 g ....\$109

### 680EL Disco Cartridge

Output 0.82 mV/cm/sec  $\pm 2$  dB; FR 20-18,000 Hz; balance/sep  $\pm 2/30$  dB (1 kHz); load imp 47k ohms; load capacitance 275 pF; tracking force 2.5 g; 0.4  $\times$  0.7-mil elliptical diamond stylus; 5.5 g; replacement stylus D6800EL .....\$106

### 785LZE Phono Cartridge

Low-imp cartridge with 0.2  $\times$  0.7-mil elliptical stylus. FR 20-30,000 Hz; sep 30 dB; 80-micron tracking at 1-g force; 5.5 g; replacement stylus D78E ... \$100

### 681EE Phono Cartridge

Output 0.82 mV/cm/sec  $\pm 2$  dB; FR 10-10,000 Hz  $\pm 2$  dB; balance/sep  $\pm 2/35$  dB (1 kHz); load imp 47k ohms; load capacitance 275 pF; tracking force 0.75-1.5 g; 0.2  $\times$  0.7-mil elliptical diamond stylus; weight 5.5 g with self-supporting (1 g) brush; replacement stylus D6800EE, D6810 for LPs, D6827 for 78s .....\$97

### 681SE Phono Cartridge

Output 1 mV/cm/sec 72 dB; FR 10-10,000 Hz  $\pm 0.5$  dB; balance/sep  $\pm 2$  dB/35 dB (1 kHz); load imp 47k ohms; load capacitance 275 pF; tracking force 2-4 g; 0.4  $\times$  0.7-mil elliptical stylus; weight 5.5 g with self-supporting (1 g) brush; replacement stylus

**“ If you could make your phono cartridge last up to 10 times longer, and enjoy improved tracking and lower distortion... simply by using the right stylus treatment... wouldn't you go out and buy it? ”**



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**LAST Collector's Kit, \$120.00**

**LAST Metering Dispenser, \$30.00**

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**LAST Record Cleaning Kit, \$5.95**

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**LAST Record Care Brushes,**

**Pack of 10, \$9.95**

**STYLAST Stylus Treatment, \$15.95**

**LAST Stylus Cleaner, \$4.95**

**LAST**

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CIRCLE NO. 17 ON READER SERVICE CARD

D16800SE, D6810 for LPs, D6827 for 78s....\$97

**681A Phono Cartridge**

Output 1 mV/cm/sec & 2 dB; FR 10-10,000 Hz & 0.5 dB; balance/sep & 2 dB/35 dB (1 kHz); load imp 47k ohms; load capacitance 275 pF; tracking force range 1.5-3 g; 0.7-mil spherical stylus; weight 5.5 g with self-supporting (1 g) brush; replacement stylus D6807A, D6810 for LPs, D6827 for 78s .....\$88

**L737S Phono Cartridge**

Plug-in cartridge with 0.3 x 0.7-mil elliptical stylus. Output 4.4 mV; FR 10-22,000 Hz; tracking force 0.75-1.25; sep 32 dB; replacement D737E.....\$80

**680EE Phono Cartridge**

Output 0.82 mV/cm/sec & 2 dB; FR 20-20,000 Hz; balance/sep & 2 dB/35 dB (1 kHz); load imp 47k ohms; load capacitance 275 pF; tracking force 0.75-1.5 g; 0.3 x 0.7-mil elliptical diamond stylus D680 .....\$76

**600EE Phono Cartridge**

Output 1 mV/cm/sec & 2 dB; FR 20-20,000 Hz & 2.5 dB; balance/sep & 2 dB/35 dB (1 kHz); load imp 47k ohms; load capacitance 275 pF; tracking force 1-2 g; 0.3 x 0.7-mil elliptical diamond stylus; weight 5 g; replacement stylus D6003EE, D6010 for LPs, D6027 for 78s .....\$62, .....\$62  
**600E**. Similar to 600EE but FR 20-20,000 Hz & 2 dB; 0.4 x 0.7-mil elliptical diamond stylus; tracking force 1.5-3 g; replacement stylus D6004E .....\$56  
**600A**. Similar to 600E but with 0.7-mil conical stylus; tracking force range 2-4 g; replacement stylus D6071A.....\$51

**L-727E Phono Cartridge**

Plug-in cartridge with 0.4 x 0.7-mil elliptical stylus. Output 4.4 mV; FR 10-25,000 Hz; tracking force 0.75-1.24 g; sep 32 dB; replacement stylus D727E.....\$60

**L725E P-Mount Cartridge**

Has an elliptical stylus; tracking force 1-1 1/2 g; output 0.6; FR 10-22,000 Hz; ch balance < 2 dB; sep 28 dB; 6.0:02; replacement stylus D72E.....\$60

**500EE Phono Cartridge**

Output 1 mV/cm/sec & 2 dB; FR 20-10,000 Hz & 1 dB; balance/sep & 2 dB/35 dB (1 kHz); load imp 47k ohms; load capacitance 275 pF; tracking force 1-2 g; 0.3 x 0.7-mil elliptical diamond stylus; weight 5 g; replacement stylus D5100EE, D5110 for LPs, D5127 for 78s.....\$42

**500AA Phono Cartridge**

Output 1 mV/cm/sec & 2 dB; FR 20-10,000 Hz & 1 dB; balance/sep & 2 dB/35 dB (1 kHz); load imp 47k ohms; load capacitance 275 pF; tracking force 1-2.5 g; 0.5-mil spherical diamond stylus; weight 5 g; replacement stylus D5105AA, D5110 for LPs, D5127 for 78s.....\$36

**500E Phono Cartridge**

Output 1 mV/cm/sec & 2 dB; FR 20-10,000 Hz & 1 dB; balance/sep & 2 dB/35 dB (1 kHz); load imp 47k ohms; load capacitance 275 pF; tracking force 2-5 g; 0.4 x 0.7-mil elliptical diamond stylus; weight 5 g; replacement stylus D5100E, D5110 for LPs, D5127 for 78s.....\$37

**500A Phono Cartridge**

Output 1 mV/cm/sec & 2 dB; FR 20-10,000 & 1 dB; balance/sep & 2 dB/35 dB (1 kHz); load imp 47k ohms; load capacitance 275 pF; tracking force 2-5 g; 0.7-mil spherical diamond stylus; 5 g; replacement stylus D5107A, D5110 for LPs, D5127 for 78s \$31

**Professional Series**

**881S Phono Cartridge**

Output 0.9 mV/cm/sec; FR 10-25,000 Hz (individually calibrated to 20,000 Hz); balance/sep (1 kHz) & 1 dB/35 dB; load imp 47k ohms; load capacitance 275 pF, including t1arm leads, cables, amp; tracking

force 0.75-1.25 g; nude Stereohedron™ stylus; 5.7 g with self-supporting (1 g) brush; silver with white handle, white brush; replacement stylus D81, D810 for mono SPs, D827 for 78s .....\$179  
**881E**. Similar to 881S except has 0.0002" x 0.0007" elliptical diamond stylus; FR 10-22,000 Hz (individually calibrated to 20,000 Hz); replacement stylus D81E .....\$158

**880S Phono Cartridge**

Phono cartridge with nude Stereohedron™ diamond stylus tip; output 0.9 mV/cm/sec; FR 10-25,000 Hz; sep 35 dB; tracking pressure 1 g & 0.25 g; load imp/capacitance 47k ohms/275 pF; silver with white handle, white brush; 5.7 g; replacement stylus D80S .....\$147  
**880E**. Similar to 880S except has 0.0002" x 0.0007" elliptical diamond stylus; range 10-22,000 Hz; replacement stylus D80E .....\$126

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**SUPEX by SUMIKO**

**SDX-1000 Phono Cartridge**

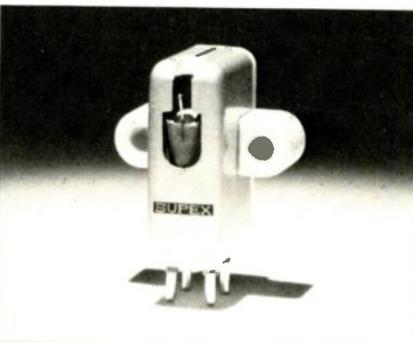
Low-mass MC cartridge with 0.3 x 0.7-mil Advanced Line Contact modified elliptical nude diamond stylus tip on rectangular base, boron-coated aluminum cantilever, samarium-cobalt magnet; Bimorphic (2 sheets composite resin damping material) damping system; uni-axial pivot; FR 20-45,000 Hz; 4.6 g .....\$500

**SD-900E+ Super Phono Cartridge**

Low-mass MC cartridge with 0.3x 0.7-mil Advanced Line Contact modified elliptical nude diamond stylus tip on rectangular base, aluminum cantilever; uni-axial pivot; magnetic pole piece; Bimorphic damper; FR 10-50,000 Hz .....\$225

**SDX-2000 Phono Cartridge**

Low-mass MC with boron tube cantilever. Rise time characteristics maintained by increasing output



through use of rare-earth high-energy magnets. Advanced Line Contact stylus; uni-axial pivot. Output 2 mV; FR 10-50,000 Hz; 5 g.....\$600  
**SD-901E+**. Similar to SD-900E+ except output level 2 mV, allowing use without step-up device. FR 10-35,000 Hz .....\$135

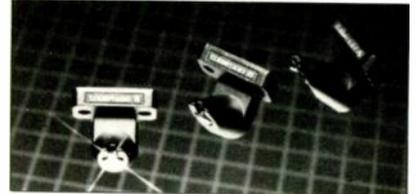
**TALISMAN by SUMIKO**

**Talisman Alchemist**

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**Talisman S Moving Coil Cartridge**

MC cartridge with Direct Field Focus™ design to re-



duce magnetic losses and fringing effects by eliminating magnetic yokes and all but 1 pole piece; energy from Samarium cobalt ring magnet is "pulled" across the coils by front-mounted pole piece creating a direct relationship between motion at coils and voltage at outputs; solid zinc body for reduced resonance, tapered for maximum rigidity; minimal internal air spaces; cantilever is a low-mass sapphire tube that is laser-indexed to a grain-oriented, long-line-contact diamond .....\$300  
**Talisman B**. Identical to Talisman S except for rigid low-mass boron-tube cantilever .....\$235  
**Talisman A**. Identical to Talisman S except for aluminum/magnesium alloy cantilever with nude-mounted elliptical diamond stylus .....\$175

**TECHNICS**

**EPC-P205CMK3**

Plug-in MM stereo phono cartridge with HPF core, samarium-cobalt magnet, 0.2 x 0.7-mil elliptical diamond stylus, boron pipe cantilever, 1-point suspension. Output 2 mV at 1 kHz, 5 cm/sec; FR 15-60,000 Hz & 3 dB; sep/balance > 25/0.7 dB at 1 kHz; compliance 12 x 10<sup>6</sup> cm/dyne; load imp 47k-100k ohms; effective moving mass 0.149 mg; tracking force 1.25 g; 6 g .....\$210  
**EPS-P205ED3**. Replacement stylus .....\$115

**EPC-P22/P22S Phono Cartridges**

Plug-in MC stereo cartridge with 1-point suspension, laminated core, samarium-cobalt magnet, 0.3 x 0.7-mil elliptical diamond stylus, boron pipe cantilever. Output 2.5 mV at 1 kHz, 5 cm/sec; FR 20-35,000 Hz & 3 dB; sep/balance > 22/1.8 dB at 1 kHz; compliance 12 x 10<sup>6</sup> cm/dyne; load imp 47k-100k ohms; effective moving mass 0.29 mg; tracking force 1.25 g; 6 g .....\$50

**EPC-P23 Phono Cartridge**

Plug-in MM stereo phono cartridge with 1-point suspension, samarium-cobalt magnet; laminated core, 0.3 x 0.7-mil elliptical diamond stylus, aluminum pipe cantilever. Output 2.5 mV at 1 kHz, 5 cm/sec; FR 10-40,000 Hz; sep/balance > 22/1.8 dB at 1 kHz; compliance 12 x 10<sup>6</sup> cm/dyne; load imp 47k-100k ohms; effective moving mass 0.29 mg; tracking force 1.25 g; 6 g .....\$70  
**EPS-23ES**. Elliptical replacement stylus .....\$25  
**EPS-23CS**. Conical replacement stylus .....\$15

**EPC-P28 Phono Cartridge**

Plug-in MM phono cartridge with 1-point suspension, samarium-cobalt magnet, 0.3 x 0.7-mil elliptical diamond stylus, aluminum pipe cantilever. Output 2.5

(Continued on page 210.)

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# 6

# Tape Decks

## ADS

### Atelier C2 Cassette Deck

Stereo cassette deck with single capstan design and DC frequency generator servo-motor drive. Features speed accuracy of  $\pm 1\%$  or better; 80 sec winding time for C-60 cassettes; Dolby C, Dolby B noise reduction; 12-segment 2-color LEDs. W&F 0.06% DIN; FR normal and chrome 30-16,000 Hz  $\pm 1$  dB, 20-18,000 Hz  $\pm 2$  dB, metal 30-18,000 Hz  $\pm 1$  dB; S/N (ref to level producing 3% THD at 315 Hz)  $> 74$  dBA with Dolby C,  $> 66$  dBA with Dolby B,  $> 58$  dBA without Dolby; headphone output 320 mV into 200 ohms (0.5 mW); 17.52"W  $\times$  2.76"H  $\times$  14.84"D; 18.3 lbs ..... \$550

## AIWA

### AD-F770 Dolby HX Pro Cassette Deck

Stereo cassette deck with Dolby HX Professional circuitry and Digital Auto Tape Adaptation System. Features flat keyboard control design; Dolby B and C; feather-touch IC logic controls; remaining-time display in all modes; fluorescent multifunction display; Intro-play; memory rewind and repeat; micro-grain dual-capstan system; Auto Demagnetizing System; auto tape selector; auto rec mute; wireless remote-control capability; stereo mic terminals. W&F 0.25% wrms; S/N 80 dB above 5 kHz with Dolby C . . \$495

### AD-F660 Dolby HX Pro Cassette Deck

Stereo cassette deck with Dolby HX Professional circuitry and flat keyboard control design. Features Dolby B and C; feather-touch IC logic controls; multi-color peak level indicator; Intro-play; memory rewind and repeat; micro-grain dual-capstan system; Auto Demagnetizing System; auto tape selector; auto rec mute; wireless remote-control capability; stereo mic terminals. W&F 0.28% wrms; S/N 80 dB above 5 kHz with Dolby C ..... \$395

### AD-WX110 Dubbing Cassette Deck

Stereo cassette deck with two cassette transports for one-touch synchro dubbing. Features 4-channel dubbing to cut time to  $\frac{1}{4}$  that of conventional decks; continuous playback; Dolby B and C noise reduction; LH bias fine adjust; auto tape selector; timer standby; music sensor; auto replay; LED peak level meters. W&F 0.045% wrms ..... \$395

### AD-R600U Auto-Reverse Cassette Deck

Stereo cassette deck with quick auto reverse. Features feather-touch IC logic controls; dual-motor drive with DC servo motor mode; direction selector; Dolby B and C; 3-color 12-part LED peak display; auto tape selector; record sync operation. W&F 0.035% wrms; S/N 65 dB ..... \$395

### AD-F330 Dolby C Cassette Deck

Two-motor stereo cassette deck with Dolby B and C noise reduction. Features keyboard control panel; IC feather-touch logic controls; fine bias adjust; auto rec mute; auto tape select; timer standby; oil-damped eject. W&F 0.035% wrms; S/N 73 dB with metal tape ..... \$225

### AD-3500U Cassette Deck

Stereo cassette deck with DX Combination 3-Head System. Features Dolby C and B; S/N 76 dB with metal tape; Auto Demagnetizing System; soft-touch operation with cue and review; 3-color 12-LED peak display; LH-bias fine-adjust control; W&F 0.038% wrms ..... \$295

### AD-F330U Cassette Deck

Feather-touch IC-logic controls with cue and review; computer-designed keyboard front panel; Dolby B and C NR; 2-motor drive; bias fine adjuster (normal-CrO<sub>2</sub>); auto rec mute; auto tape selector; timer standby; S/N 73 dB with metal tape; W&F 0.035% wrms . . \$225

### AD-F220U Cassette Deck

Stereo cassette deck with soft-touch operation and Dolby B and C NR; auto tape selector; bias fine adjust (normal-CrO<sub>2</sub>); rec mute; auto replay; timer standby; 7-step peak level indicator; micro grain capstan; S/N 73 dB with metal tape; W&F 0.038% wrms . . \$170

### AD-F990U Cassette Deck

Amorphous alloy combination 3-head system; Dolby HX Professional active bias system; computer designed keyboard front panel; Dolby B and C NR system; Digital Auto Tape Adaptation; fluorescent multifunction display; all-mode remaining tape time display; 8-second Intro-Play; memory rewind and repeat system; feather-touch IC logic controls with cue and review; Micro-Grain dual capstan; Auto Demagnetizing System; Auto Tape Selector; auto rec mute; switchable MPX filter; Auto Tape Source Selector; auto noise reduction detector; auto record level control; S/N 74 dB with metal tape; W&F 0.025% wrms; FR 20-21,000 Hz ( $\pm 3$  dB) metal tape ..... \$595

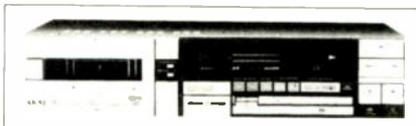
## AKAI

### GX-F91 Stereo Cassette Deck

Computer-controlled stereo cassette deck with Dolby B and C noise reduction. Features Super GX record/play heads; 3-head, 2-motor full-logic transport system; quartz-locked direct-drive, double-capstan closed-loop system; Quiet and Quick mechanism, auto tape selector; auto tape tuning with adjustable bias; output and headphone level controls; dc servo amp; switchable peak/VU meters; digital real-time tape counter; auto play; IPLS; Intro Scan; auto fader; auto record mute; auto record cancel. W&F  $< 0.025\%$  wrms, FR 15-21,000 Hz  $\pm 3$  dB with metal tape; S/N no NR/Dolby B/Dolby C 60/70/80 dB; distortion  $< 0.7\%$  ..... \$750

### GX-7 Computerized Cassette Deck

Computer-controlled cassette deck. Features Dolby B/C NR system; Super GX3 head; closed-loop double-capstan direct-drive system; Quick and Quiet mechanism;



direct lead-in/power eject system; auto tape selector; DC amp; auto monitor; intro scan; IPLS; auto mute; rec cancel; operational fluorescent display; electronic digital timer/tape counter; auto play system; multiplex filter; timer start; remote control jack ..... \$400

### GX-6 Computerized Cassette Deck

Computer-controlled bidirectional record/play with Dolby B/C NR system. Features silent quick auto reverse recording/playback mechanism with reverse mode selector (system utilizes bidirectional symmetrical precision) mechanism; twin-field super GX head; feather-touch microcomputer controls; operational fluorescent display with 2-color bar meters and digital tape counter; electronic recording level control with indicators; recording level memory backup mechanism; blank search, intro scan; auto tape selector; instant program location system; record cancel; auto mute; switchable multiplex filter; timer start; remote control jack; metal tape capability ..... \$400

### HX-R5 Computerized Cassette Deck

Computer-controlled bidirectional record/play deck with Dolby B/C NR system. Features silent quick auto reverse recording/playback mechanism with reverse mode selector system utilizing bidirectional symmetrical precision mechanism; operational fluorescent display with digital counter and 2-color bar meters; electronic recording level control with indicators and recording level memory backup mechanism; auto tape selector; instant program location system; auto mute; timer start; remote control jack; metal tape capability ..... \$350

### GX-F31 Stereo Cassette Deck

Computer-controlled stereo cassette deck with Dolby B and C noise-reduction systems. Features twin-field Super GX head; auto tape selector, dc amp; direct drive; quiet and quick mechanism; Intro Scan, IPLS; 2 motors; power eject/direct lead-in system; auto record cancel; max input-level indicators; electronic digital tape counter. W&F 0.35% wrms; FR 20-19,000 Hz  $\pm 3$  dB with metal tape; S/N no NR/Dolby B/Dolby C 60/70/80 dB ..... \$300

### HX-3 Dolby B & C Cassette Deck

Cassette deck with Dolby B/C NR system. Features feather touch controls; operational fluorescent display with digital counter; metal tape compatibility; auto tape selector; auto play; selected repeat; electronic recording level control; auto mute; timer start; remote control jack ..... \$220

### HX-2 Stereo Cassette Deck

Stereo cassette deck. Features feather touch controls; Dolby NR system; operational fluorescent display with digital counter; Dolby NR system; metal tape compatibility; auto tape selector; electronic recording level control; auto mute ..... \$200

### CS-F14 Stereo Cassette Deck

Stereo cassette deck with Dolby B and C noise-reduction systems. Features feather-touch transport controls; metal-tape capability; 12-segment FLD bar-

# HOW COULD A CASSETTE DECK WITH TWO HEADS BE SO HARD TO GET?



The Kyocera D-801 Cassette Deck is hard to get because so much more is built into it. For example, it has five circuit boards where most decks have only one or two. But that's only the beginning.

## It more than meets the ultimate tape deck challenge.

The challenge is to move tape across the heads at as nearly a constant speed as possible. Variations in speed, of course, come out in your speakers or headphones as wow and flutter.

Many decks claim a wow and flutter figure of 0.05% WRMS—trouble is, speed variations of 0.05% are clearly audible with piano music (one of the most revealing tests you can give a cassette deck—try it on the D-801 and marvel!).

The D-801 by Kyocera comes through with a remarkably low wow and flutter figure of 0.02% WRMS—and that is derived from a unique, three-motor, dual capstan drive mechanism. Two capstans are driven by a direct drive motor. A beltless/clutchless simple DC motor drives the feed and takeup reels, while a third motor is used as a head-position assist drive (it greatly prolongs head-to-tape azimuth accuracy). The dual capstan system provides that sensationally accurate tape travel, maintaining proper tension between capstans to eliminate external shock source modulating noise.

## It more than meets the needs of the audio perfectionist.

The D-801 goes above and beyond even the fussiest audiophile's needs with 3-position bias/equalization selection (with fine bias adjustment), 400 Hz calibration tone, Automatic Program Mute Recording, automatic search, and electronic 4 digit display, including counter, elapsed time and time remaining functions.

The D-801's noise reduction systems were built for the audio purist. It has two—Dolby\* B & C—Dolby B for music material of limited dynamic range. Dolby C for music of the widest dynamic range, so noise reduction can be tailored to program material.

Finally, the specs everyone wants: frequency response of 30-20,000 Hz  $\pm$  3 dB using metal or CrO<sub>2</sub> tape, and a S/N ratio of 78 dB with metal tape in Dolby C NR mode.

If you have any trouble finding a Kyocera dealer, contact: Kyocera International, Inc., 7 Powder Horn Drive, Warren, NJ 07060 (201) 560-0060.

CIRCLE NO. 21 ON READER SERVICE CARD



KYOCERA

\*Dolby is a registered trademark of Dolby Laboratories, Inc.

trois; metal-tape capability; 12-segment FLD bargraph signal-level displays; oil-damped eject; timer start. W&F 0.04% wrms; FR 30-18,000 Hz  $\pm 3$  dB with metal tape; S/N ratio no NR/Dolby B/Dolby C 58/68/78 dB with metal tape; distortion <0.8% ..... \$200

#### HX-1 Stereo Cassette Deck

Stereo cassette deck features metal tape compatibility; Dolby NR system, feather-touch controls; 12-segment FLD bar meters; oil-damped eject system; 3-digit counter; one-touch tape selection; headphone jack ..... \$180

### BANG & OLUFSEN

#### Beocord 9000 Stereo Cassette Deck

Top-loading stereo cassette deck with auto computer-controlled calibration that auto adjusts for specific tape formulation used. Features Dolby B and C noise-reduction and Dolby HX-Pro (headroom-extension) systems; double Sendust/ferrite tape head with separate gaps for record and playback; manual switching system for normal/CrO<sub>2</sub>/metal tape formulations; special low-noise playback amplifier; -20 to +6 dB record/playback peak signal-level meters; auto demagnetization; minutes/seconds tape counter; tape-end indicator; single-motor/capstan drive system. W&F DIN/wrms <0.1%/<0.045%; FR 10-25,000 Hz  $\pm 3$  dB referred to 250 nWb/m, -20 dB, 20-20,000 Hz  $\pm 1.5$  dB all tape formulations; S/N Dolby B/C 68/79 dB Scotch Metafine and Sony FeCr, 70/80 dB BASF chrom II, 64/74 dB BASF LHI tape; sep > 40 dB at 1 kHz; input sens/imp 0.4V/47k ohms radio, 15 mV/22k ohms line, 0.15 mV/3K ohms mic, 40 mV/22k ohms AUX; output level/imp 500-2000 mV/5/6k ohms radio, 10 V maximum/56 ohms headphones; fast-wind time 70 sec with C60 cassette; 20 $\frac{1}{2}$ " W  $\times$  11 $\frac{1}{4}$ " D  $\times$  5 $\frac{1}{4}$ " H; 17 lb \$1,295

#### Beosystem 5000 Cassette Deck

Stereo cassette deck with transport-in-a-drawer design and HX Professional headroom-extension system. Can be operated by remote control with Beomaster 5000 receiver and Master Control Panel or remote-control terminal. Features Dolby B and C noise reduction; peak-reading meters; Auto Search; auto bias and EQ. W&F < $\pm 0.078$ % wrms; speed deviation < $\pm 1.5$ %; FR 30-18,000 Hz  $\pm 3$  dB with chrome tape; S/N >56 dB (with metal tape) . \$695

#### Beocord 8004 Stereo Cassette Deck

Stereo cassette deck with Dolby B and C noise reduction and Dolby HX-Pro headroom-extension system. Features auto normal/CrO<sub>2</sub>/metal bias selection; real-time calibration system that gives index to music in minutes and seconds; auto computer-controlled search; single-gap record/play head; auto demagnetizing; stop function that places 4-sec noise-free pause between cuts; timer start/stop function for record and play. Fast-wind time with C60 tape 70 sec. FR 20-20,000 Hz  $\pm 3$  dB; W&F <0.045% wrms; S/N 78 dB (metal, Dolby C); sep > 35 dB. 20 $\frac{1}{2}$ " W  $\times$  11 $\frac{1}{4}$ " D  $\times$  5 $\frac{1}{4}$ " H; 16.5 lbs... \$695

### BENJAMIN ELECTROPRODUCTS

#### Rondelay 300T Portable Cassette System

Variable speed ( $\pm 20$ %) portable cassette player in lightweight molded case. 12" full-range speaker in detachable lid. Separate mic input with level control for public-address/voice-over music. Auto speed correction when recording. 20 W rms output. 12.5 lbs \$249

### DENON

#### DR-M4 Stereo Cassette Deck

Quartz-locked 3-head cassette deck with direct-drive closed-loop 2-capstan computer servo motor. All functions microprocessor controlled. Features Dolby B and C; infinitely variable auto-bias computer tuning; silent transport; flat key controls; peak-hold fluorescent meter; control center display; auto tape select; dc amp construction; independent power supplies; MPX filter switch; input/output slide level control;

one-touch Rec/Mute and Rec/Pause; digital display; memory counter; computer program search; stop-watch; remaining time countdown. Black with rose-walnut high-gloss finish end panels included. Fast forward time 90 sec for C60. Frequency response 20-23,000 Hz with metal tape; wow and flutter 0.027% wrms; S/N 73 dB (with Dolby C, at 3% THD); 17.4"W  $\times$  4.6"H  $\times$  11.5"D; 13.2 lbs, \$600

#### DR-M3 Stereo Cassette Deck

Direct-drive 3-head cassette deck with computer servo motor. All functions microprocessor controlled, including tape-tension servo for reliable tape-to-head contact. Digital counter displays index and remaining time in minutes and seconds. Features Dolby B and C; auto tape-type selection; infinitely variable auto biasing; silent flat-key transport controls; peak-hold fluorescent meters; dc amplifier construction; independent power supplies. Grey and silver, with wood high-gloss end panels optional ..... \$500

**DR-M2.** Similar to DR-M3 except lacks computer-tuning auto-bias feature ..... \$400

#### DR-M1 Two-Head Cassette Deck

Two-head stereo cassette deck with Tape Tension Servo Sensor and Nonslip Reel Drive Motors for ever-tape-to-head contact of 20 grams. Features Dolby B and C noise reduction; optically controlled flat-touch silent tape transport; peak/hold-reading fluoro meters; digital tape counter. FR 25-19,000 Hz metal, to 18,000 chrome, 30-17,000 normal; ch sep > 40 dB at 1 kHz; crosstalk > 65 dB at 1 kHz; W&F within 0.035% (JIS wrms); S/N > 73 dB (3% third-harmonic distortion, with Dolby C, CCIR/ARM); input sens 77.5 mV (50k ohm unbalanced) line at max volume, 0.35 mV (-67 dB, 10k ohm unbalanced) mic; output level 775 mV (10k ohm load) line at max volume; 434mm W  $\times$  115mm H  $\times$  286mm D; 12.54 lb \$299

### FISHER

#### DD450 Stereo Cassette Deck

Direct-drive 3-head cassette deck with separate tape-hub motor, dual-process Dolby B noise-reduction system, full-logic IC solenoid transport controls. Features 3 sendust heads; normal/CrO<sub>2</sub>/FeCr/metal tape switching with separate fine bias control; memory/auto-repeat function; fluorescent peak-level autohold meters. W&F 0.04% wrms; frequency response  $\pm 3$  dB 30-14,000 Hz normal, to 16 kHz CrO<sub>2</sub> and FeCr, to 18 kHz metal tape; S/N 62 dB with Dolby on; THD 1.5% at 0 VU; fast-wind time 90 sec for C60 cassette; 17"W  $\times$  10 $\frac{1}{2}$ " D  $\times$  4"H; 15.5 lb ..... \$580

#### DD300 Stereo Cassette Deck

Metal-compatible stereo cassette deck with Dolby B noise reduction, direct-drive dc servo capstan motor, 2 MX/ferrite heads. Features normal/FeCr/CrO<sub>2</sub>/metal tape selector; dual VU meters with 3-LED peak indicators; input-level control with line/mic input selector; output-level control; auto repeat memory; 3-digit tape counter with reset; record mute; electronic solenoid feather-touch controls with LEDs; timer standby with external audio timer. W&F 0.04%; FR 30-18,000 Hz  $\pm 3$  dB with metal tape; S/N 62 dB with Dolby; 17 $\frac{1}{2}$ " W  $\times$  9 $\frac{1}{2}$ " D  $\times$  5 $\frac{1}{4}$ " H ..... \$300

**DD280.** Similar to DD300 but minus FeCr tape position, auto repeat memory, output-level control; has separate left/right input-level controls; metal tape FR 30-15,000 Hz  $\pm 3$  dB; optional RC 80 full-function remote control unit available; 17 $\frac{1}{2}$ " W  $\times$  10 $\frac{1}{2}$ " D  $\times$  4"H ..... \$250

#### CR150B Stereo Cassette Deck

Stereo 3-head cassette deck with dual-process Dolby noise-reduction system, power-assisted soft-touch transport controls, bias fine control. Features MPX filter; independent left, right input-level controls; output-level control; normal/CrO<sub>2</sub>/metal tape selectors; dual lighted VU meters plus peak-level LEDs; tape/source monitoring, MPX filter. W&F 0.06% wrms; FR  $\pm 3$  dB 40-14,000 Hz normal, to 16 kHz CrO<sub>2</sub>, to 18 kHz metal tape; S/N 62 dB, Dolby on; THD 1.5% at 0 VU; fast-wind time 90 sec with C60 cassette; 17 $\frac{1}{2}$ " W  $\times$  10 $\frac{1}{2}$ " D  $\times$  4 $\frac{1}{4}$ " H; 13 lb \$350

#### DD350 Stereo Cassette Deck

Direct-drive cassette deck with full-logic transport controls, metal-tape-compatibility, Dolby B noise-reduction system, peak indicators, timer standby. Features separate motor for tape reels; normal/CrO<sub>2</sub>/metal bias/EQ switches; MX/ferrite heads; 2 large dual-scale VU meters; 3 peak-level LED indicators; timer standby switch; low-imp microphone inputs, W&F 0.04% wrms; FR  $\pm 3$  dB 40-14,000 Hz normal, to 15 kHz CrO<sub>2</sub>, and metal tapes; S/N 62 dB with Dolby on; THD 1.5% at 0 VU; fast-wind time 90 sec with C60 cassette; 17 $\frac{1}{2}$ " W  $\times$  10 $\frac{1}{2}$ " D  $\times$  4"H; 13 lb ..... \$300

#### CRW40 Double Cassette Deck

Double stereo cassette deck designed for high-quality tape duplication. Features sequential play; synchronized one-touch dubbing; Dolby B; soft-touch power-assisted transport controls; LED bar meters; separate tape-type selectors for each transport (metal, CrO<sub>2</sub>, normal); separate left and right record-level controls; front-panel mic inputs; headphone output. FR 30-14,000 Hz  $\pm 3$  dB with normal tape, to 15 kHz with CrO<sub>2</sub> and metal tape; W&F 0.06% wrms; S/N 51 dB no Dolby, 61 dB Dolby on; THD 1.2% at 0 VU; line input sensitivity 100 mV; sep 40 dB; crosstalk 70 dB. C60 fast-wind time 100 sec; 15 $\frac{1}{4}$ " W  $\times$  11 $\frac{1}{4}$ " D  $\times$  4 $\frac{1}{4}$ " H; 9.9 lb ..... \$200

**CRW77.** Similar to CRW40, but adds high-speed synchronized dubbing; Dolby C; rec mute; auto tape selection. 15 $\frac{1}{4}$ " W  $\times$  10" D  $\times$  4 $\frac{1}{4}$ " H; 10 lb . \$250

#### CR77 Stereo Cassette Deck

Metal-compatible stereo cassette deck with Dolby B and C noise-reduction systems, dual 7-LED level meters, powered mechanism. Features input-level control; metal/CrO<sub>2</sub>/normal tape selector; record mute switch; microphone/line input selector; low-impedance microphone inputs; dc governor-controlled motor; hard permalloy record/playback head; full auto stop; LED function indicators. W&F 0.06% wrms; FR  $\pm 3$  dB 30-14,000 Hz normal, to 15 kHz CrO<sub>2</sub> and metal tapes; S/N Dolby off/B on/C on 52/60/70 dB; THD 1.5% at 0 VU; ch sep 40 dB; crosstalk 70 dB; fast-wind time 110 seconds with C60 cassette; 15 $\frac{1}{4}$ " W  $\times$  8 $\frac{1}{4}$ " D  $\times$  4 $\frac{1}{4}$ " H; 9 lb ..... \$200

#### CR127B Stereo Cassette Deck

Metal-compatible stereo cassette deck with soft-touch transport controls, powered mechanism, LED bargraph displays, Dolby B and C noise reduction. Features 3-position tape selector; hard permalloy record/play head; dc governor-controlled motor; timer standby function; dual concentric input-level controls; 3-digit tape counter. W&F 0.08% wrms; FR  $\pm 3$  dB 30-14,000 Hz normal, to 15 kHz CrO<sub>2</sub> and metal tapes; S/N 52 dB Dolby off, 62 dB Dolby B, 68 dB Dolby B; THD 1.5% at 0 VU; fast-wind time 100 seconds with C60 cassette; 17 $\frac{1}{2}$ " W  $\times$  10 $\frac{1}{2}$ " D  $\times$  4 $\frac{1}{4}$ " H; 11 lb ..... \$200

**CR356.** Similar to CR127 but adds electronic solenoid controls; switchable FM/MPX filter; timer standby. W&F 0.05% wrms; S/N 54 dB no Dolby, 62 dB Dolby B, 68 dB Dolby C; THD 1.4% at 0 VU; fast-wind with C60 90 sec. 16 lb ..... \$250

#### CR140 Stereo Cassette Deck

Metal-compatible stereo cassette deck with powered mechanism, Dolby B noise reduction system, 7 LED bargraph meters. Features normal/CrO<sub>2</sub>/metal tape selector; dc governor controlled motor; hard permalloy record/playback head; rec mute switch; slide input level, balance controls; full automatic stop; soft eject cassette door; W&F 0.06% wrms; FR  $\pm 3$  dB 30-14,000 Hz normal, to 15,000 Hz CrO<sub>2</sub> and metal

#### NEED MORE INFORMATION?

Write directly to the manufacturer or distributor. A list of names and addresses starts on page 25.

# DESIGN INTEGRITY:

**WHAT MAKES DENON CASSETTE DECKS UNCOMMON IS HOW MUCH THEY HAVE IN COMMON.**

Denon has never built multi-thousand dollar cassette decks in order to sell unrelated inexpensive machines. Instead, Denon has concentrated its full engineering effort to produce rationally-priced cassette decks that would impress serious music lovers with their sound rather than their features. Now, the new DR-M4, DR-M3 and DR-M2 cassette decks exceed Denon's previous sonic performance levels, while adding significant technological and convenience features.

Denon's Tape Tension Servo Sensor System has been further refined to provide automatic sensing and correction of tape tension for optimum tape-to-head contact throughout the entire play of each cassette. A new SF combination head extends frequency response to 23kHz (metal) with a 70dB S/N ratio (Dolby C). A new computer controlled silent tape transport mechanism provides entirely quiet and safe tape handling. An electronic computer digital counter using an optical detector system automatically indicates tape used and tape remaining information.

The DR-M Cassette Decks feature Denon's Flat Twin direct capstan drive; non-slip clutchless, beltless, reel drive mechanisms; Dolby B & C noise reduction; direct-coupled amplifier design, and separate amp/mechanical power supplies.

The DR-M3 offers computer tape tuning for bias and sensitivity. The DR-M4 adds programmable random access, stopwatch function and dual-capstan transport. Otherwise, all the Denon DR-M Series Cassette Decks are principally the same — each offering the highest performance and quality at its price in the industry.

Denon products share more than name alone.

*For the best results on the new DR-M Series, or any cassette decks, for that matter, try new Denon DX-Series Cassette Tape.*

**Denon DR-M1 Two-Head Cassette Deck with Dolby C; Non-slip Reel Drive Motors. \$299**

**Denon DR-M2 Three Head Cassette Deck with Dolby C; Tape Tension Servo; SF Combination Head. (Side panels optional) \$399**

**Denon DR-M3 Three Head Cassette Deck adds Computer Tuning System. (Side panels optional) \$499**



**Denon DR-M4 Three Head Cassette Deck adds Dual Capstan and Music Search. (Including side panels) \$599**

Prices for comparison purposes only.

# DENON

Imagine what we'll do next.

Denon America, Inc., 27 Law Drive, Fairfield, N.J. 07006

CIRCLE NO. 20 ON READER SERVICE CARD

## Cassette Decks

6

## Cassette Decks

tapes; S/N Dolby off/on 52/62 dB; THD 1.2% at 0VU; sep 40 dB; crosstalk 70 dB; fast wind time 120 seconds with C60 cassette; 15 $\frac{1}{4}$ "W  $\times$  11 $\frac{1}{16}$ "H  $\times$  4 $\frac{3}{8}$ "D; 9.9 lb ..... \$150

### CR36 Stereo Cassette Deck

Metal-compatible stereo cassette deck with powered mechanism, Dolby B noise-reduction system, 7-LED bargraph meters. Features normal/CrO<sub>2</sub>/metal tape selector; dc governor-controlled motor; hard Permalloy record/playback head; record mute switch; slide-



type input-level, balance controls; full auto stop, soft-eject cassette door. W&F 0.06% wrms; FR 30-13,000 Hz  $\pm$  3 dB normal, to 14 kHz CrO<sub>2</sub> and metal tapes; S/N Dolby off/on 52/62 dB; THD 1.5% at 0 VU; sep 40 dB; crosstalk 70 dB; fast-wind time 110 seconds with C60 cassette; 15 $\frac{3}{4}$ "W  $\times$  8 $\frac{3}{4}$ "D  $\times$  4 $\frac{3}{8}$ "H; 7 lb ..... \$130

## HARMAN/KARDON

### CD491 Stereo Cassette Deck

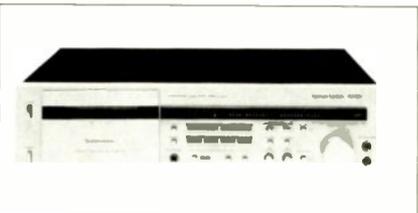
Metal-compatible stereo cassette deck with Dolby HX Professional headroom-extension and Dolby B and C noise-reduction systems, switchable multiplex filter, and 3 heads. Features ultrawideband frequency response with any tape formulation; solenoid-controlled dual-capstan transports; sendust record head; ferrite play head; electronic clock/counter; bidirectional auto search; auto space; auto repeat; meter weighting; rec mute; dual 16-LED peak-indicating meters; bias fine trim; mic inputs; calibration test-tone generator. W&F 0.02% wrms (NAB); FR 20-24,000 Hz  $\pm$  3 dB, any tape formulation. 17 $\frac{1}{16}$ "W  $\times$  13 $\frac{1}{2}$ "D  $\times$  4 $\frac{3}{16}$ "H ..... \$785

### CD391 Stereo Cassette Deck

Metal-compatible stereo cassette deck with Dolby HX Professional headroom-extension and Dolby B and C noise-reduction systems, switchable multiplex filter, and 2 heads. Features ultrawideband frequency response with any tape formulation; solenoid-controlled dual-capstan transport; sendust record/play head; bidirectional auto search; auto space; auto repeat; meter weighting; rec mute; dual 16-LED peak-indicating meters; bias fine trim; mic inputs; output level control; mic mixing; bias and record calibration test-tone generator. Wow and flutter 0.02% wrms (NAB); FR 20-22,000 Hz  $\pm$  3 dB, any tape formulation. 17 $\frac{1}{16}$ "W  $\times$  13 $\frac{1}{2}$ "D  $\times$  4 $\frac{3}{16}$ "H ..... \$575

### CD291 Stereo Cassette Deck

Metal-compatible stereo cassette deck with Dolby B and C noise-reduction, switchable multiplex filter, and 2 heads. Features Dolby HX Professional headroom extension system; ultrawideband frequency response



with any tape formulation; solenoid-controlled transport; sendust record/play head; auto repeat; rec mute; dual 12-LED peak-indicating meters; bias fine trim; mic inputs. W&F 0.05% wrms NAB; FR 20-21,000 Hz  $\pm$  3 dB, any tape formulation; 17 $\frac{1}{16}$ "W  $\times$  13 $\frac{1}{2}$ "D  $\times$  4 $\frac{3}{16}$ "H ..... \$435

### CD191 Stereo Cassette Deck

Metal-compatible stereo cassette deck with Dolby B and C, switchable multiplex filter, and 2 heads. Features ultrawideband frequency response with any tape formulation; solenoid-controlled transport; sendust record/play head; auto repeat; dual 12-LED peak-indicating meters; bias fine trim; mic inputs; input balance. W&F 0.05% wrms NAB; FR 20-21,000 Hz  $\pm$  3 dB, any tape formulation; 17 $\frac{1}{16}$ "W  $\times$  13 $\frac{1}{2}$ "D  $\times$  4 $\frac{3}{16}$ "H ..... \$345

### CD91 Stereo Cassette Deck

Metal-compatible stereo cassette deck with Dolby B noise reduction, switchable multiplex filter, and 2 heads. Features ultrawideband frequency response with any tape formulation; solenoid-controlled transport; sendust record/play head; dual 12-LED peak-indicating meters; bias and equalization selectors. W&F 0.05% wrms NAB; FR 20-20,000 Hz  $\pm$  3 dB, any tape formulation; 17 $\frac{1}{16}$ "W  $\times$  13 $\frac{1}{2}$ "D  $\times$  4 $\frac{3}{16}$ "H ..... \$265

## HITACHI

### D-2200M Dolby B/C Cassette Deck

Microcomputer-controlled cassette deck with Dolby B and C NR. Features Hitasenrite record and play head; Auto Tape Response System; metal compatibility; direct-drive unitorque motor; electronic digital counter; dual-capstan transport. W&F 0.019%; FR ( $\pm$  3 dB) 30-18,000 Hz normal and FeCr, 30-20,000 CrO<sub>2</sub> and metal; S/N (A-weighted, metal tape, ref. 3% THD) 61 dB Dolby off, 69 dB Dolby B, 75 dB Dolby C; crosstalk (ch, at 1 kHz) > 40 dB; distortion 0.8% (1 kHz, 160 nWb/m). 17 $\frac{1}{16}$ "  $\times$  5 $\frac{7}{8}$ "  $\times$  11 $\frac{1}{4}$ "; 16 lbs ..... \$750

### D-W700 Double Stereo Cassette Deck

Double stereo cassette deck designed for duplicating programs from one cassette to another. Features Dolby B and C noise-reduction systems; IC-logic feather-touch transport controls; random programming; dubbing/playback; repeat play; 2 dc motors; facility for optional remote control; 17 $\frac{1}{8}$ "W  $\times$  11 $\frac{1}{4}$ "D  $\times$  4 $\frac{3}{16}$ "H; 13 lb ..... \$370

### D-E7 Dolby Three-Head Cassette Deck

Stereo cassette deck with three heads and Dolby B and C NR. Features auto memory rewind; feather-touch controls; compatible with normal, chrome, metal tapes; remote-control capability. W&F 0.038%; FR ( $\pm$  3 dB) 30-17,000 Hz normal, 30-18,000 CrO<sub>2</sub>, 30-19,000 metal; S/N (A-weighted, metal tape, ref. 3% THD) 61 dB Dolby off, 69 dB Dolby B, 75 dB Dolby C; crosstalk (ch, at 1 kHz) > 30 dB; distortion 0.8% (1 kHz, 0 VU). 17 $\frac{1}{16}$ "W  $\times$  4 $\frac{9}{16}$ "H  $\times$  10 $\frac{11}{16}$ "D; 10 lbs ..... \$350

### D-RV7 Auto-Reverse Cassette Deck

Stereo cassette deck with auto-reverse mechanism that provides independent azimuth alignment for each side of a cassette. Features Dolby B and C; 3 motors; IC logic control; infrared tape-end sensor; continuous play; playing selections in any order; auto sampling of each selection; auto bias and EQ; electronic tape counter; feather-touch controls; remote-control jack. W&F 0.04%; FR ( $\pm$  3 dB) 40-14,000 Hz normal, 40-15,000 CrO<sub>2</sub>, 40-17,000 metal; S/N (A-weighted, metal tape, ref. 3% THD) 60 dB Dolby off, 68 dB Dolby B, 74 dB Dolby C; crosstalk (ch, at 1 kHz) > 30 dB; distortion 0.8% (1 kHz, 160 nWb/m). 17 $\frac{1}{16}$ "W  $\times$  4 $\frac{19}{16}$ "H  $\times$  10 $\frac{11}{16}$ "D; 10 lbs... \$300

### D-E3 Dolby B/C Cassette Deck

Stereo cassette deck with Dolby B and C NR and feather-touch controls. Features 12-part LED meters; auto rec mute; metal compatibility; optional remote control (RB100); timer capability; output-level control. W&F 0.04% wrms; S/N 72 dB with Dolby C. 17 $\frac{1}{8}$ "W  $\times$  4 $\frac{9}{16}$ "H  $\times$  8 $\frac{3}{8}$ "D; 8 lbs ..... \$200

### D-E2 Dolby B/C Cassette Deck

Stereo cassette deck with Dolby B and C and soft-touch mechanism. Features metal compatibility; rewind auto play; 12-part LED meters; timer capability;



output level control. W&F 0.05% wrms; S/N 72 dB with Dolby C; 17 $\frac{1}{8}$ "W  $\times$  4 $\frac{9}{16}$ "H  $\times$  8 $\frac{3}{8}$ "D; 7 lbs ..... \$170

### D-E1 Soft-Touch Cassette Deck

Stereo cassette deck with soft-touch mechanism and Dolby B NR. Features metal compatibility; rewind auto play; master rec level control and independent rec balance control; timer capability; auto stop; mic jacks. W&F 0.05%; FR ( $\pm$  3 dB) 30-14,000 Hz normal, 30-15,000 CrO<sub>2</sub>, 30-16,000 metal; S/N (A-weighted, metal tape, ref 3% THD) 58 dB Dolby off, 66 dB Dolby B, crosstalk (ch, at 1 kHz) > 30 dB; distortion 1.0% (1 kHz, 0 VU). 17 $\frac{1}{8}$ "  $\times$  4 $\frac{9}{16}$ "  $\times$  8 $\frac{3}{8}$ "; 7 lbs ..... \$140

## JVC

### DD-V9 Cassette Deck

Auto-reverse 3-head cassette deck with auto-reverse swivel head. Features Dolby B and C NR; Sen-Alloy recording head; 3 motors; Pulse Servo direct-drive capstan; computerized Bias, Equalization, Sensitivity of Tape tuning; 10-sec Index Scan; Blank Search; digital 4-function counter; slide-out control panel; fluorescent digital level meters with peak hold; multi-music scan; auto rec mute; auto tape selector; optional remote control. W&F 0.03% wrms; FR 25-18,000 Hz  $\pm$  3 dB with metal tape; S/N 60 dB; sep 40 dB; 17 $\frac{1}{8}$ "W  $\times$  4 $\frac{9}{16}$ "H  $\times$  10 $\frac{13}{16}$ "H; 15 lbs ..... \$800

### DD-V7 Auto-Reverse Cassette Deck

Stereo cassette deck with "Flip Reverse" system (for quick auto-reverse recording and playback) and direct-drive Pulse Servo motor. Features Sen-Alloy head; Dolby B and C with MPX switch; digital multifunction counter; Index Scan; Blank Search; Block Repeat; Multi-Music Scan; 12 LED multi-peak level indicators with peak hold; safety-locked timer start auto rec mute; auto tape selector; optional remote control. W&F 0.35% wrms; FR 30-17,000 Hz  $\pm$  3 dB with metal tape; S/N 58 dB; sep 40 dB; 17 $\frac{1}{8}$ "W  $\times$  4 $\frac{9}{16}$ "H  $\times$  11 $\frac{1}{8}$ "H; 15.8lbs ..... \$500

### KD-D55 Stereo Cassette Deck

Metal-compatible front-loading stereo cassette deck with Dolby B and C (ANRS) noise-reduction systems, 3 heads, electronic digital counter. Features full-logic transport controls; digital multifunction counter that counts tape, shows elapsed/remaining tape time, Music Scan countdown; Multiple Music Scan system that allows up to 20 selections to be skipped; 7-LED multi-peak meters; record mute; output-volume control; timer function; gear/oil-damped cassette door. Wow and flutter 0.05% wrms; FR  $\pm$  3 dB 30-16,000 Hz metal and CrO<sub>2</sub>, to 15 kHz normal tape, S/N Dolby C off/on 58/78 dB with metal tape; THD 1.0% with metal tape at 0 VU, 1 kHz; fast-wind time 110 secs with C60 cassette; 17 $\frac{1}{8}$ "W  $\times$  11"D  $\times$  4 $\frac{9}{16}$ "H; 12.1 lb ..... \$380

### KD-V44 Auto-Reverse Cassette Deck

Stereo cassette deck with "Flip Reverse" system for quick auto-reverse recording and playback. Features 2-motor full-logic control tape transport; Sen-Alloy head Dolby B/C NR with built-in MPX filter; a Music Scan system; and auto rec mute; for clean tape dubs. The unit also features a 7-LED multi-peak level indicator system; timer start; cue and review facility. W&F 0.05% wrms; FR 30-16,000 Hz  $\pm$  3 dB with metal tape; S/N 58 dB; sep 40 dB; 17 $\frac{1}{8}$ "W  $\times$  10 $\frac{19}{16}$ "D  $\times$  4 $\frac{9}{16}$ "H; 10.4 lbs ..... \$330

### KD-V40 Auto-Reverse Cassette Deck

Stereo cassette deck with "Flip Reverse" swiveling

head for quick auto-reverse recording and playback. Features 2-color fluorescent spectro-peak indicator; logic control mechanism; soft-touch operation; Dolby B/C; MPX; Music Scan; Sen-Alloy record/play head; electric digital counter; timer start; rec mute function. W&F 0.08% wrms; FR 30-16,000 Hz  $\pm$  3 dB with metal tape; S/N 58 dB; sep 40 dB; 17 $\frac{1}{8}$ " W  $\times$  4 $\frac{3}{8}$ " H  $\times$  11 $\frac{1}{8}$ " D; 10.6 lbs ..... \$290

**KD-V33 Auto-Reverse Cassette Deck**

Auto-reverse deck with "Flip Reverse" system. Features logic control mechanism; Dolby B/C NR; Music Scan; 7 LED multi-peak indicators; timer start. W&F



0.08% wrms; FR 30-15,000 Hz  $\pm$  3 dB with metal tape; S/N 58 dB; sep 40 dB; 17 $\frac{1}{8}$ " W  $\times$  4 $\frac{3}{8}$ " H  $\times$  11 $\frac{1}{8}$ " D; 9.9 lbs ..... \$320

**KD-V22 Cassette Deck**

Logic-control cassette deck with Dolby B and C NR. Features full-logic controls, metalperm head; 6-LED multi-peak indicator; LED tape-running indicator; headphone jack. W&F 0.08% wrms; FR 40-15,000 Hz  $\pm$  3 dB with metal tape; S/N 58 dB; sep 40 dB; 17 $\frac{1}{8}$ " W  $\times$  4 $\frac{3}{8}$ " H  $\times$  9 $\frac{1}{2}$ " D; 8.2 lbs ..... \$180

**KD-V11.** Similar to KD-V22, but with JVC's ARNS NR instead of Dolby C. W&F 0.08% wrms; FR 40-15,000 Hz  $\pm$  3 dB with metal tape; S/N 58 dB; sep 40 dB; 17 $\frac{1}{8}$ " W  $\times$  4 $\frac{3}{8}$ " H  $\times$  9 $\frac{1}{2}$ " D; 7.7 lbs. \$140

**KD-W5 Double Cassette Deck**

Stereo cassette deck has 2 full-logic controlled tape transports for dubbing and double-speed dubbing with "Synchro Start" mechanism. Features continuous play function; tape/mic and line/mic mixing; Music Scan; ANRS/Dolby B NR; pitch control ( $\pm$  10% on deck A); 7-LED multi-peak indicators; auto rec mute; timer start. W&F 0.05% wrms; FR 30-16,000 Hz  $\pm$  3 dB with metal tape; S/N 58 dB; sep 40 dB; 17 $\frac{1}{8}$ " W  $\times$  4 $\frac{3}{8}$ " H  $\times$  11 $\frac{1}{8}$ " D; 11 lbs ..... \$340

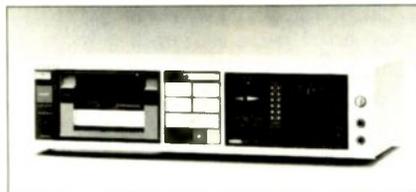
**Remote-Control Unit**

**RM-70E.** For KD-DD7 and KD-DD9 ..... \$50

**KENWOOD**

**KX-71R Cassette Deck**

Auto-reverse cassette deck with electronic full-logic controls. Features Dolby B and C NR; full repeat and



cue music repeat; permalloy head with Sendust guard erase; 7-LED peak level meters; metal tape compatibility. Available in silver or black ..... \$320  
**KX-71RB.** Same as KX-71R except black ..... \$320

**KX-41 Cassette Deck**

Stereo cassette deck with soft mechanical logic controls. Features Dolby B and C; permalloy head with Sendust guard erase; 7-LED peak level meters; metal tape compatibility. Available in silver or black ..... \$225  
**KX-41B.** Same as KX-41 except black ..... \$226

**KX-31 Cassette Deck**

Stereo cassette deck with soft mechanical logic controls; Dolby NR; permalloy head with Sendust guard erase; 7-LED peak level meters; metal tape compati-

bility. Available in silver or black ..... \$180  
**KX-31B.** Same as KX-31 except black ..... \$180

**X-9C Cassette Deck**

Two-head cassette deck with Dolby B and C NR. Features feather-touch electronic full-logic controls; auto tape selector; direct program search system; full repeat system; amorphous alloy head; synchro recording from turntable. 9 lbs ..... \$309

**KX-7XCG Cassette Deck**

Two-head cassette deck with Dolby B and C. Features electronic full-logic controls with dual-motor drive; amorphous alloy magnetic head. 23 lbs ..... \$400

**KX-5XC Cassette Deck**

Two-head cassette deck with Dolby B and C NR. Features electronic full-logic controls; dual-motor drive; amorphous alloy magnetic head. 23 lbs ..... \$245

**RC-7 Remote Control Unit**

Control for KX-7XCG, KX-5XC. 6 lbs ..... \$25

**KYOCERA**

**D-801 Stereo Cassette Deck**

Stereo cassette deck with Dolby B and C noise-reduction systems. Features normal, CrO<sub>2</sub>, metal bias/equalization tape selector; fine bias control; 3-motor, 2-capstan drive system; Auto Program Mute Recording; Sendust-alloy record/play head; soft-touch transport controls; 3-function electronic digital counter



(elapsed time/time remaining/stopwatch); bar-graph level meters with peak hold; auto memory stop/replay/repeat. W&F 0.02% wrms, FR 20-22,000 Hz  $\pm$  3 dB with metal tape; S/N (A weighted) 68 dB with Dolby B, 78 dB with Dolby C ..... \$590  
**D-601.** Similar to D-801 except no auto search, no dual capstan, mechanical tape counter. Wow and flutter 0.035% wrms ..... \$450

**Cybernet DD-701 Dubbing Cassette Deck**

Stereo high-speed copy dubbing cassette deck with mic echo mixer, auto tape select. Features 2-speed dubbing capability; adjustable echo effect, full auto stop; Quick Start and Auto Recording Stop; timer standby with optional timer; Auto Program Jump System; external processing loop capability; rec mute, cue and review; Dolby B noise-reduction system bargraph signal-level meters. W&F 0.04% wrms; frequency range 30-20,000 Hz with metal tape; S/N 64 dB with Dolby on ..... \$425

**KLH**

**CD-101 Stereo Cassette Deck**

Stereo cassette deck with Dolby B NR. Features soft-touch transport controls; standard/CrO<sub>2</sub>/metal tape bias/equalization selectors; LED signal-level meters; permalloy, ferrite heads; dc governor capstan motor. W&F 0.08% wrms; FR 30-15,000 Hz  $\pm$  3 dB normal, to 17 kHz metal tape; S/N 60 dB Dolby on; THD 1.5%; fast-wind time 100 secs with C60 cassette ..... \$200

**LUXMAN**

**KX-102 Stereo Cassette Deck**

Computerized ServoFace stereo cassette deck with dbx NR. Features 3-heads; double dbx circuitry for both tape and disc playback; Duo Beta circuitry for min negative feedback, elimination of TIM; 15% bias control; peak-level fluorescent meters; Dolby B NR;

computerized tuning system that selects best bias level for tape used; auto repeat, rewind, play; facility for using wireless remote controller. W&F 0.04% wrms; FR 20-22,000 Hz  $\pm$  3 dB with metal tape; S/N Dolby B/dbx 68/94 dB; THD 0.7% with LH tape at 400 Hz, 0 dB test level ..... \$1,000

**KX-101 Stereo Cassette Deck**

Full-logic, solenoid-controlled stereo cassette deck with Dolby B and C NR. Features fluorescent indicators; Duo Beta circuitry; 2 Sendust heads; metal-tape capability; ServoFace design. W&F 0.04% wrms; FR 20-22,000 Hz  $\pm$  3 dB with metal tape; S/N with Dolby C on, metal tape 73 dB; THD 0.7% with LD tape at 400 Hz, 0 dB test level ..... \$500

**K-118 Stereo Cassette Deck**

Stereo cassette deck with Duo Beta circuitry, dbx noise-reduction and disc-decoder systems, Dolby B noise reduction. Features fluorescent tape counter; normal/CrO<sub>2</sub>/metal tape selector; full-logic solenoid-controlled transport with remote-control capability; fluorescent peak-level indicators; auto rewind/play/repeat; switchable MPX filter. W&F 0.04%; wrms; FR 20-17,000 Hz  $\pm$  3 dB normal, to 18 kHz CrO<sub>2</sub>, to 20 kHz metal tape; S/N with metal tape, no NR/Dolby/dbx 58/67/93 dB; overall distortion 0.6% with LH tape at 1 kHz, 0 dB; 18 $\frac{1}{8}$ " W  $\times$  10 $\frac{1}{2}$ " D  $\times$  5 $\frac{1}{2}$ " H; 13.2 lb ..... \$500

**K-100 Cassette Deck**

Full-logic solenoid-controlled cassette deck with Dolby B and C. Features Duo Beta circuitry; Servo-face; end of record auto pause for unattended taping with Luxman turntables; remote control through Luxman's RX-103 or LX-104 integrated amplifier; VU meter, fluorescent tape counter; FL direction indicator; tape selector switch for metal/chrome/normal; S/N (with metal tape and Dolby C) 72 dB; FR 20 to 20,000 Hz (metal); 17 $\frac{1}{8}$ " W  $\times$  5 $\frac{3}{8}$ " H  $\times$  14 $\frac{3}{8}$ " D ..... \$400

**K-210 Stereo Cassette Deck**

Metal compatible cassette deck with Duo-Beta circuitry. Features Dolby B and C; soft-touch controls; precision DC servo motor driven capstan; dynamically balanced flywheel; specially processed belt; one-touch record; Mecha-Logic motor-driven system; end-of-tape auto stop, 12-dot fluorescent peak meter; access to azimuth adjustment; FR 20 to 19,000 Hz (metal); S/N 70 dB (metal, Dolby C); W&F 0.05%. 17 $\frac{1}{8}$ " W  $\times$  6 $\frac{1}{8}$ " H  $\times$  14 $\frac{3}{8}$ " D ..... \$250

**MARANTZ**

**SD-530 Dolby B/C Cassette Deck**

Dolby B and C stereo cassette recorder with 2-motor feather-touch operation. Features automatic quick-wind reverse, record, and play; gold-plated input/output jacks; super-hard metal alloy record/playback heads; 31-tune quick music sensor; auto song and side repeat; auto tape slack take-up; peak-reading LED meters; wireless remote control capability with



optional RC 430/RMC 12; memory rewind. Wow and flutter 0.05%; frequency response (overall): -20 dB below 0 VU)  $\pm$  3 dB 35-14,000 Hz normal, to 15 kHz CrO<sub>2</sub>, and to 16 kHz metal; S/N ratio 70 dB with Dolby C, 60 dB with Dolby B, 52 db with Dolby off; output line level/impedance 560 mV/3.5 kilohms; input line sensitivity/impedance -27 dBV/50 kilohms; mic level/impedance -70 dBV/6.5 kilohms; 16 $\frac{3}{8}$ "  $\times$  3 $\frac{11}{16}$ "  $\times$  11 $\frac{3}{16}$ " D; 8 lbs ..... \$350

**SD-420 Dolby B/C Cassette Deck**

Stereo cassette deck with Dolby B and C noise-reduc-

tion systems. Features soft-touch transport controls; gold-plated input and output connectors; multiple program Compuskip forward and backward; repeat playback; fine bias control; LED indicators for all transport controls and for tape type. Dolby; timer standby; LED peak signal-level displays; metal/CrO<sub>2</sub>/normal tape selector; record mute; tape counter. Wow and flutter 0.05% wrms; frequency response  $\pm 3$  dB 40-12,500 Hz normal, to 15 kHz CrO<sub>2</sub>, to 16 kHz metal tape; S/N ratio no NR/Dolby B/Dolby C 52/62/72 dB; input sensitivity/impedance -24 dBV/50k ohms line, -70 dBV/10k ohms mic; output level/impedance 600 mV/5k ohms line, 35 mV/240 ohms headphones; 16 $\frac{3}{4}$ " $\times$  11 $\frac{3}{8}$ " $\times$  3 $\frac{3}{8}$ " $\times$  H ..... \$300

#### SD-320 Dolby B/C Cassette Deck

Stereo cassette deck with Dolby B and C noise-reduction systems. Features soft-touch transport controls; gold-plated input and output connectors; LED peak-signal level displays; normal/CrO<sub>2</sub>/metal tape selector; record mute; timer standby; tape counter. Wow and flutter 0.07% wrms; frequency response  $\pm 3$  dB 40-12,500 Hz normal, to 14 kHz CrO<sub>2</sub>, to 15 kHz metal tape; S/N ratio no NR/Dolby B/Dolby C 52/62/72 dB; input sensitivity/impedance -24 dBV/50k ohms line, -70 dBV/10k ohms mic; output level/impedance 600 mV/5k ohms line, 35 mV/100 ohms headphones; 16 $\frac{3}{4}$ " $\times$  7 $\frac{1}{2}$ " $\times$  3 $\frac{3}{8}$ " $\times$  H ..... \$225

#### SD-321 Stereo Cassette Deck

Metal-ready stereo cassette deck with Dolby B and C. Features soft-touch operation; peak-reading LED meters; 3-digit tape counter; 3-position tape selector; timer standby; gold plated input/output plugs. Wow and flutter 0.05%; frequency response (overall: -20 dB below 0 VU)  $\pm 3$  dB 30-14 kHz normal, to 15 kHz CrO<sub>2</sub>, to 16 kHz metal; S/N ratio Dolby B/C on 70 dB/62 dB, Dolby off 52 dB; output line level/impedance 500mV/ 5 kilohms; line input (level at 0 VU) sensitivity/impedance is -20 dBV/ 50 kilohms; mic level/impedance -65 dBV/5 kilohms; 16 $\frac{3}{4}$ " $\times$  7 $\frac{1}{2}$ " $\times$  7 lbs ..... \$185  
SD-221. Same as SD-321 except without Dolby C; 6 lbs ..... \$130

#### SD-225 Stereo Cassette Deck

Stereo cassette deck with Dolby B noise-reduction system. Features soft-touch transport controls; timer standby; LED peak-signal level meters; normal/CrO<sub>2</sub>/metal tape selector; record mute; tape counter. Wow and flutter 0.08% wrms; frequency response  $\pm 3$  dB 40-12,500 Hz normal, to 14 kHz CrO<sub>2</sub>, to 15 kHz metal tape; S/N ratio Dolby off/on 52/62 dB; input sensitivity/impedance -24 dBV/50k ohms line, -70 dBV/10k ohms mic; line output level/impedance 600 mV/5k ohms; 16 $\frac{3}{4}$ " $\times$  7 $\frac{1}{2}$ " $\times$  3 $\frac{3}{8}$ " $\times$  H ..... \$179

### MCS by JC PENNEY

#### MCS 3590 dbx Cassette Deck

dbx cassette deck with Dolby B and C NR. Features feather-touch function transports; fluorescent power meters; tape counter; remaining time signal; program search; rec mute; 2 motors; dbx output level control. 16 $\frac{3}{4}$ " $\times$  3 $\frac{3}{8}$ " $\times$  10 $\frac{1}{4}$ " $\times$  D; 11 lb 4 oz ..... \$300

#### MCS 3588 Auto-Reverse Cassette Deck

Auto-reverse stereo cassette deck with Dolby B and C NR. Features continuous auto-reverse control; quick reverse control; mechanical soft-touch transport controls; timer standby; LED record-level meters; record mute; metal tape capability. W&F 0.08%; S/N Dolby off/on 51/60 dB; sep/adjacent-track crosstalk 57/57 dB; 16.5" $\times$  10.6" $\times$  4.3" $\times$  H; 9.5 lb 580

#### MCS 3565 Stereo Cassette Deck

Stereo cassette deck with 3 motors. Features feather-touch transports; Dolby B and C; fluorescent meters; program search; record mute; standby timer; auto MPX filter switch; 16 $\frac{3}{4}$ " $\times$  4 $\frac{1}{2}$ " $\times$  10 $\frac{1}{8}$ " $\times$  D; 8.8 lb ..... \$250

#### MCS 3556 Stereo Cassette Deck

Cassette deck with Dolby B and C. Features electronic

feather-touch transports; fluorescent record meters; digital tape counter; program search; tape selection for normal, CrO<sub>2</sub> or metal; 16 $\frac{3}{4}$ " $\times$  4 $\frac{1}{2}$ " $\times$  H  $\times$  8 $\frac{1}{2}$ " $\times$  D; 13.2 lb ..... \$200

#### MCS 3544 Stereo Cassette Deck

Auto-rewind cassette deck with Dolby B and C. Features mechanical soft touch operations; fluorescent power meters; digital tape counter; auto stop/play; tape selector for normal, CrO<sub>2</sub> or metal; 16 $\frac{3}{4}$ " $\times$  4 $\frac{1}{2}$ " $\times$  H  $\times$  9 $\frac{3}{8}$ " $\times$  D ..... \$180

#### MCS 3543 Stereo Cassette Deck

Soft-touch transport stereo cassette deck with Dolby B NR system. Features auto shut-off; VU record meters; metal-tape capability; LED record indicator. W&F 0.06% wrms; FR  $\pm 3$  dB 50-13,000 Hz normal, to 14 kHz CrO<sub>2</sub>, to 15 kHz metal tape; S/N Dolby off/on 60/60 dB; 16 $\frac{3}{4}$ " $\times$  7 $\frac{1}{2}$ " $\times$  D  $\times$  4 $\frac{1}{4}$ " $\times$  H ..... \$150

#### MCS 3522 Mid-Size Cassette Deck

Stereo cassette deck with soft-touch transport mechanisms and electronic servo DC motor. Features LED record-level indicator; Dolby B NR; metal-tape compatibility; digital tape counter; auto shut-off. 15 $\frac{3}{4}$ " $\times$  4 $\frac{1}{2}$ " $\times$  H  $\times$  8 $\frac{1}{4}$ " $\times$  D ..... \$150

#### MCS 3531 Soft-Touch Cassette Deck

Stereo cassette deck with soft-touch transport control and Dolby B NR. Features 5-LED peak level display meters; auto program search; metal-tape compatibility; permalloy head. 15 $\frac{3}{4}$ " $\times$  4 $\frac{1}{4}$ " $\times$  H  $\times$  8 $\frac{3}{8}$ " $\times$  D ..... \$130

### MITSUBISHI

#### DT-35 Stereo Cassette Deck

Metal tape compatible stereo cassette deck with Dolby B and C NR systems. Features FeCr/normal/-special/metal tape selector; bias test oscillator; slide-type bias-adjust control with LED bias indicators; fluorescent peak level meters; digital tape counter; feather-touch transport controls with logical interlock; record mute; memory play; read in/read out buttons for special counter memory operations; record/play timer function; output level control; MPX filter; lighted cassette compartment; pneumatically damped cassette eject. W&F 0.035% wrms; FR 30-20,000 Hz  $\pm 3$  dB with metal tape; S/N Dolby B/C on 66/74 dB; harmonic distortion 0.9%/1.0%/0.8%/0.9% metal/FeCr/special/normal tape; 18 $\frac{1}{2}$ " $\times$  11 $\frac{3}{4}$ " $\times$  D  $\times$  5 $\frac{3}{8}$ " $\times$  H ..... \$490

### NAD (USA)

#### 6050C Stereo Cassette Deck

Metal compatible stereo cassette deck with Dolby B and C NR systems, dc servo capstan motor, direct load cassette mechanism. Features dual LED peak lev-



el bargraph displays; bias, equalization, fine bias trim for normal, CrO<sub>2</sub>, metal tapes; soft-touch tape transport controls; 3-digit tape counter. W&F 0.06% weighted peak; FR  $\pm 3$  dB 40-16,000 Hz normal to 17,000 Hz CrO<sub>2</sub>, to 19,000 Hz metal tape; S/N 70 dB with Dolby C and metal tape; 16.5" $\times$  9.5" $\times$  4" $\times$  H ..... \$238

Audio terms are defined  
in the glossary on page 19.

For an explanation of abbreviations,  
turn to the list on page 22.

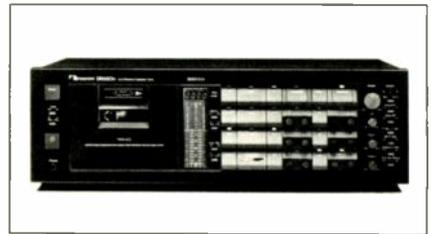
### NAKAMICHI

#### 1000ZXL Computing Cassette Deck

Front-loading computer-controlled discrete stereo cassette deck with Dolby B NR system, double-capstan transport, 3 heads. Microcomputer autoally calibrates azimuth, bias, level, equalization of any quality tape; features 4 tape memories for recording conditions obtained by computer; 15 program RAMM with 30 command memories via high-speed bidirectional search; LED status indicators. Additional features include 70/120- $\mu$ sec equalization selector; under/normal/over bias set selector; 400 Hz test-tone oscillator; quartz-controlled bias oscillator; multiplex and infasonic filter switches; dual fluorescent recording level bar-graph displays with peak hold, VU/peak switch; 2-ch mic, line input, and output-level vertical slide controls; tape/source monitoring; LED 4-digit tape counter with memory stop/play; pitch control; timer record/play with external audio timer; C-MOS logic function controls powered by motor-driven cam; direct-coupled recording and playback amplifiers, double NF equalizer circuitry; 3 microphone inputs for tri-mic recording, mic/line mixing; provision for external NR system. W&F 0.04% wrms; FR 10-25,000 Hz  $\pm 3$  dB; EIA rack-mounting; 20 $\frac{3}{4}$ " $\times$  12 $\frac{1}{16}$ " $\times$  D  $\times$  10 $\frac{1}{8}$ " $\times$  H ..... \$3,800

#### Dragon Stereo Cassette Deck

Microprocessor-controlled auto-reverse 3-head cassette deck with Dolby B and C NR systems. Features Auto Azimuth Correction system; asymmetrical dif-



fused resonance transport; Super Linear Torque direct-drive motors; auto retracting slot guides; tape-pad lifter; auto tape slack take-up; 2-speed cueing; 2-speed master fader; auto record pause; record level and bias calibration controls with 2-tone oscillator; dual-gap ferrite/sendust erase head; separate tape and equalization switches for ZX, SX, and EX cassettes; direct-coupled recording and playback amplifiers; left, right, master input levels; output level control; record mute; high-output headphone jack; defeatable infrasonic filter; 4-digit LED electronic counter with memory stop and repeat. W&F 0.019% wtd rms; FR 20-22,000 Hz  $\pm 3$  dB with ZX tape; S/N Dolby B/C on 70/72 dB at 400 Hz with 3% THD (A-wtd with ZX tape at 400 Hz, 0 dB); sep/crosstalk 37/60 dB at 1 kHz, 0 dB; 17 $\frac{3}{4}$ " $\times$  5 $\frac{3}{8}$ " $\times$  H  $\times$  11 $\frac{3}{16}$ " $\times$  D; 21 lbs ..... \$1,850

#### ZX-9 Stereo Cassette Deck

A super-tuned version of the ZX-7 where asymmetrical capstans are driven by unique Super Linear Torque direct drive motor originally developed for the \$7,000 TX-1000 turntable, which totally eliminates cogging. Electronics improved through direct coupling the playback as well as the record amplifier and upgrading capacitors still utilized. Though there are significant sonic improvements, only W&F of .022% wrms differs from ZX-7 printed min specifications ..... \$1,550

#### ZX-7 Stereo Cassette Deck

Microprocessor-controlled discrete 3-head, double-capstan stereo cassette deck with Dolby B and C NR systems. Features microprocessor-controlled transport; master fader; diffused-resonance transport; asymmetrical dual capstan; LED peak-level meters with -40 to +10 dB range; 4-digit LED tape counter; high-quality amplification with special equalizer and double-NF monitor; record mute; defeatable MPX filter; facility for optional RM-20 remote control; timer

record/play capability. Wow and flutter >0.08% weighted peak, >0.04% wrms; FR 20-20,000 Hz  $\pm$  3 dB SX and EXII, to 21 kHz ZX tape; S/N Dolby B/C on >66/>72 dB; THD <1% with SX and EXII tape, <0.8% with ZX tape;  $17\frac{1}{2}''\text{W} \times 11\frac{1}{4}''\text{D} \times 5\frac{1}{8}''\text{H}$ ; 21 lb ..... \$1,250

#### LX-5 Stereo Cassette Deck

Discrete 3-head stereo cassette deck with Dolby B and C NR systems. Features microprocessor-controlled transport; master fader; diffused-resonance transport; asymmetrical capstans; 50-dB LED peak-indicating meters; 4-digit electronic LED tape counter; bias tune control; defeatable MPX filter; record mute; facility for optional RM-20 remote controller; timer record/play capability. W&F <0.11% weighted peak, <0.06% wrms; FR  $\pm$  3 dB 20-20,000 Hz with ZX, SX, EXII tapes; S/N Dolby B/C on >64/>70 dB; THD <0.9% ZX, <0.1% SX and EXII tape;  $17\frac{1}{4}''\text{W} \times 12\frac{1}{8}''\text{D} \times 5\frac{1}{8}''\text{H}$ ; 18 lb 12 oz ..... \$850  
**LX-3.** Similar to LX-5 except 2-head design; S/N Dolby B/C on >62/>68 dB; THD <1.0% ZX, <1.2% SX and EXII tape. .... \$595

#### RX-202 Auto-Reverse Cassette Deck

Stereo cassette deck with unique mechanism for uni-directional auto reverse that turns the cassette over in 2 seconds to play or record opposite side. Manual control for flipping tape at any point. Features Dolby B and C NR; Auto Rec Standby; soft-touch transport controls; 4-digit LED tape counter; memory stop/play; vertical peak-level meters covering -30 to +7 dB; vertical output level and L/R rec level controls; 2-speed master fader. W&F <0.11% wtd peak, <0.06% wrms; frequency response 20-20,000 at -20 dB; S/N >68 dB with Dolby C, >62 with Dolby B (both A-wrms ref to 3% THD at 400 Hz with high-bias ZX tape); THD <1.0% with ZX, EXII tape, <1.2% with SX tape (both at 400 Hz at 0 dB); sep >36 dB (1 kHz, 0 dB); crosstalk >60 dB (1 kHz, 0 dB); fast-wind time 85 sec with C-60;  $17.75''\text{W} \times 5.37''\text{H} \times 10''\text{D}$ ; 19 lb 13 oz ..... \$650

#### BX-2 Stereo Cassette Deck

Microprocessor-controlled 2-head cassette deck with Dolby B and C NR system. Features 10,000-hour hyperbolic-contour laminated sendust record/play head; dual-gap erase head; cam transport incorporates 3 motors to maintain accurate and gentle tape handling; double NF circuitry incorporated in recording and playback equalizers; 4-digit LED counter with memory play; record mute; master record level control; output control; headphone jack; available in black or silver. 30-step alignment and calibrations procedure guarantees min specifications: W&F .06% wrms; FR 20-20,000 Hz  $\pm$  3 dB; THD <1.0% ZX tape; sep/crosstalk 36/60 dB;  $16\frac{1}{8}''\text{W} \times 4\frac{3}{8}''\text{H} \times 9\frac{7}{8}''\text{D}$ ; 12 lbs 2 oz ..... \$450  
**BX-1.** Similar to BX-2 without Dolby C. Available in black or silver ..... \$299

#### RM-20 Wired Remote Control

Allows remote operation of record, play, pause, stop, FF, rewind; plus reverse operation with Dragon. For LX series, ZX series, 580 series, 680 series, 700ZX, Dragon, and 1000ZXL cassette decks ..... \$50

### NIKKO

#### ND-1000C Stereo Cassette Deck

Three-head, 2-motor stereo cassette deck with computerized tape-evaluation system for auto bias, level, and sensitivity adjustment. Features source/tape monitoring; full-logic transport controls; facility for optional remote-control unit; normal/CrO<sub>2</sub>/metal tape selector; dual 12-section LED peak-level displays; output-level control; Dolby B and C noise reduction; MPX filter; auto memory stop/play function; timer record/play capability. Rack mountable with optional kit. Available in black or silver.  $17.3''\text{W} \times 9.9''\text{D} \times 4.7''\text{H}$  ..... \$630

#### ND-700II dbx Cassette Deck

Stereo cassette deck with dbx and Dolby B NR. Features memory rewind; dual 9-section LED peak-level

signal displays; power-assisted soft-touch tape-function buttons; one-button recording system; output level control; cue and review; MPX filter; 2-way dbx NR system that also features expanded dynamic range; removable cassette-compartment door. Rack mountable with optional kit. Available in black or silver.  $17.3''\text{W} \times 9.9''\text{D} \times 4.7''\text{H}$  ..... \$300

#### ND-620 Stereo Cassette Deck

Stereo cassette deck with dual-motor IC logic-control tape-transport mechanism. Compatible with normal, CrO<sub>2</sub>, and metal tape. Features dual 5-section LED peak signal displays; Dolby B NR system; ferrite 2-gap erase head; timer record/play capability; super-hard permalloy head; remote controllable with optional kit; removable cassette-compartment door. Silver.  $17.3''\text{W} \times 10.6''\text{D} \times 4.4''\text{H}$  ..... \$210

#### ND-520 Stereo Cassette Deck

Stereo cassette deck with Dolby B NR system. Features LED peak signal-level meters; cue and review; power-assisted transport controls. Silver.  $17.3''\text{W} \times 4.3''\text{H} \times 10.0''\text{D}$  ..... \$189

### ONKYO

#### Integra TA-2070 3-Head Cassette Deck

Metal-compatible 3-head stereo cassette deck with Dolby B and C NR. Features tape/source monitoring; sendust heads; brushless direct-drive 3-motor tape transport; digital tape counter that indicates elapsed or remaining time; auto Accubias; feather-touch transport controls; 2-color fluorescent signal meters; auto space button; memory stop/play; facility for optional remote-control unit. W&F 0.021% wrms; frequency response 20-16,000 Hz  $\pm$  3 dB normal, to 18 kHz CrO<sub>2</sub>, to 19 kHz metal tape; S/N no NR/Dolby B/Dolby C 60/70/80 dB with metal tape; fast-wind time 90 secs with C60 cassette;  $17\frac{1}{2}''\text{W} \times 15\frac{1}{8}''\text{D} \times 3\frac{1}{4}''\text{H}$ ; 20.9 lb ..... \$700

#### Integra TA-2066 Dolby B/C Cassette Deck

Microcomputer-controlled stereo cassette deck with Dolby B and C NR and Accubias system to set correct bias for virtually any cassette tape. Features 3 motors; 3 permalloy heads; Auto Music Control System; switchable EQ for normal, CrO<sub>2</sub>, metal tape; electronic tape counter; memory stop and play; large feather-touch transport buttons; timer recording and play; remote-control capability; available in black or silver. W&F 0.035% wrms; FR 25-16,000 Hz  $\pm$  3 dB normal, to 18 kHz CrO<sub>2</sub>, to 20 kHz metal tape; S/N (no NR) 60 dB with metal tape, with Dolby B, NR is 10 dB above 5 kHz and 5 dB at 1 kHz, with Dolby C, NR is 20 dB at 5 kHz;  $17\frac{1}{2}''\text{W} \times 14\frac{3}{8}''\text{D} \times 4\frac{3}{8}''\text{H}$ ; 14.8 lbs ..... \$480

#### Integra TA-R77 Auto-Reverse Cassette Deck

Microcomputer-controlled stereo cassette deck with quick reverse (changes tape direction in less than 1 sec). Features Dolby B and C; 3 transport modes (one side, both sides, or continuous); Auto Music Control System to sample selections; sendust record/play head; auto space rec mute; large feather-touch trans-



port buttons; electronic tape counter; 3 DC servo motors; compatible with normal, CrO<sub>2</sub>, and metal tape; available in black or silver. W&F 0.05% wrms; FR 30-15,000 Hz  $\pm$  3 dB normal, to 17 kHz CrO<sub>2</sub>, to 18 kHz metal tape; S/N (no NR) 60 dB with metal tape, with Dolby B, NR is 10 dB above 5 kHz and 5 dB at 1 kHz, with Dolby C, NR is 20 dB at 5 kHz;  $17\frac{1}{2}''\text{W} \times 14\frac{3}{8}''\text{D} \times 4\frac{3}{8}''\text{H}$ ; 14.8 lbs ..... \$400

#### TA-W88 Dubbing Stereo Cassette Deck

High-speed dubbing stereo cassette deck with Dolby

B NR system. Features one-touch recording; continuous/simultaneous playback modes; microphone mixer; dc servo-controlled motors; hard permalloy record/play heads; feather-touch transport controls; record mute; LED level meters; timer standby mode; full auto stop; facility for remote control. W&F 0.06% wrms; FR  $\pm$  3 dB 30-14,000 Hz normal, to 15 kHz CrO<sub>2</sub>, to 16 kHz metal tape; S/N 68 dB with Dolby on metal tape; fast-wind time 90 secs with C60 cassette;  $16\frac{1}{2}''\text{W} \times 10\frac{3}{8}''\text{D} \times 4\frac{1}{8}''\text{H}$ ; 14.3 lb ..... \$380

#### TA-2055 3-Motor Cassette Deck

Metal-compatible stereo cassette deck with 3-motor direct-drive system, C90/C60/C46 tape-length selectors, digital real-time counter. Features display of remaining or consumed tape time; 5-sec automatic space on record; hard permalloy record/play head; Accubias to fine tune recording bias for any type of tape; Dolby B and C NR systems; feather-touch transport controls; memory stop/play; 2-color LED peak level meters; timer record/play; facility for optional remote control. W&F 0.035% wrms; FR  $\pm$  3 dB 20-15,000 Hz normal, to 18 kHz CrO<sub>2</sub>, to 19 kHz metal tape; S/N no NR/Dolby B/Dolby C 60/70/80 dB; fast-wind time 90 secs with C60 cassette;  $16\frac{1}{2}''\text{W} \times 14\frac{1}{8}''\text{D} \times 3\frac{1}{8}''\text{H}$ ; 14.8 lb ..... \$360

#### TA-2044 Integra Cassette Deck

Three-motor stereo cassette deck with full logic-control silent mechanism. Features Dolby B and C; permalloy head; Auto Music Control System; auto space rec mute; 10-part LED meters; timer stand-by; compatible with normal, CrO<sub>2</sub>, metal tape. W&F 0.04% wrms; FR 30-15,000 Hz  $\pm$  3 dB normal, to 16 kHz CrO<sub>2</sub>, to 17 kHz metal tape; S/N (no NR) 60 dB with metal tape, with Dolby B, NR is 10 dB above 5 kHz and 5 dB at 1 kHz, with Dolby C, NR is 20 dB at 5 kHz; min input level 50 mV line; fast forward/rewind time 90 seconds with C60 cassette  $17\frac{1}{2}''\text{W} \times 14\frac{1}{8}''\text{D} \times 4\frac{3}{8}''\text{H}$  ..... \$300

#### TA-2035 Dolby B/C Cassette Deck

Microcomputer-controlled 3-motor stereo cassette deck with Dolby B and C NR. Features auto music search; auto space on record; auto tape selection; hard permalloy record/play head; Accubias fine bias tuning; timer switch; full auto stop; 2-color LED peak-level displays; feather-touch transport controls; facility for optional remote control. W&F 0.045% wrms; FR  $\pm$  3 dB 30-14,000 Hz normal, to 16 kHz CrO<sub>2</sub>, to 17 kHz metal tape; S/N no NR/Dolby B/Dolby C 60/70/80 dB; fast-wind time 90 secs with C60 cassette;  $16\frac{1}{2}''\text{W} \times 10\frac{3}{8}''\text{D} \times 3\frac{1}{8}''\text{H}$  ..... \$300

#### TA-2033 Dolby B/C Cassette Deck

Stereo cassette deck with Dolby B and C NR. Features Auto Music Control System; auto tape selector; full logic-control mechanism; hard permalloy head; 7-part LED meters; timer stand-by; DC servo motor; compatible with normal, CrO<sub>2</sub>, metal tapes. W&F 0.05% wrms; FR 20-14,000 Hz  $\pm$  3 dB normal, to 15 kHz CrO<sub>2</sub>, to 16 kHz metal tape; S/N (no NR) 60 dB with metal tape, with Dolby B, NR is 10 dB above 5 kHz and 5 dB at 1 kHz, with Dolby C, NR is 20 dB at 5 kHz; min input level 50 mV line; fast-wind time 90 secs with C60 tape.  $16\frac{1}{2}''\text{W} \times 10\frac{3}{8}''\text{D} \times 4\frac{3}{8}''\text{H}$ ; 10.6 lbs ..... \$250

**TA-2022.** Similar to TA-2033 except lacks Auto Music Control System and auto tape selector. Also available in black ..... \$200

#### TA-2015 Dolby B/C Cassette Deck

Computer-controlled 3-motor stereo cassette deck with Dolby B and C NR systems. Features auto music search system; auto space in record; auto tape detection system; hard permalloy record/play head; Accubias fine bias tuning; timer switch; full auto stop; 2-color LED peak-level meters; feather-touch transport controls; facility for optional remote control. W&F 0.06%; FR  $\pm$  3 dB 30-14,000 Hz normal, to 15 kHz CrO<sub>2</sub>, to 16 kHz metal tape; S/N ratio no NR/Dolby B/Dolby C 58/68/78 dB; fast-wind time 90 secs with C60 cassette;  $16\frac{1}{2}''\text{W} \times 10\frac{3}{8}''\text{D} \times 4\frac{1}{8}''\text{H}$ ; 10.1 lb ..... \$185

## PIONEER

## CT-90R Cassette Deck

Computer-controlled cassette deck with 3-motor direct-drive transport and auto-reverse record and play. Features quick reverse; index scan; music search/ repeat; blank search; blank skip; auto bias, level, EQ; auto tape selector; record mute; LED level meters; Dolby B/C switchable NR system; digital electronic real-time tape counter (indicates minutes, seconds, even in fast forward and rewind); timer-assisted record or playback. FR 20-20,000 Hz (metal), S/N 78 dB with Dolby C, 68 dB with Dolby B, 58 dB Dolby off; W&F 0.03% wrms.  $16\frac{1}{2}'' \times W \times 13\frac{3}{4}'' \times D \times 4\frac{3}{4}''$  H; 19 lbs ..... \$520

CT-70R. Similar to CT-90R except no real-time counter or auto bias, level, EQ. FR 25-19,000 Hz (metal). 17 lbs 6 oz ..... \$420

JT-216 Wired Remote Controller. For use with CT-90R and CT-70R ..... \$50

CT-50R. Similar to CT-70R except 2-motor tape transport, auto space record mute, no index scan, blank search, or music repeat. FR 30-17,000 Hz (metal), W&F 0.05% wrms.  $16\frac{1}{2}'' \times W \times 10\frac{1}{4}'' \times D \times 4\frac{3}{4}'' \times H$ . 13 lbs 9 oz ..... \$310

JT-217 Wired Remote Controller. For use with CT-50R ..... \$50

CT-40. Similar to CT-50R with 2-motor tape transport, skip search (9 cuts forward and reverse), music search, record mute, LED level meters, Dolby B/C switchable NR system, electronic tape counter. FR 25-17,000 Hz (metal), S/N Dolby C: 77 dB; Dolby B: 67 dB; Dolby off: 57 dB, W&F 0.04% wrms,  $16\frac{1}{2}'' \times W \times 11'' \times D \times 4'' \times H$ . 10 lbs 8 oz ..... \$260

CT-30. Similar to CT-40 except no skip search, music search, record mute or electronic tape counter. 11 lbs 9 oz ..... \$220

CT-20. Similar to CT-30 except no Dolby C. S/N - Dolby B: 67 dB; Dolby off: 57 dB. 11 lbs ..... \$175

CT-10. Similar to CT-20 except soft-touch operation, 1-motor tape transport. FR 25-16,000 Hz (metal), W&F 0.05% wrms.  $16\frac{1}{2}'' \times W \times 9\frac{1}{4}'' \times D \times 4\frac{3}{4}'' \times H$ ; 11 lbs 5 oz ..... \$150

## CT-1040W Double Cassette Deck

Double cassette deck for high-speed dubbing with one-button synchro start, relay play, skip search (9 cuts forward and reverse), music search (playback deck only), auto tape selector, record mute, LED level meters, Dolby B NR system. FR 25-17,000 Hz (metal), S/N Dolby B, 67 dB; Dolby off, 57 dB, W&F 0.45% wrms.  $16\frac{1}{2}'' \times W \times 11\frac{1}{4}'' \times D \times 3\frac{1}{2}'' \times H$ . 17 lbs. 9 oz ..... \$375

## CT-X9 Cassette Deck

Shelf-sized computer-controlled cassette deck with 3-motor direct-drive transport, auto-reverse record and play, auto repeat, music search, index scan, blank skip, Dolby B/C, one-touch recording, ribbon sendust head, auto function, synchro copying with PL-X9 turntable. FR 30-17,500 Hz (metal), S/N 77 dB with Dolby C.  $3\frac{3}{4}'' \times H \times 12\frac{1}{2}'' \times W \times 8\frac{1}{4}'' \times D$ ; 11 lbs 12 oz ..... \$380

## CT-X8W Double Cassette Deck

Shelf-sized double cassette deck for double-speed copying. Features one-touch recording; Dolby B; feather-touch logic controls; auto function; synchro copying with PL-X9 turntable. FR 30-17,000 Hz (metal), S/N 64 dB with Dolby B.  $6\frac{1}{4}'' \times H \times 12\frac{1}{2}'' \times W \times 7\frac{1}{4}'' \times D$ ; 14 lbs 8 oz ..... \$380

## CT-X6 Full-Logic Cassette Deck

Shelf-sized full-logic cassette deck with music search, one-touch recording, Dolby B, auto function, synchro copying with PL-X9 turntable. FR 40-15,000 Hz (metal), S/N 67 dB with Dolby B.  $3\frac{3}{4}'' \times H \times 12\frac{1}{2}'' \times W \times 8\frac{1}{4}'' \times D$ ; 9 lbs ..... \$190

## REALISTIC

## SCT-42 Auto Reverse Cassette Deck

Stereo auto-reverse cassette deck with programmable memory. Features rec mute, separate sliding record level controls, digital fluorescent tape counter; two

mic jacks; lighted mode selector; solenoid logic control; auto metal/CrO<sub>2</sub>/normal bias selector; 2-color, 14-segment fluorescent peak level meter; Dolby B and C NR. FR 45-18,000 Hz  $\pm 3$  dB (metal), 45-17,000 Hz CrO<sub>2</sub>, 45-17,000 Hz normal; W&F 0.04% wrms; S/N 75 dB Dolby C; 67 dB Dolby B ref 3.0% distortion, A-weighted, metal tape; distortion 1.0% 3rd harmonic;  $4\frac{3}{8}'' \times W \times 17\frac{1}{8}'' \times H \times 11\frac{1}{16}'' \times D$  ..... \$300

## SCT-500A Stereo Cassette Deck

Full logic deck with Dolby B and C, auto search, metal/CrO<sub>2</sub>/normal bias pushbuttons, dual concentric record level controls, mic/line input selector. Features feather touch solenoid controls; 2 color, 8 segment LED level meter; FR 25-17,000 Hz  $\pm 3$  dB metal, 25-16,000 Hz CrO<sub>2</sub>, 25-16,000 Hz normal; W&F 0.05% wrms; S/N 75 dB Dolby C; 66 dB Dolby B ref 3.0% distortion, A weighted, metal tape; distortion 1.0% 3rd harmonic;  $4\frac{3}{8}'' \times W \times 16\frac{1}{16}'' \times H \times 9\frac{13}{16}'' \times D$  ..... \$220

## SCT-40 Stereo Cassette Deck

Deck with solenoid logic controlled operation, separate right and left record level controls, metal/CrO<sub>2</sub>/normal bias pushbuttons, 3 digit tape counter; LED record, pause and power indicators MPX filter adjustable output, mic/line input selector. Features auto search; Dolby B and C NR; 2 color, 8 segment LED level meter; FR 27-17,000 Hz  $\pm 3$  dB metal; 27-16,000 Hz CrO<sub>2</sub>, 27-16,000 Hz normal; W&F 0.05% wrms; S/N 74 dB Dolby C; 65 dB Dolby B ref 3.0% distortion, A weighted, metal tape; distortion 1.0% 3rd harmonic;  $4\frac{3}{8}'' \times W \times 16\frac{1}{16}'' \times H \times 9\frac{13}{16}'' \times D$  ..... \$180

## REVOX

## Revox B710 MKII Stereo Cassette Deck

Microprocessor-controlled stereo cassette deck with Dolby B and C NR system. Features peak level bargraph meters with up to +8 dB indication; 2 quartz-



controlled DD capstan motors; 2 servo-controlled reel motors; unique hinged headblock for absolute stability in azimuth plane; die-cast aluminum alloy transport chassis; mic/line mixing; internal programmable 24-hour clock for stop/start record/play timing; headphone volume control; auto tape type sensing; auto start of oxide cueing; MPX filter. W&F 0.035% wrms; FR 30-20,000 Hz  $\pm 2\frac{1}{3}$  dB; S/N > 72 dB IEC A weighted at 3% distortion, Dolby C on ... \$1,999

## SAE

## C101 Stereo Cassette Deck

Three-head 2-motor Computer Direct-Line\* stereo cassette deck with Dolby B and C. Features bias and level adjust; 2 test tones for adjusting bias. FR 24-18,000  $\pm 2.5$  dB with type I tape, 24-20,000  $\pm 2.5$  dB with type II, 24-20,000  $\pm 2$  dB with type IV; S/N (Dolby off) 52 dB type I, 53 dB type II, 55 dB type IV; S/N (Dolby B) type I/II/IV tape 62/64/65 dB; S/N (Dolby C) type I/II/IV tape 70/72/73 dB; W&F < 0.9% all tape types. Rack mountable ..... \$650

## C2 Stereo Cassette Deck

Stereo cassette deck with Dolby B and C. Features full-logic transport controls; Cam-Actuated Transport for smooth engagement of all functions; auto program search; fluorescent level meters; memory, repeat functions; remote timer play/record; facility for optional full-function remote control ..... \$299

Remote One. Remote control unit for C2 and C101 ..... \$50

## SANSUI

## D-970B Stereo Cassette Deck

Microprocessor-controlled 3-head cassette deck with auto Compu-Trec bias, EQ, sens adjustments, Dolby B and C NR systems. Features direct-drive capstan; Dyna-Scrape filter with hold-back servo tension mechanism; diamond-differential dc equalizer, dc amplifier; ferrite heads with separate record and play gaps; normal/real-time digital counter; LED peak-level meters; auto muting; timer-controlled functions; auto tape lead-in. W&F 0.025% wrms; FR 30-22,000 Hz  $\pm 3$  dB with metal tape; S/N 81 dB with metal tape, Dolby C on ..... \$680

## D-990R Auto-Reverse Cassette Deck

Quick auto-reverse microprocessor-controlled cassette deck with Dolby B and C plus dbx NR. Features built-in 5-band graphic equalizer; Introskip Play; blank search; peak level meter; pitch control ( $\pm 5\%$ ); electronic 4-digit tape counter and real-time display; 15-selection Auto Music Program Search; quiet pause switch; 2 motors; 2 heads; wired remote control. W&F 0.04%; S/N 78 dB with Dolby C; FR 20-19,000 Hz with metal tape. Silver ..... \$650

## D-770R Stereo Cassette Deck

Auto-reverse 3-motor deck with dual capstan drive, Auto Music Program Search for up to 15 selections. Features 4-digit normal/real-time electronic counter; Dolby B and C NR; 4-second auto rec mute; dual memory function; available in black (D-770RB) or silver (D-770RS) finish. W&F 0.048% wrms; FR 35-18,000 Hz  $\pm 3$  dB with metal tape; S/N 80 dB with metal tape, Dolby C on ..... \$600

## D-570 Stereo Cassette Deck

Direct-drive, full-logic 3-head stereo cassette deck with Dolby B and C NR. Features auto music program search; tape lead-in facility that automatically bypasses leader; roller-coupled holdback tension; Compu-Edit capability; dual memory function; 4-digit fluorescent tape/real-time counter; 12-segment peak-indicating signal meters; timer record/play capability; semiauto bias control. W&F 0.03% wrms; FR 30-21,000 Hz  $\pm 3$  dB with metal tape; S/N no NR/Dolby B/Dolby C 60/70/80 dB;  $16\frac{1}{16}'' \times W \times 12\frac{1}{4}'' \times D \times 4\frac{3}{8}'' \times H$ ; 14.3 lb ..... \$540

D-590R. Similar to D-570 except has auto reverse ..... \$500

D-370. Similar to D-570 except has 2 heads. Available in black (D-370B) or silver (D-370S) finish. Frequency response 30-18,000 Hz  $\pm 3$  dB ..... \$420

## D-W9 Double-Recording Cassette Deck

Stereo cassette deck with two complete transports capable or recording simultaneously (or sequentially) on command. Features full-logic controls; 15-selection Random Music Program Search; 3-function memory; Dolby B and C; auto bias and EQ; 4-sec record mute; auto leader bypass; timer record and playback capability; 6-segment peak level display; auto level control. FR 20-19,000 Hz; W&F < 0.04% wrms; S/N ratio 78 dB with Dolby C.  $16\frac{1}{16}'' \times W \times 4\frac{7}{16}'' \times H \times 12\frac{1}{16}'' \times D$ . 14 lbs ..... \$450

## D-77R Auto-Reverse Cassette Deck

Bidirectional record/play stereo cassette deck with Compu Edit to make recording easy with Sansui turntables. Features Auto Level Control; Auto Music Program Search; IC-controlled transport; Compu Selector system; Dolby B. Available in black (D-77RB) or silver (D-77RS). W&F 0.05% wrms; frequency response 30-17,000 Hz  $\pm 3$  dB; S/N ratio 68 dB with Dolby on ..... \$320

D-77F. Single-direction version of D77R. Available in black (D-77FB) or silver (D-77FS) finish ..... \$230

## D-55M Stereo Cassette Deck

Stereo cassette deck with Soft-Touch transport controls; Auto Level Control. Features Dolby B NR system; available in matte black (D-55MB) or silver (D-

55MS). W&F 0.07% wrms; FR 30-15,000 Hz  $\pm$  3 dB ..... \$190

#### D-99D Dubbing Cassette Deck

Dual-transport stereo cassette deck with Compu-Edit for synchronization with some Sansui turntables. Features separate record/play and play-only transports; Auto Music Program Search; play one transport while recording on other; full IC-logic transport controls; auto level control; Compu-Selector for one-touch operation with some Sansui amplifiers/receivers; provision for external timer operation; available in black (D-99DB) or silver (D-99DS) ..... \$350

### SANYO

#### RDW310 Double Cassette Deck

Double stereo cassette deck with high-speed (2.5 $\times$ ) tape dubbing. Features Auto Music Select; metal capability; Dolby B; LED peak level meters; rec mute; auto stop; air-damped doors; mic/line mixing; DC servo motor; soft-touch controls. FR 40-17,000 Hz (metal), 40-16,000 Hz (chrome), 40-13,000 Hz (normal); W&F 0.055% wrms; S/N (with metal tape) 57 dB (Dolby off), 65 dB (Dolby on); 16.5" W  $\times$  4.2" H  $\times$  6.5" D ..... \$200

#### RDF70 Dolby B/C Cassette Deck

Stereo cassette deck with Dolby B and C NR. Features Auto Music Select; dual-motor transport; auto stop; soft-touch logic controls; shows tape used, elapsed time, minutes remaining; 9-part LED meters; rec mute; adjustable bias; LED function indicators; high-sensitivity mic inputs. FR 30-18,000 Hz (metal), 30-17,000 Hz (chrome), 30-13,000 Hz (normal); W&F 0.04% wrms; S/N (with metal tape) 57 dB (Dolby off), 77 dB (Dolby C); 16.5" W  $\times$  4.2" H  $\times$  8.5" D ..... \$190

#### RDR60 Auto-Reverse Cassette Deck

Stereo cassette deck with auto reverse and Dolby B and C NR. Features open-loop dual-capstan tape transport; programmable operation; auto bias and EQ; Auto Music Select; soft-touch controls; 7-part LED meters; adjustable bias; high-sensitivity mic inputs; headphone jack. FR 30-18,000 Hz (metal), 30-16,000 Hz (chrome), 30-14,000 Hz (normal); W&F 0.05% wrms; S/N (with metal tape) 59 dB (Dolby off), 77 dB (Dolby C); 16.5" W  $\times$  4.5" H  $\times$  10.5" D ..... \$180

#### RDF50 Dolby B/C Cassette Deck

Stereo cassette deck with Dolby B and C NR. Features Auto Music Select; metal compatibility; full-logic soft-touch controls; 16-part LED meters; adjustable bias; auto stop; high-sens mic inputs; air-damped cassette door; DC servo motor. FR 30-18,000 Hz (metal), 30-16,000 Hz (chrome), 30-14,000 Hz (normal); W&F 0.05% wrms; S/N (with metal tape) 59 dB (Dolby off), 77 dB (Dolby C); 16.5" W  $\times$  4.5" H  $\times$  10.5" D ..... \$170

#### RDS40 Time-Display Cassette Deck

Stereo cassette deck displays tape used, elapsed time, and time remaining. Features Dolby B and C NR; Auto Music Select; power-assisted controls; 7-part LED meters; rec mute; adjustable bias; LED function indicators; high-sens mic inputs; auto stop; air-damped cassette door. FR 30-18,000 Hz (metal), 30-17,000 Hz (chrome), 30-13,000 Hz (normal); W&F 0.05% wrms; S/N (with metal tape) 57 dB

(Dolby off), 77 dB (Dolby C); 16.5" W  $\times$  4.2" H  $\times$  8.6" D ..... \$150

#### RDW22 Double Cassette Deck

Double cassette deck with synchronized playback between the 2 tape transports. Features Dolby B NR; compatibility with normal, chrome, and metal tape; auto stop; permalloy record/play head; dual 5-seg-



ment LED meters. W&F 0.06%; S/N 61 dB; FR 40-16,000 Hz with metal tape ..... \$150

#### RDS30 Dolby B/C Cassette Deck

Stereo cassette deck with Dolby B and C NR. Features Auto Music Select; metal compatibility; power-assisted controls; 7-part LED meters; adjustable bias; LED function indicators; auto stop; air-damped cassette door. FR 40-16,000 Hz (metal), 40-15,000 Hz (chrome), 40-13,000 Hz (normal); W&F 0.06% wrms; S/N (with metal tape) 57 dB (Dolby off), 77 dB (Dolby C); 16.5" W  $\times$  4.2" H  $\times$  7.2" D ..... \$130

#### RDS23 Dolby B Cassette Deck

Stereo cassette deck with Dolby B NR and Auto Music Select. Features logic interlock power-assisted soft-touch controls; metal compatibility; one-touch record; permalloy head; LED function indicators; high-sens mic inputs; auto stop; air-damped cassette door; DC servo motor. FR 30-17,000 Hz (metal), 30-16,000 Hz (chrome); W&F 0.05% wrms; S/N (with metal tape) 64 dB (Dolby on); 16.6" W  $\times$  4.4" H  $\times$  9.8" D ..... \$100

#### RDS22 Dolby B Cassette Deck

Stereo cassette deck with Dolby B and soft-touch transport controls. Features single-motor DC servo drive; metal-tape compatibility; 5-part LED meters; auto stop; mic and line inputs; headphone jack; air-damped cassette door. FR 40-16,000 Hz (metal); W&F 0.06% wrms; S/N (with metal tape) 61 dB (Dolby on); 16.5" W  $\times$  4.9" H  $\times$  7.2" D ..... \$90

#### RDS11 Dolby B Cassette Deck

Stereo cassette deck with Dolby B NR and single-motor DC servo drive. Features 5-part LED meters; auto stop; air-damped cassette door; headphone jack; mic and line inputs; metal compatibility. FR 40-15,000 Hz (metal); W&F 0.08% wrms; S/N 60 dB (Dolby on); 16.5" W  $\times$  4.9" H  $\times$  7.2" D ..... \$80

#### RD7 Dolby B Cassette Deck

Stereo cassette deck with Dolby B NR and metal-tape compatibility. Features 5-part LED meters; headphone jack; 2 mic inputs. FR 40-15,000 Hz; W&F 0.08% wrms; S/N 54 dB (Dolby off); 11.8" W  $\times$  5.2" H  $\times$  7.2" D ..... \$70

### SCOTT

#### 619DB Metal-Compatible Cassette Deck

Stereo cassette deck features Dolby B; 2-color LED

peak program meters; soft-touch controls; cue/-review; slide-type record level and balance controls; record mute; 3 tape type selections; LED function indicators; 3 digit tape counter; cassette back lighting; high torque DC EG motor; permalloy head; dual-gap erase head. FR 25-17,000 Hz (metal); S/N with Dolby 66 dB; W&F 0.045%; 4 $\frac{1}{2}$ " H  $\times$  17" W ..... \$200

#### 659DA Auto-Reverse Cassette Deck

Metal-compatible cassette deck features Dolby B and C, auto-reverse mechanism; 2-color LED peak program meters; forward and reverse play modes; soft touch controls; cue/-review; separate left and right ch record level controls; record mute; 3 tape selections; LED function indicators; 3 digit tape counter; cassette back lighting; mic inputs; headphone jack; high torque DC EG motor; Dynalloy head; dual-gap erase head; FR 25-17,000 Hz (metal); S/N with Dolby 74 dB; W&F 0.04%; 4 $\frac{1}{2}$ " H  $\times$  17" ..... \$280

#### 639DC Metal Compatible Cassette Deck

Stereo cassette deck features Dolby B and C; 2-color LED peak program meters; soft-touch controls; cue/-review; slide-type record level and balance controls; record mute; 3 tape selections; LED function indicators; 3 digit tape counters; cassette back lighting; mic inputs; headphone jack; high torque DC EG motor; permalloy head; dual-gap erase head; mic inputs; headphone jack. FR 25-17,000 Hz (metal); S/N with Dolby 74 dB; W&F 0.04%; 4 $\frac{1}{2}$ " H  $\times$  17" ..... \$230

### SHARP

#### RT-4040 Double Cassette Deck

Double cassette deck with high-speed (3 $\frac{1}{4}$  ips) dubbing to copy tapes in half usual time. Features dubbing level scale; Auto Program Search System; Dolby NR; rec mute; compatible with metal, CrO<sub>2</sub>, normal tapes; timer standby; mic mixing in dubbing mode and tape 1 mixing; frequency generator servo motor in each transport; 1-touch dubbing; monitoring during recording; VU meter switchable for either transport; soft-touch logic control. W&F 0.048% wrms; FR 30-19,000 Hz  $\pm$  3 dB metal, to 17 kHz CrO<sub>2</sub>, to 16 kHz normal tape; S/N Dolby off/on 57/67 dB. 16 $\frac{1}{16}$ " W  $\times$  11 $\frac{1}{4}$ " D  $\times$  4 $\frac{7}{8}$ " H; 12.8 lb ..... \$330

#### RT-350 Auto-Reverse Cassette Deck

Stereo cassette deck with Dolby B and C NR and auto reverse. Features full-logic control; Auto Program Search System; Intro-scan; Blank Tape Pass to skip blanks > 30 sec; auto tape selector for metal, CrO<sub>2</sub>, normal tapes; 2-color LED peak-level meters. W&F 0.07% wrms; FR 40-15,000 Hz  $\pm$  3 dB metal, 30-13,000 CrO<sub>2</sub>, 40-12,000 normal tape; S/N Dolby off 57 dB, with Dolby B up 10 dB over 5 kHz, with C up 20 dB 1-10 kHz. 16 $\frac{1}{16}$ " W  $\times$  9 $\frac{1}{8}$ " D  $\times$  4 $\frac{1}{8}$ " H; 12.8 lb ..... \$330

#### RT-300 Dolby B and C Cassette Deck

Solenoid full-logic feather-touch transport stereo cassette deck with Dolby B and C NR systems. Features slim design; APSS; metal-tape capability; normal/-CrO<sub>2</sub>/metal tape selector; 2-color 8-LED peak signal level displays; soft eject; full auto stop; 17" W  $\times$  9 $\frac{1}{4}$ " D  $\times$  4" H ..... \$200

#### RT-250 Full-Logic Cassette Deck

Solenoid full-logic feather-touch transport stereo cassette deck with APSS and Dolby B and C. Features metal-tape capability; 2-color LED peak signal-level meters; soft eject; normal/CrO<sub>2</sub>/metal tape selector; electronically controlled dc motor. W&F 0.07% wrms; FR  $\pm$  3 dB 40-14,000 Hz metal, to 13 kHz CrO<sub>2</sub>, to 12.5 kHz normal tape; S/N Dolby off/on 52/62 dB. 15 $\frac{1}{8}$ " W  $\times$  9" D  $\times$  4" H; 6.9 lb ..... \$150

#### RT-150 Soft-Touch Cassette Deck

Soft-touch stereo cassette deck with Dolby B and C. Compatible with metal, CrO<sub>2</sub>, and normal tape. Features rewind auto-play; dual 5-part LED peak signal-level meters; independent left/right record-level controls. W&F 0.07% wrms; S/N 72 dB with Dolby C. 390 mm W  $\times$  245 mm D  $\times$  110 mm H ..... \$130

## NOTICE TO READERS

Prices of items described are manufacturers' suggested prices only and are subject to change without notice. Actual selling prices are determined by the dealers.

**RT-100 Low-Profile Cassette Deck**

Low-profile stereo cassette deck with metal-tape capability and Dolby B NR. Features 10-LED peak signal level displays; electronically controlled dc motor; normal/CrO<sub>2</sub>/metal tape selector soft eject; hard permalloy record/play head. W&F 0.1% wrms; FR  $\pm 3$  dB 40-13,000 Hz metal, to 12 kHz CrO<sub>2</sub>, to 11 kHz normal tape; S/N Dolby off/on 52/62 dB. 15 $\frac{1}{4}$ " W  $\times$  8 $\frac{1}{2}$ " D  $\times$  4 $\frac{1}{4}$ " H; 5.5 lb. .... \$110

**SHERWOOD****S-6000 CP 3-Head Cassette Deck**

Stereo cassette deck with 3 heads, Dolby B and C NR. Features sendust tape heads; normal/CrO<sub>2</sub>/metal tape capability; fine bias adjust control; switchable MPX filter; microprocessor-controlled soft-touch transport. W&F 0.05% wrms; FR 30-21,000 Hz  $\pm 3$  dB with metal tape; S/N > 77 dB with Dolby C; THD 3%; 17 $\frac{1}{2}$ " W  $\times$  15 $\frac{1}{2}$ " D  $\times$  4 $\frac{3}{8}$ " H. .... \$400

**S-450 CP Dolby B/C Cassette Deck**

Microprocessor-controlled cassette deck with Dolby B and C. Features Auto Music Selection; Index Scan; real-time counter; elapsed-time indicator; auto rewind, repeat, replay between selected points; sendust heads; fine bias adjust. W&F < 0.06% wrms; FR 30-19,000 Hz  $\pm 1/3$  dB. 17 $\frac{1}{2}$ " W  $\times$  15 $\frac{1}{2}$ " D  $\times$  4 $\frac{3}{8}$ " H. .... \$300

**S-250 CP Dolby B/C Cassette Deck**

Metal-capable stereo cassette deck with Dolby B and C NR. Features Dynalloy tape heads; normal/CrO<sub>2</sub>/metal tape selector; soft-touch transport controls; 12-segment LED level meters. W&F < 0.06% wrms; FR 30-19,000 Hz  $\pm 1/3$  dB; S/N > 76 dB with Dolby C; THD 3%; 17 $\frac{1}{2}$ " W  $\times$  15 $\frac{1}{2}$ " D  $\times$  4 $\frac{3}{8}$ " H. .... \$230

**S-150 Stereo Cassette Deck**

Metal-compatible cassette deck with Dolby B NR. Features 7-part LED meters; pushbutton selection of metal, CrO<sub>2</sub>, normal bias and EQ; soft-touch controls; backlit cassette well; LED indicators for pause, play, record; Dynalloy record/play head; DC motor. FR 30-16,000 Hz  $\pm 3$  dB; S/N 67 dB with CrO<sub>2</sub> tape (Dolby on). 17 $\frac{1}{2}$ " W  $\times$  13 $\frac{1}{2}$ " D  $\times$  4 $\frac{3}{8}$ " H. .... \$200

**S-250 CP Stereo Cassette Deck**

Metal-capable stereo cassette deck with Dolby B and C NR systems. Features Dynalloy tape head; normal/CrO<sub>2</sub>/metal tape selector; soft-touch transport controls; 12-segment LED level meters. W&F < 0.06% wrms; FR 30-19,000 Hz  $\pm 1/3$  dB; S/N > 76 dB with Dolby C; THD 3%; 17 $\frac{1}{2}$ " W  $\times$  15 $\frac{1}{2}$ " D  $\times$  4 $\frac{3}{8}$ " H. .... \$230

**SONY****TC-D5M Portable Cassette Deck**

Pro-quality portable cassette deck with disk drive transport. Operates from 3 power sources: batteries, 12-V car battery (with optional DCC-127AW adapter) and ac outlets (with optional AC-61 adapter). Features large VU meters with +6 dB LED peak indication, battery check position, and 10-sec illumination; independent L/R record-level controls; switchable record-level limiter; switchable mic attenuator; built-in monitor speaker; sendust and ferrite record/playback heads; dc-to-dc converter power supply; coreless dc servomotor; Dolby B NR; direct-coupled playback head amp; 4-position tape selector; 4-gap erase head. W&F 0.06% wrms  $\pm 0.17$  (DIN 45507); FR ( $\pm 3$  dB, re -20 dB) 30-17,000 Hz metal and FeCr, 30-15,000 Type II (Sony UCX), 30-14,000 Type I (Sony SHF); S/N (re 3% THD, peak-weighted): with Dolby NR off, 58 dB metal, 59 dB FeCr, 64 dB Type II (Sony UCX), 53 dB (SHF), with Dolby NR on, 65 dB metal, 66 dB FeCr, 64 dB UCX, 64 dB SHF; THD at 1 kHz (re 0 dB record level) 1.0% metal and Type II; crosstalk 60 dB at 1 kHz between tracks; sep 35 dB at 1 kHz between chs; 9 $\frac{1}{2}$ "  $\times$  1 $\frac{1}{4}$ "  $\times$  6 $\frac{1}{8}$ "; 3 lbs, 12 oz. .... \$780

**TC-FX1010 3-Head Cassette Deck**

Self-monitoring 3-head computerized stereo cassette deck with audio signal processor IC for feather-touch control of all functions, settings. Features self-monitoring head that sets record levels for min distortion; multifunction memory for storing tape settings, calibration of up to 4 different types of tape; Dolby B and C NR; independent-suspension sendust and ferrite record, play/monitor head; closed-loop dual-capstan drive system with BSL capstan and dc reel motors; concentrated display that includes electronic peak program meters, linear real-time tape counter, record-level setting guides; auto tape selection system for all types of tape, including metal; auto play; memory play/stop; auto-space record mute; memory backup system; dc amp, direct-coupled play head amplifier; facility for optional remote control. W&F 0.04% wrms; frequency response 25-18,000 Hz  $\pm 3$  dB; S/N 60 dB A-weighted, Dolby off. .... \$650

**TC-K555 2-Motor Cassette Deck**

Three-head, 2-motor stereo cassette deck with independent suspension sendust and ferrite record and playback heads. Features closed-loop dual-capstan dc servo belt-drive transport system; BSL capstan, dc reel motors with solenoid logic feather-touch transport controls; fine-tuning bias control for Type I tape, plus positions for Types II, III, and IV tapes; Dolby B and C NR; auto-space record mute; auto play; memory stop/play; concentrated display that includes electronic peak program meter, linear real-time tape counter, record setting guides; provision for optional remote control. W&F 0.04% wrms; FR 30-18,000 Hz  $\pm 3$  dB with Type IV tape; S/N 60 dB A-weighted, Dolby off. .... \$450  
RM-50. Wired remote control. .... \$55  
RM-80. Wireless infrared remote control. .... \$120  
RM-44. Full system wireless remote control for use with selected Sony RC-capable products. .... \$150  
RM-65. Recording synchronizer for use with selected Sony turntables. .... \$25

**TC-FX77 Dolby B/C Cassette Deck**

Stereo cassette deck with Dolby B and C noise-reduction systems, 2 motors. Features dc servo belt-drive system; noncrystalline Laser-Amorphous record/play head for greater dynamic range; feather-touch full-logic solenoid transport controls; concentrated display that includes electronic peak program meters, linear real-time tape counter, 9-selection Auto Music Sensor/auto repeat feature, 4-position tape selector (includes metal); auto play; memory play/stop; auto-space record mute. W&F 0.04% wrms; FR 30-17,000 Hz  $\pm 3$  dB with metal tape; S/N 59 dB A-weighted, Dolby off. .... \$400  
TC-FX66. Similar to TC-FX77 except no AMS/repeat feature or record-level guides. .... \$320

**TC-V7 Auto-Reverse Cassette Deck**

Feather-touch, full-logic control auto-reverse cassette deck with linear counter for precise index of tape location and optional remote control. Features continuous playback; auto music sensor; concentrated display; blank skip; auto play; auto space/rec mute; 13-segment peak meters; synchronized operation possible with some Sony turntables; unattended recording or wake-up timer; roto-bilateral head and dual-capstan transport system; Laser-Amorphous head; Dolby B and C; dual-gap erase head. W&F 0.065% wrms,  $\pm 0.2$ % (DIN 45507); FR ( $\pm 3$  dB, re -20 dB) 30-15,000 Hz metal, FeCr, and Type II (Sony UCX); 30-14,000 Type I (Sony SHF); S/N (re 3% THD, peak-weighted), no Dolby/Dolby B/Dolby C: 58/65/78 dB metal, 59/66/72 dB FeCr, 57/64/70 dB Type II (UCX), 54/61/67/ dB Type I (SHF); THD 1.0% at 1 kHz, re 0 dB record level, metal and FeCr; crosstalk 60 dB at 1 kHz between tracks; sep at 1 kHz between chs 35 dB; 14"  $\times$  3 $\frac{1}{4}$ "  $\times$  11 $\frac{1}{8}$ "; 11 lbs, 1 oz. .... \$350

**TC-FX600 Full-Logic Cassette Deck**

Full-logic, feather-touch cassette deck with auto music sensor and repeat function. Features linear counter; end-of-tape alarm; concentrated display; memory counter; auto play; 16-segment peak program meters; auto space/rec mute; choice of remote

controls; synchronized operation; headphone output jack; Dolby B and C; 2-motor tape drive; dynamically balanced antiresonant flywheel; dc amplifier; direct-coupled playback head amp; 4-gap erase head; 4-position tape selector. W&F 0.04% wrms  $\pm 0.14$ % (DIN 45507); FR ( $\pm 3$  dB, re -20 dB) 30-17,000 Hz metal, 30-17,000 FeCr, 30-15,000 Type II (Sony UCX), 30-14,000 Type I (Sony SHF); S/N (re 3% THD, peak-weighted), Dolby NR off/Dolby B/Dolby C: 59/66/72 dB metal, 60/67/73 FeCr, 57/65/71 Type II (UCX), 54/61/67 Type I (SHF); THD 1.0% at 1 kHz, re 0 dB record level, metal and FeCr; crosstalk 60 dB at 1 kHz between tracks; sep 35 dB at 1 kHz between chs; 17"  $\times$  4 $\frac{1}{4}$ "  $\times$  10 $\frac{1}{4}$ "; 12 lbs, 6 oz. .... \$320

**TC-FX505R Auto-Reverse Cassette Deck**

Auto-reverse feather-touch full-logic cassette deck with continuous play mode. Features music scan; blank skip; auto music sensor; auto tape selector; auto play; optional remote control; fast 13-segment peak meters; auto space/record mute; unattended recording; Laser-Amorphous head construction; Dolby B and C; dc amplifier; direct-coupled playback head amp; 4-gap erase head. W&F 0.05% wrms  $\pm 0.14$ % (DIN 45507); FR: ( $\pm 3$  dB, re -20 dB) 30-17,000 Hz metal, FeCr, Type II (Sony UCX), 30-15,000 Type I (Sony SHF); S/N: (re 3% THD, peak-weighted), no Dolby/Dolby B/Dolby C: 58/65/71 dB metal, 59/66/72 FeCr, 56/63/69 Type II (UCX), 54/61/67 Type I (SHF); THD 1.0% at 1 kHz, re 0 dB record level, Type IV and Type II; crosstalk 60 dB at 1 kHz between tracks; sep 35 dB at 1 kHz between chs; 17"  $\times$  4 $\frac{1}{4}$ "  $\times$  10 $\frac{1}{4}$ "; 9 lbs, 15 oz. .... \$260

**TC-FX45 Dolby B/C Cassette Deck**

Feather-touch full-logic cassette deck with optional remote control. Features music scan for 10-sec sample of each cut; blank skip; auto music sensor; auto tape selector; auto play; unattended recording or timed wake-up option; headphone output jack; mic input jack; Dolby B and C; 4-gap erase head. Wow and flutter 0.05% wrms  $\pm 0.14$ % (DIN 45507); frequency response: ( $\pm 3$  dB, re -20 dB) 30-16,000 Hz metal and FeCr, 30-15,000 Type II (Sony UCX), 30-13,000 Type I (Sony SHF); S/N (re 3% THD, peak-weighted), Dolby off/Dolby B/Dolby C: 58/65/71 dB metal, 59/66/62 FeCr, 56/63/69 Type II (UCX), Type I 54/61/67 (SHF); THD 1.0% at 1 kHz, re 0 dB record level, Type IV and Type II; crosstalk 60 dB at 1 kHz between tracks; sep 35 dB at 1 kHz between chs; 17"  $\times$  4 $\frac{1}{4}$ "  $\times$  10 $\frac{1}{4}$ "; 9 lbs, 11 oz. .... \$230

**TC-FX44 Dolby B/C Cassette Deck**

Stereo cassette deck with Dolby B and C noise-reduction systems, SD record/play head. Features dc servo belt-drive system; full-logic feather-touch transport controls; auto tape selection system for all tape formulations, including metal; Auto Music Sensor with auto-space record mute; auto play; LED peak meters; facility for optional remote controller. Wow and flutter 0.05% wrms; FR 30-16,000 Hz  $\pm 3$  dB with metal tape; S/N 59 dB A-weighted, Dolby off. .... \$210

**TC-FX35 Dolby B/C Cassette Deck**

Feather-touch full-logic cassette deck with cue and review. Features auto play; headphone output jack; 4-gap erase head. W&F 0.05% wrms  $\pm 0.14$ % (DIN 45507); FR ( $\pm 3$  dB, re -20 dB) 30-16,000 Hz metal and FeCr, 30-14,000 Hz Type II (Sony UCX), 30-13,000 Hz Type I (Sony SHF); S/N (re 3% THD, peak-weighted) Dolby off/Dolby B/Dolby C: 58/65/71 dB metal, 59/66/72 FeCr, 56/63/69 Type II (UCX), 54/61/67 Type I (SHF); THD 1.0% at 1 kHz, re 0 dB record level, Type IV and Type II; crosstalk 60 dB at 1 kHz between tracks; sep 35 dB at 1 kHz between chs; 17"  $\times$  4 $\frac{1}{4}$ "  $\times$  10 $\frac{1}{4}$ "; 9 lbs, 8 oz. .... \$210

**TC-V3 Dolby B/C Cassette Deck**

Dolby B and C cassette deck with feather-touch, full-logic selector and auto music sensor. Features auto tape selector; auto play; fast LED peak meters; auto space/rec mute; optional unattended recording or timed wake-up; 14" width for compatibility with Sony

G-V3 system; SD record/playback head; 4-gap erase head. W&F 0.065% wrms ±0.02 (DIN 45507); FR (±3 dB, re -20 dB) 30-15,000 Hz metal and FeCr, 30-15,000 Hz Type II (Sony UCX), 30 Hz-14,000 Hz Type I (Sony SHF); S/N (re 3% THD, peak-weighted), Dolby off/Dolby B/Dolby C: 58/65/71 dB metal, 59/66/72 FeCr, 56/63/69 Type II (UCX), 54/61/67 Type I (SHF), THD 1.0% at 1 kHz, re 0 dB record level, Type IV and Type II; crosstalk 60 dB at 1 kHz between tracks; sep 35 dB at 1 kHz between chs; 14" × 4 1/4" × 9 3/4"; 8 lbs, 13 oz ..... \$210

**TCZ-FX25 Full-Logic Cassette Deck**

Feather-touch, full-logic cassette deck with auto tape selector. Features auto play; cue and review; auto space/rec mute; fast 8-segment peak meters; optional unattended recording or timed wake-up; Dolby B; SD record playback head; direct-coupled playback head amp; 4-gap erase head; W&F 0.05% wrms ±0.14 (DIN 45507); FR (±3 dB, re -20 dB) 30-15,000 Hz metal and FeCr, 30-14,000 Hz Type II (Sony UCX), 30-13,000 Hz Type I (Sony SHF); S/N (re 3% THD, peak-weighted), Dolby off/Dolby B: 58/65 dB metal, 59/66 FeCr, 56/63 Type II (UCX), 54/61 (SHF); THD 1.0% at 1 kHz, re 0 dB record level, Type IV and Type II; crosstalk 60 dB at 1 kHz between tracks; sep 35 dB at 1 kHz between chs; power consumption 14 W; 17" × 4 1/4" × 10 1/4"; 9 lbs, 4 oz ..... \$170

**TANDBERG**

**TCD 3004 Cassette Deck**

Microprocessor-controlled metal-compatible vertical front-loading stereo cassette deck with dual Dolby B NR system, 4 motors, 3 tape heads. Features PROM-brain logic microprocessor function controls with LED indicators; recording preset; Dyneq® record EQ, Actilinear® headroom-extension system; 4-position bias/-record, 70/120 µsec playback EQ controls with bias fine adjust; calibration selector for off, azimuth, bias fine adjust, left/right record levels with calibration meter; separate left/right record, mic level controls with master control; source/tape monitor switch; headphones volume control; resettable LED digital counter display with memory; dual peak-indicating meters; error-detection digital display; winding speed control; azimuth control. FR 20-20,000 Hz ±3 dB; S/N 70 dB ..... \$2,395

**TCD 3014 Cassette Deck**

Microprocessor-controlled stereo cassette deck with 4 servo-controlled tape-transport motors. Has scan to play, scan to stop, auto rewind, auto replay, timer record/play functions. Features 3 heads; Dolby B and C; azimuth alignment; bias adjustment; record current adjustment utilizing built-in test system; linear motor to position heads and pinch-rollers to tape; instant "flying start" record/play; Dyneq® record equalization; Actilinear II® headroom-extension system;



peak-reading meters; cue and review at half speed; real time/real revolution counter; LED indication of all transport functions. Optional side panels in rosewood. Wireless infrared remote control with built-in receiver and rack mounts are available ..... \$1,395

**TCD 440A Cassette Deck**

Metal-compatible stereo cassette deck with dual Dolby B NR system, separate record, play, Tandberg erase heads (80 dB erasure at 1 kHz and 60 dB erasure at 100 Hz), 3 motors in dual-capstan transport

system. Features Dyneq® record equalization circuitry designed to automatically adjust record preemphasis of deck to maximize potential treble response while simultaneously minimizing treble distortion; Actilinear® recording system; peak-indicating meters with second scale reflecting metal-particle signal levels; 10-kHz test oscillator; bias adjust controls for ferric, CrO<sub>2</sub>, and metal tapes with set of left/right LEDs; separate left, right slider input/output-level controls with LEDs; LED Dolby, tape I and II/metal, source/tape, record preset on/off, power indicators; optional PCM infrared wireless remote control available. FR 20-20,000 Hz ±3 dB; S/N 70 dB A weighted; anodized matte black finish; 18 1/8" W × 8 7/8" D × 4" H ..... \$995

**TCD 420A Stereo Cassette Deck**

Front-loading metal-compatible stereo cassette deck with Dolby B NR system, 3 motors in dual-capstan transport system, diamond-cut Senalloy record/play and Tandberg erase (80-dB erasure at 1 kHz, 60-dB at 100 Hz) heads. Features Dyneq® dynamic EQ amplifier circuitry; Actilinear® recording system; tape and bias selectors for type I (ferric), II (chrome), and metal with left-, right-ch bias-adjust selectors for each tape; separate left, right input/output-level controls; equalized peak-indicating VU meters; 3-digit tape counter with reset. W&F 0.13% wrms; FR 30-18,000 Hz ±3 dB; THD 3.0% metal, 2.0% ferric and chrome; S/N with metal tape 68 dB (IEC A-weighted); 18 1/8" W × 8 7/8" D × 4" H ..... \$649

**TCD 3034 Stereo Cassette Deck**

Soft-touch, logic-controlled stereo cassette transport. Features cue, record mute; peak-indicating equalized meters; Dyneq® and Actilinear® headroom-extension system; instant-access loading. Dustcover for cassette compartment optional. Accommodates metal tape. FR 10-20,000 Hz ±3 dB ..... \$499

**TASCAM by TEAC**

**122 2-Speed Stereo Cassette Deck**

Stereo cassette deck with 2 speeds, 3 heads, Dolby B NR, and Dolby HX headroom extension. Features 1 7/8 and 3 3/4 ips speeds; bias and EQ controls; extra line inputs on front panel; interface jacks for optional dbx NR unit; optional microprocessor remote control; auto rewind; fader start; rack mountable; DC servo capstan motor; DC reel motor; compatible with normal, CrO<sub>2</sub>, metal tape; VU meters with peak-reading LEDs; LSI logic circuitry; tape counter memory; headphone volume control. W&F at 1 7/8 ips ±0.085% (IEC/ANSI/-DIN weighted), 0.06% (NAB weighted); at 3 3/4 ips ±0.055% (IEC/ANSI/DIN weighted), 0.04% (NAB weighted); FR (with CrO<sub>2</sub> tape) at 3 3/4 ips 35-14,000 Hz ±3 dB at 0 VU, 35-20,000 Hz at -20 dB; at 1 7/8 ips 35-8,500 Hz ±3 dB at 0 VU, 35-14,000 Hz at -20 VU; THD 1% at 3 3/4 with CrO<sub>2</sub> tape at 0 VU=160 nWb/m, 1 kHz, 1.2% at 1 7/8; S/N at 3 3/4 (with CrO<sub>2</sub> tape, 1 kHz ref., 3% THD) 63 dB A-weighted, at 1 7/8, 58 dB A-weighted; sep > 35 dB at 1 kHz. 19" W × 5.8" H × 13.6" D; 19.8 lbs ..... \$725

**M-124 Syncaset Stereo Cassette Deck**

Front-loading Simul-Sync stereo cassette deck with Dolby B NR system, FG dc servo-controlled motor, and record/play and erase heads. Features Simul-Sync that permits monitoring on one track while simultaneously recording on another through the same head; crossfield switch for Simul-Sync for slight blending of left and right chs; independent bias and EQ selectors for normal/CrO<sub>2</sub> tapes; separate left and right record level controls; mic/DIN and line input selector; 3-digit tape counter with memory rewind; 2 VU meters; fast-wind time 90 seconds with C60 cassette.

W&F 0.07% wrms; frequency response 30-16,000 Hz ±3 dB with CrO<sub>2</sub> tape; S/N 55 dB, improved 5 dB at 1 kHz and 10 dB at 5 kHz with Dolby. 16 1/4" W × 11 1/2" D × 6 1/4" H ..... \$450

**TEAC**

**Z-7000 Stereo Cassette Deck**

Three-head 3-motor cassette deck with auto bias, level, and EQ. Tape Memory Function can be programmed with calibration data for three tape types. Features Dolby B and C and dbx NR; dbx disc decoding; linear tape counter for time display; search to zero or cue; programming of up to 19 selections; 30-segment fluorescent peak level meters; search to record; Intro Search; sendust record head; ferrite playback head; pitch control; motorized head loading system; power eject; auto fade-in/fade-out; memory stop/playback/repeat; headphone amp with adjustable volume; MOL balance controls. W&F 0.018% wrms; S/N with dbx on 100 dB with metal tape; FR 20-24,000 Hz ±2 dB with metal tape; 432mm W × 160mm H × 432mm D; 16kg ..... \$1,800

**Z-6000.** Similar to Z-7000 above except W&F 0.019% wrms; FR 20-22,000 Hz 2 dB. Heads are directly coupled to the playback amplifier's FET input stage ..... \$1,400

**Z-5000.** Similar to Z-6000 except W&F 0.025% wrms, permalloy record and playback heads, 15-segment fluorescent peak level meters; FR 20-20,000 Hz 2 dB with metal tape ..... \$1,000

**RX Series Stereo Cassette Decks**

**3RX Stereo Cassette Deck**

Stereo cassette deck with dbx NR system and 3-head, 2-motor transport. Features double dbx NR; tape/-source monitoring; Dolby B NR; 3-step independent bias and equalization selectors; timer function; memory play/stop; independent input level controls; output level control; adjustable bias/record calibration; optional rack-mount kit, remote controller, test-tone oscillator. W&F 0.04% NAB weighted; FR ±3 dB 20-20,000 Hz metal, to 19 kHz CrO<sub>2</sub>, to 16 kHz normal tape; S/N no NR/dbx 60/91 dB; fast-wind time 80 secs with C60 cassette; 15.7" W × 15.7" D × 5.8" H; 20.9 lb ..... \$690

**V-909RX Stereo Cassette Deck**

4-track 2 channel cassette deck with dbx disc decoder. Features Computomatic program system memory play/stop, block repeat; auto fade in/out switch; rec mute with auto spacer blank scan alarm; multi-function LED counter; CPS program display and alarm program display; MPX filter switch; bipolar power supply and dc configuration amp; LED bar-graph level meters; L/R 100mm long slide record level controls, output volume control; L/R microphone inputs; timer rec/play capability; 3-position tape selector; headphone jack and illuminated auto reverse status indicators. W&F 0.045% wrms; FR 20-19,000 Hz; overall (-20 VU, metal tape); S/N NR out/Dolby C/ dbx; 59 dB/79 dB/91 dB; 17 1/8" × 4 1/4" × 10 1/8"; 15 1/4 lbs ..... \$650

**V-707RX.** Similar to V-909RX except no Dolby C NR; blank scan; programmable alarm or auto fade in/out ..... \$500

**V-1RX Stereo Cassette Deck**

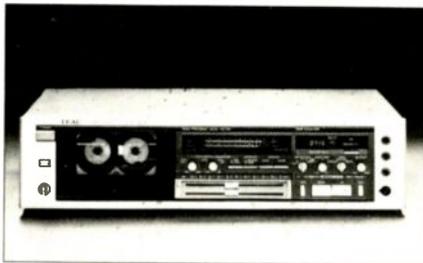
Electrolaud motorized head loading stereo cassette deck with 3-motor, 3-head transport and dbx NR. Features dynamic range expansion system; direct-drive capstan motor; block repeat; vertical peak level meters; timer record/play; output level control; fine bias adjust control; double Dolby B NR; normal/CrO<sub>2</sub>-(Co)/metal tape selectors; 4-digit electronic tape counter; soft-touch transport controls. W&F 0.025% wrms; FR ±3 dB 20-18,000 Hz normal, to 19 kHz CrO<sub>2</sub>/Co, to 20 kHz metal tape; S/N no NR/Dolby/-dbx 63/73/92 dB; fast-wind time 90 seconds with C60 cassette; 17 1/8" W × 10 1/4" D × 4 7/8" H; 13 lb 4.0 oz ..... \$590

**V-2RX Stereo Cassette Deck**

4-track 2 channel stereo cassette deck with dbx and

**NEED MORE INFORMATION?**  
Write directly to the manufacturer or distributor. A list of names and addresses starts on page 25.

Dolby NR and low-frequency parametric equalizer. Features 3 heads; 2-motor IC logic transport control; microprocessor-controlled real-time tape counter; memory repeat/play, stop; bias fine tuning control; rec mute; output level control; fluorescent bar graph level meters; timer rec/play capability; independent L/R record level controls; metal/CrO<sub>2</sub>/normal tape selector; L/R microphone jacks; headphone jack. W&F 0.035% wrms; FR (overall) 20,20,000 Hz metal



tape; 20-19,000 Hz Co (CrO<sub>2</sub>) tape; 20-18,000 Hz normal tape; S/N 60 dB (3% THD level, weighted, metal tape); THD dbx in 92 dB (3% THD level, weighted); 17<sup>1</sup>/<sub>16</sub>"W × 4<sup>1</sup>/<sub>4</sub>"H × 10<sup>1</sup>/<sub>16</sub>"D; 15<sup>1</sup>/<sub>16</sub> lbs ..... \$520  
**V-4RX.** Similar to V-2RX except for a cobalt amorphous RP head instead of the 3-head system; no bias fine tuning control. FR 20-17,000 Hz for normal tape ..... \$420

#### V Series Cassette Decks

##### V-66C Stereo Cassette Deck

Cobalt-amorphous-head cassette deck with Dolby B and C NR. Features 12-segment fluorescent bar display for record/play levels; solenoids for transport functions; DC servo motor for capstan control; second DC motor for tape reels. FR 30-19,000 Hz with metal or chrome tape; to 17,000 Hz with normal tape; W&F 0.035%; S/N 59 dB weighted without NR, 69 dB above 5 kHz with Dolby B and 74 dB with Dolby C ..... \$280

##### V-44C Stereo Cassette Deck

Soft-touch cassette deck with Dolby B and C NR and BRILLIANT switch for boosting treble frequencies. Features DC servo motor; 12-segment fluorescent bar meter; rec mute. S/N 72 dB with Dolby C; W&F 0.05%; FR 30-16,000 Hz with metal or chrome tape, to 15,000 Hz with normal tape ..... \$240

##### V-33 Stereo Cassette Deck

Front-loading cassette deck with Dolby B NR and BRILLIANT switch for increasing high-frequency response. Features 12-segment LED bar level indicator; rec mute; metal tape compatibility. FR 30-16,000 Hz with metal or chrome tape, to 15,000 Hz with normal tape; S/N 57 dB without NR, 67 dB above 5,000 Hz with Dolby B; W&F 0.05% weighted ..... \$210

#### Simul-Sync System Cassette Deck

##### M-124 Syncaset Stereo Cassette Deck

Front-loading Simul-Sync stereo cassette deck with Dolby B NR system, FG dc servo-controlled motor, and record/play and erase heads. Features Simul-Sync that permits monitoring on one track while simultaneously recording on another through the same head; crossfield switch for Simul-Sync for slight blending of left and right chs; independent bias and EQ selectors for normal/CrO<sub>2</sub> tapes; separate left and right record level controls; mic/DIN and line input selector; 3-digit tape counter with memory rewind; 2 VU meters; fast-wind time 90 seconds with C60 cassette. W&F 0.07% wrms; frequency response ±3 dB 30-16,000 Hz with CrO<sub>2</sub> tape; S/N Dolby off/on 55/65 dB; 16<sup>1</sup>/<sub>4</sub>"W × 11<sup>1</sup>/<sub>2</sub>"D × 6<sup>1</sup>/<sub>4</sub>"H ..... \$450

##### V-500X Stereo Cassette Deck

Stereo cassette deck with dbx, dbx disc and Dolby B NR. Features IC logic transport control; 13 dot LED bar meters; timer standby selector; auto mpX filter;

Dolby C NR; cobalt amorphous head; multi-display electronic tape counter (includes tape run time, counter); memory play/stop/repeat; auto rec mute; FR from 30-20,000 Hz metal. W&F 0.05% and S/N of 85 dB (dbx) ..... \$340  
**V-400X.** Similar to V-500 except no Dolby C NR, CPS; memory play; FR 30-18,000 Hz metal; W&F 0.06% ..... \$260

##### V-350C Stereo Cassette Deck

Metal tape compatible stereo cassette deck with Dolby B and C NR systems; soft-touch transport control; rec mute; brilliance circuitry (to boost high frequencies); auto mpX filter; 3 step BIAS/EQ selector and 8-dot LED bar meter; FR 30-17,000 Hz with metal tape; W&F 0.06% S/N 60 dB (at 5,000 Hz with Dolby B) ..... \$230  
**V-300.** Similar to V-350C except no Dolby C NR ..... \$200

## TECHNICS

##### RS-M85MkII Stereo Cassette Deck

Metal-compatible stereo cassette deck with Dolby B NR; vertical hold; flat component style; quartz-locked-planar-opposed dc brushless, coreless, slotless direct-drive capstan motor with servo-controlled circuit; separate coreless reel motor; full IC-logic control; laminated sendust head; low-noise equalizer and high linearity amplifier; MPX filter. Features fluorescent electronic bargraph peak displays; dim/bright and VU/peak switches; 4-position tape selector with fine bias-adjust control; electronic full auto stop; record mute; mic/line mixing; output level control; 3-digit tape counter with memory rewind; electronic muting circuit. W&F 0.035% wrms; FR ±3 dB 30-14,000 Hz normal, to 16 kHz CrO<sub>2</sub> and FeCr tape; S/N Dolby off/on 59/69 dB; fast-wind time 90 secs with C60 cassette; 19"W × 15<sup>1</sup>/<sub>2</sub>"D × 3<sup>1</sup>/<sub>4</sub>"H ..... \$750

##### RS-M275X Stereo Cassette Deck

Direct-drive stereo cassette deck with Dolby B and C, dbx NR. Features 3-motor direct-drive transport; Intro-Search; AX head; multifunction FL digital counter; wide-scale, 3-color FL meter (-40 to +18 dB) with peak-hold; dbx disc decoder; auto normal/CrO<sub>2</sub>/metal tape selector; microprocessor feather-touch transport controls; bias fine adjust control. W&F 0.03% wrms; FR ±3 dB 30-16,000 Hz normal, to 17 kHz CrO<sub>2</sub>, to 18 kHz metal tape; S/N ratio no NR/Dolby B/Dolby C/dbx 58/68/76/92 dB; dynamic range 110 dB at 1 kHz with CrO<sub>2</sub> tape; 16<sup>1</sup>/<sub>4</sub>"W × 12<sup>1</sup>/<sub>4</sub>"D × 3<sup>1</sup>/<sub>4</sub>"H ..... \$600

##### RS-M253X Stereo Cassette Deck

Three-head slim stereo cassette deck with dbx and Dolby B and C NR. Also has dbx disc decoding. Features fine bias adjustment; 2 motors; microprocessor logic control; AX head; 3-color 18-segment FL meter with peak hold; electronic counter for tape, time, music select (max 20 skips), record-mute time, refrain (max 16 times auto repeat); auto monitor change play (manually changeable); tape monitor; rec/source monitor; auto tape select; auto input select; output volume control; remote control with optional RP-9645; timer stand-by. W&F 0.045% wrms... \$450

##### RS-M258R Stereo Cassette Deck

Auto-reverse stereo cassette deck with Dolby B NR. Features quick-reverse tape mechanism; mode and direction selectors; fixed SX heads; dual flywheel; soft-touch transport controls; music select; record mute; single-touch recording; timer record/play; auto normal/CrO<sub>2</sub>/metal tape selection; dot-pattern FL meters; output-level control; auto input selector. W&F 0.07% wrms; FR ±3 dB 30-15,000 Hz normal, to 16 kHz CrO<sub>2</sub> and metal tape; S/N Dolby off/on 57/67 dB; fast-wind time 90 secs with C60 cassette; 16<sup>1</sup>/<sub>4</sub>"W × 13<sup>1</sup>/<sub>4</sub>"D × 4<sup>1</sup>/<sub>4</sub>"H; 12 lb 13 oz. \$400

##### RS-245X Stereo Cassette Deck

Two-motor stereo cassette deck with dbx and Dolby B and C NR. Also has dbx disc decoding. Features microprocessor logic control; AX head; 3-color 18-segment FL meter with peak hold; electronic counter for

tape, time, music select (max 20 skips), record-mute time, refrain (max 16 times auto repeat); auto tape select; auto input select; output volume control; remote control with optional RP-9645; timer stand-by. W&F 0.045% wrms ..... \$330

##### RS-M222 Stereo Cassette Deck

High-speed-dubbing double stereo cassette deck with Dolby B NR. Features synchro start; mic mixing; series playback; auto normal/CrO<sub>2</sub>/metal tape selection; music selector; dub/mix switch; peak-hold FL meters; playback level control; single-touch recording; rec mute; soft-touch transport controls; rewind auto play; metal-compatible MX heads; dual pause control; auto input selector. W&F 0.048% wrms; FR 20-17,000 Hz ±3 dB with normal tape, to 18 kHz CrO<sub>2</sub>, to 19 kHz metal; S/N 57 dB Dolby off, 67 dB Dolby on; fast-wind time 90 secs for C60 cassette. 16<sup>1</sup>/<sub>4</sub>"W × 10<sup>1</sup>/<sub>16</sub>"D × 4<sup>1</sup>/<sub>16</sub>"H. 12 lbs 7 oz ..... \$300

##### RS-235X Stereo Cassette Deck

Slim-line 2-motor stereo cassette deck with dbx and Dolby B and C NR. Also has dbx disc decoding. Features microprocessor logic control; AX head; 3-color 18-segment FL meter with peak hold; auto tape select; auto input select; metal-compatible MX head; rec mute; timer stand-by. FR with metal tape 20-19,000 Hz; W&F 0.045% wrms ..... \$270

##### RS-M224 Stereo Cassette Deck

Stereo cassette deck with Dolby B and C NR, soft-touch transport controls. Features single-touch recording; rewind auto play; timer record/play; metal-compatible MX head; oil-damped cassette door. W&F 0.048% wrms; frequency response 20-17,000 Hz ±3 dB normal, to 18 kHz CrO<sub>2</sub> and metal tape; S/N 57 dB no NR, 67 dB Dolby B, 75 dB Dolby C; fast-wind time 90 secs with C60 cassette; 16<sup>1</sup>/<sub>4</sub>"W × 9<sup>1</sup>/<sub>16</sub>"D × 4<sup>1</sup>/<sub>16</sub>"H; 8 lb 13 oz ..... \$220

##### RS-M234X Stereo Cassette Deck

Slim-line stereo cassette deck with dbx and Dolby B and C NR. Also decoding for dbx disc. Features soft-touch transport; single-touch recording; rewind auto play; 3-color 18-segment FL meter with peak hold; metal-compatible MX head; timer record/play; auto tape select; auto input select; record mute. W&F 0.05% wrms ..... \$220

##### RS-M227X Stereo Cassette Deck

Slim-line stereo cassette deck with dbx and Dolby B and C NR. Features soft-touch transport; single-touch recording; rewind auto play; illuminated meters; metal-compatible MX head; timer record/play. FR with metal tape 20-17,000 Hz; W&F 0.05% wrms \$180

##### RS-M205 Stereo Cassette Deck

Stereo cassette deck with metal-tape compatibility, soft-touch transport controls, dual analog VU meters. Features Dolby NR; left, right input-level controls; oil-dampened soft load, eject; removable cassette-well door; MX record/play, double-gap ferrite erase heads. W&F 0.05% wrms; FR ±3 dB 20-17,000 Hz metal, to 16 kHz CrO<sub>2</sub>, to 15 kHz normal tape; S/N Dolby off/on 56/66 dB; fast-wind time 90 secs with C60 cassette; 16<sup>1</sup>/<sub>4</sub>"W × 8<sup>1</sup>/<sub>4</sub>"D × 4<sup>1</sup>/<sub>4</sub>"H ..... \$130

## TEKNIKA

##### 8861 Stereo Cassette Deck

Stereo cassette deck with hard permalloy record/play, dual-gap ferrite erase heads. Features solenoid-operated 2-motor direct-drive transport with FG servo dc capstan motor; soft touch IC-logic transport controls; program quick sensor; separate input and output level controls; Dolby B NR; 24-part peak-hold fluorescent meters; 4-position tape selector (includes metal); auto stop at end of play; W&F 0.03% wrms; FR 30-17,000 Hz ±3 dB with metal tape; S/N 63 dB; Dolby on; THD <1.5% at 0 VU; 17<sup>1</sup>/<sub>16</sub>"W × 12<sup>1</sup>/<sub>16</sub>"D × 4<sup>1</sup>/<sub>16</sub>"H ..... \$300

##### 8461 Stereo Cassette Deck

Stereo cassette deck with hard Dynalloy record/play dual-gap ferrite erase heads. Features dc castan mo-

tor; soft-touch IC-logic controlled transport. Dolby B NR; LED recording-level displays; normal/CrO<sub>2</sub>/metal tape selector; auto stop; W&F 0.06% wrms; FR 40-16,500 Hz ±3 dB; S/N 61 dB, Dolby on; THD <1.5%; 14<sup>3</sup>/<sub>16</sub>"W × 9<sup>1</sup>/<sub>16</sub>"D × 5<sup>7</sup>/<sub>16</sub>"H ..... \$200

**8361 Stereo Cassette Deck**

Stereo cassette deck with hard permalloy record play, ferrite erase heads. Features Dolby B NR; 3-position tape selector; LED meters; W&F 0.16% wrms; FR 40-15,000 Hz CrO<sub>2</sub>, to 16,000 Hz metal tape; sep 30 dB; S/N Dolby off/on 50/60 dB; THD 2.2%; 14<sup>3</sup>/<sub>16</sub>"W × 9<sup>1</sup>/<sub>16</sub>"D × 5<sup>7</sup>/<sub>16</sub>"H ..... \$170

**TOSHIBA**

**PCG 50R Auto-Reverse Cassette Deck**

Stereo 2-motor cassette deck with auto reverse and Dolby B and C NR. Features rotary head; quick reverse; one side, two side, or continuous play; auto



bias/EQ selector; peak-indicating level meters; timer record/play; compatible with metal tape. W&F 0.04% wrms; FR 20-17,000 Hz; S/N 75 dB with Dolby C. 16<sup>3</sup>/<sub>16</sub>"W × 4<sup>3</sup>/<sub>16</sub>"H × 10<sup>3</sup>/<sub>16</sub>"D ..... \$230

**PC-G30 Dolby B/C Cassette Deck**

Solenoid-operated 2-motor stereo cassette deck with Dolby B and C NR. Features peak-indicating LED level meters; amorphous head; timer record/play; compatible with normal, CrO<sub>2</sub>, metal tape. W&F 0.45% wrms; FR 20-18,000 Hz; S/N 75 dB with Dolby C... \$180

**PC-G10 Stereo Cassette Deck**

Metal-compatible stereo cassette deck with Dolby B NR; peak-indicating LED signal-level meters; soft-touch transport controls; W&F 0.055% wrms; FR 35-17,000 Hz; S/N 57 dB, Dolby off; 16<sup>3</sup>/<sub>16</sub>"W × 10<sup>3</sup>/<sub>16</sub>"H × 4<sup>3</sup>/<sub>16</sub>"D ..... \$140

**UHER by WALTER ODEMER**

**CR-240 Portable Cassette Deck**

Compact front-loading portable cassette deck with Dolby NR, 2 contrarotating flywheels, and built-in loudspeaker for mono monitoring. Features auto start; auto stop; switchable auto level control; twin peak-reading level meters; built-in condenser mic; power amp; headphone jack; joystick for selection of



3 tape transport functions. W&F 0.2% DIN; FR 30-16,000 Hz; S/N 58 dB Dolby off with FeCr, 66 dB Dolby on with CrO<sub>2</sub>, and FeCr, 65 dB Dolby on with normal tape; crosstalk -70 dB at 1 kHz, reverse track, -45 dB stereo; power ac line, dry cells, rechargeable, or car battery; 9<sup>3</sup>/<sub>16</sub>" × 2<sup>1</sup>/<sub>16</sub>" × 7<sup>1</sup>/<sub>16</sub>" ..... \$1,389  
CR-240AV. Audio-visual version of CR-240. \$1,427

**CR 210 Uher Portable Stereo Cassette Machine**

4 track stereo cassette machine with auto reverse

(playback mode); auto switching for chrome tapes and photo sens electronic controls of the tape drive mechanism. Features built-in condenser mic; DC motor; on/off switch for FET auto level control; auto shut-off; remote control; record level indicator. W&F ±0.12%; FR 20-16,000 Hz; S/N >58 dB; 7"W × 2"H × 7"D; 4<sup>1</sup>/<sub>2</sub> lbs ..... \$1,275

**VECTOR RESEARCH**

**VCX-800 Stereo Cassette Deck**

Front-loading stereo cassette deck with 3 heads, 2 motors, dual capstans. Features Dolby B/C tape, Dolby FM NR, HX headroom-extension systems; microprocessor-controlled. Compu-counter automatically selects tape length, displays remaining time in minutes and secs, sweep oscillator that allows adjustment for flattest response; 2 memory circuits; auto rewind/play; record mute; feather-touch transport controls. W&F C.03%; FR ±3 dB 25-19,000 Hz normal, to 20 kHz CrO<sub>2</sub>, to 21 kHz metal tape; S/N no NR/Dolby B/Dolby C 56/66/76 dB; 17<sup>3</sup>/<sub>16</sub>"W × 14<sup>1</sup>/<sub>2</sub>"D × 5<sup>1</sup>/<sub>16</sub>"H..... \$1,000

**VCX-510 Stereo Cassette Deck**

Stereo cassette deck with Dolby B/C NR, IC-logic 2-motor transport, Music Search®. Features Duralloy head; 4-position tape selector; auto rewind/play; repeat play memory function; LED peak level meters; rec mute; output-level control; MPX filter; provision for optional VRC-22 remote-control unit. W&F 0.04% wrms; frequency range 25-19,000 Hz metal, to 18 kHz CrO<sub>2</sub>, to 16 kHz normal; S/N no NR/Dolby B/Dolby C 56/66/76 dB A-wtd, ref to 3% THD; fast-wind time 100 secs with C60 cassette; 17<sup>3</sup>/<sub>16</sub>"W × 14<sup>1</sup>/<sub>2</sub>"D × 5<sup>1</sup>/<sub>16</sub>"H; 15.7 lb ..... \$500

**VCX-400 Stereo Cassette Deck**

Stereo cassette deck with Dolby B/C NR, full-logic solenoid-controlled transport, memory rewind. Features Duralloy head; 4-position tape selector; fine bias adjust control; LED peak-level meters; rec mute; provision for optional VCR-22 remote control W&F 0.05% wrms; FR 25-18,000 Hz metal, to 17 kHz CrO<sub>2</sub>, to 15 kHz normal tape; S/N no NR/Dolby B/Dolby C 56/66/76 dB A-wtd referred to 3% THD; fast-wind time 100 seconds with C60 cassette; 17<sup>3</sup>/<sub>16</sub>"W × 14<sup>1</sup>/<sub>2</sub>"D × 5<sup>1</sup>/<sub>16</sub>"H; 14.6 lb ..... \$350

**VCX-200 Stereo Cassette Deck**

Power-assisted 1-motor-transport cassette deck with Dolby B and C NR. Features Music Search; 2 sendust heads; variable bias; 4-position tape selector; LED meters; rec mute. Frequency response 30-16,000 Hz ±3 dB (metal), to 15 kHz (CrO<sub>2</sub>), to 14 kHz (normal); S/N 56 dB no Dolby, 66 dB Dolby B (over 4 kHz), 76 dB Dolby C (over 2 kHz); all other specs same as for VCX-400; 17<sup>3</sup>/<sub>16</sub>"W × 14<sup>1</sup>/<sub>2</sub>"D × 4<sup>3</sup>/<sub>16</sub>"H ..... \$250

**YAMAHA**

**K-2000 3-Head Cassette Deck**

Stereo 3-head 2-motor cassette deck with dbx and Dolby B NR. Features triple-laminated sendust heads; Linear Electromagnetic Transduction Circuitry to reduce TIM; 16-part LED meters (from -40 to +18 dB); direct drive; auto bias; monitor erase; time counter; auto return to point recording begin; pitch control ±15%; full-logic, light-touch controls; full repeat; memory rewind; continuous playback of programmed section. W&F 0.02%. Available in black only. \$795  
K-1000B. Similar to K-2000 except has manual bias control, double-laminated sendust heads. Black front panel ..... \$595  
K-1000S. Same as K-1000S except with silver front panel ..... \$595

**K-700 Auto-Reverse Cassette Deck**

Auto-reverse stereo cassette deck with microcomputer-controlled functions and Dolby B and C NR. Can be programmed to omit unwanted cuts while recording and can play up to 15 cuts in any order. Features auto

fade in/out during 2.5-sec reverse; blank skip; 2 motors; remaining time indicator; auto return to point recording began; intro scan; memory stop; auto advance; auto tape-type selector; record/play timer; 12-part LED meters; optional remote control. \$495

**K-500 Stereo Cassette Deck**

Full-logic transport controls stereo cassette deck with 2 motors and Dolby B and C NR. Features sendust record/play and double-gap ferrite erase heads; 2-color bargraph meters; auto tape selector; timer record/play function; memory stop with repeat function; dc servo capstan and dc reel motors; facility for optional remote controller. W&F <0.05% wrms, <0.08% DIN; FR ±3 dB 40-16,000 Hz normal, to 18 kHz CrO<sub>2</sub>, to 20 kHz metal tape; S/N no NR/Dolby B/Dolby C 60/68/76 dB EIAJ with CrO<sub>2</sub> tape; overall distortion <1% EIAJ at 315 Hz; 17<sup>3</sup>/<sub>16</sub>"W × 11"D × 4<sup>3</sup>/<sub>16</sub>"H; 9 lb 14 oz ..... \$350  
K-300. Similar to K-500 except no memory stop with repeat or remote-control capability; has hard permalloy record/play head. FR to 16 kHz normal, to 16 kHz CrO<sub>2</sub>, to 17 kHz metal tape ..... \$275

**K-200 Stereo Cassette Deck**

Two-motor stereo cassette deck with Dolby B NR. Features soft-touch transport controls; true meter-type signal-level meters with VU characteristics; dc servo capstan, flat-torque dc reel motors; hard permalloy record/play, double-gap ferrite erase heads. W&F 0.05% wrms, 0.08% DIN; FR 40-15,000 Hz ±3 dB all tape formulations, including metal; S/N Dolby off/on >50/>60 dB with CrO<sub>2</sub> tape; overall distortion 1.0% at 315 Hz; separation >35 dB at 1 kHz; crosstalk >60 dB at 125 Hz; fast-wind time 80 secs with C60 cassette; 17<sup>3</sup>/<sub>16</sub>"W × 11"D × 4<sup>3</sup>/<sub>16</sub>"H; 9 lb ..... \$220

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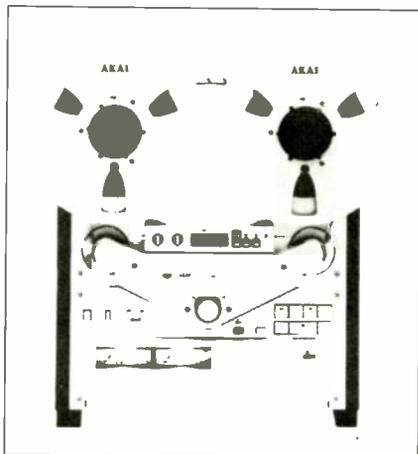
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AKAI

**GX-747 dbx Open-Reel Deck**

4-track 2-ch auto reverse rec/play stereo/mono 10 1/2" deck with EE tape capability and type I dbx. Features full-logic feather-touch controls; tape/source monitoring; auto tension-arm lock system; electronic



digital real-time counter with memory; fine bias adjustment; pitch control; timer recording and playback capability; auto mute; remote control terminal \$1,400

**GX-625 Open-Reel Tape Deck**

Open-reel 3 3/4 and 7 1/2-ips, 1/4-track 2-ch stereo deck with ac servo direct-drive capstan, 2 eddy-current reel motors. Features 2 GX rec/play, one erase head; reel capacity 10 1/2"; auto repeat, play, stop; illuminated logic solenoid tape function controls with LED standby indicator; LED digital timer/tape counter; 2-deck tape monitoring; mic/line mixing; output level control; variable pitch control; mono/stereo recording; timer rec/play with external timer; computerized electronic braking. W&F 0.03% rms at 7 1/2 ips; FR 30-26,000 Hz; ±3 dB at 7 1/2 ips; S/N 62 dB weighted, with low-noise tape, peak recording level at 3% THD; 17.6"H x 17.3"W x 9.5"D ..... \$850

**GX-77D Open-Reel Tape Deck**

Open-reel 4-track, 2-ch, auto-reverse rec/play stereo/mono 7" deck with EE tape capability. Features 2-color LED peak-hold meters; tape/source monitoring; power loading system; digital real-time counter; fine bias-adjust control; timer rec/play capability; remote-control capability. Tape speeds 7 1/2, 3 3/4 ips; W&F <0.03% wrms at 7 1/2 ips; S/N > 63 dB at 7 1/2 ips, DIN 45500 standard; FR 25-33,000 Hz ±3 dB at 7 1/2 ips; distortion <0.5% at 7 1/2 ips; 17.2"W x 9.6"H x 8.9"D; 37.5 lb ..... \$795

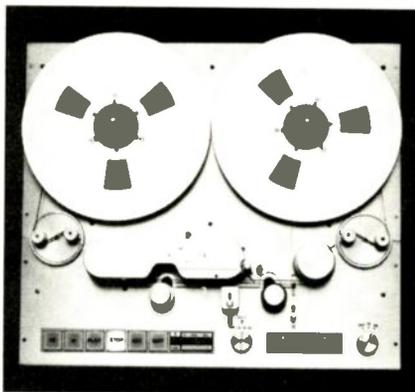
**GX-4000D Compact Tape Deck**

Contains GX rec and playback and separate erase heads, accommodates up to 7" reels. Features tape/source monitoring; mic/line mixing; sound-on-sound, sound-with-sound; track selector; auto stop; output level control; VU meters. Tape speeds 7 1/2 and 3 3/4 ips; W&F <0.08% rms at 7 1/2 ips; FR 30-24,000 Hz ±3 dB at 7 1/2 ips; S/N > 60 dB weighted at wide range tape setting with peak level at 3% THD; distortion <1% at 1 kHz, 0 VU; 17.3"W x 12.4"H x 9.1"D; 29 lb ..... \$400

MARK LEVINSON

**ML-5 Master Recorder**

Open-reel recorder contains the Studer A80RC transport with audio electronics by Mark Levinson Audio; available in 30 AES/15 NAB and CCIR ips, or 15 NAB and CCIR/7.5 NAB and CCIR ips. Features low gap splatter; wide-track record and playback heads; full-track erase head; complete editing features. Operating level 200 nWb/meter = -6 dBm (387 mV); rec/playback FR (30 and 15 ips) 31.5-125 Hz ±1.5 dB, 125-20,000 Hz +0.2 dB, -0.5 dB; total third



harmonic distortion <1.81% at 400 Hz; S/N at -6 dBm; > -54 dB unweighted, -62 dB ASA A-weighted. 11 1/4" x 25 1/4" x 21 1/4"; 117 lbs ... \$14,400

PIONEER

**RT-909 Stereo Tape Deck**

Open-reel 3 3/4 and 7 1/2-ips, 1/4-track, 3-motor, 4-head stereo tape deck; FG dc servo dual-capstan motor, two 6-pole inner rotor reel motors; accepts up to 10 1/2" reels. Features 2-step bias/EQ selector with variable bias; fluoroscan level indicators with peak/average functions; 4-digit electronic counter; reel and speed selector; pitch control; repeat switch; auto reverse; tape/monitor switch; separate mic/line, left/right input-level controls; output-level control. W&F 0.04% at 7 1/2 ips, 0.08% at 3 3/4 ips; FR 20-28,000 Hz ±3 dB (7 1/2 ips), 20-18,000 Hz ±3 dB (3 3/4 ips); S/N 60 dB (7 1/2 ips), 55 dB (3 3/4 ips); 13 3/8"H x 18 3/8"W x 12 1/2"D ..... \$900

**RT-707 Stereo Tape Deck**

Auto-reverse open-reel stereo tape deck. Features 3 3/4- and 7 1/2-ips speeds; speed accuracy ±0.5%; 3 motors; 4 heads; 1/4-track, 2-ch design; handles 7" reels; FG servo ac direct drive motor for capstan, 2 6-pole inner-rotor induction motors for reel drive; solenoid-operated, direct-switchable function buttons, preset function button for timer rec/play; auto/manual reverse play; auto repeat play; independent L/R recording mode selectors; 2 bias/2 EQ tape selection; full complement of inputs/outputs. W&F 0.055 wrms; (7 1/2 ips), 0.08% wrms (3 3/4 ips); S/N 58 dB; distortion 1% max at 7 1/2 ips; fast rewind 100 sec with 7" reel; FR 30-24,000 Hz ±3 dB at 7 1/2, to 16 kHz at 3 3/4 ips; crosstalk -50 dB; sep 50 dB; pitch control ±6% (play only); 9 1/8"H x 18 7/16"W x 14 1/16"D ..... \$700

REVOX

**B77 MKII Stereo Tape Recorder**

Stereo 2-speed (choice of 3 3/4 and 7 1/2 ips, 7 1/2 and 15 ips, 1 1/8, and 1 1/4, or 1 1/8 and 3 3/4 ips) tape recorder with 3 motors; 10 1/2" reel capacity. Features front-panel vari-speed control (±2 semitones); integrated-drive-logic computer-type push-point function keys; built-in tape cutter; dual VU meters with peak level indicators; separate left/right record and input-level controls; tape monitor switch; provision for remote control of all functions and electric timer operation;



connectors for remote control of tape transport functions, remote control of variable tape speed, and slide projector or crossfade unit. W&F (DIN 45507/IEEE 193-1971) 0.06% at 15 ips, 0.08% at 7 1/2 ips; FR +2/-3 dB 30-22,000 Hz at 15 ips, to 20 kHz at 3 3/4 ips, to 16 kHz at 3 3/4 ips; S/N on 1/4-track 63 dB at 15 and 7 1/2 ips, 60 dB at 3 3/4 ips; on 1/2-track 67 dB at 15 and 7 1/2, 64 dB at 3 3/4 ips; mic input level/imp 0.15 mV/2.2k ohms (lo position, 50-to-6,000-ohm mics); 2.8 mV/110k ohms (hi, 20k-ohm mics); 16.3"H x 17.8"W x 8.14"D ..... \$1,799  
**B77 Self Sync.** Similar to B77; available in 3 3/4 and 7 1/2 ips or 7 1/2 and 15 ips speeds with playback possibility from record head ..... \$1,749  
**B77 Autostart.** Same as B77 except with VOX control ..... \$2,049  
**B77 Slide Sync.** Same as B77 except with additional head for slide projector control ..... \$1,899

**PR99 Stereo Tape Deck**

Stereo 15- and 7 1/2- or 7 1/2- and 3 3/4-ips half-track recorder with direct-drive servo-controlled capstan, electrically controlled reel motors, 10 1/2" reel capacity. Features balanced XLR line-in/out and switched cal/uncal level settings; high- or low-imp mic input (balanced, XLR option); 2-way Self-Sync with complete tape editing facilities including tape dump; logic-controlled transport; true VU meters with LED peak indicators; tape/source monitoring; safe/ready record switches; 4-digit tape counter; manual/remote-control/fader-start operation. W&F 0.06% DIN at 15 ips, 0.08% at 7 1/2 ips, 0.1% at 3 3/4 ips; FR +2/-3 dB 30-22,000 Hz at 15 ips, to 20 kHz at 7 1/2 ips, to 16 kHz at 3 3/4 ips; S/N 66 dB at 15 and 7 1/2 ips, 63 dB at 3 3/4 ips; case or 19" rack mount; 19"W x 15.7"H x 7.9"D ..... \$2,095  
 Console ..... \$330  
 Carrying case ..... \$225

SONY

**TC-399 Open-Reel Deck**

Quarter-track stereo record/play deck with Ferrite-and-Ferrite heads in 3-head design, head/play amplifier. Features ac induction motor drive system; 7 1/2, 3 3/4, and 1 1/4 ips tape speeds; servo back-tension device; scrape flutter filter; all-mode auto stop; 7" reel capacity. 17 1/4"H x 16 3/8"W x 7 1/2"D; 27 lb 13 oz ..... \$520

TANDBERG

**TD20A SE Open-Reel Deck**

Features record EQ curves allowing up to 80 dB SN without NR (EQ switchable to NAB standard); Actilinear II record system; Dynecq headroom-extension system; active transconductance circuit for lower intermodulation distortion; Sel Sync 4-motor solenoidless operation; phase linearity network; push-button operation with LED indicators, including FREE position for easy tape editing and threading; standby position with LED when one or both record buttons are engaged; electronically governed speed; optional wireless infrared remote control or conventional cord remote control; 4 line inputs and master control for fading in/out; 2-step front-panel widescale peak-reading meters; front-panel bias adjustment.  
 1/4 track, 15 and 7 1/2 ips ..... \$1,595  
 1/2 track, 15 and 7 1/2 ips ..... \$1,595  
 1/4 track, 7 1/2 and 3 3/4 ips ..... \$1,595

TASCAM by TEAC

**Series 50 Recorder/Reproducers**

8-track (1 1/2"; 15 ips) or 2-track (1 1/4"; 7.5 or 15 ips). Features sync response equal to repro response; heavy-duty transports with full servo systems, motion sensing and micro processor control plus high-torque capability and logic; monitor tracks or inputs using pre-load and record mode switched per track plus overall output select switches; the 2-track 52 has sync recording capability; tach-driven digital display with positive or negative real-time readout; search to cue return to zero button; quartz crystal referenced

record/play speed; dual pitch controls include coarse and fine; rear panel SMPTE accessory connector; 2 remote control units; high-torque slotless DC reel motors; 5 independent photo-interruptors; bipolar power supply for max headroom and noise immunity; optional dbx tape NR.

**5058.** W&F 15 ips  $\pm 0.08\%$  peak DIN/IEC/ANSI wtd;  $17'' \times 19\frac{7}{8}'' \times 12\frac{7}{16}''$ ;  $77\frac{3}{16}$  lbs.; input imp 60 ohms unbalanced; output imp 500 ohms unbalanced; FR record reproduce 40-20,000 Hz  $\pm 3$  dB at 0 VU; 40-20,000  $\pm 3$  dB at -10 VU; sync and reproduce 40-20,000 Hz 3 dB; THD 0.8% at 0VU, 1,000 Hz 250nWb/m; 3% at 12 dB above 0 VU, 1,000 Hz, 1,000 nWb/m; S/N at ref of 3% THD at 1,000 Hz 69 dB A-wtd NAB, 62 dB unwttd; 107 dB unwttd NAB with dbx; 100 dB unwttd with dbx \$5,795

**5052.** W&F 15 ips  $\pm 0.08\%$  peak DIN/IEC/ANSI wtd;  $\pm 0.04\%$  rms JIS/NAB wtd;  $7\frac{1}{2}$  ips  $\pm 0.09\%$  peak DIN/IEC/ANSI wtd;  $\pm 0.06\%$  rms JIS/NAB, wtd;  $17'' \times 19\frac{7}{8}'' \times 12\frac{7}{16}''$ ; input imp 60,000 ohms unbalanced;  $70\frac{7}{16}$  lbs; output imp 60 ohms unbalanced; output imp 500 ohms unbalanced; FR 15 ips 40-20,000 Hz 2 dB at 0 VU; 15 ips 40-22,000 Hz  $\pm 3$  dB at -10 VU;  $7\frac{1}{2}$  ips 40-20,000 Hz  $\pm 3$  dB at -10 VU; sync and reproduce 15 ips; 40-20,000 Hz  $\pm 2$  dB;  $7\frac{1}{2}$  ips 40-16,000 Hz  $\pm 3$  dB; THD 0.8% at 0 VU 1,000 Hz 250 nWb/m $^3$  at 12 dB above 0 VU 1,000 Hz 1,000 nWb/m; S/N 70 dB A-wtd NAB, 63 unwttd; 107 dB A-wtd NAB with dbx 100 dB unwttd with dbx \$3,795

**Series 30 Recorder/Reproducers**

Feature high-torque slotless dc reel motors; FG dc servo capstan motor; pitch control; permalloy record/sync and repro heads; logic-operated transport controls; computer-controlled sensing logic; photo-optical end-of-tape detector;  $10\frac{1}{2}''$  reel capacity; full sync functions; full FR in sync reproduce mode; FET switching in function and output select sections; zero return function; optional full dual-process dbx NR system; circuit driven 4-digit FL index counter; flip-up head cover; Sync head shield; cue lever; dump edit logic; facility for optional remote transport control; optional remote punch-in/out foot pedal. Can be used vertically or horizontally or mounted in standard 19" EIA rack with optional hardware.

**Model 38.** Eight-track  $\frac{1}{2}''$  recorder/reproducer operates at 15 ips and features precision die-cast head mounting block and plug-in head assembly for field replacement with minimal or no realignment. Head angle can be adjusted while tape is moving. Manually retractable shield minimizes noise \$2,750

**Model 34.** Four-track  $\frac{1}{4}''$  recorder/reproducer operates at 15 and  $7\frac{1}{2}$  ips and features illuminated VU meters and 4 phono-jack unbalanced high-imp line inputs and outputs (nominal level -10 dBV or 0.3 V). W&F 0.06% peak at 15, 0.09% peak at  $7\frac{1}{2}$  ips; FR (Sync,  $\pm 3$  dB at 0 VU) 40-22,000 Hz at 15 ips, to 16 kHz at  $7\frac{1}{2}$  ips; THD (at 1 kHz) 0.08% at 0 VU (250 nWb/m), 3% at 13 dB above 0 VU (1,116 nWb/m); S/N 68 dB NAB A-wtd at 15 ips, 66 dB at  $7\frac{1}{2}$  ips; crosstalk > 50 dB down at 1 kHz, 0 VU;  $17.5'' \times 16'' \times 8.43''$ ; 44 lb \$1,700

**Model 32.** Half-track  $\frac{1}{4}''$  recorder/reproducer operates at 15 and  $7\frac{1}{2}$  ips and features dual concentric input and output-level controls; stereo headphone jack with independent level control; 2 illuminated VU meters; 2 unbalanced high-imp phono-type line input jacks; 2 unbalanced high-imp phono-type mic input jacks. Nominal line/mic input level -10 dBV (0.03 V)/ 60 dBV (1 mV); W&F at 15 and  $7\frac{1}{2}$  ips 0.06%/0.09% wtd peak; FR (sync and repro, 3 dB at 0 VU) 40-22,000 Hz at 15 ips, to 15 kHz at  $7\frac{1}{2}$  ips; THD (at 1 kHz) 0.08% at 0 VU (250 nWb/m), 3% at 13 dB above 0 VU (1,116 nWb/m); S/N 68 dB NAB A-wtd at 15 ips, 66 dB at  $7\frac{1}{2}$  ips; crosstalk > 50 dB down at 1 kHz, 0 VU;  $17.5'' \times 16'' \times 8.43''$ ; 44 lb \$1,300

**22-4 Recorder/Reproducer**

Four-ch system with 7" reel capacity and 15 and  $7\frac{1}{2}$  ips record/play capability. Features mixer interface; function and output select; punch-in recording; removable head housing; logic-controlled transport functions; headphone monitor selectors; expanded

scale VU meters; independent level controls; memory stop function;  $\pm 6\%$  pitch; manual cueing; dbx NR Type I interface optional. Tape format  $\frac{1}{4}''$ ; tape speeds 15 and  $7\frac{1}{2}$  ips  $\pm 0.5\%$ ; FR 40-22,000 Hz at 15 ips, to 16 kHz at  $7\frac{1}{2}$  ips, both  $\pm 3$  dB at 0 VU; THD 1.0% at 0 VU, 1 kHz, 185 nWb/m; S/N 67 dB at 15 ips, 60 dB at  $7\frac{1}{2}$  ips A-wtd NAB (increases to 88 dB in both cases with dbx); record/play amp headroom 23 dB above 0 VU;  $16\frac{1}{8}'' \times 16\frac{1}{8}'' \times 10\frac{1}{4}''$ ; 40 lb \$1,425

**22-2 Half-Track Recorder/Reproducer**

Three-motor/3-head  $\frac{1}{4}''$  tape recorder/reproducer that accepts  $7\frac{1}{2}''$  reels and operates at 15 or  $7\frac{1}{2}$  ips. Features expanded-scale -2 to +5 dB VU meters; independent monitor and record ready controls for each ch; mic/line mixing; detachable head housing; precision molded reel tables, spring-loaded reel holders. Fully independent electronics permit source or tape monitoring, record for reproduce mode to be selected independently for either track. W&F 0.07% peak DIN/IEC/ANSI wtd at 15 ips, -0.04% rms JIS/NAB wtd at 15 ips (0.09% and 0.05%, respectively, at  $7\frac{1}{2}$  ips); FR 40-22,000 Hz  $\pm 3$  dB at 0 VU, 1 kHz, 185 nWb/m; S/N 66 dB NAB A-wtd at 15 ips, 64 dB at  $7\frac{1}{2}$  ips; headroom > 26 dB above 0 VU at 1 kHz for record, 38 dB for play amps;  $16\frac{1}{8}'' \times 12\frac{1}{4}'' \times 9\frac{1}{4}''$ ; 30.8 lb \$775

**TEAC**

**X-1000R Bidirectional Stereo Deck**

Computer-controlled dual-capstan stereo open-reel deck with bidirectional record/play, dbx decilinear NR/dynamic-range-expansion system, and EE-tape compatibility. Features 5-digit LED multi-function digital tape counter/timer; dual-capstan closed-loop transport with tension servo control; Magnefloat capstan bearings; Search To Zero and Search To Cue; auto spacing in record; block repeat; Dupli-Sync for dubbing to cassette; auto reverse/repeat; real-time pause; electrically assisted reel braking; 6% pitch control; motion sensing; timer record/play; 3 dc motors; 6 heads (3 each forward and reverse); facility for optional remote controller. Speeds  $7\frac{1}{2}$  and  $3\frac{3}{4}$  ips; reel size up to  $10\frac{1}{2}''$ ; W&F at  $7\frac{1}{2}$  and  $3\frac{3}{4}$  ips 0.03%/0.04%; FR  $\pm 3$  dB 40-30,000 Hz at  $7\frac{1}{2}$ , to 24 kHz at  $3\frac{3}{4}$  ips; S/N dbx off/on 65/100 dB; harmonic distortion 0.8% at 1 kHz, normal operating level; sep 50 dB at 1 kHz; input sens/imp 60 mV/50k ohms line, 0.25 mV (-72 dB)/200 ohms or more line; output level/imp 0.45 V/10k ohms or more line; headphone output imp 8 ohms; power consumption 80 W; fast-wind time 100 secs with 1,800-ft tape;  $17\frac{1}{2}'' \times 17'' \times 10\frac{1}{16}''$ ; 48 lb 6 oz \$1,400

**X-1000 Open-Reel Stereo Tape Deck**

Computer-controlled 4-track 2-ch dual-capstan transport open-reel tape deck with dbx NR, multi-function digital tape counter/timer, EE tape compatibility. Features permalloy heads; search to zero; search to cue; block repeat; rec mute; auto spacer; mic attenuation switching; independently switchable L/R recording for monaural or sound-on-sound recording; independent L/R source/tape monitoring; full-logic transport; mic/line mixing; 6% pitch control; 3 DC motors; optional remote control. Reel size  $10\frac{1}{2}''$  and  $7''$ ; W&F 0.03% rms at  $7\frac{1}{2}$  ips; 0.04% rms at  $3\frac{3}{4}''$ ; FR 30-34,000 Hz  $\pm 3$  dB; 40-30,000 -10VU at  $7\frac{1}{2}$  ips; S/N 65 dB dbx out, 100 dB dbx in (3% THD level, wtd); sep 50 dB at 1,000 Hz.  $17'' \times 17.8'' \times 10.3''$ ; 48.5 lbs \$1,200

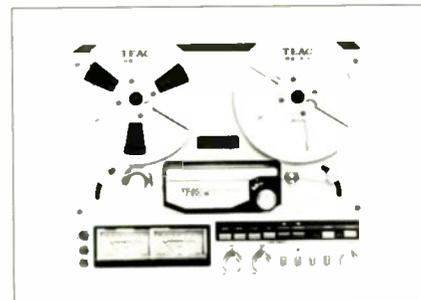
**X-700R Stereo Deck**

Bidirectional record/play stereo open-reel deck with

dual-capstan closed-loop transport and built in dbx. Features magnefloat capstan bearings; EE tape capability; full-logic transport control;  $\pm 6\%$  pitch control; manual cueing; independent 2-stage bias/EQ selectors; timer rec/play capability; FR 30-34,000 Hz (at  $7\frac{1}{2}$  ips); S/N 95 dB with dbx; W&F 0.03% ( $7\frac{1}{2}$  ips, wrms) \$950

**X-300R Open-Reel Deck**

Bidirectional playback stereo open-reel deck with 3-motor transport. Features EE tape capability; 3 heads; light-touch locking transport control; rec mute; independent L/R output; line and mic input-level controls;



tape/source monitor selector; mic/line mixing; front-panel mic and headphone jacks. FR 30-34,000 Hz at  $7\frac{1}{2}$  ips; S/N 65 dB with 3% THD; W&F 0.04% at  $7\frac{1}{2}$  ips wrms \$690

**X-300.** Similar to X-300R except no bidirectional playback \$620

**TECHNICS**

**RS-1520US Open-Reel Deck**

Compact professional tape deck;  $\frac{1}{2}$ -track, 2-ch record/play and  $\frac{1}{4}$ -track, 2-ch record/play and  $\frac{1}{4}$ -track, 2-ch play; 4 head system; 15-,  $7\frac{1}{2}$ - $3\frac{3}{4}$ -ips speeds; quartz control phase-locked dc brushless servo direct-drive capstan motor; reel tables; 2-tape tension-controlled dc brushless direct-drive motors; isolated loop direct-drive transport system. Features full IC-logic tape transport functions; direct switching from mode-to-mode without tape strain; separate left, right bias/EQ controls; left and right VU meters; built-in stroboscope. W&F 0.018% wrms at 15 ips, 0.3% wrms at  $7\frac{1}{2}$  ips; fast-wind time 150 secs with 2,500-ft tape; FR 30-30,000 Hz  $\pm 3$  dB at 15 ips, to 25 kHz at  $7\frac{1}{2}$  ips; S/N 60 dB; 0.8% distortion; 50 dB sep; mic input sens 0.25 mV (-72 dB); mic imp 200-10,000 ohms;  $17\frac{1}{2}'' \times 18'' \times 10\frac{1}{4}''$ . \$2,100

**RS-1500US Open-Reel Deck**

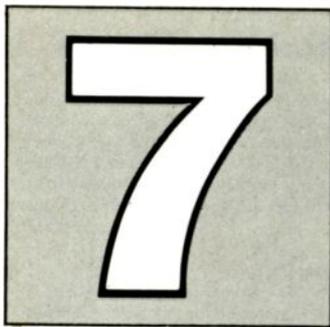
Three-speed (15,  $7\frac{1}{2}$ , and  $3\frac{3}{4}$  ips)  $\frac{1}{2}$ -track 2-channel record, playback, erase, and  $\frac{1}{4}$ -track 2-ch playback stereo tape recorder with quartz-controlled PLL dc brushless servo direct-drive capstan motor with double pinch-rollers. 2 tape-tension-controlled dc brushless direct-drive reel motors, 4 heads for recording,  $\frac{1}{2}$ - and  $\frac{1}{4}$ -track playback, erasure; mixing;

(Continued on page 210.)



Audio terms are defined in the glossary on page 19.

For an explanation of abbreviations, turn to the list on page 22.



# Blank Tape

## BASF

### Metal IV Cassettes

Metal-particle tape for Type IV/metal settings.

60 min	\$8.59
90 min	\$11.49
120 min	\$13.99

### Pro I Super Cassettes

Ferric-oxide formulation for Type I/normal-bias position.

60 min	\$4.49
90 min	\$5.99

### Pro II Chrome Cassettes

Pure chromium-dioxide formulation for Type II/chrome/high-bias position.

60 min	\$4.69
90 min	\$6.29

### Ferrochrom III Cassettes

Double-layer formulation of chromium dioxide and ferric oxide; Type III, ferrichrome bias, or Type I bias and 70  $\mu$ sec EQ. Especially recommended for car stereos.

60 min	\$4.49
90 min	\$5.99

### Performance I Cassettes

Normal/Type I/ferric position.

60 min	\$2.99
90 min	\$4.19
120 min	\$5.19

### Ferro LH Open-Reel Tape

Low-noise/high-output formulation exceeds professional recording studio requirements. Complete with sleeve and dust-proof box.

1,800 ft, 7" reel	\$9.99
2,400 ft, 7" reel	\$11.99

### Ferro Super LH Open-Reel Tape

Wide-dynamic-range tape designed for the most demanding studio mastering use as well as high-quality audiophile recordings.

1,800 ft, 7" reel	\$11.99
3,600 ft, 10 1/2" metal reel	\$31.99

### Chrome EE Open-Reel Tape

Extra-efficiency chrome tape for recorders with EE bias and EQ position.

1,800 ft, 7" reel	\$19.99
3,600 ft, 10 1/2" metal reel	\$49.99

## DENON

### DXM Metal Cassette

Designed exclusively for music; features improved MOL in low and medium frequency range and SOL in high frequency range, wide dynamic range at high-frequency end, smooth magnetic coating; high-precision cassette shells and matrix sheets; metal bias, 70- $\mu$ sec EQ.

C60. 60 min	\$8.60
C90. 90 min	\$12

### DX8 Series Cassettes

High-performance high-position cassette tape with ultra-fine high-energy magnetic oxides and high-precision shell with dynamically balanced hubs and clear matrix slip sheets. Features nonabrasive head-cleaning leader; reusable labels; 2-sided index cards; large tape-viewing window. Dynamic range 80 dB at 1 kHz; residual magnetic flux-density 2,500 gauss; coercive force 680 oersteds.

C60. 60 min	\$5.99
C90. 90 min	\$7.99

### DX7 Series Cassettes

Improved chrome-position double-coated cobalt-doped tape for music programs; high-bias; 70- $\mu$ sec EQ; high saturation output level in high frequencies and wide dynamic range; precision shell half with transparent friction sheets and dynamically balanced hubs.

C60. 60 min	\$4.99
C90. 90 min	\$6.99

### DX4 Series Cassettes

"Ultimate" normal-bias tape with double-oxide coating. Improved high-frequency response. Same shell half, friction sheets, and dynamically balanced hubs as DX7. Normal bias and 120- $\mu$ sec EQ.

C90. 90 min	\$5.99
C60. 60 min	\$4.35

### DX3 Series Cassettes

Double-coated normal-position tape with wide dynamic range. Features very favorable MOL from low to high frequencies with improved S/N ratios. High saturation level and low distortion. Fully compatible with all makes of cassette decks with normal bias setting. 120- $\mu$ sec EQ.

C60. 60 min	\$4
C90. 90 min	\$5.60

### DX1 Series Cassettes

Ferrite formulation newly developed for high sensitivity, high MOL, and excellent linearity. Ample dynamic range for musical and general recording. Tape transport characteristics improved with same high-precision shell halves as other DX series cassettes. Normal bias, 120- $\mu$ sec EQ.

C60. 60 min	\$2.75
C90. 90 min	\$3.85

### Open-Reel Tape

#### DX11010B Studio Master Tape

Open-reel audio tape with polyester base film material. Width 6.25mm; base film thickness 21mm; coating thickness 14mm; back coating 2.5mm; total thickness 37.5mm; length 1,100 meters. Frequency response +1 dB at 10,000Hz, +1.5dB at 12.5kHz;

### NEED MORE INFORMATION?

Write directly to the manufacturer or distributor. A list of names and addresses starts on page 25.

MOL 400,000 Hz + 12 dB, at 12.5 kHz + 7 dB; S/N ratio 63 dB; print-through 51 dB; dynamic range 91 dB; coercivity 340 oersteds ..... \$35  
**DX551.** Same as above except no back coating, total thickness 35mm, and length 550 meters ..... \$15

## FUJI

### FR Series Metal Cassettes

Metal coating with tensilized polyester base; designed for metal bias, 70- $\mu$ sec EQ; packaged in hinged plastic box.

FR (C-46). 46 min	\$7.15
FR (C-60). 60 min	\$7.99
FR (C-90). 90 min	\$10.75

### FR-II Series Cassettes

Chromium-dioxide cassettes with tensilized polyester base; designed for Type II/CrO<sub>2</sub> bias, 70- $\mu$ sec equalization; packaged in hinged plastic box.

FR-II (C-46). 46 min	\$4.90
FR-II (C-60). 60 min	\$5.45
FR-II (C-90). 90 min	\$7.50

### FR-I Series Cassettes

Ferric formulation with tensilized polyester base; designed for ferric/normal/Type I bias, 120- $\mu$ sec equalization; packaged in hinged plastic box.

FR-I (C-46). 46 min	\$4.90
FR-I (C-60). 60 min	\$5.45
FR-I (C-90). 90 min	\$7.50

### ER Series Cassettes

Ferric formulation with tensilized polyester base; designed for ferric/normal/Type I bias, 120- $\mu$ sec equalization; packaged in hinged plastic box.

ER (C-46). 46 min	\$3.60
ER (C-60). 60 min	\$4.10
ER (C-90). 90 min	\$5.75

### DR Series Cassettes

DR (C-46). 46 min	\$2.99
DR (C-60). 60 min	\$3.40
DR (C-90). 90 min	\$4.75
DR (C-120). 120 min	\$6.60

### GI-I Series Cassettes

Normal bias, 120  $\mu$  sec EQ car audio cassette with heat-resistant tape, shell and clear plastic case; tensilized polyester backing;

GT (C-46)	\$5.45
GT (C-60)	\$6.20
GT (C-90)	\$8.65

## HITACHI

### High-End High-Bias Cassettes

High bias and chrome EQ.

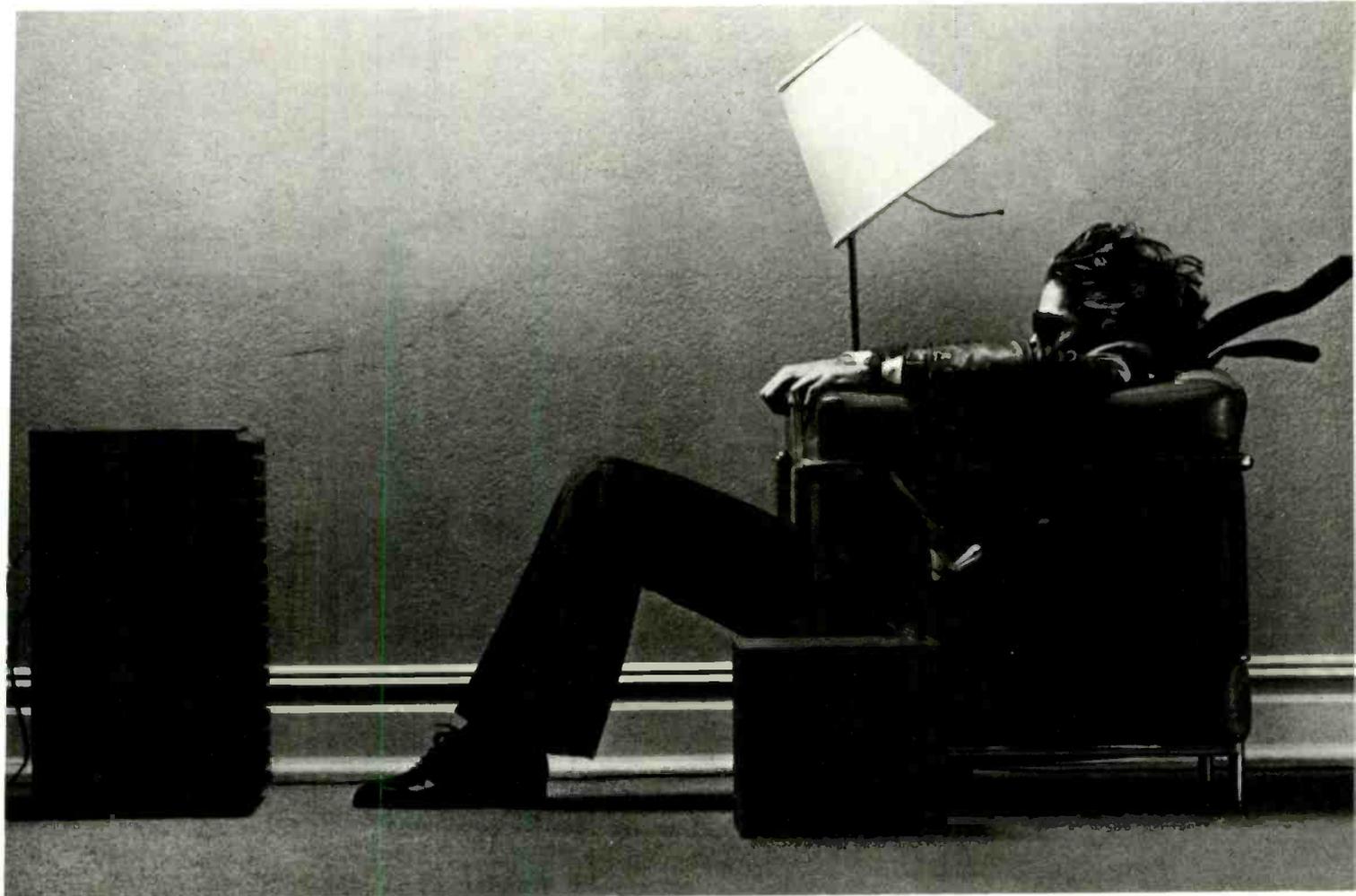
SXC60. 60 min	\$5.10
SXC90. 90 min	\$6.99

### High-End Cassettes

Normal bias and EQ.

SRC60. 60 min	\$5.10
SRC90. 90 min	\$6.99

# AFTER 500 PLAYS OUR HIGH FIDELITY TAPE STILL DELIVERS HIGH FIDELITY.



If your old favorites don't sound as good as they used to, the problem could be your recording tape.

Some tapes show their age more than others. And when a tape ages prematurely, the music on it does too.

What can happen is, the oxide particles that are bound onto tape loosen and fall off, taking some of your music with them.

At Maxell, we've developed a binding process that helps to prevent this. When oxide particles are bound onto our tape, they stay put. And so does your music.

So even after a Maxell recording is 500 plays old, you'll swear it's not a play over five.



## IT'S WORTH IT.

## Blank Tape

### Mid-Range High-Bias Cassettes

High bias and chrome EQ.	
EXC60. 60 min	\$4.35
EXC90. 90 min	\$5.99

### Mid-Range Cassettes

Normal bias and EQ.	
ERC60. 60 min	\$4.35
ERC90. 90 min	\$5.99

### Low-Noise Cassettes

Normal bias and EQ.	
LNC60. 60 min	\$2.25
LCC90. 90 min	\$3.45

## IRISH

### Professional-Series Cassettes

In polybag.	
261-C60-3PA-HK. 60 min, 3/bag	\$3.30
261-C90-3PA-HK. 90 min, 3/bag	\$4.50

#### In flip-top plastic box.

2000-C30. 30 min	\$1.50
2000-C60. 60 min	\$1.75
2000-C90. 90 min	\$2.15

#### In flip-top plastic box and polybag.

2000-C60B. 60 min	\$1.90
2000-C90B. 90 min	\$2.30

### Low-Noise, Extended-Range Cassettes

Flip-top plastic box.	
7000 C-60. 60 min	\$2.10
7000 C-90. 90 min	\$2.70

### 270 Series Professional Tape

277-151. 1,800-ft, 7" reel	\$15.25
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### 200 Series Professional Tape

Standard, 1½-mil, polyester base, ¼".	
231-151. 1,200-ft, 7" reel	\$8.99

## JVC

### ME-Pro II Cassette Tape

Metal-particle tape with high magnetic density and high particle acicularity for high MOL.	
C-90	\$17

### Dynarec Series

Especially designed for recording Compact Discs and other PCM digital source material.	
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### DA7 High-Bias Cassette Tape

Tape combines two layers of high-energy cobalt-treated particles.	
C-90	\$7.45
C-60	\$5.25

### DA3 Normal-Bias Cassette Tape

Normal-bias tape, designed for recording music, has two layers of magnetic coating; one with high coercivity and one with high magnetic flux density. Requires 120 µsec EQ	
C-90	\$6.95
C-60	\$4.75

### DA1 Normal-Bias Tape

Normal-bias tape with low noise and high output made with gamma ferric magnetic particles having a high residual magnetic flux density.	
C-90	\$5.25
C-60	\$3.85

### F1 Cassette Tape

Popular series.	
C-90	\$3.95
C-60	\$2.95

## KENWOOD

### MD Series Cassettes

Designed for metal bias/70-µsec EQ.	
MD-60. 60 min	\$9.25

## 7

### CD Series Cassettes

Cobalt-adsorbed gamma ferric oxide formulation designed for high bias/70-µsec EQ.	
CD-60. 60 min	\$4.25
CD-90. 90 min	\$5.75

### ND Series Cassettes

Premium ferric-oxide formulation designed for normal bias/120-µsec EQ. Particle shape, size uniformity, and dispersion are controlled to yield maximum output level and low noise across frequency spectrum. High frequency response is 4 to 7 dB over conventional normal-bias tapes. Recommended for portable and car-stereo tape players.	
ND-60. 60 min	\$3.45
ND-90. 90 min	\$5.00

### N Series Cassettes

High-output ferric-oxide formulation with a high-frequency sensitivity of up to 4 dB over conventional low-noise/high-output tapes; designed for low noise and low distortion on equipment with or without bias/EQ controls.	
N-60. 60 min	\$2.70
N-90. 90 min	\$3.45

## KONICA

### Metal Cassette Tapes

60 min	\$5.49
90 min	\$7.49

### GM-II High-Bias Cassette Tapes

60 min	\$3.09
90 min	\$3.99

### GM-I Normal-Bias Cassette Tapes

60 min	\$2.49
90 min	\$3.59

### ML Normal-Bias Cassette Tapes

60 min	\$1.89
90 min	\$2.59
120 min	\$3.29

## LORAN

### Loran Normal-Bias Cassettes

Designed for normal bias, 120-µsec EQ settings.	
C-46. 46 min	\$5.25
C-60. 60 min	\$5.75
C-90. 90 min	\$7.95

### Loran High Bias, Type II Cassettes

Ferri-cobalt tape designed for use with CrO <sub>2</sub> settings.	
C-46. 46 min	\$5.25
C-60. 60 min	\$5.75
C-90. 90 min	\$7.95

### Loran Metal Cassettes

Metal-particle formulation cassettes designed for type IV bias, 70-µsec EQ.	
C-60. 60 min	\$12.70
C-90. 90 min	\$15.75

## MAXELL

### MX Metal Cassettes

Metal bias/EQ.	
MX-46. 46 min	\$8.99
MX-60. 60 min	\$9.99
MX-90. 90 min	\$11.99

### XLII-S Epitaxial Cassettes

High-level bias; 70-µsec EQ.	
XLII-S60. 60 min	\$5.29
XLII-S90. 90 min	\$7.29

### XLII-S Epitaxial Cassettes

Normal bias; 120-µsec EQ.	
XLII-S60. 60 min	\$5.29
XLII-S90. 90 min	\$7.29

## Blank Tape

### UD-XL-I Epitaxial Cassettes

Normal bias; 120-µsec EQ.	
C-60. 60 min	\$4.59
C-90. 90 min	\$6.39

### UD-XL-II Epitaxial Cassettes

Chrome type; high-level bias; 70-µsec EQ.	
C-60. 60 min	\$4.59
C-90. 90 min	\$6.39

### Ultra Dynamic Cassettes

Normal bias.	
UD-46. 46 min	\$3.19
UD-60. 60 min	\$3.49
UD-90. 90 min	\$5.19
UD-120. 120 min	\$6.99

### Low-Noise Cassettes

Normal bias.	
LN-46. 46 min	\$2.19
LN-60. 60 min	\$2.39
LN-90. 90 min	\$3.59
LN-120. 120 min	\$4.69

### Microcassettes

Normal bias.	
MC-46MX (1 per card)	\$8.09
MC-60MX (1 per card)	\$8.99
MC-46UD2PK (2 per card)	\$8.39
MC-60UD2PK (2 per card)	\$9.29

### Open-Reel Tapes

#### XLII Open-Reel Tapes

Designed for use with EE-capable decks.	
XLII 35-90. 1,800 ft.	\$19.99
XLII 35-180. 3,600 ft.	\$54.59

#### XLI Back-Coated Open-Reel Tapes

XLI 50-60B. 1,200 ft, 7" reel	\$11.29
XLI 50-120B. 2,500 ft, 10½" reel	\$30.59
XLI 35-90B. 1,800 ft, 7" reel	\$12.69
XLI 35-180B. 3,600 ft, 10½" reel	\$34.99

#### Ultra-Dynamic Open-Reel Tapes

UD50-60. 1,200 ft, 7" reel	\$8.99
UD50-120. 2,500 ft, 10½" reel	\$25.69
UD35-90. 1,800 ft, 7" reel	\$10.39
UD35-180. 3,600 ft, 10½" reel	\$28.89
UD50-120. 2,500 ft, 10½" reel	\$12.99
UD18-180. 3,600 ft, 10½" reel	\$14.99

## MEMOREX

### Metal IV Cassettes

State-of-the-art metal formulation for metal bias (Type IV) and 70-µsec EQ settings; low and midrange S/N ratio at +6 dB above conventional premium tapes; unique dustproof Memorex album locks open or closed, accepts cassettes in either direction.	
METAL IV C-60. 60 min	\$4.59
METAL IV C-90. 90 min	\$6.29

### High Bias II Cassettes

Exclusive superfine uniform ferrite crystal oxide formulation for high-bias (CrO <sub>2</sub> , Type II) setting and 70-µsec EQ; delivers flat frequency response at preferred record levels (0 dB) and 4 to 5 dB lower noise; unique dustproof Memorex album locks open or closed, accepts cassettes in either direction.	
HIGH BIAS II C-60. 60 min	\$3.19
HIGH BIAS II C-90. 90 min	\$4.79

### MRX I Cassettes

Finest Memorex Type I cassette tape, with unique ferric-oxide formulation for normal bias; 120-µsec EQ settings; improved dynamic range across full sound spectrum; unique dustproof Memorex album locks open or closed, accepts cassettes in either direction.	
MRX I C-30. 30 min	\$2.79
MRX I C-45. 45 min	\$2.99
MRX I C-60. 60 min	\$3.19
MRX I C-90. 90 min	\$4.79
MRX I C-120. 120 min	\$6.39

For years you have been told some pretty tall stories about cassette tape. Denon only makes one claim for DX-Series Cassettes. We don't say they will play on the moon; we don't say they will survive being baked in ovens. We hope that they won't tip over your chair or shatter your stemware. We only say that Denon DX-Series Cassette Tape will sound more like real music than any other brand on the market.

**"YOU DON'T LISTEN TO SPECIFICATIONS;  
YOU LISTEN TO MUSIC."**

Most cassette tape advertising tries to impress you with specifications. The trouble is that specifications do not

necessarily equate to *musicality*.

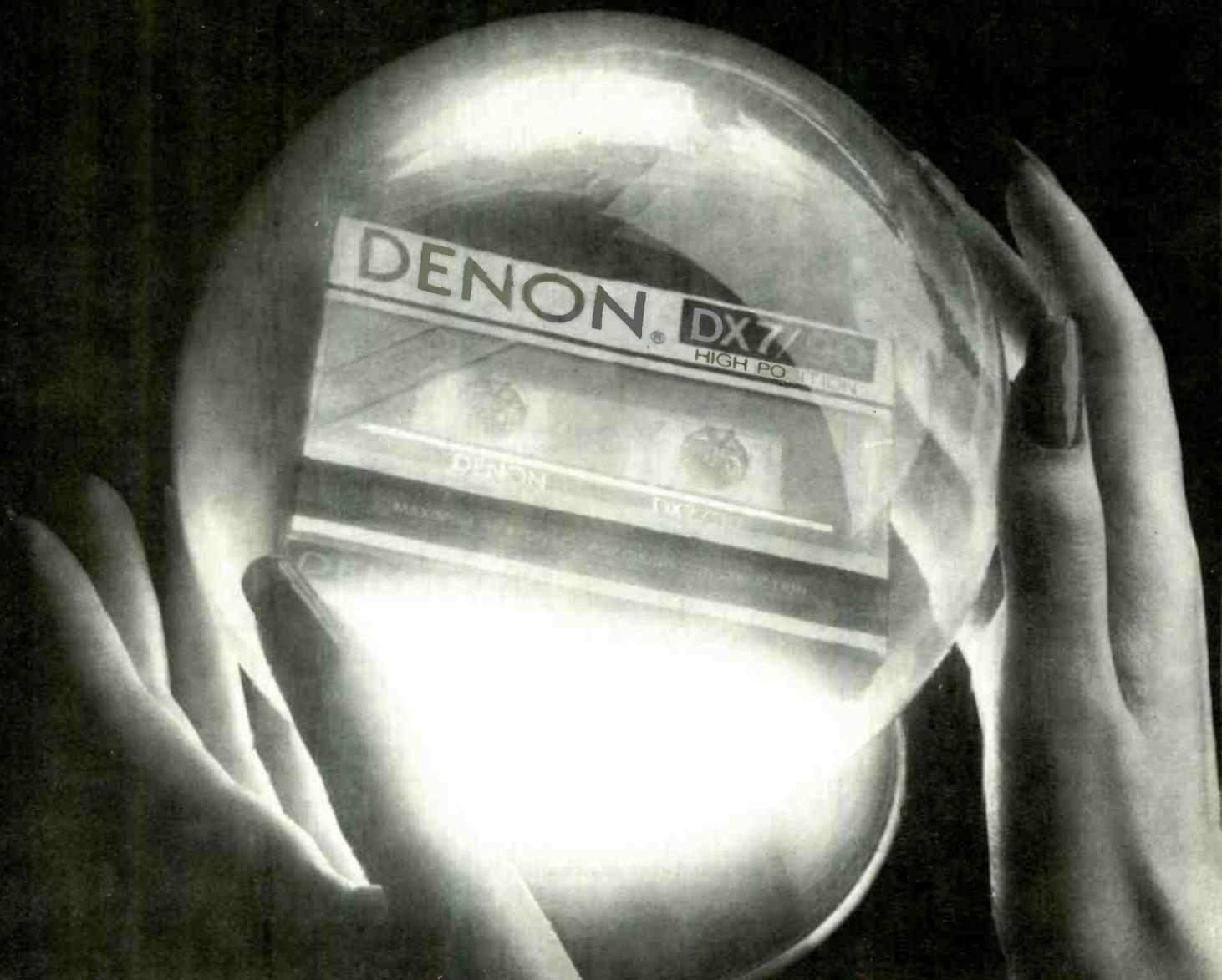
Most manufacturers' specifications are based on static measurements, the tape's response to steady test tones. Denon DX-Series Cassette Tape goes one step further: it also minimizes Dynamic Distortion, the distortion created by actual musical signals.

**"DENON WILL BECOME  
'THE AUDIOPHILES CASSETTE TAPE.'"**

True audiophiles realize the A-B testing is not the real gauge of sound quality. Only extended listening can tell you if a component—or a tape—is superior.

Perform this test for yourself. Make a recording on Denon DX-Cassette Tape first listening to the source. Then playback your DX-tape recording and compare the two experiences.

The message is in the music.



**"YOU WILL DISCOVER A CASSETTE TAPE  
THAT SOUNDS LIKE REAL MUSIC."**

**dB Series Cassettes**

Cassette tape for general recording of voice or music. Full lifetime warranty.

C-60. 60 min	\$2.59
C-90. 90 min	\$3.79

**Microcassettes**

A series of 3 different microcassettes for different user application; two for music, one for general recording METAL Music Micro 60 min ..... \$8.99  
MEX Dictation-Micro 60 min (2 pack) ..... \$7.99  
MRX Music Micro 60 min ..... \$5.99

**NAKAMICHI****ZX Reference Cassette Tape**

Metalloy (metal-particle) formulation for recording with metal-compatible decks only; features ultra-high coercivity and retentivity for improved distortion and MOL; 70- $\mu$ sec EQ.

ZX-C60. 60 min	\$6.50
ZX-C90. 90 min	\$9.00

**SX II Reference Cassette Tape**

Double-coated ionized cobalt and ferric-oxide formulation. CrO<sub>2</sub> bias and EQ (70  $\mu$ sec).

SXII-C60. 60 min	\$5.85
SXII-C90. 90 min	\$8.00

**SX Reference Cassette Tape**

Single-coated; ionized cobalt and ferric oxide formulation; high coercivity permits use of CrO<sub>2</sub> bias and EQ (70- $\mu$ sec) for 4-5 dB better S/N ratio.

SX-C60. 60 min	\$4.50
SX-C90. 90 min	\$6.30

**EX II Reference Cassette Tape**

Single-coated; ferricobalt formulation; same bias and EQ (120 $\mu$ sec) as EX tape; extra-low noise, high output.

EXII-C60. 60 min	\$3.70
EXII-C90. 90 min	\$5.40

**PDMAGNETICS****1100 Metal Audio Cassettes**

Designed to produce flat response over entire 30-20,000-Hz range for critical recording applications; metal bias.

C-60. 60 min	\$8.99
C-90. 90 min	\$11.99

**500 Crolyn® Audio Cassettes**

Chromium-dioxide cassettes in precision housings with laminated double-layer foil construction for superior winding quality, controlled friction, and no jamming; designed for CrO<sub>2</sub> bias.

C-60. 60 min	\$4.99
C-90. 90 min	\$6.49

**Tri-Oxide FERRO Audio Cassettes**

Premium-quality ferric-oxide audio cassettes designed for normal bias.

C-60. 60 min	\$3.49
C-90. 90 min	\$4.99

**QUASAR****MT602 Microcassettes**

60-minute normal-bias microcassettes in twin pack ..... \$5.00

**MT462M Microcassettes**

46-minute metal-bias microcassettes in twin pack ..... \$9.50

**MT90A Microcassettes**

Angrom tape microcassettes ..... \$9.50

**REALISTIC****Supertape Metal Cassettes**

44-960. 60 min	\$5.99
44-961. 90 min	\$6.99

**Supertape Hi-Bias Cassettes**

44-940. 60 min	\$3.99
44-941. 90 min	\$4.69

**Supertape Gold Cassettes**

44-920. 45 min	\$2.69
44-921. 60 min	\$2.99
44-922. 90 min	\$3.99
44-923. 120 min	\$4.99

**Realistic Low-Noise, High output**

44-601. 30 min	\$1.59
44-602. 60 min	\$1.99
44-603. 90 min	\$2.79
44-604. 120 min	\$3.49

**Concertape: 3-Packs**

44-606. 30 min	\$1.99 ea.
44-607. 60 min	\$2.59 ea.
44-613. 90 min	\$3.59 ea.
44-614. 120 min	\$4.99 ea.

**Concertape: Singles**

44-605. 60 min	\$0.88 ea.
44-620. 90 min	\$1.25 ea.

**Mini-Cassettes**

44-633. 30 min	\$2.69
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**Micro Cassettes**

44-640 2.4cm/sec.60 min.	\$3.49
1.2cm/sec.120 min	\$2.99

**RECOTON****Rainbow 5-Packs**

Audio cassettes supplied 5/pack in see-through molded plastic boxes. Cassette shells come in 5 different colors for easy identification.

RC5 $\times$ 60. 60 min each	\$3.99
RC5 $\times$ 90. 90 min each	\$5.79

**Studio Cassettes**

High-bias high-energy cassette tapes with Teflon-treated reels. 70 $\mu$ sec EQ. Frequency response 50-23,000 Hz.

SHB60. 60 min.	\$3.49
SHB60RJ. 60 min.	\$3.99

**Studio Standard Series**

High-bias cassettes in rigid Norelco case. Features Teflon-treated tape reels for trouble-free operation.

SH-60. 60 min	\$2.79
SH-60RJ. 60 min, blister packed	\$2.79

**Deluxe Ultra Flow Cassettes**

RU60. 60 min	\$1.19
RU90. 90 min	\$1.49
RU60-2RJ. Pkg of 2 60 min	\$2.49
RU90-2RJ. Pkg of 2 90 min	\$3.29
RU4 $\times$ 60. Four 60 min in Magic-Stak module	\$5.39
RU4-90. Four 90 min in Magic-Stak module	\$6.79

**Ultra Flow High-Energy Cassettes**

Available individually boxed or on blister cards.	
HE60. 60 min	\$1.75
HE90. 90 min	\$2.25
HE60-2RJ. Pkg of 2 60 min, blister packed	\$3.49
HE90-2RJ. Pkg of 2 90 min, blister packed	\$3.49

**Budget-Priced Cassettes**

Available individually wrapped or in poly bags.	
RC60. 60 min	\$0.89
RC90. 90 min	\$1.19

Audio terms are defined  
in the glossary on page 19.

For an explanation of abbreviations,  
turn to the list on page 22.

**8-Track Cartridges**

Available in shrink wrap or blister pack.

8T40. 40 min	\$2.49
8T45. 45 min	\$2.59
8T80. 80 min	\$3.19
8T90. 90 min	\$3.69
8T100. 100 min	\$3.99
8T40-4. Pkg of 4 40 min	\$10.95
8T80-4. Pkg of 4 80 min	\$12.95

**REVOX****631 Magnetic Tape**

New Revox tape with improved maximum output level at low frequencies. For 3% distortion, flux on tape reaches 1,200 nWb/m, representing an S/N ratio of 78 dB. Bias adjustment compatible with 621 tape.....\$40

**RKO****Ultrachrome Cassettes**

Chromium dioxide formulation; chrome (high) bias; 70- $\mu$ sec EQ; housed in five-screw polystyrene shell with chrome notch.

C-60. 60 min	\$4.49
C-90. 90 min	\$5.99

**Broadcast I Cassettes**

Ferric formulation; normal bias; 120 $\mu$ sec equalization; housed in five-screw polystyrene shell.

C-60. 60 min	\$3.99
C-90. 90 min	\$5.49

**Xtra Dynamic Cassettes**

Ferric bias; for home recording.

C-45. 45 min	\$2.49
C-60. 60 min	\$2.99
C-90. 90 min	\$3.99

**SCOTCH****XSM IV Cassettes**

Fine metal magnetic particle formulation; delivers maximum output up to 10 dB better than typical oxide tapes and up to 7 dB greater than chrome tapes; low distortion, added high frequency response, and improved S/N ratio.

60 min	\$7.99
90 min	\$10.29

**XS I Cassettes**

Features premium grade, low-noise ferric oxide; for use with recorders in the normal or 120  $\mu$ sec equalization position; album packaging; improved shell for critical mechanical permanence and 3-head equipment.

60 min	\$4.49
90 min	\$5.79

**XS II Cassettes**

Features premium grade, dual-layer, cobalt-modified ferric oxide; for use with recorders in the chrome or 70  $\mu$ sec EQ position; album packaging; improved shell for critical mechanical permanence and 3-head equipment.

60 min	\$4.79
90 min	\$5.99

**CX Cassettes**

Normal-bias ferric oxide cassette featuring extended sensitivity in both high and low frequency ranges. 5-screw impact polymer shell houses an inner assembly that features specially made low-friction roller guides; album package.

46 min	\$2.99
60 min	\$3.29
90 min	\$4.79
120 min	\$6.59

**BX Cassettes**

Ferric-oxide formulation for all-purpose cassette use; polyester base. 5-screw impact polymer shell featuring low-friction roller guides. Album packaging.

46 min	\$1.89
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46 min .....	\$1.89
60 min .....	\$2.19
90 min .....	\$3.29
120 min .....	\$4.79

**206-207 Open-Reel Tapes**

Polyester-base tape with "Posi-Trak" back coating. Leader, trailer. Designed for critical stereo mastering.  
206. 7" reel, 60 min at 7½ ips, 1.5 mil ... \$9.39  
207. 7" reel, 90 min at 7½ ips, 1.0 mil ... \$10.79

**Dynarange Open-Reel Tapes**

Provides high-fidelity recording even at 3¼ ips; multi-purpose tape providing full dynamic range throughout audible spectrum; S/N is 4 to 6 dB better than standard tapes.

211. Polyester backing, white yellow trailer, 5" reel, 30 min at 7½ ips, 1.5 mil .....	\$4.09
7" reel, 60 min .....	\$6.29
212. 5" reel, 45 min at 7½ ips, 1.0 mil .....	\$4.89
90 min, 7" reel .....	\$8.39

**SONY****Metal Series Cassettes**

70-µsec metal EQ.	
Metallic 46. 46 min .....	\$7.00
Metallic 60. 60 min .....	\$8.45
Metallic 90. 90 min .....	\$11.50

**FeCr Series Cassettes**

Normal or FeCr bias; 70-µsec FeCr EQ.	
FeCr-46. 46 min .....	\$3.90
FeCr-60. 60 min .....	\$4.40
FeCr-90. 90 min .....	\$6.10

**UCX-S Series Cassettes**

Ferric-oxide magnetic tape; high bias, Type II. 70-µsec equalization.	
UCX-S 60. 60 min .....	\$5.00
UCX-S 90. 90 min .....	\$7.00

**UCX Series Cassettes**

Type I position (high bias, 70 µsec EQ)	
UCX-60,60 min .....	\$4.15
UCX-90,90 min .....	\$5.75

**AHF Series Cassettes**

Type I position (normal bias, 120µsec EQ).	
AHF-60, 60 min .....	\$3.80
AHF-90, 90 min .....	\$5.20

**BHF Series Cassettes**

Type 1 position; normal bias 120-µsec EQ.	
BHF-60. 60 min .....	\$3.10
BHF-90. 90 min .....	\$4.25

**LNX Series Cassettes**

Normal bias; normal or 120-µsec EQ.	
LNX-46. 46 min .....	\$2.05
LNX-60. 60 min .....	\$2.25
LNX-90. 90 min .....	\$3.15
LNX-120. 120 min .....	\$4.05

**Microcassettes**

Popular Series; ferric oxide; 3 to a package.	
3MC-60. min .....	\$11.40
Popular Series blister pack.	
MC-60. 60/120 min .....	\$3.80
MC-90. 90/180 min .....	\$8.00
High Fidelity Series.	
MC45 HF. 46/92 min .....	\$4.10
MC60 HF. 60/120 min .....	\$4.50
Metallic Series.	
MC46 Metallic. 46/92 min .....	\$5.55
MC60 Metallic. 60/120 min .....	\$6.10

**Elcasetts**

Type I: SLH tape.	
LC-60. 60 min .....	\$8.00
LC-90. 90 min .....	\$10.60
Type II: FeCr tape.	
LC-60. 60 min .....	\$10.60
LC-90. 90 min .....	\$12.80

**Open-Reel Tapes**

FeCr Series.	
FeCr 7-55OBL. 90 min .....	\$14.00
FeCr 11-110OBL. 180 min .....	\$39.00
ULH Series.	
ULH 72-37OBL. 60 min .....	\$9.00
ULH 7-55OBL. 90 min .....	\$11.50
ULH 11-110OBL. 180 min .....	\$31.00

**TDK****Professional Reference Series****MA-R (Metal Alloy-Reference) Cassettes**

Metal bias; 70-µsec EQ; housed in reference standard diecast metal shell; excellent high-frequency MOL and high coercivity for improved sensitivity and extra recording headroom.	
MA-R 60. 60 min .....	\$8.99
MA-R 90. 90 min .....	\$11.99

**SA-X (Super Avilyn-Extended) Cassettes**

Double-coated Super-Avilyn-particle tape; high bias; 70-µsec EQ; high output and wide dynamic range; housed in precision shell and laboratory standard mechanism.	
SA-X60. 60 min .....	\$4.99
SA-X90. 90 min .....	\$6.99

**AD-X (Acoustic Dynamic-Extended) Cassettes**

Avilyn-particle technology in a normal-bias cassette. High output, wide dynamic range, excellent sensitivity. Laboratory standard mechanism. 120-µsec equalization.	
AD-X60. 60 min .....	\$3.89
AD-X90. 90 min .....	\$5.49

**Reference Standard Series****MA (Metal Alloy) Cassettes**

Metal bias; 70-µsec EQ; housed in precision molded plastic shell housing and laboratory standard mechanism.	
MA-60. 60 min .....	\$6.69
MA-90. 90 min .....	\$8.99

**SA (Super Avilyn) Cassettes**

Cobalt-ferric formulation; high bias; 70-µsec EQ; extended frequency response and low noise; laboratory standard mechanism.	
SA-60. 60 min .....	\$4.59
SA-90. 90 min .....	\$6.49

**AD (Acoustic Dynamic) Cassettes**

Linear ferric oxide particle formulation for normal bias; 120-µsec EQ; superior high-end response and output level; laboratory standard mechanism; for home and car decks.	
AD-60. 60 min .....	\$3.29
AD-90. 90 min .....	\$4.79

**General-Purpose Cassettes****D (Dynamic) Cassettes**

Normal bias; 120-µsec EQ; precision mechanism.	
D-30. 30 min .....	\$2.09
D-46. 46 min .....	\$2.29
D-60. 60 min .....	\$2.40
D-90. 90 min .....	\$3.39
D-120. 120 min .....	\$3.99
D-180. 180 min .....	\$5.59

**Endless Cassettes****EC (Endless) Cassettes**

Endless-loop design permits continuous repeating of recorded material; back coated; available with or without foil strip for machines with automatic shutoff sensor.	
EC-20S(F). 20 sec .....	\$4.19
EC-30S(F). 30 sec .....	\$4.29
EC-1M(F). 1 min .....	\$4.39
EC-3M(F). 3 min .....	\$4.49
EC-6M(F). 6 min .....	\$4.99
EC-12M(F). 12 min .....	\$5.99

**Open-Reel Tapes****SA Open-Reel Tape**

Extra-efficiency Super Avilyn open-reel tape for use with new EE tape decks. High coercivity, low noise for full performance at half speed.  
SA35-90. 1,800-ft, 7" plastic reel ..... \$15.95 || SA35-180M. 3,600-ft, 10½" metal reel ..... | \$41.95 |

**GX Open-Reel Tape**

Extremely high output level, extended range, low noise, low distortion tape for mastering and all critical recording applications. Back treated for smooth running and stable winding. Available in 35- and 50-micron thicknesses.  
GX35-90B. 1,800 ft, 7" plastic reel ..... \$12.95 || GX35-180BM. 3,600 ft, 10½" metal reel ..... | \$34.95 |
| GX50-60B. 1,200 ft, 7" plastic reel ..... | \$10.95 |
| GX50-120BM. 2,500 ft, 10½" metal reel ..... | \$29.95 |

**LX Open-Reel Tape**

High output level, extended range, low noise, low distortion tape for professional and all critical recording applications. Available in 35- and 50-micron thicknesses. Back treated (except for LX 35-90 and LX35-180M).  
LX35-90. 1,800 ft, 7" plastic reel ..... \$9.95 || LX35-90B. 1,800 ft, 7" plastic reel ..... | \$10.95 |
LX35-180M. 3,600 ft, 10½" metal reel .....	\$27.95
LX35-180BM. 3,600 ft, 10½" metal reel .....	\$30.95
LX50-60B. 1,200 ft, 7" plastic reel .....	\$9.95
LX50-120BM. 2,500 ft, 10½" metal reel .....	\$27.95

**Microcassettes****MA-MC60B Microcassettes**

Same metal-alloy tape formulation as standard-size cassettes. High-MOL, high-coercivity tape for critical music recording in metal-compatible microcassette recorders.  
MA-MC60. 60 min ..... \$8.99 |

**AD-MC60B2 Microcassettes**

Same acoustical dynamic formulation as standard-size cassettes. High-output, extended-range, low-noise tape for music and speech recording. Packed in twos.  
AD-MC60B3, 60 min each ..... \$9.99 |

**D-MC60B3 Microcassettes**

Same dynamic formulation as standard-size cassettes. Has flat response and low noise figure for speech recording. Packed in threes.  
D-MC60B3. 60 min each ..... \$11.99 |

**YAMAHA****Metal-Alloy Audio Cassettes**

Designed for metal bias, 70-µsec EQ.	
MR-60. 60 min .....	\$8.39
MR-90. 90 min .....	\$11.29

**Super Ferric-Oxide Extended Cassettes**

Super ferric-oxide extended audio cassettes designed for high bias, 70-µsec EQ.	
CRX-60. 60 min .....	\$6.29
CRX-90. 90 min .....	\$8.69

**Super Ferric-Oxide Audio Cassettes**

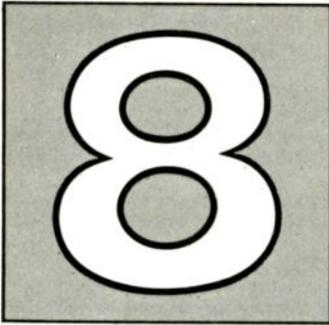
Super ferric-oxide audio cassettes designed for high bias, 70-µsec EQ.	
CR-60. 60 min .....	\$5.49
CR-90. 90 min .....	\$7.79

**Ferric-Oxide Extended Audio Cassettes**

Ferric-oxide extended cassettes designed for normal bias, 120µsec EQ.	
NRX-60. 60 min .....	\$5.10
NRX-90. 90 min .....	\$6.75

**Ferric Oxide Audio Cassettes**

Standard ferric-oxide audio cassettes designed for normal bias, 120-µsec EQ.	
NR-60. 60 min .....	\$4.29
NR-90. 90 min .....	\$6.19



# Accessories

## AAL

### V-6 Audio/Video Home Entertainment Center

Rack features tempered glass doors and recessed adjustable shelves which can easily accommodate up to a 19-inch monitor. Features chrome record dividers; concealed tape storage drawer; made from top-grade fiberboard laminated with acrylic-coated, wood-grained vinyls; easy cam-lock assembly; 48"H x 51 1/2"W x 18 1/2"D..... \$400

### A-5 Audio Home Entertainment Center

Rack features tempered glass doors with u-shaped magnetic pads and 3 shelves, one adjustable. Has storage space for audio software. Made from top-grade fiberboard, laminated with acrylic-coated vinyls. Features cam-lock system for easy assembly. 31 1/2"H x 45 3/4"W x 18 1/4"D ..... \$300

### A-4 Audio Control Center

Audio rack features 3 shelves, wooden dust cover, concealed tape storage drawer; chrome-finished record dividers for audio software storage; 50 1/4" x 23"W x 18 1/4"D ..... \$280

### A-3 Mobile Audio Rack

Audio rack features tempered safety glass doors, easy-roll casters and storage for audio/video software. Includes 3 shelves, 2 adjustable; made from top-grade fiberboard, laminated with acrylic-coated vinyl; features cam-lock assembly. 40 3/8"H x 23 3/8"W x 18 3/8"D..... \$190

## ACE AUDIO

### 4100-X-24b Infrasonic/Ultrasonic Filter

Active filter designed to eliminate infrasonic (turntable and record) noise and ultrasonic (rfi, power-amplifier overdrive with high-frequency noise, etc.) interference. Infrasonic section rate at 24 dB/octave below 20 Hz; ultrasonic section rate 12 dB/octave beyond 20 kHz; distortion 0.002% at 2 V output. \$142.50

### 4000-X-24 Super Infrasonic Filter

Combined active Bessel and passive filter sections provide low phase shift and an ultra-sharp cutoff (-24 dB/octave); removes all infrasonic disturbances; individually hand-calibrated; distortion 0.002%; response -3 dB at 20 Hz (24 dB/octave) ..... \$132

### 4100 Infrasonic/Ultrasonic Filter

Active filter. Subsonic section rate 18 dB/octave below 20 Hz; ultrasonic section rate 12 dB/octave beyond 20 kHz; IM distortion 0.002% typical, 20-20,000 Hz ..... \$108.50

### 4000b Subsonic Filter

Low-frequency filter with 4 rear-panel connectors for 18 dB/octave rolloff at 20 Hz or below, -3 dB; IM distortion 0.01% at 1 V output; input imp 47k ohms; output imp 150 ohms; min output load 10k ohms; hum and noise -86 dB; for use with direct-coupled amps, receivers, and/or subwoofers. 6"W x 4 3/4"D x 2 1/4"H ..... \$98.50

### 3900 Ground Liminator

Designed to break up ground loop faults in connecting

cables and improve hum; employs passive circuitry ..... \$20.75  
Kit ..... \$16.25

## ADCOM

### GFS-1 Speaker Selector

Can switch speaker systems with amps rated at up to 200 W/ch; usable with conventional or bridged amps; handles up to 3 pairs of speakers with built-in load protection for low-imp loads; headphone output; 7"W x 5 1/2"D x 2 1/4"H ..... \$89

### Carbon Fiber Headshell

Low-resonance low-mass carbon fiber headshell with nontarnishing gold-plated terminal pins .... \$14.95

## AIWA

### MT-80U Digital Audio Timer

Ultraslim timer with wake-up alarm, sleep timer, digital time display with dimmer capability. Features on/off beeper; power-interruption compensation; remaining-tape timer; 5 AM/5 FM time presets; programmable for up to 6 automatic changes between tuner preset channels ..... \$120

### RC-R200U Remote-Control System

Infrared wireless remote-control system for Aiwa solid-state-controlled cassette decks ..... \$95

## AKAI

AH-15. Demagnetizer for GX tape heads ... \$39.95

CHR-1. Head-cleaning fluid ..... \$3.50

D-100. DIN/DIN cable ..... \$8.50

DC-77. Dust cover for GX-77 ..... \$49.95

DC-255. Dust cover for GX-255 ..... \$45.50

DC-266. Dust cover for GX-267D ..... \$45.50

DC-620. Dust cover for GX-620/GX-625 ... \$51.95

DC-630. Dust cover for GX-630D/DB/GX-270DSS ..... \$51.95

DC-635. Dust cover for GX-635D/DB/GX-747 ..... \$57.50

DC-4000. Dust cover for GX-4000DB ..... \$45.50

DR-110. DIN/RCA cable ..... \$10.50

DT-120S. 24-hour digital display timer ..... \$85

FP-210. Felt-pad tape cleaners ..... \$3

HS-20. Headshell for AP-B20 turntable .... \$11.95

HS-60. Headshell for AP-D30/D40/Q50/Q60 turntables ..... \$17.50

HS-80. Headshell for AP-Q80 turntable ..... \$17.50

R-7M. Empty 7" aluminum reel ..... \$10.50

R-10M. Empty 10 1/2" aluminum reel ..... \$17.50

RC-5. Wireless remote for UC-5 Series ..... \$325

RC-21. Remote control for GX-F60R/77/747/F44R/F33R/F25/F35/F95/CS-F21/F11 .. \$39.95

RC-31. Full-function remote control for GX-F31/51/71 ..... \$34.95

RC-90. Full-function wireless remote control for GX-77/747/F95/F60/F35/F25/F11/F66RC/F39R/F33R/F21/F44R/UC-F5 ..... \$115

RH-12. NAB 10 1/2" reel holders ..... \$34.50

ST-20. Sensing tape (6") ..... \$5.95

3R-100. Rubber reel retainers ..... \$2.50

## ALLSOP

### Orbitrac® Record Cleaning System

Wet cleaning system that tracks each record groove to remove impurities. Includes Orbitrac® cleaner, solu-



tion and sprayer, record cleansing pad, dirt remover brush, storage case ..... \$29.95  
Orbitrac® record cleaning solution refill in 8-oz bottle ..... \$8.95

### Allsop 3 Ultraline Cassette Deck Cleaner

Auto-reverse cassette deck cleaner with wet cleaning system. Includes dual cleaning pads; replacement cleaning cartridges in smoked plastic storage box; cleaning solution; leather-like case ..... \$15.95  
Without case ..... \$9.95

## R.B. ANNIS

### Magnetometers & Demagnetizers

Model 25/S5. Deluxe jeweled pocket magnetometer with 5-0.5 gauss range; 2 1/4" diameter .... \$43.00

Model 20/B5. Similar to 25/S5 except no jewels ..... \$11.60

Model K20/S5. Deluxe Han-D-Kit bulk tape eraser for 117-V ac, 50/60 Hz operation ..... \$75.80

Model K20/B5. Standard version of K20/S5 \$45.20

Model 115. Han-D-Mag audiophile demagnetizer for 117-V ac, 50/60 Hz operation ..... \$29.70

Long Probe Han-D-Mag. For 117-V ac, 50/60 Hz operation ..... \$37.70

Thin Probe version of Model 115 ..... \$33.70

## AUDIONICS

### ET-1 Electronic Transformer

Class-A direct-coupled head amp for MC phono cartridges. Features separate outboard power supply; provisions for cartridge loading. Input sens 0.2 mV for 6-mV output; S/N 90 dB wideband ..... \$250

Audio terms are defined in the glossary on page 19. For an explanation of abbreviations, turn to the list on page 22.

## AUDIO-TECHNICA

## PDQII Record Cleaning System

Kit including AT6002 brush, AT6012 cleaner, AT607 stylus cleaner, AT608 solution ..... \$29.95

## AT605 Audio Insulator System

Vibration-damping feet for use under speakers or turntables to prevent acoustic feedback; individually adjustable height. Supplied in set of 4, with bubble level ..... \$27.95

## AT6015 TechniClean™

Audiophile record maintenance system cleans record surface and reduces static ..... \$24.95

## AT618 Disc Stabilizer

Solid brass disc with rubber coating designed to damp out sound-coloring resonances. Fits over turntable spindle ..... \$22.95

## AT6012 Sonic Boom™

Record-cleaning system with controlled-density fibers 6 microns in diameter; cleaning fluid can be applied to reservoir or directly to pad. Includes holder with cleaning surface, AT608 fluid ..... \$12.95

## AT6002 Autocleanica™

Double-action disc cleaning system combines soft carbon-conductive brush and plush pad to loosen and remove groove dirt. Small arm on weighted base can be placed on motorboard; can be used with most manual turntables or automatic when in manual mode. Replacement pad and brush kit available ..... \$12.95

AT602. Replacement of conductive brush, pad kit for AT6002 ..... \$2.95

## AT6003 Tri-Capsule

Holds up to 3 spare cartridges in standard plug-in shells (used in most European and Japanese tonearms); smoked-plastic domes ward off accidents, dust ..... \$9.95

## AT6010a Disc Whisk™

Consists of dropper, antistatic cleaning fluid (applied from back to prevent streaks), pad holder, cleaning edge, adhesive for mounting holder, AT-608 fluid ..... \$7.95

## AT617 Sonic Tonic

Fluid damping compound with applicator bottle. Dries to clear, resilient gel ..... \$6.95

## AT607 Stylus Cleaning Formula

Cleaning solution dissolves foreign material on stylus without harming known stylus adhesives; in bottle with stylus brush ..... \$3.95

## AT608 Record Care Formula

Dissolves fingerprints, loosens stuck on particles, reduces static bond of micro-dust, airborne material. Nonalcoholic; use directly on fibers of conventional brushes; 2 oz ..... \$2.95

## Universal Headshells

AT-CF3. Low-mass, carbon-fiber headshell for straight tonearms; grid pattern helps in alignment .. \$15.95

AT-N. Basic Type ..... \$12.95

AT-S. Similar to AT-N except with improved rigidity and lower mass ..... \$8.00

AT-D. Professional quality; low mass; cast aluminum alloy ..... \$12.00

AT-MS. Extra lightweight, low-resonance magnesium headshell with built-in damping. Includes AT609 cartridge wires, built-in stylus overhang adjustment screw ..... \$24.95

## Vital Link™ Cable Series

## AT620 Super Conductivity Cable Set

Litz wire construction with double shielding and gold-plated connectors; for low impedance and maximum rejection of r-f interference; set of 2 ..... \$29.95

## AT622 Universal Tonearm Cable

Low-resistance cable for manual turntables; 51" braided copper shield; color-coded molded phono plugs; gold-plated connectors ..... \$24.95

## AT610a Cable Set

Low-capacitance cables for connecting turntable and amplifier; 4-ft shielded cable with molded pair phono plugs each end; gold-plated connectors and separate ground wire; single set needed per turntable \$10.95

## AT641 Cable Connectors

Two gold-plated female phono feed-through cable connectors; extends length of other Vital Link cables ..... \$7.95

## AT609 Headshell Wire Set

Replaces original headshell wiring; set of 4 color-coded connectors made of silver litz wire and gold-plated ..... \$7.95

AT643. 1/4" to mini stereo plug adaptor ..... \$3.95

AT644. 1/4" to mini stereo 6 1/2-ft extension cord ..... \$8.95

AT648. Mini mono to mini stereo 6 1/2-ft extension cord ..... \$6.95

## AT650 Moving-Coil Transformer

Passive transformer, no batteries or power supply required; variable imp 3, 20, 40 ohms and pass; FR 10-100,000 Hz; THD 0.005% at 1 mV; output imp 47k ohms ..... \$250

## AT630 Moving-Coil Transformer

FR 15-100,000 Hz; input/output imp 20/47k ohms; channel balance 0.5 dB; THD 0.01% at 0.5mV input ..... \$95

BENJAMIN DIVISION  
BENJAMIN ELECTROPRODUCTS

## 24-017 Audio Tape Bulk Eraser

Erases virtually all signals from audio tape and leaves tape with low noise level. Works with cassettes and reels ..... \$19.95

## 25-005 Audible-Tone Head Demagnetizer

Automatic electronic head demagnetizer in cassette format removes accumulation of residual magnetism from heads of home or auto cassette tape decks; whistling tone indicates demagnetizing action \$18.50

## 26-043 "Gibson Girl" Cassette Splicer

Produces slight cuts on edges of spliced tape to prevent adhesive from contacting critical parts. Knob has cut and trim positions. Blade adjustment provided to maintain lifetime accuracy ..... \$7.95

## 26-038 "Gibson Girl" 1/4" Tape Splicer

Same features as 26-043, but for 1/4" cassette tape ..... \$7.95

## 30-005 Tape Head Clean Kit

Cleaning kit for all audio recorders (cassette, reel to reel). Contains bottles of head cleaner, head guide lubricant, swabs (10 pcs) for safe, easy cleaning and lubricating of recorder heads ..... \$1.95

## 35-005 Audio Cassette Wet Head Cleaner

Complete audio tape head wet cleaning system; metered liquid flow; cleans complete tape path .. \$4.95

## Record Care

## 42-101 "Groove Sweeper"

Record Conditioning System with patented 3-way action discharges static, dust and dirt loosened by mohair bristles and vacuumed away. Will not harm records ..... \$40

## 42-110 Professional "Groove Sweeper"

Record Conditioning System has same operation as 42-101 with addition of removable, washable filter, built-in 45 rpm adapter, 3 conductor grounding for improved static grounding ..... \$50

## 41-100 "Dust Magnet" Silicone Record Cleaner

Special "tacky" silicone compound reaches deep into grooves and lifts dust and particles out onto the roller. Roller may be washed off with water or alcohol. Does not leave any residue ..... \$9.95

## BRYSTON

## Switch Boxes

Equipment switch boxes with no active components; designed for high-current applications.

Four-way (for Bryston equipment only) ..... \$170

Two-way (with headphone jack) ..... \$115

Two-way (without headphone jack) ..... \$100

## CANTON

## Connect Series Switchboxes

Speaker system switchboxes designed to install between amp outputs, speaker systems to allow routing as desired

Combi 80. Switchbox for 1-8 pairs speaker systems. Has DIN jacks for speaker, amp, receiver outputs ..... \$100

Connect 60. Switchbox for 1-4 tape decks or up to 3 decks, 1 high-level source. Features regulators in left, right channels to reduce signal during recording; connection in tape-monitor loop; 5-pole DIN jacks \$100

Connect 50. Similar to Connect 60 except for speaker switching. Handles 1-4 pairs speaker systems, has DIN and phono jack headphones outputs. Features volume controls for adjusting channels 2 and 4; connection to output of amps, receivers; DIN speaker jacks ..... \$100

Connect 20. Switchbox for 1-3 tape decks or 2 decks, 1 high-level signal source. Features left, right regulators to reduce signal levels before recording; 5-pole DIN jacks ..... \$60

Connect 10. Similar to Connect 20 except designed for 1-3 pairs speaker switching. Features standard DIN speaker jacks ..... \$60

## Record-Care Products

Discostat. Dry record-care kit containing Discostat tonearm-type cleaner; Styloclean stylus-cleaning fluid; Statex-cloth metallized record-care cloth ..... \$30

Cantosweep. Record-care brush with antistatic carbon bristles. Removes static charges, dirt particles from grooves before play ..... \$25

Styloclean. Stylus cleaning fluid-applicator brush'n cap ..... \$20

## CROWN

## RTA-2 Real-Time Audio Analyzer

Real-time spectrum analyzer in 1/2- and full-octave bands, switch selectable; consists of 32 single-pole-

## NOTICE TO READERS

Prices of items described are manufacturers' suggested prices only and are subject to change without notice. Actual selling prices are determined by the dealers.

pair 1/2-octave bandpass filters centered on 1/2-octave intervals. Features 5" scope; lighted graticule; pink-tise generator; 800-20,000 Hz and 16-630 Hz fast/slow integration rate select controls; 5 or 10 dB/division select control; 0-70 dB input level control in 10-dB steps, 40-dB range vernier; internal balanced-input gain control. FR 16-20,000 Hz; sens at full-scale indication 15.2 mV-150 V, max in (unbalanced), 0.76 mV-3 V, max in (balanced); scans 32 chs in 16.6 msec; max output 1.1 V rms min; balanced output 600 ohms/50 ohms (male XLR front connector), unbalanced output 300/25 ohms (1/4" phone jack front and rear panel connector); 19"W x 15" D x 7"H..... \$2,450

**CUSTOM WOODWORK & DESIGN**

**Lowboy Audio Cabinet**

Roll-around lowboy cabinet with left, right compartments each behind pair of tinted safety glass. Left compartment has shelves for up to 4 components; right compartment has shelf for another component, record storage area below; available in choice of solid woods; capability for stacking with optional accessories; hand-rubbed oil and wax finishes; chromed hardware, casters. 47 1/4"W x 30"H x 19"D overall, 27 1/8"H x 22 1/2"W x 18 1/2"D each compartment.  
 KD600. Oak with natural oil finish..... \$490  
 KD700. Oak with dark walnut oil finish..... \$490  
 KD800. Walnut with natural oil finish..... \$610  
 ST6. Natural oak finish stacking accessory..... \$65  
 ST7. Dark oak finish stacking accessory..... \$65  
 ST8. Natural walnut stacking accessory..... \$85

**Glass Lid Audio Cabinet**

Roll-around upright audio cabinet with glass lid for access to turntable; shelves for 3 audio components,

records storage area behind pair of tinted safety glass doors. Features 2 adjustable shelves; choice of solid woods; chromed hardware, casters. Measures 42"H x 24"W x 17"D

- GL211. Oak with natural oil finish..... \$445
- GL311. Oak with dark walnut finish..... \$445
- GL411. Walnut with natural oil finish..... \$565
- CD2. Optional natural oak cassette drawer; holds 100 cassettes; has removable dividers; 3 1/4"H.. \$70
- CD3. Same as CD2 except dark oak..... \$70
- CD4. Same as CD2 except natural walnut..... \$75

**Upright Audio Cabinet**

Roll-around audio cabinet with adjustable shelves for up to 3 audio components, records storage area below. Features 2 tinted safety-glass doors; chromes hardware, casters; availability in choice of solid woods, finishes. 42"H x 24"W x 17"D.

- KD400. Walnut with natural oil finish..... \$475
- KD200. Oak with natural oil finish..... \$375
- KD300. Oak with dark walnut oil finish..... \$375

**30" Woodmore Cabinet**

Modular cabinet with adjustable shelf and chrome hardware and casters. Features bronze tempered glass or optional wood doors. Available in hand-oiled and waxed finishes. Measures 30"H x 24"W x 19"D.

- KD222. Natural oak..... \$330
- KD322. Dark oak..... \$330
- KD422. Natural walnut..... \$410

**21" Woodmore Cabinet**

Similar to 30" Woodmore except meaures 21"H x 24"H x 19"D.

- KD2101 Natural oak..... \$235
- KD2103 Dark oak..... \$235
- KD2104 Natural walnut..... \$410

**Woodmore Entertainment Table**

Cocktail-style table houses components or up to 400 record albums. Features optional wood or glass doors and glass top; available in hand-oiled or waxed finishes; finished on 4 sides for stacking or grouping. 16"H x 47 1/4"W x 19"D.

- ET9002 Natural oak..... \$330
- ET9003 Dark oak..... \$330
- ET9004 Natural walnut..... \$410

**Cabinet Accessories**

**Entertainment Center Base.** Leveling system designed to group up to 5 cabinets.

- ECB2. Oak with natural-oil finish..... \$95
- ECB3. Oak with dark walnut-oil finish..... \$375
- ECB4. Walnut with natural-oil finish..... \$110

**Entertainment Grouping Base**

Leveling system designed to group up to 4 Woodmore 25"W cabinets and 1 30"W cabinet.

- EGB12. Oak with natural-oil finish..... \$100
- EGB13. Oak with dark walnut-oil finish..... \$100
- EGB14. Walnut with natural-oil finish..... \$115

**42" Rack Mount**

For use in a 30" Woodmore or 1 side of a Lowboy

- RM2H. Oak with natural oil finish..... \$73
- RM3H. Oak with dark walnut oil finish..... \$73
- RM4H. Walnut with natural oil finish..... \$73

**30" Rack Mount**

For use in a 30" Woodmore or 1 side of a Lowboy

- RM2L. Oak with natural oil finish..... \$65
- RM3L. Oak with dark walnut oil finish..... \$65
- RM4L. Walnut with natural oil finish..... \$65

**30" Stacking Accessory**

Stacks any 24"W cabinet on top of another 24" cabinet, a lowboy or entertainment table.

- ST2. Oak with natural oil finish..... \$33
- ST3. Oak with dark walnut oil finish..... \$33
- ST4. Walnut with natural oil finish..... \$43

**DB SYSTEMS**

**DB-4A MC Preamp**

MC cartridge preamp with low-noise cascode amplifiers, diode-protected inputs. Features internal low/medium/high gain switch. THD 0.0008%, 20-20,000 Hz at 1 V; noise -84 dB at 1 mV; FR 10-100,000 Hz +0/-0.1 dB; input/output imp 9k ohms, 2,000 pF/220 ohms; max load 10k ohms, 3,000 pF; internally adjustable gain/sens/overload 33 dB/40 μV/45 mV high; 28 dB/80 μV/80 mV medium, 22 dB/160 μV/90 mV low; channel balance ±0.2 dB..... \$185  
 With DBP-4 coupler, DB-2A power supply..... \$245

**DBP-11 Phono Capacitance Switch Box**

Features front-panel-switchable 100-400-pF loading for 2 MM phono cartridges. Open position is provided. Phono jacks, plugs are gold plated..... \$79.95  
 DBP-11MC. Similar to DBP-11 but with resistive instead of capacitive values. Includes 5-ohm load..... \$79.95

**DBP-2J Passive Switch Box**

Switching module with 8 input, 2 output jacks. Can be used for switching 4 turntables, tape recorders, amp, signal processors, etc. Shorted test position included. Allows for selectable cartridge loading when used with DBP-6 or 6MC. A-B comparisons possible with 2 Y adaptors..... \$45.95  
 DBP-2JAU. Same as DBP-2J except jacks are gold plated..... \$54.95

**DBP-6 Phono Equalization Kit**

Permits adding 100-400 pF of capacitance to phono input of any preamp or receiver. Consists of 2 Y adaptors, set of gold-plated phono plugs with polystyrene capacitors wired to give 100, 150, 200, 300, 400 pF. Resistive load (1%) included for experimenting with MC cartridges plus pair of empty plugs for making custom values..... \$34.95  
 DBP-6MC. Similar to DBP-6 except for MC cartridges.

**FROM SINGLE RACK TO MULTI-STACK**

CWD's modular furniture systems can expand from single units to complete Home Entertainment Centers so you'll never be boxed-in by obsolete stereo cabinets.

Enjoy Old-World craftsmanship befitting today's finest audio, video and computer components.

Great Home Entertainment Centers begin with Custom Woodwork & Design. From \$235. (Manuf. sugg. retail)  
 Call toll-free for the dealer nearest you.

**CWD**  
 CUSTOM WOODWORK & DESIGN INC.  
 TOLL-FREE: 1-800-323-2159  
 IN ILLINOIS: 312-563-1745

In Natural Oak, Dark Oak or Natural American Walnut

Loads are 1% 10-, 20-, 50-, 100-, 200-, metal-film resistors. Two empty plugs included ..... \$34.95

#### DBP-10 Phono Alignment Protractor

Accurately measures lateral tracking error of mounted phono cartridges to within 0.25°. Instructions provided to optimize geometry, set correct overhang for minimum error and distortion, useful when checking vertical tracking angle. Comes with carrying case ..... \$21.95

#### dbx

#### Model 200 Program Route Selector

Rack-mountable passive switching box has inputs/outputs for 3 sound processors, 1 NR unit and 3 tape decks. Dubbing between decks is direct. 1 1/4" W x 1 7/16" H x 7 1/2" D ..... \$129

#### Model 400 Program Route Selector

Rack-mountable powered switching box has same capabilities and dimensions as above except dubbing can be interrupted by sound processors and/or encode/decode side of NR unit; lighted pushbuttons show routing; buffered tape outputs prevent imp interactions with preamp/receiver ..... \$229

## DISCWASHER

#### Disc & Stylus Care Products

##### DiscKit® Record Care

Contains D4 record care system, Zerostat antistatic instrument, SC-2 stylus-care system housed in DiscOrganizer ..... \$55

##### Discset™

Provides essentials of record, and stylus care; includes D4™ Record Care System, SC-2 Stylus Care System in milled walnut base ..... \$24.95

##### Zerostat®

Anti-Static instrument neutralizes static charges on virtually any surface; works without coating by showering surface with millions of positive, negative ions ..... \$23

#### D4™ Record Care System

Safe record-cleaning system designed to remove contaminants without reducing record fidelity. Consists of D4 fluid that lifts, suspends contaminants; soft-fiber pad with hand-milled walnut handle to remove debris and dry record; DC-1 pad-cleaner brush \$16.50  
1.25 oz replacement fluid ..... \$2.50  
6 oz replacement fluid ..... \$10  
16 oz replacement fluid ..... \$17  
DC-1 brush ..... \$0.69

#### Special formula for shellac records (78s)

1 1/4 oz bottle ..... \$2.50  
16 oz bottle ..... \$17

#### Discorganizer

Milled walnut tray with dustcover designed to hold D4 Record Care System, SC-2 Stylus Care System, Zerostat Anti-Static Instrument, provide space for reserve spindles, stylus guards, cartridges, other phono accessories ..... \$15

#### DiscHandler

Record-handling device that picks up, removes, flips, returns records to their sleeves without hand contact; to eliminate fingerprints, hand contamination. \$9.95

#### D'Stat II Mat

Turntable mat reduces static charges on contact, provides cushion to reduce sonic, mechanical feedback between record and turntable platter ..... \$8.50

#### SC-2 Stylus Cleaner System

Includes scientifically safe cleaning fluid, precision nylon-fiber brush designed to safely remove stylus contamination. Brush has attached stylus-inspection magnifying mirror, held in walnut handle ..... \$8.50

#### V.R.P. Record Sleeves

Scratch-free record liner sleeves that prevent static charge buildup during record storage, removal from sleeve. Super smooth surface will not ooze plastic additives onto record; package of 10 ..... \$3.50

#### Cables

##### Gold-ens™ Audio Cables

Perfectionist cables for audio, video; provide ultra-low capacitance with heavy gold-plated connections with molded nylon insulating sleeves.

1/2-meter ..... \$11.95  
1-meter ..... \$12.95  
2-meter ..... \$13.50

#### Tape Care Products

##### Discwasher® D'Mag™ Cassette Deck Demagnetizer

Demagnetizes tape heads and capstans and entire



tape path. Requires no batteries or power cords and will operate in both home and car cassette decks ..... \$19.95

##### Discwasher® Tape Deck CareSet™

The Discwasher® Tape Deck CareSet™ includes Perfect Path™ Cassette Head Cleaner and C.P.R.™ Capstan Pinch Roller Cleaner packaged together .... \$14.95

##### C.P.R.™ Capstan/Pinch-Roller Cleaner

"Positive Drive" cleaning system safely scrubs pinch rollers, capstans with advancable cleaning fabric matrix, safe fluid ..... \$9.95  
10-cc C.P.R. fluid refill ..... \$1.25

##### Perfect Path™ Cassette Head Cleaner

Nonabrasive dry system for cassette decks designed to remove oxides, gummy residues along tape path, on tape heads; preserves sound and life of car, home cassette decks ..... \$6.95

## ELITE INDUSTRIES

#### EL-6 Audio/Video Cabinet

Audio/video cabinet with hardwood book-matched veneers in oak, walnut, or teak. Features wood-framed bronzed glass doors; 1" solid-wood radial corners; finished back panel; 2 adjustable shelves; record storage; retractable roll-out shelf; heavy-duty casters; 36.74" H x 28.5" W x 18" D ..... \$259

## FRAZIER

#### SS-1 Speaker Stand

Speaker stand with top and bottom panels of high density fibre-board. Features rubber discs to protect wood finish; furniture glides protect carpet; black lacquer finish; completely assembled. Base size 13 1/2" D x 11 7/8" W; speaker platform size 11 3/8" D x 11 7/8" W x 6 3/8" H; angle of tilt 5°; 13 lbs. \$60/pr

## GUSDORF

#### 2980 Status Pro II Cabinet

Roll-around audio/video credenza. Left side has shelf for up to 19" TV, storage area behind pair of doors; right side has area for VCR or turntable under flip-up safety glass top, 3 shelf spaces for equipment/-accessories on adjustable shelves behind pair of safety-glass doors. Features walnut-tone finish; burl-

walnut tone finish on storage cabinet doors, flip-up lid trim; tough Rendura coating; hooded double-wheel casters. Left side measures 27" W x 26 7/8" H x 19" D; right 34" H x 21" W x 19" D ..... \$372

#### 2995 Audio Cabinet

Roll-around upright audio cabinet with area on top for turntable under flip-up tempered-glass lid, 2 audio components on open center shelves. Storage area at bottom behind pair of doors. Features paradise hickory finish; tough Rendura coating; hooded double-wheel casters. Record dividers optional. 45 7/8" H x 21 1/2" W x 19" D ..... \$290

#### 1785 VistaRak Audio Cabinet

Roll-around upright cabinet designed to accommodate turntable under flip-up safety-glass top, 2 audio components on shelves and record storage at bottom behind 2 safety-glass doors. Features pecan veneer finish with chrome side moldings; double-wheel chrome-hooded casters. 44" H x 23 3/4" W x 19 1/2" D (17 1/2" behind doors) ..... \$280

#### 1755 VistaRak

Paradise hickory with chrome trim and accent moldings. Features tempered safety glass door; glass canopy with spring-loaded hinges; 4 adjustable ebony shelves; removable record dividers for up to 200 albums ..... \$187  
5465. Similar to 1755 VistaRak except slate gray finish and shelves ..... \$146

#### 1600 Compact Audio Cabinet

For compact audio systems. Paradise hickory with chrome accents; adjustable shelves to conform to size of components; storage for albums and cassettes ..... \$68.95

## HEYBROOK by MECOM

#### Heybrook AK-1

Cartridge-mounting kit with high tensile screws and nuts; allen key wrench; open-end nut wrench; overhang protractor ..... \$10

## HITACHI

#### AD-091 Electronic Head Demagnetizer

Standard-size silver-oxide cassette demagnetizer usable for approx. 500 one-sec demagnetizations. Uses 650 Hz; black. 4" W x 1/2" H x 2 1/2" D; 0.1 lb. \$25.00

#### AD-093 Record Cleaner

Battery-powered cleaner with high-speed rotating brushes. Usable with or without a record player. Uses 2 penlite batteries; black. 8" L x 2 1/4" H x 1 1/8" D; 0.44 lb. .... \$30

## KENWOOD

#### SRC-1X Audio Cabinet

Rack for these system combinations: KA-9XG/KT-9XG/KX-7XCG/KD-9XG/GE-9X, KA-7X/KT-7X/KX-5XC/KD-7X/GE-9X, KA-5X/KT-7X/KX-5XC/KD-7X/GE-9X. 50 lbs. .... \$175

#### SRM-9 Audio Cabinet

Tall-boy audio cabinet for New Life components. 16 1/2" W x 37 1/8" H x 13 1/2" D; 27 lbs. ... \$150

#### AT-50 Audio Timer

24-hour digital clock audio timer ..... \$90

### NEED MORE INFORMATION?

Write directly to the manufacturer or distributor. A list of names and addresses starts on page 25.

**“ If you could play the same record over and over, and have even the 200th play sound as audibly superior, noise-free and undistorted as the first... simply by using the right record treatment... wouldn't you go out and buy it? ”**



#### LAST Record Preservation Kit

This remarkable scientific formulation is now available at audio stores everywhere or directly from the factory.

**CALL NOW, TOLL-FREE  
800-223-5278**  
IN CALIFORNIA DIAL  
800-222-5278



COD/MO/CHECK accepted  
Minimum Order \$15.00  
Shipping/Handling extra.

California residents add 6½% sales tax.  
Foreign orders not accepted.  
In Canada, call (514) 621-4087

LAST Record Preservation Kit, \$18.95

LAST Record Preservative Refill, \$14.95

LAST Collector's Kit, \$120.00

LAST Metering Dispenser, \$30.00

LAST Power Cleaner Kit, \$9.95

LAST Record Cleaning Kit, \$5.95

LAST RCM fluid, \$20.00

LAST Record Care Brushes, Pack of 10, \$9.95

STYLAST Stylus Treatment, \$15.95

LAST Stylus Cleaner, \$4.95

**LAST**

Liquid Archival Sound Treatment  
P.O. BOX 41 LIVERMORE CA 94550

CIRCLE NO. 24 ON READER SERVICE CARD

## Accessories

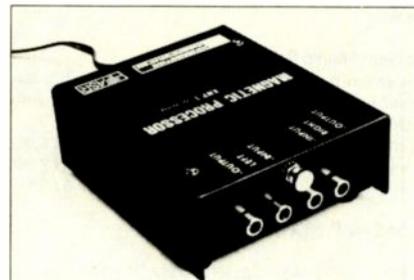
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## Accessories

### KINERGETICS

#### KMP-1 Magnetic Cartridge Processor

Magnetic processor designed to correct basic non-



linearities of most MM cartridges. Connects between turntable and amp ..... \$110

#### KMP-2 Magnetic Tape Deck Processor

Magnetic processor designed to remove hysteresis distortion produced by tape heads. Connects between cassette deck output and amp input ..... \$110

#### KDP Dynamic Processors

Designed for use between pre- and power-amp circuits to correct basic circuit nonlinearities.

KDP-1. For high-quality receivers ..... \$145

KDP-2. For moderately priced separates ..... \$145

KDP-3. For high-quality transistor amps ..... \$145

### KINETIC AUDIO INT'L

#### Stereo Amplifier/Line-Level Control

For bi/multi-amping, other amp level adjustments. Features 10k-, 25k-, 50k-ohm imp; phono jacks; connectors; mounting hardware ..... \$99

#### Amplifier/Speaker Selector

Switches 2 stereo amps into single pair of speakers or 2 pairs of speakers from single stereo amp .... \$99

#### Speaker Stands

Straight or tilted speaker stands with dual angle up/down capability and flat black satin finish.

S-S. Small ..... \$79/pr

S-M. Medium ..... \$89/pr

S-L. Large ..... \$99/pr

#### Cabinets

Furniture-styled equipment/record/tape cabinets. Can be stacked; adjustable-height shelves or rack rails; walnut veneer over particle-board side panels.

EC-XL. 48"H x 21"W x 18"D. Deluxe unit with Plexiglass door, black dual-wheel casters ..... \$449

EC-L. 48"H x 21"W x 18"D ..... \$339

EC-M. 38"H x 21"W x 14"D ..... \$239

EC-S. 24"H x 21"W x 14"D ..... \$139

### KOSS

#### Audio Tape Line

KCT 4000. Illuminated demagnetizer for cassette, open-reel, 8-track, VCR machines. Features soft guard tip; pinpoint light ..... \$14.99

KCT 3010. Total cassette machine care kit designed for automatic, manual decks. Includes inspection mirror; cleaning probes; tape fluid ..... \$5.99

KCT 3000. Cassette, open-reel, 8-track machine cleaning kit. Includes brush; cleaning probes; cleaning fluid; inspection mirror ..... \$3.99

KCT 2020. Nonabrasive automatic 8-track machine care kit. Includes tape care fluid; housing brush \$2.99

KCT 2010. Automatic cassette machine care kit. Includes cleaning fluid; housing brush ..... \$2.99

KCT 1020. Nonabrasive automatic 8-track head cleaner ..... \$1.99

KCT 1010. Similar to KCT-1020, but for cassette decks ..... \$1.69

#### Record & Stylus Care Line

KMR-400. Antistatic disc cleaner designed to eliminate static, remove fine dust. Requires no cleaning solutions; stores in own case ..... \$5.69

KCS-303. Total record, stylus care kit. Includes record purifier; record, stylus fluid; stylus cleaning brush; inspection mirror ..... \$4.99

KCS-100. Clean Sweep record purifier prolongs record life. Contains 2,000 cleaning bristles/sq in. Includes dust-free storage box ..... \$2.39

KCT-2000. Audio/Video Tape-Head Cleaner for use with all cleaning products for tape machines. Leaves no harmful residue. 2 fluid oz ..... \$1.99

KCS-2000. No-residue record, stylus cleaning fluid in 2-oz bottle ..... \$1.69

#### Headphone Accessories

KEC-25. 25-ft coiled extension cord ..... \$7.99

KMA-200. ¼" to ⅜" mono plug adapter ..... \$1.99

KSA-100. ¼" to ⅜" stereo plug adapter ..... \$1.99

### THE LAST FACTORY

#### Metering Dispenser

0.35 ml metering dispenser required for the Last record preservative; it is reusable and need only be purchased with the initial kit ..... \$30

#### Last RCM Fluid

Record-cleaning machine fluid with formulation optimized for vacuum removal of used cleaner. Safe for all vinyl discs. Available only in gallon size ..... \$20

#### Last Record Preservative

Archival preservative for phonograph records provides minimum of 200 plays without discernible distortion per application. Safe for all vinyl records, designed to eliminate record wear, reduce distortion and static electricity, increase stylus life. Requires no buffing, rubbing, or waiting. Contains enough to treat 60 records ..... \$18.95

Preservative Refill. 2 oz; treats 60 records . \$14.95

Preservative Refill. 2 oz; treats 60 records . \$14.95

Preservative Refill. 2 oz; treats 60 records . \$14.95

Preservative Refill. 2 oz; treats 60 records . \$14.95

#### Stylast Stylus Treatment

Molecularly engineered thermodynamic phono stylus treatment designed to greatly lower stylus friction, increase cantilever suspension life. One bottle contains enough material for thousands of applications .. \$16

#### Last Power Cleaner Kit

Designed for deep cleaning situations, particularly effective for the initial cleaning of new records; for LP



and 45 rpm records only; kit includes a 2 oz bottle of Last power cleaner; 4 applicators, dropper and instructions; kit cleans 60 sides ..... \$10

#### Last Stylus Cleaner

44 oz seconalcoholic stylus cleaner ..... \$5

### MICRO-ACOUSTICS

#### GG-1 Groove Ground

Automatic static drain and debris sweep providing clean static-free path for cartridge stylus. Features Micro-fine carbon fibers; gold-plated contacts for improved conductivity; 2 mounting slots for use with variety of cartridges; fully automatic; 1.5 g; ground adds no significant mass to cartridge/arm . \$29.95

**MARANTZ**

**RC430/RMC 12 Remote Receiver**

Remote receiver for wireless remote control RMC 12; RMC 12 remote functions features FM/AM; up/down tuning; 16 station preset; volume up/down; input select; loudness; low filter; high filter; tape 1 play; tape 2 play; balance; audio; muting; cassette play and repeat, pause, record and record mute; 31 song search; turntable play; stop, repeat and cue. . . . \$250

**MAXELL**

**Tape Accessories**

- PR-7. 7" plastic reel . . . . . \$4.09
- 12-cassette plastic storage box . . . . . \$4.99
- MR-7M. 7" precision metal reel . . . . . \$9.19
- MR-10. 10 1/2" precision metal reel . . . . . \$14.59
- HE-44. Cassette demagnetizer . . . . . \$25.99
- CW-340. Tape winder . . . . . \$25.99

**Record Accessories**

- SC-345. Staticlean . . . . . \$34.99
- AE-320. Self-rotating record cleaner . . . . . \$29.99

**MEMOREX**

**Tape and Record Care**

- X-CD Audio Cassette Head Cleaner/Demagnetizer . . . . . \$6.99
- Record Care Kit . . . . . \$5.99
- Cassette cleaning kit . . . . . \$2.99
- Record Cleaner . . . . . \$2.99
- Record Cleaning Fluid . . . . . \$2.69
- Cassette head cleaner . . . . . \$1.89

**MISSION ELECTRONICS**

**ISOPLAT Isolation Platform**

Ensures that vibrations, resonances are isolated from equipment mounted on it. Design based on critical application of vertical sandwich of highly inert fiberboard and Sorbothane feet. Capable of controlling, damping vibrations in all 6 rotational, translational axes. . . . . \$59

**SORBOMAT Turntable Mat**

Made from impregnated Sorbothane polymers; design optimized to isolate rumble, motor vibrations, bearing noise, platter ringing, etc., from cartridge . . . . . \$39

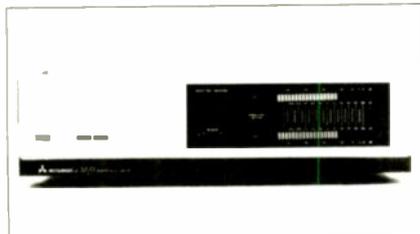
**Other Accessories**

- Record clamp . . . . . \$39
- Speaker cable . . . . . \$2/ft
- Speaker stands . . . . . \$59/pr

**MITSUBISHI**

**DA-M30 Power-Level Meter**

Designed for docking with A30 power amp. Features fluorescent display, advanced digital logic circuitry; rise time typically 300 sec (max 1 msec); recovery



time 1.5 sec; bar-graph display; each ch has 24, 5-bar groups of fluorescent elements, every fifth blanked; calibrated in W/dB; 48 driver circuits; circuitry is outside signal path; remote-control cable . . . . . \$200

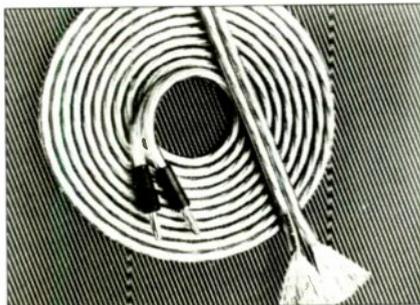
**DR-730 Audio Equipment Rack**

Vertical or horizontal format; twin glass double doors; generous record storage; 4 shelves . . . . . \$225

**MONSTER CABLE**

**Monster Cable Connecting Cables**

Improved version of original Monster Cable with new strand configuration designed for midrange clarity,



faster transient response, and extended low and high FR. From spool not pre-cut . . . . . \$0.95/ft  
Pre-cut, with universal gold pin ends with lock-notch.  
50 ft . . . . . \$95/pr  
30 ft . . . . . \$58/pr  
20 ft . . . . . \$40/pr  
15 ft . . . . . \$30/pr

**Interlink Reference Connecting Cables**

Connecting wire with 3-wire multiple-gauge network for each conductor. Thick core wire for frequencies below 300 Hz. 4 medium conductors for midrange, hair-thin woven stranded wires for 700+ Hz. (Also available in custom lengths.) . . . . . \$80/meter pair

**Interlink Interconnect Cables**

High Resolution "Bandwidth Balanced" cables designed to increase clarity, dynamic range, and imaging, and lower distortion. Balanced line configuration of 2 identical multiple-gauge litz wires inside braided copper shield. (Also available in custom lengths.) . . . . . \$50/meter pair

**Interlink III Connecting Cables**

Low-capacitance connecting cables with oxygen-free copper litz wire center conductor. Features extra ground wire molded between 2 identical conductors. (Also available in custom lengths.) . . . . . \$30/meter pair

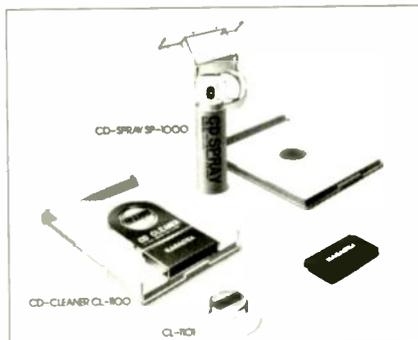
**Supreflex Speaker Wire**

High-purity copper speaker wire with flexible "Duraflex" insulation; dividing web between the 2 conductors. Same stranding configuration as Monster Cable but fewer strands of wire. . . . . \$0.50/ft  
25 ft . . . . . \$35/pr  
15 ft . . . . . \$21/pr  
10 ft . . . . . \$16/pr

**NAGAOKA by MICROFIDELITY**

**Compact Disc Cleaner**

Kit consisting of holder, cleaning solution in spray



bottle, and lamb's leather cleaning pad designed to remove dust, fingerprints, and other materials from Compact Discs . . . . . \$34.95

**Record Care**

- Kilavolt. Battery-operated anti-static device. . . . . \$35
- DC-203 Recopak. Special fluid and applicator, which, when applied to a record, peels off to remove dust in grooves . . . . . \$30
- RC-200 Rolling Cleaner. Record cleaner employs sophisticated elastomer roller; cleaned with water, tacky properties restored upon drying. . . . . \$20
- No. 102 Anti-Static Record Sleeves. Protect discs from static and dust (50 contoured sleeves) . . . \$12
- QR-202 Disc Cleaner. Record preener includes fluid, brush for preener and tray with dustcovers. . . . \$12
- Stat-10 Anti-Static Liquid. Long-term anti-static record-treatment fluid . . . . . \$10

**Tape Care**

- PC-507 Tape Splicing Kit. Unique splicing block and tools allow splicing of open-reel, micro, and cassette tapes . . . . . \$20
- CW-402 Pocket Winder. Battery-powered cassette rewriter with safety mechanism . . . . . \$15
- QC-220 Wash-Up Four. Wet-type cleaner for cassette heads, capstan and pinch-roller. With fluid . . . \$10
- QC-209 Cleaning Tape. Dry-type cleaner for cassette deck heads, capstan and pinch-roller . . . . . \$6
- QC-205 Deck Cleaning Kit. Complete kit—head-cleaning fluid, rubber-cleaning fluid, jointed inspection mirror, with swabs in a cassette case . . . . . \$6

**Audio Accessories**

- GL-602 Stabilizer Mat. Specially treated glass mat to eliminate record vibration . . . . . \$80
- GL-601 II Stabilizer. Glass stabilizer with strobe and level bead . . . . . \$30
- MG-704 Magnesium Head Shell. Universal headshell supplied with Litz wires . . . . . \$20
- RC-401 Stabilizer Stylus Cleaner. Machined brass stabilizer with round felt stylus cleaner . . . . . \$15
- PC-115 Cable. Low-noise, low-imp cable (1.5 M for use with MC cartridges) . . . . . \$12
- No. 101 Anti-Static Tissues. 50 specially treated tissues supplied in canister dispenser. Ideal for audio, video and computer products . . . . . \$10
- AG-99 Litz Wire. Cartridge lead wires for MM type (160 mg silver) . . . . . \$5
- HC-1 Hi Clean. Fluid and applicator brush. Removes dust and dirt adhering to stylus . . . . . \$4
- BN-7B Screws. Black aluminum screws, nuts and nylon washers for securing cartridge . . . . . \$3
- BN-7S Screws. Silver aluminum screws, nuts and nylon washers for securing cartridge . . . . . \$3
- SB-1 Stylus Brush. Fur stylus cleaning brush . . . \$2.50

**NAGATRONICS**

**Ag 9200 Z Coupler**

Impedance, level coupling device designed for 3-ohm output imp of Nagatron ribbon cartridge, most low-output MC cartridges to 47k-ohm input imp of magnetic input stage on most preamps. Features chemically pure silver windings, very short magnetic circuit; selector switch for balanced or unbalanced line hook-up. Input imp 3 ohms; output imp 33k ohms; load resistance 47k ohms minimum; load capacitance 200 pF; FR 12-35,000 Hz & 0.5 dB; max input 300 mV at 50 Hz; distortion 0.0001% at 5 mV in, 1 kHz; crosstalk 75 dB; gain 40 dB. . . . . \$425

**NAKAMICHI**

**T-100 Audio Analyzer**

Measures and verifies performance of audio equipment; combines functions of oscillator, VTVM, distortion analyzer; W&F meter; oscillator has 21 discrete frequencies from 20-20,000 Hz; wideband pink noise, measures distortion from 0.001% to 3% at 400 Hz; measures level with peak or average ballistics; measures speed accuracy; W&F (weighted or unweighted); measures noise inputs down to 10 µV; features nonmechanical bargraph display; logic controlled-FET switching; includes carrying case; 9.5 lbs; 13 1/2" W x 9 1/2" H x 3" D . . . . . \$990

**PS-100 Power Supply**

±10 V dc for MX-100, other Nakamichi blackbox se-

ries components; can power up to 6 components ..... \$100

**SF-100 Subsonic Filter**

Operates at line level to remove turntable rumble and other infrasonics caused by record warps and tonearm/cartridge resonances. Active filter attenuates response at either 40 or 50 dB at 10 Hz. Requires PS-100 power supply. THD 0.005%; S/N 110 dB; 7.5"W x 4"D x 2.5"H ..... \$95

**SF-10 Subsonic Filters**

Compact passive filters perform same function as SF-100. Provides 6 dB/octave filter, down 10 dB at 10 Hz. May be used at tape output or amp tape-input jacks. 2.6"L x .51" diameter ..... \$15/pr

**NIKKO**

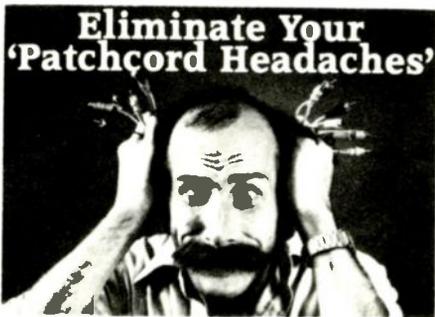
**BTL-1 Power Bridging Network**

Stereo power bridging network enables user to mono 2 stereo power amplifiers. FR 10-30,000 Hz; THD 0.01%; overall gain 0 dB; output level 1,000 mV (rated); S/N 100 dB; imp in/out 50K ohms/600 ohms; matte-black finish; 8.7"W x 6.3"D x 2.5"H ..... \$110

**NILES AUDIO**

**CPM-31 Switcher**

To connect receiver or preamp with up to 5 other components; each component can be connected to one or more different components; genuine walnut side panels are standard ..... \$180  
**CPM-2.** Same as CPM-31 except accommodates 3 add-on components instead of 5 ..... \$100



Rearranging wires and patchcords when you have more components than places to hook them up can send you running for the aspirin. One of our switching systems will bring you the relief you have been looking for.

Tape copying, in any direction from any deck, is a simple matter with our Component Patching units. And you can easily switch in and out your equalizer or noise reduction units.

Our Speaker Switching units connect up to 4 pairs to your receiver, playing any or all at the same time. They're compatible with all amplifiers and available for regular and high definition cables.

For complete information on these and other accessory items, write or call TODAY!

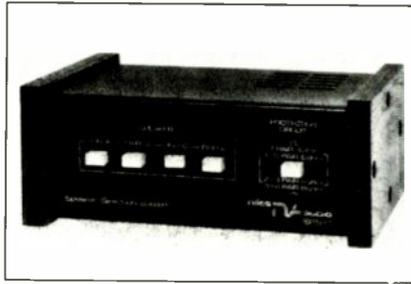
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 City, State, Zip \_\_\_\_\_



Dept. BG, P.O. Box 160818, Miami, FL 33116  
 Telephone: (305) 238-4373  
 CIRCLE NO. 25 ON READER SERVICE CARD

**SPS-1 Speaker Selection System**

To connect up to 4 pairs of speakers to receiver and play any or all pairs simultaneously. Features imp protection switch; separate left and right ch grounds; accommodates up to 14 gauge speaker wire; power



handling capacity up to 100 W/ch; genuine walnut side panels standard ..... \$80

**Speaker Selection Systems**

To connect up to four pairs of speakers to receiver and play any or all pairs simultaneously. Designed to accommodate high-definition speaker cables. Features imp protection switch; separate left and right ch grounds; both units will accommodate amps with power outputs of 200 W/ch; genuine walnut side panels are standard and rack mount brackets are optional.

- HDS-1.** Banana jack connectors ..... \$130
- HDS-1P.** Pin jack connectors ..... \$130
- Rack mounts** ..... \$15

**HVC-1 High-Power Speaker Volume Control**

Adjusts volume at remote location rather than at amp. Connects between amp and remote speakers via spring-loaded push connectors. Features separate L/R ch grounds for use with any type of amp; power handling 150 W/ch; genuine walnut side panels standard ..... \$90

**MM-1 Music Minder**

Automatic monitoring and shut-off device for stereo system. Electronically "listens" to your stereo. Shuts off system if inactive for 5 minutes. Also has 60-min timer mode ..... \$100

**NORTRONICS/RECORDER CARE**

**Professional Alignment Tapes**

- AT-120.** For 1/4" open-reel decks; 7 1/2-ips, first-generation full-track master recording. Contains all tests, tones required to adjust recorders to NAB standards. Supplied with instruction booklet, individual response curve ..... \$91.20
- AT-200.** First-generation master recording for cassette decks. Provides zero reference, azimuth alignment, FR tests to DIN standards; 3 kHz tone for speed, flutter tests. Individual response graph supplied ..... \$82.80
- AT-320.** For use with NAB-type endless-loop mono, stereo cartridge recorders, players. First-generation full-track master recording at 7 1/2 ips. For adjusting head azimuth, FR, record level, stereo head phasing, cue tone sens. tape speed ..... \$82

**QM-211 Professional Bulk Eraser**

Generates powerful 60-Hz erasure field for open-reel, cassette, 8-track cartridge tapes. Features micro-switch turn-on, put-down turn-off; hand-contoured Cyclolac® case. For 110-120 V ac, 50-60 Hz \$71.20  
**QM-212.** Same as QM-211 except for 230-250 V ac ..... \$75

**QM-230 Cassette Bulk Eraser**

Self-powered hand-held bulk eraser for cassettes. Features Cyclolac® case ..... \$42.40

**QM-202 Professional Head Demagnetizer**

For use with all open-reel, cassette, 8-track cartridge decks. Features flexible probe tip with soft, no-scratch coating; leaf-switch turn-on/put-down turn-off;

- Cyclolac® case. For 110-120 V ac, 50-60 Hz... \$32
- QM-203.** Same as QM-202 except for 230-250 V ac ..... \$37.60

**QM-Series Tape Splicing Blocks**

Specially grooved to firmly hold tape during splicing. Features 2 deep slits for straight, diagonal cuts. Supplied with double-backed adhesive for mounting without drilling; stainless-steel cutter. 5 1/4"W x 1"D x 1/4"H.

- QM-311.** For 1/4" tapes ..... \$30.80
- QM-312.** For cassette tapes ..... \$30.80

**PF-601 Magnetic Tape Developer**

Makes magnetic recording visible for determining proper track location, head/track positioning, etc. Fine powder aerosol that will not harm tape, tape coating, recording; wipes off after use. 4-oz can \$15

**QM-506 Inspection Mirror**

Inspection mirror with light for all recorders. Supplied with AA cells ..... \$9.60

**QM-505 Cellular Foam Swabs**

Package of 25 swabs, for cleaning audio, video tape decks ..... \$9.40

**QM-116 Tape & Head Cleaner**

Aerosol spray cleaner with extension tube to reach recessed parts. Safe for audio, video decks. 16-oz can ..... \$9.60

**QM-142 Audio Cassette Head and Capstan Cleaner**

Nonabrasive, spun-bonded polyester tape with extra large pressure pad for cleaning entire head. Includes residue-free cleaning solution. .... \$8.40

**QM-99 Audio Head Spray Cleaner and Swabs**

Three-oz spray cleaner and 100 cotton swabs \$8.20

**QM-103 Tape/Head Cleaner**

Aerosol tape and head cleaner blasts loose oxides, dirt. Supplied with extension tube ..... \$6

**QM-108 Tape/Head Cleaner**

Liquid tape and head cleaner in 8-oz can. .... \$5.80

**QM-102 Tape Head Cleaner**

Liquid tape head cleaner in 2-oz bottle. Leaves no residue; can be used on capstans, pinch rollers... \$5.20  
**QM-122.** Same as QM-102 but in 1.7-oz spill-proof bottle ..... \$4.20

**Reel Tabs**

Pre-cut adhesive-backed Mylar or metal tabs for tape splicing, editing. Designed for use with Nortronics splicing equipment.

- 1/4" Mylar:
- QM-531.** 1,000/pkg. .... \$60.80
- QM-526.** 200/pkg. .... \$15.60
- QM-521.** 50/pkg. .... \$7.20
- Cassette Mylar:**
- PF-527.** 200/pkg ..... \$18.00
- QM-522.** 50/pkg ..... \$7.20
- QM-524.** 50/pkg ..... \$7.20

**NUMARK ELECTRONICS**

**SD2950 Electronic Display Unit**

Stereo frequency spectrum, peak level/tone computer display for use with any equalizer. Features 2 10-channel fluorescent displays; VU mode to display output level; peak level fluorescent meters with peak hold, reset. Provides accurate display of each left, right equalizer ch or all chs at once ..... \$349  
**SD2900.** Similar to SD2950 except no peak level capability ..... \$299

**PX2626 Generator/Measurement Amplifier**

Pink noise generator/measurement mic amp for properly setting up stereo systems. For use with calibrated mic. Numark SD2900 or SD2950 (above) ..... \$89

**ONKYO**

**CB7U Custom Rack**

Dual wood-grain cabinets, each with transparent glass doors, adjustable shelves; designed for vertical of horizontal layout; 29<sup>1</sup>/<sub>8</sub>"H x 43<sup>3</sup>/<sub>8</sub>"W x 15<sup>1</sup>/<sub>2</sub>"D (horizontal), 58<sup>3</sup>/<sub>8</sub>"H x 21<sup>3</sup>/<sub>8</sub>"W x 15<sup>1</sup>/<sub>2</sub>"D (vertical) ..... \$349.95

**CB7A.** Upper-cabinet unit with 4 adjustable shelves (from CB-7U) ..... \$210

**CB7R.** Lower unit record rack (from CB-7U) ..... \$140

**SR4 Rack System**

Rack system with adjustable shelf, glass-door record compartment, roll-about casters, black matte finish ..... \$139.95

**AT-80 Timer**

Slim-line digital system timer with multimode operation ..... \$129.95

**MT-2 Transformer**

Designed for use with MC-100 phono cartridge. .98

**RC-5T Remote Controller**

Remote-control unit designed for Onkyo TA-2040, TA-2050, TA-2060 cassette decks, CP-1130F, CP1150 turntables ..... \$49.95

**O'SULLIVAN INDUSTRIES**

**DC940 Audio/Video Center Cabinet**

Bartonwood vinyl-laminate finished cabinet features shelf for VCR or videodisc player with pull-down glass front, flip-up glass top, compartment for up to 19" color TV receiver, door-protected tape storage area with pull-out drawer and shelf on left side; flip-up glass top for access to record player, glass door for access to 3 adjustable audio-equipment shelves, compartmented records storage area on right side. All doors bronzed tempered glass except for tape storage area door. 50<sup>3</sup>/<sub>8</sub>"W x 43<sup>3</sup>/<sub>8</sub>"W x 18<sup>3</sup>/<sub>8</sub>"D overall; right shelves 21<sup>3</sup>/<sub>8</sub>"W x 14<sup>3</sup>/<sub>8</sub>"D; VCR/VDP shelf 26<sup>3</sup>/<sub>8</sub>"W x 16<sup>3</sup>/<sub>8</sub>"D x 7<sup>3</sup>/<sub>8</sub>"H; TV shelf 26<sup>3</sup>/<sub>8</sub>"W x 18"D x 18"H; turntable area 21<sup>3</sup>/<sub>8</sub>"W x 16"D x 6<sup>3</sup>/<sub>8</sub>"H ..... \$450

**DC930 Audio/Video Center Cabinet**

Honey elm vinyl-laminate finished cabinet features accommodation for up to 4 audio components on adjustable shelves behind tempered-glass doors on left side; accommodation for up to 19" TV receiver, VCR or VDP on pull-out shelf on right side; 2 separate storage compartments behind wood-look doors along bottom. 51<sup>3</sup>/<sub>8</sub>"H x 51<sup>3</sup>/<sub>8</sub>"W x 19<sup>1</sup>/<sub>2</sub>"D overall; left shelves 21<sup>3</sup>/<sub>8</sub>"W x 16"D; VCR/VDP shelf 27"W x 16"D; tv shelf 27"W x 19<sup>1</sup>/<sub>2</sub>"H x 18<sup>1</sup>/<sub>2</sub>"D; 2 storage areas 24"W x 17<sup>1</sup>/<sub>2</sub>"D x 13"H ..... \$350

**AR170 Low-Boy Audio Cabinet**

Warm honey elm vinyl-laminate finished cabinet with rounded corners with audio equipment storage area for up to 3 components on shelves on left side; records storage and 2 equipment shelves on right side with single glass door. 45<sup>1</sup>/<sub>2</sub>"W x 34<sup>3</sup>/<sub>8</sub>"H x 19<sup>3</sup>/<sub>8</sub>"D overall, left shelves 23<sup>3</sup>/<sub>8</sub>"W x 16<sup>3</sup>/<sub>8</sub>"D; right shelves 19<sup>3</sup>/<sub>8</sub>"W x 16<sup>3</sup>/<sub>8</sub>"D ..... \$260

**AR177 Audio Cabinet**

Roll-around bartonwood vinyl-laminate finished cabinet with L-shaped flip-up tempered-glass top door for access to turntable; twin tempered-glass doors for access to up to 3 audio components on adjustable shelves, pull-out cassette drawer, record storage area. 49<sup>3</sup>/<sub>8</sub>"H x 23"W x 17<sup>1</sup>/<sub>2</sub>"D overall; turntable area 21<sup>3</sup>/<sub>8</sub>"W x 16<sup>3</sup>/<sub>8</sub>"D x 6"H; shelves 21<sup>3</sup>/<sub>8</sub>"W x 14<sup>3</sup>/<sub>8</sub>"D ..... \$250

**AR175 Audio Cabinet**

Roll-around honey elm vinyl-laminate finish audio cabinet with area for up to 3 audio components on adjustable shelves, behind 2 tempered-glass doors at top; central open turntable area; storage area behind twin doors at bottom. Deluxe black dual-wheel casters. 69<sup>3</sup>/<sub>8</sub>"H x 23<sup>3</sup>/<sub>8</sub>"W x 17<sup>3</sup>/<sub>8</sub>"D overall; turntable

area 21<sup>3</sup>/<sub>8</sub>"W x 17<sup>3</sup>/<sub>8</sub>"H x 17<sup>1</sup>/<sub>2</sub>"D; top shelves 21<sup>3</sup>/<sub>8</sub>"W x 14<sup>3</sup>/<sub>8</sub>"D ..... \$240

**AR165 Audio Cabinet**

Roll-around honey elm finished cabinet with rounded corners. Has area for up to 3 audio components, records storage behind dual bronzed tempered-glass doors. Deluxe chrome-hooded dual-wheel casters; 43<sup>3</sup>/<sub>8</sub>"H x 23<sup>3</sup>/<sub>8</sub>"W x 19<sup>3</sup>/<sub>8</sub>"D overall; shelves 21<sup>3</sup>/<sub>8</sub>"W x 16<sup>3</sup>/<sub>8</sub>"D ..... \$200

**AR179 Audio Cabinet**

Roll-around bartonwood vinyl-laminate finished audio cabinet with areas for up to 3 audio components, records storage behind flip-up top, single front bronzed tempered-glass doors. Features adjustable shelves; black hooded dual-wheel casters. 44<sup>1</sup>/<sub>8</sub>"H x 23"W x 17<sup>1</sup>/<sub>2</sub>"D overall; turntable area (below flip top) 21<sup>3</sup>/<sub>8</sub>"W x 15<sup>3</sup>/<sub>8</sub>"D x 6<sup>1</sup>/<sub>2</sub>"H; shelves 21<sup>3</sup>/<sub>8</sub>"W x 14<sup>3</sup>/<sub>8</sub>"D ..... \$200

**DC928 Audio/Video Cabinet**

Bartonwood vinyl-laminate finished audio cabinet with step shelf for up to 19" TV receiver, rounded corners. Left side has storage for records behind twin doors; right side has areas up to 3 audio components on adjustable shelves behind twin clear tempered-glass doors. 49<sup>3</sup>/<sub>8</sub>"W x 31<sup>1</sup>/<sub>2</sub>"H x 17"D overall; TV shelf 26"W x 15<sup>1</sup>/<sub>2</sub>"D; right shelves 21<sup>3</sup>/<sub>8</sub>"W x 14<sup>3</sup>/<sub>8</sub>"D ..... \$180

**AR160 Audio Cabinet**

Hickory-grain vinyl finished cabinet with accommodation for up to 3 audio components and records storage behind single bronzed tempered-glass door. 41<sup>3</sup>/<sub>8</sub>"H x 22<sup>3</sup>/<sub>8</sub>"W x 16"D overall; shelves 21<sup>3</sup>/<sub>8</sub>"W x 14<sup>3</sup>/<sub>8</sub>"W ..... \$140

**PICKERING**

**P-75 Phono Head Amplifier**

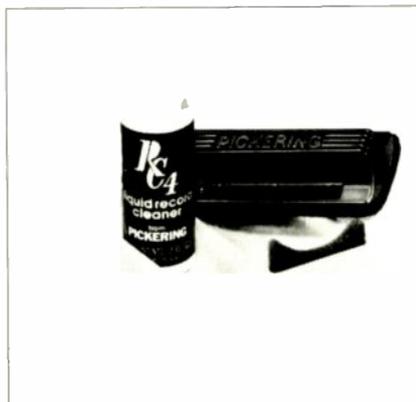
Designed to amplify signals from any low-output; low-imp cartridge to level of conventional MM cartridges. Flat response down to 5 Hz; insensitive to hum pickup; voltage gain 26 dB; FR 10-100,000 Hz ± 5 dB; THD < 0.08% at 200 mV output; sep 60 dB; maximum input level 0.03 V rms; input/output imp 6,000/1,200 ohms; powered by 3 C cells; 1.2 lbs ..... \$189

**PST-2 Stylus Timer**

Measures stylus wear time from 0-1,000 hrs in 100-hr increments; resettable for long-time use; can be reversed 180° to start over again; mounting time 1 minute ..... \$15.95

**RC4 Record Cleaner**

Includes 2-oz liquid record cleaning formula, brush for noiseless operation ..... \$14.95



16-oz Record Care refill ..... \$14.95  
8-oz refill ..... \$8.95  
2-oz refill ..... \$3.95

**Stylus Cleaning & Inspection Kit**

Designed to remove caked-on debris, build-up from stylus and maintain general stylus care; includes 2 fl-oz stylus cleaner, nylon brush, long-handled mirror, magnifying glass ..... \$10.95  
1-oz stylus cleaner refill ..... \$2.50

**CFB-80 Carbon-Fibre Record Brush**

Manufactured from aerospace quality carbon fibers to eliminate shedding. Contains 500,000 filaments/-side, each filament 0.0003" diameter to follow exactly record groove as they remove all dust particles; < 1-ohm natural electrical resistance of each fiber easily conducts away electrical charges to keep records static-free ..... \$14.95

**SC4 Stylus Cleaning System**

Kit combines specially formulated stylus-cleaning fluid safe for delicate stylus parts, unique cleaning brush with controlled-penetration bristles to dissolve and remove stylus contaminants; 5x magnifier included for examining stylus, cartridge mounting, headshell electrical connections ..... \$7.95  
RC4. Replacement applicator pad (pad and brush) ..... \$8.95

**PRC-82 Record Stabilizer**

Provides constant, even pressure, reducing warps. Features 2 sizes of locking buttons to accommodate various size turntable spindles ..... \$10.95

**PIONEER**

**DT-510 Digital Timer/Clock**

24-hour programmable timer with fluorescent digital-numeric display. Slaved to ac power-line frequency. Functions: timer auto on/off, sleep timer, clock, second counter, service interruption indicator. Features 2 accessory ac outlets with maximum power handling capacity 500 W; 16<sup>1</sup>/<sub>2</sub>" W x 5<sup>1</sup>/<sub>2</sub>" D x 2" H; 4 lbs. 13 ..... \$120  
DT-540 Similar to DT-510 except does not have 2 accessory ac outlets; 16<sup>1</sup>/<sub>2</sub>" W x 5<sup>1</sup>/<sub>2</sub>" D x 2" H 5 lbs ..... \$100

**Tape Accessories**

PR-10J. Empty 10<sup>1</sup>/<sub>2</sub>" metal tape reel with NAB hub ..... \$18  
PR-100. 10<sup>1</sup>/<sub>2</sub>" metal reel with NAB hub, boxed ..... \$18  
PR-85. Empty 7" metal tape reel, boxed ..... \$15  
PP-220A. 10<sup>1</sup>/<sub>2</sub>" Reel adaptor ..... \$11

**RECOTON**

**CS112A Stereo Cassette Adapter**

Cassette adapter allows any 8-track player to accept cassette tapes. Unit features rewind, stop and play positions with an automatic stop ..... \$59.95

**Record Care Products**

**RBM-64 "The Brush" Clean Sound II**

Record cleaning brush with carbon-fiber brush to remove static charges, clean grooves with any suitable fluid ..... \$15

**RBM-52 Clean Sound II**

Record cleaning system with wooden-handle cleaning brush, Clean Sound cleaning fluid, pad cleaning brush in hard plastic container ..... \$15

**RBM-50 Clean Sound Cleaning System**

Consists of cleaning brush, Clean Sound cleaning fluid housed on cylindrical plastic container ..... \$11

**3131P Record Conditioner**

Unique unidirectional pile pad brush with cherry wood handle. Comes with purifier solution that fits into handle ..... \$15

Audio terms are defined in the glossary on page 19.

For an explanation of abbreviations, turn to the list on page 22.

**C100RJ Musiclean™**

Deluxe record maintenance system with wooden-handle applicator brush, Musiclean solution. . . . \$10  
**C101RJ.** 1.5 oz Musiclean solution. . . . \$1.79  
**C102RJ.** 4 oz Musiclean solution. . . . \$2.99  
**C103RJ.** Package of 2 Musiclean replacement pads. . . . \$5

**Black Magic™ Record Care Products****RBM-62 Static Eliminator**

Pistol-shaped destaticizer uses piezoelectric module to remove static charges from records. . . . \$17.49

**RBM-1 Dust Wind**

Tonearm-like automatic record cleaner. Supplied with antistatic fluid. . . . \$8

**RBM-60 Clean Sound**

Record protection system with dry lubricant that protects record grooves. Can be applied repeatedly without build-up on record or stylus. Includes applicator, pump sprayer, 2 oz fluid. . . . \$8

**RBM-61.** 2 oz replacement for RBM-60. . . . \$4

**RBM-8 Record Cleaning Kit**

Consists of Magic Touch record cleaning pad, 9 oz Magic Giant antistatic record cleaning fluid. . . \$7.49

**RBM-63 Clean Stat Disc**

Antistatic turntable pad with stroboscope markings. . . . \$7.49

**RBM-10 Record Cleaning System**

Professional cleaning system with Magic Roller, antistatic cleaning solution, stylus/roller cleaning brush. Comes with antistatic indicator bar that shows ionization via color charge. . . . \$6.49

**RBM-11.** 1.25 oz bottle cleaning fluid. . . . \$1.79

**RBM-12.** 4 oz bottle cleaning fluid. . . . \$3

**RBM-4 Record Cleaning Pad**

Made of nylon plush pile impregnated with nonionic compound. Comes in plastic storage case. . . . \$4

**RBM-5 Cleaning Fluid**

Antistatic record cleaning fluid in 9-oz plastic bottle. . . . \$4

**RBM-7 Magic Roller**

Super soft nylon plush pile roller for precleaning records. . . . \$3.49

**RBM-3 Stylus Sweep**

Brush for cleaning phono cartridge stylus. . . . \$3

**Tape Care Products****106TC Cassette Head Demagnetizer**

Plugs into cigar lighter. For demagnetizing cassette tape heads. . . . \$13.95

**105TC.** Similar to 106TC except designed for home use, ac line power. . . . \$10.95

**87TC Cartridge Head Demagnetizer**

Plugs into cigar lighter. For demagnetizing 8-track cartridge player heads. . . . \$10.95

**88TC.** Similar to 87TC except designed for home use, ac line power. . . . \$9.95

**61TR Tape Head Demagnetizer**

AC line powered tape head demagnetizer designed for use in cassette, open-reel, cartridge decks. . . \$9.94

**83TC Cassette Tape Splicer**

Designed for use with all audio cassettes. . . . \$6.49

**50TR.** Similar to 83TC except designed for use with 1/4" tapes. . . . \$6.49

**63TC Cartridge/Cassette Maintenance Kit**

Contains head cleaner, lubricant, brush. . . . \$5

**131TC Total Maintenance Cartridge**

Contains cartridge, capstan/head cleaner, track switch test, demagnetizer with pinball action. . \$3.59

**144TC.** Similar to 131TC except for cassette decks. . . . \$3.59

**140TC Cassette Tape Maintenance Kit**

Includes 2 brushes with replacement pads, mirror, cleaning solution. . . . \$3.49

**51TR Protek-Tape Kit**

Spiral brush buffer for removing oxide deposits \$3.49

**145TC Cassette Tune-Up**

Professional test tape with nonabrasive cleaner, stereo balance test, head alignment test. . . . \$3

**111TC Cartridge Care Kit**

Nonabrasive head cleaner with liquid cleaning solution. . . . \$2.89

**112TC.** Similar to 111TC except designed for cassette decks. . . . \$2.89

**124TC Super Cleaner**

Nonabrasive tape-head/capstan cleaner for 8-track cartridge machines. . . . \$2.89

**90TC Sensing Tape**

For use with all tape decks with electronic controls for cueing, programming, reversing, track changing. 150"L x 1/2"W. . . . \$2.79

**139TC Cassette Salvage Kit**

Includes empty cassette shell with screws, label, splicing tabs, plastic block for repairing defective cassettes. . . . \$2.49

**75TC Cassette Mailers**

Includes 12 cassette mailer cartons. . . . \$2.29

**53TR Audio Klean Stix**

Package of 100 6" cotton applicators in storage bag. . . . \$2.19

**94TC Cassette Storage Boxes**

Package of 4 plastic storage boxes with built-in stops. . . . \$2

**68TC Cartridge Tape Head Cleaner**

Designed for 8-track cartridge players. Has built-in timer. . . . \$1.89

**71TC Cassette Head Cleaner**

Cassette cleaner removes dirt, oxides. . . . \$1.69

**54TR Tape Head Cleaner**

Removes dirt, oxides from all tape deck heads \$1.59

**55TR Tape Recorder Lubricant**

Lubricant has silicone. . . . \$1.59

**58TR Splicing Tape**

Designed for all formats tape, splicers. 108"L x 1/2"W. . . . \$1.19

**65TC-8 Cartridge Dust Shields**

Package of 8 snap-on shields for 4- and 8-track cartridges. . . . \$0.99

**Black Magic™ Tape Care Products****RBM-37 Cassette Demagnetizer**

Solid-state cassette demagnetizer with in use LED. Inserts directly into cassette compartment of deck \$23

**RBM-43 Tape Editing Kit**

Designed for cassette, open-reel formats; includes aluminum splicing block, leader tape, splicing tabs, 12 blank cassette labels, razor blade. . . . \$13

**RBM-44 Cartridge Demagnetizer**

Comes with tape head cleaner, operates on ac line power. . . . \$13

**RBM-45.** Similar to RBM-44 except for cassette decks; has no tape head cleaner. . . . \$13

**RBM-41 Cartridge Kit**

Maintenance kit with 10-ft nonabrasive cassette head cleaner in plastic storage case, Magic Dew cleaning solution, Magic Wand applicator with 6 replaceable pads. . . . \$7

**RBM-48 Magic Stix™ Maintenance Kit**

Deluxe cassette kit includes applicator brushes with replacement pads, deluxe cleaning solution. . . . \$4

**RBM-42 Tape Cleaning Kit**

Includes Magic Tape Dew cleaning fluid, Magic Applicator with 6 interchangeable pads. . . . \$3.59

**RBM-41 Tape Cleaning Solution**

Specially formulated tape cleaning solution with applicator swabs. . . . \$3

**ROBINS DIVISION,  
BENJAMIN ELECTROPRODUCTS****24-004 Cordless Cassette Tape Eraser**

Removes recorded material from all standard and micro/mini cassettes in 2 seconds. Erases tape below normal erase head level; leaves low background noise level. Useful with dictation systems. Requires no outside power or batteries. Alnico magnet produces strong demagnetizing field. . . . \$12

**24-005 Cordless Micro Cassette Eraser**

Similar to 24-004 for micro cassettes. . . . \$7

**RUSSOUND/FMP****TMS-3 Tape-Recorder Selector**

Connects any combination of 3 tape recorders or other line sources to be used single or simultaneously in any combination of functions. All switches silver plated, self-cleaning. 6 3/4"W x 3 1/2"D x 3"H. . . \$55.95

**TMS-3W.** With walnut side panels. . . . \$65.95

**TMS-5.** Same as TMS-3 except handles 5 sources. . . . \$89.95

**TMS-10.** Same as TMS-5 except handles up to 10 inputs. Provides facilities for tape-to-tape duplication without going through preamp or mixer. Measures 16 1/2"W x 3 3/4"D x 3"H. . . . \$149.95

**TMS-10W/R.** With walnut end panels or rack-mount ears. . . . \$159.95

**SWB-3 Speaker Selector Switch**

Connects up to 3 sets stereo speaker systems to any amp; will play any or all simultaneously. Internal design assures that load on amplifier never falls below 4 ohms. 6 3/4"W x 3 1/2"D x 3"H. . . . \$39.95

**SWB-3W.** With walnut end panels. . . . \$49.95

**SWB-4.** Same as SWB-3 except handles 4 pairs of speaker systems. . . . \$54.95

**SWB-4W.** With walnut end panels. . . . \$64.95

**HP-1 High-Power Speaker Switch**

Connects one or two amps up to four pairs of stereo speakers. Any pair of speakers may be individually programmed to either amp. This unit can be safely used with amps up to 250 W. . . . \$100

**QT-1 Quad Patching/Control Center**

Passive switching center expands tape monitor loop of audio system to accept 2- or 4-channel NR systems, graphic equalizers, matrix decoders, up to 4 mono, stereo, or quad tape recorders, with switching functions handled through front-panel switches or patch cords; supplied with 16 shielded patch cords. Front panel switches include record, mix, 2-/4-channel, play, monitor, aux, input, output modes; front-panel patching jacks for source/recorders in, recorders/source copy buss, recorder/monitor out, equalizer in/out, NR encode in/out, NR decode in/out. Rear panel connects all recorders, accessories with 72 RCA type phono pin jacks. Insertion loss < 0.5 dB when operating recorders or decoders singly, 6 dB when mixing 2 channels or 2 recorder outputs; walnut vinyl finish; 13 3/4"W x 5"D x 4 1/2"H. . . . \$189.95

**SP-1R.** Rack-mount version of SP-1; 7"W x 5"D x 4 1/4"H. . . . \$200

**SD-4 Sound Distribution Center**

Accommodates 4 sets of stereo speakers with volume control, independent program selector for each pair; permits precise speaker level balancing for A/B testing. Features individual auto transformer; 10-position amp-output switch for delivery to speakers; all metal case with black front panel; 9 3/4"W x 7 1/2"D x 3"H. . . . \$279.95

**SD-4W/R.** Same as SD-4 except has walnut side panels or rack-mount ears. . . . \$289.95

**MP-3.** Similar to SD-4 except has constant-impedance L-pad controls rated for 35 W audio power or 70 W peak music power; can be used with high-power amps, low-efficiency speaker systems. No individual auto transformer or 10-position amp-output switch. . . . \$150

**FP-36R Patchbay**

Features 18 inputs or 18 outputs on front panel; connects any combination of components in any sequence; can be used independently in tape monitor loop or to augment patching capability of QT-1 or SP-1; includes 12 patch cords; semigloss black metal cabinet; rack-mountable; 19"W x 5"D x 1 3/8"H. . . . \$150

**FP-36.** FP-36R without rack mounting; walnut wood sides; 13 3/4"W. . . . \$140

**VS-1 Speakers/Headphone Volume Control**

Switchable speakers/headphones volume control with heavy-duty L-pad control; accepts up to 150-W/ch amp outputs; LED power warning indicator; metal case with semigloss black finish; 4 1/8"W x 4 1/2"D x 3"H. . . . \$90

**SWB-4G Speaker Selector Switch Box**

Speaker switch box with gold-plated connectors, gold-plated switches and low-resistance wiring for all types

of speaker cables (including heavy-duty premium type). Connects up to 4 pairs of speakers simultaneously with load imp within safe limits. Total loading imp on amp will not be less than 4 ohms when any combination of speakers of any imp are switched in. Can be used safely with amps up to 250 W. Also available as a furniture model with solid walnut end pieces. 6 $\frac{3}{4}$ "W x 3 $\frac{1}{2}$ "D x 3"H .....\$90

#### SWB-4 MM Speaker Selector Box

Multi-match (4-8-16 ohm) speaker-selector switch connects up to 4 pairs of speakers to any amp and will play any or all simultaneously. Total imp of speakers never falls below 4 ohms. Imp-matching transformers are switched into the circuits when necessary to keep loading on the amp within safe limits. Insertion loss 4 dB with 4-8 ohm speaker pairs switched in; 6 dB with 4 ohm pairs of stereo speakers; separate L/R grounds; can be used with amps up to 250 W. Also available as furniture model with solid walnut end pieces. 6 $\frac{3}{4}$ "W x 3 $\frac{1}{2}$ "D x 3"H.....\$70

#### SWB-3E Speaker and Headphone-Selector Switch

Connects up to three sets of stereo speakers and one pair of headphone to any amp and will play any or all simultaneously. Connects one or both of two sound sources to any combination of speaker pairs (with 8-ohm speakers). Amp loading imp never falls below 4 ohms; will also work equally well with 16-ohm speakers; also available as furniture model with solid walnut end pieces. All switches silver plated. Can be safely used with amp up to 250 W. 6 $\frac{3}{4}$ "W x 3 $\frac{1}{2}$ "D x 3"H.....\$50

#### VS-2 Remote Speaker/Headphone Volume Control

Allows speaker or headphone listening at remote location. Sound level controlled by 10-position rotary switch which selects taps on an auto-transformer. Selection switches for speakers or headphones, high or low power operation. Designed for control of 4-, 8- or 16-ohm speakers. Power range 10-25 W. 4 $\frac{1}{2}$ "W x 2 $\frac{3}{4}$ "D x 2 $\frac{3}{4}$ "H.....\$70

### SANSUI

#### GX-155 Audio Cabinet

Free-standing cabinet for audio-component system has oak-grain vinyl finish; 2 glass doors; record storage area; caster rollers. 36 $\frac{3}{8}$ "H x 18 $\frac{1}{8}$ "W x 16 $\frac{1}{8}$ "D.....\$220

### SCOTCH

#### ERK-130 Cassette Edit/Repair Kit

Contains precision splicing block; spindle for manually winding cassette tape; 6 polyester picks (adhesive tipped for retrieval of tape ends lost in housing); 6 130-mil splicing tabs; detailed instruction booklet .....\$3.60

#### Pre-Cut Tabs

SPT-7/32-36. 36 pre-cut 1.0-mil polyester splicing tabs .....\$1.60  
SST-7/32-18. 18 pre-cut aluminized sensing tabs \$2  
SK-7/32. 12.5 ft of 1.9 mil polyester splicing tape in dispenser kit .....\$2.50

#### Head Cleaners

S-C-HC. Cassette head cleaner .....\$1.79

#### Record Care System

Three-way record protection--dust cleaning, static removal and friction reduction--with Sound Life fluid. Applicator attaches to turntable spindle to meter a controlled amount of fluid onto pad.

Total System .....\$28  
Sound Life replacement fluid/pad .....\$10  
Sound Life replacement fluid .....\$8.20

#### Turntable Dust Guard

Conductive foam turntable pad reduces external electrostatic field to repel airborne dust .....\$7

### H.H. SCOTT

#### 830Z Audio Analyzer

Audio analyzer indicates acoustical changes in speaker system location, optimizes tape deck bias, equalization, record levels, tape compatibility; measures peak sound pressure level, dynamic range of program material; hooks into amplifier, receiver, tape deck input. Features 110-LED visual display grid covering 32-16,000 Hz in 2-, 3-, or 4-dB range switch; 10-octave band oscillator level control; SPL, flat, A-weighting, C-weighting mode switch; external mic/internal mic/aux/calibration input select switch; independent mic, line level controls; LED dimmer; includes remote condenser microphone; optional 19" rack-mount handle.....\$600

### SHURE

#### M64 Preamplifier

Fixed-gain stereo preamplifier with switch-selected phono, tape equalization; for use with unequaled amplifier inputs, microphones, as buffer amplifier in "flat" position; on-off ac/dc switch; two phono jack inputs; 120 V ac 50/60 Hz, 5 W .....\$99

#### Trackability Test Records

Evaluates cartridge performance by analyzing the cartridge's most important performance characteristic--trackability.

TTR 103. Trackability test.....\$11.50  
Record TTR 117. Audio obstacle course test record.....\$15

#### SK-1 Stylus Cleaning Kit

Removes built-up dust and dirt from stylus to prolong the life of cartridge and records. Includes cleaning fluid, stylus cleaning brush, magnifying glass for stylus inspection .....\$9.95

#### SFG-2 Stylus Force Gauge

Allows precise setting of optimum stylus force for maximum trackability and sharply reduced wear on records and stylus tip .....\$8.50

### SIGNET

SK402. Litz wire interconnector in 1-meter lengths; low capacitance .....\$35-\$40  
SK305. Electronic stylus cleaner .....\$35-\$40  
SK306. Replacement liquid cleaner for SK305 . \$4-\$5.00  
SK401. Maximum transfer high-conductivity cable assembly .....\$30-\$35  
SK503. Disc stabilizer .....\$30-\$35  
SK501. Automatic tonearm lift .....\$22.95  
SK505. Straight-arm headshell .....\$15-\$20  
SK303. Vibration damping compound ....\$10-\$12  
SK405. Maximum transfer headshell wire set.. \$10-\$12  
SK301. Liquid stylus cleaning formula .....\$4-\$6

### SONEX by ILLBRUCK/usa

#### Sonex Juniors Acoustic Foam

Sound-absorbing acoustic foam designed to reduce noise, slap echo, room flexure, standing waves, and to smooth frequency response. Sculpturing of foam sheets creates surface area 450% greater than flat surface with anechoic wedge shapes. Charcoal, brown, or beige. Squares 2" thick x 24" x 24"; 4 sheets per box .....\$39.95/box

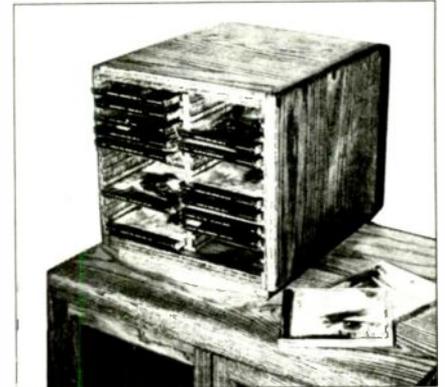
#### NEED MORE INFORMATION?

Write directly to the manufacturer or distributor. A list of names and addresses starts on page 25.

### SONRISE

#### Mirrormont III CD Cabinet

Rotating cabinet stores up to 40 Compact Discs, 20 on each side. Solid oak or solid walnut. Also available



in audio or video tape formats; can be stacked to multiply storage capacity .....\$69

### SONY

#### MX-1000 Microphone Amplifier

Four-channel microphone amplifier with input selector, pan pots, low-cut filter. Designed for use with Sony TC-K555 cassette deck but can be used with all Sony home decks.....\$300

## The art of shaping sound.

Does your music sound better in the next room? Pro audio kills resonances with SONEX acoustic foam, and now you can too. Control acoustics and turn your room into a studio. At midrange, SONEX has twice the sound absorption of good carpeting for about the same cost. If your dealer doesn't have SONEX, send us \$40 for a sample box of four 24"x24" sheets, or write for our color brochure.



**illbruck/usa**  
techniques with foams

3800 Washington Ave. N. Minneapolis, MN 55412

CIRCLE NO. 26 ON READER SERVICE CARD

**PT-77 Programmable Timer**

8-event/7-day programmable timer with 60-minute sleep function. Features 2 switched ac outlets rated 1,000 W maximum; 10-min backup battery; designed to complement Sony ST-JX500 programmable tuner but can be used as control center for entire hi-fi system ..... \$195

**T-V5 Program Timer**

1-day 4 event programmable timer with microprocessor control and fluorescent display. Features "conversion" programming (flashing display guides you to next function); sleep timer; ready function alarm; membrane keypad; built-in rechargeable battery; 2 ac outlets (1 switched, 1 unswitched); power consumption 9 W 14" x 2 1/2" x 9 3/4"; 4 lbs .. \$130

**PT-V5 24-Hour Programmable Timer**

Twenty-four hour programmable timer and alarm system with 4-event programming and built-in sleep timer and ready alarm ..... \$130

**PT-55 Programmable Timer**

1-event/1-day programmable timer with 60-min sleep function. Features 2 switched ac outlets rated at 500 W maximum ..... \$95

**AN-300 Outboard FM Antenna**

Highly sensitive tuneable outboard FM antenna with 90° rotation flexibility. Accepts automatic control signal from Sony receivers, while manual override allows usage with other separate tuners receivers ..... \$80

**SB-500 Tape Deck Switcher**

Tape deck switching unit with copying facility for up to 3 decks ..... \$75

**BE-100 Cassette Eraser/Winder**

Silently removes all magnetic recordings from all cassettes, including metal with > 65 dB erasure. Wind time within 170 seconds with C60 cassette .... \$70

**WS-300 Speaker Stands**

Deluxe speaker stands designed for Sony SSU-60, SSU-50 speaker systems ..... \$70/pr

**RM-65 Recording Synchronizer**

Automatically cues PS-FL77, PS-FL1, PSLX-500, PSLX-55 turntables with some Sony cassette decks ..... \$25

**SOUNDAIDS****Cassette Storage Cabinet**

Wood cabinet with lock-jointed corners, 4 hand-fitted 68-cassette capacity drawers with recessed sides for easy removal of cassettes. Cabinet fits on standard record shelves, separates records, or supports shelves (with more than one cabinet). 12 1/4"H x 12 1/8"D x 5 1/4"W ..... \$53

**Record Storage Cabinet Blueprints**

Plans, instructions, order forms for building vertical, horizontal record storage units from pre-cut plywood; each element braces, is braced by, 2 others; no tools required; white glue, masking tape needed for assembly; vertical unit 6'6"H x 21 1/4"W x 13 1/4"D; horizontal unit 2'10 1/4"H x 8'1 1/2"W x 14"D ..... \$5

**STANTON****310 Professional Phono Preamp/Equalizer**

Designed to correctly interface all Stanton, selected

magnetic cartridges for optimum playback of records, calibration of audio systems. Features universal mounting brackets; selection of flat or NAB post-emphasis curves; switchable rumble filter; individual gain adjust, high-frequency responses; capacitive cartridge loading trim; 117-230 V ac 50/60 Hz operation; immunity to external ac fields. Output 20 dBm; output source imp 5 ohms; designed for loads of 150 ohms or greater; gain 30-60 dB, adjustable; max input level 120 mV at 1 kHz; input resistance 47k ohms; sep 60 dB min, 20-20,000 Hz; 7 1/4"W x 5"D x 2 1/4"H ..... \$240

**SP-98 Preamp**

Designed to amplify signals delivered by low-output low-impedance moving-coil phono cartridges and low-impedance moving-magnet cartridges. Uses 2 alkaline 9 V batteries (not included); total power consumption about 150  $\mu$ amperes per ch; gain 34 dB (x20)  $\pm$  1 dB; FR 5-150,000 Hz (-3 dB) input imp 100 ohms; output imp 1.5K ohms, S/N 90 dB (1,000 Hz, 1 mV in) turn-on time approx. 60 sec \$189

**BA-26 Phono Head Amplifier**

Designed to amplify signals from any low-output, low-impedance cartridge to level of conventional magnetic cartridges. Flat response down to 5 Hz; insensitive to hum pickup; voltage gain 26 dB; FR 10-100,000 Hz  $\pm$  5 dB; THD < 0.08% at 200 mV output; sep 60 dB; max input level 0.03 V rms; input/output imp 6k/1.2k ohms; powered by 3 C cells; 1.2 lb . \$189

**RC5plus Record Cleaner**

Kit contains cleaning fluid that safely dissolves oily film, loosens microdust, other debris, leaves no residue. Contains antistatic ingredient. Comes with "Polarized" brush, conductive handle. Cleans 300 record sides ..... \$16.95  
2-oz refill ..... \$5.95  
8-oz refill ..... \$9.50  
RC4 2-oz refill ..... \$3.95  
RC4 8-oz refill ..... \$8.95  
RC4 16-oz refill ..... \$14.95  
RC4 replacement applicator pad ..... \$8.95  
1-oz stylus cleaning fluid ..... \$2.50

**Stylus Cleaning and Inspection Kit**

Consists of 2-ft-oz liquid stylus cleaning fluid, nylon brush, long-handled mirror, magnifying glass; cartridge does not have to be removed during stylus cleaning ..... \$10.95

SC4 Mini Stylus Cleaning Kit ..... \$7.95  
7.5 solution refill ..... \$1.50

**SUMIKO****The PhonoAmp Preamplifier**

Stereo phono preamplifier with RIAA equalization, enough gain for MC and MM cartridges. Provides sufficient power to drive power amps directly. Features



active impedance synthesis; front-mounted cartridge damping control; bypass switch that allows input from external preamp through PhonoAmp; Mil-spec components; solid Koa cabinet ..... \$600

**SWITCHCRAFT****Control Switches**

645 PL. Control switching center allows use of any combination of up to 6 speaker systems. Equipped

# A Clean Record is a Healthy Record

*"The perfect prescription for record care."*



## RC<sub>5</sub> PLUS

RC5 is a superior record cleaning formula with an astounding, permanent anti-static element. RC5 gives you complete record protection in one simple application. Kit includes an easy-to-use velvet high pile polarized brush with conductive handle and a convenient built-in brush cleaner. Write for our record care booklet to

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Stanton Magnetics Inc., 200 Terminal Dr., Plainview, N.Y. 11803

CIRCLE NO. 27 ON READER SERVICE CARD

with pushbutton/depression locking system ... \$80  
**310 PL.** 2-conductor phone jack input with 2-conductor phone plug output fitting standard nonrecessed jacks ..... \$24.20  
**311 PL.** Similar to 310 PL except has long plug for recorders with recessed jacks ..... \$24.80  
**670 PL.** Control switch to select either or both main, 2 remote speaker systems ..... \$24.95  
**668 PL.** Control switch to select both channels of 1 of 3 sources to drive one pair outputs ..... \$23.25

**9000 Series Impedance-Matching Transformers**

For direct connection without adapters between low-imp mics and high-imp amps and tape decks \$30.75-37.25

**TASCAM**

**MH-40 Multi-Headphone Amplifier**

Headphone amp which drives up to 4 pairs of stereo headphones from a single line-level stereo signal. Features power switch; input controls; input mode and input level selectors; headphone level controls and output jacks; input jacks; foldback terminals; input imp 40,000 ohms; imp 8 ohms; max output level 100 mW (8 ohms) FR 50,20,000 Hz  $\pm 2$  dB; S/N 88/85 dB, A-weighted, crosstalk better than 45 dB (1,000 Hz, max output level); THD < 1% (1,000 Hz); 19"W x 3<sup>7</sup>/<sub>16</sub>"H x 9"D ..... \$250

**TDK**

**CP-36 Cassette Cabinet**

Holds up to 36 audio cassettes in 3 separate drawers that hold 12 cassettes each ..... \$39.99  
**CP-15.** Stores up to 15 audio cassettes ..... \$5.99  
**CK-15.** Portable cassette case carries up to 15 cassettes ..... \$9.99

**HD-11 Tape Head Demagnetizer**

Portable handheld universal tape head demagnetizer designed for open-reel or cassette tape decks; operating time < 1 second; red on, green READY to use LEDs; side-mounted activator switch; plastic-covered metal tips; includes 1 1.5-V cells ..... \$34.99

**HD-01 Head Demagnetizer**

Automatic head demagnetizer with < 1-second operating time; housed in transparent cassette shell with LED to show demagnetization is taking place; self-contained battery ..... \$24.99

**HC-1 Head Cleaner**

Nonabrasive cassette tape machine head cleaner ..... \$1.89

**Empty Tape Reels**

**AR-7M.** 7" metal reel ..... \$8.99  
**AR-10M.** 10<sup>1</sup>/<sub>2</sub>" metal reel ..... \$13.99

**TEAC**

**E-2 Bulk Eraser**

Handles 7" and 10<sup>1</sup>/<sub>2</sub>" reels. Features pilot light, circuit breaker ..... \$100

**E-3 Tape-Head Demagnetizer**

Removes residual magnetism from tape heads, guides ..... \$29.50

**RMK Recorder Maintenance Kit**

Kit includes 3-oz HC-1 tape-head cleaner, 3-oz rubber cleaner, 3-oz stainless polish, cotton swabs, cleaning cloth ..... \$9.95  
**HC-2.** 11-oz tape-head cleaner ..... \$6.50  
**RC-2.** 7-oz rubber cleaner ..... \$6.50  
**SP-2.** 11-oz stainless polish ..... \$6.50

**Flight Cases**

Tough vinyl-covered wooden trunk-type flight cases for recorder transports (Teac 2340 Series) meet Air-line Transport Association specifications.  
**FC-8.** For Tascam 80-8 and 40-4 decks ..... \$225  
**FC-5.** For Tascam Model 5A mixer ..... \$225  
**RC-3.** For Tascam Model 3 mixer ..... \$180

**FC-24.** For 2340 series decks ..... \$170  
**FC-34.** For A-3440 tape deck ..... \$170

**PB-64 Patch Bay**

Has 64 RCA phono connectors on front, rear panels. Compatible with low-loss cables ..... \$100

**Metal Reels and Hubs**

**RE-1002.** 10<sup>1</sup>/<sub>2</sub>" NAB metal reel for 1/4" tape ... \$15  
**TZ-612B.** 1/4" NAB hub adaptors; quick lock ..... \$17.50/pr

**TECHNICS**

**Component Racks**

**SH-700.** Horizontal rack for Studio collection ..... \$440  
**SH-350.** Speaker stand for use with SH-700 Horizontal Rack ..... \$60  
**SH-710.** Vertical rack for Studio collection ... \$400  
**SH-536.** Multi-purpose rack with tempered top and front glass; two adjustable metal mounting brackets; record storage area; simulated walnut-grain finish ..... \$140  
**SH-595.** Multi-purpose rack with tempered top and front glass; metal mounting brackets; adjustable wood shelf record; storage area; simulated walnut-grain finish ..... \$140

**SH-305MC Head Amp**

Step-up transformer accurately matched to the EPC-305MCMK2, but suitable for use with other MC cartridges. Features quadruple shielding; low/middle/high/pass input imp selector; amorphous toroidal core: FR 15-100,000 Hz  $\pm 0.2$  dB; THD < 0.001% at 1 kHz; ch sep > 90 dB at 1 kHz; ch balance within 0.2 dB 1 kHz load imp 47 kilohms; 2<sup>3</sup>/<sub>4</sub>"W x 3<sup>25</sup>/<sub>32</sub>"H x 8<sup>3</sup>/<sub>32</sub>"D; 9.9 lb ..... \$350

**SH-8000 Frequency Analyzer**

Frequency analyzer with 31-point warble tone generator and sound level meter. Features tweeter protector switch for high-range signals; 5-setting precision sound level meter; ultra-sensitive condenser mic; switchable (fast/slow) meter response speed for indication of transient or average peaks; battery check switch and meter indication; carrying case; FR 20-20,000 Hz,  $\pm 2$  dB; oscillation signal warble tone; (31 measurement points); frequency precision  $\pm 6\%$  or better; output level/imp 70mV/1 kilohm; SPL measurement range 35-105 dB SPL (0 dB = 2 x 10<sup>-4</sup>  $\mu$ bar); power source DC 9 V; battery life 10 hours continuous operation; 8<sup>13</sup>/<sub>32</sub>" x 2<sup>7</sup>/<sub>16</sub>" x 4<sup>13</sup>/<sub>16</sub>"; 2.2 lb ..... \$150

**SH-4060 Audio Timer**

Programmable 24-hour timer with day-of-week indicator. Features digital FL time display; preset channel indicator; outlet power/timer indicator; timer cancel key; quartz-locked clock; programmable for 1 time in 24-hour, 2 times in 7-day periods; power capacity 600 W maximum; power consumption 7 W; 16<sup>15</sup>/<sub>16</sub>"W x 6<sup>3</sup>/<sub>32</sub>"D x 2<sup>3</sup>/<sub>32</sub>"H; 3.75 lb ..... \$100

**Remote-Control Units**

**RP-9690P.** Remote control for Technics open-reel decks ..... \$100  
**RP-070.** Wireless (infrared) full-function remote control for all Technics open-reel decks ..... \$200

**SH-F101 Indoor Active Tuned FM Wing Antenna**

Compact in-door dipole antenna for reception in strong signal areas to be used with Technics ST-S7, ST-S3, ST-K808 tuners. Features automatic electronic tuning circuit; high gain characteristics; manual tuning knob; die-cast base; relative gain -2 db; figure-8 pattern; half-power angle 90°; output imp 75 ohm; standing wave ratio 1.2 or less; power source DC 18 V; 16<sup>27</sup>/<sub>32</sub>"W x 6<sup>3</sup>/<sub>32</sub>"H x 4<sup>7</sup>/<sub>16</sub>"D; 1.9 lb ..... \$90

**Universal Headshells**

**SH-90S.** Combination headshell/adaptor for direct plug-in universal headshell tonearms ..... \$30  
**SH-100.** Die-cast aluminum universal plug-in headshell with calibrated overhang cursor, gold-plated

contacts. For Technics turntables ..... \$16  
**SH-98D.** Similar to SH-100 except no calibrated overhang cursor ..... \$13

**VECTOR RESEARCH**

**VCC-10 Floor Cabinet**

Equipment cabinet with 2 glass doors ..... \$180

**Remote-Control Units**

**VRC-1.** Wired unit for VRX-9000 receiver ..... \$75  
**VPC-2.** Wired unit for VCX-500/600 cassette decks ..... \$75  
**VRC-11.** Wired unit for VRX-9500 receiver ..... \$85  
**VCR-12.** Wired unit for VRX-8000 receiver ..... \$85  
**VRC-21.** Wired unit for VCX-800 cassette deck ..... \$85  
**VCR-22.** Wired unit for VCX-400/510 cassette decks ..... \$85

**Cabinets**

**VKD-1A.** For all Vector receivers ..... \$35  
**VKD-2A.** For all Vector cassette decks ..... \$35  
**VKD-3.** For Vector equalizer ..... \$35

**Miscellaneous**

**VMA-1.** Rack-mount adapter for all Vector receivers, cassette decks ..... \$35  
**VMA-1A.** Rack-mount adapter for Vector equalizer ..... \$35  
**VMS-1.** Rack-mount spacer for all Vector models ..... \$15

**YAMAHA**

**DT-2 Digital Clock/Timer**

Can be used to preset any predetermined turn on/off time. Includes sleep function ..... \$120

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**A DIFFERENT KIND OF RECORD CLUB**

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on every record and tape in print - no "agree to purchase" obligations of any kind  
**DISCOUNTS OF 43% TO 73%**  
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informational news and happenings in the world of music - special super sale listings

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on all products and services - your total satisfaction is unconditionally guaranteed

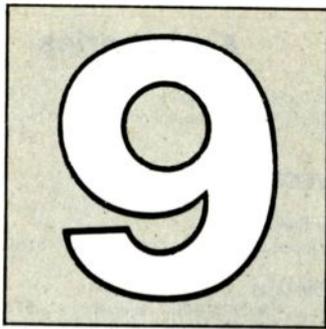
Discount Music Club is a no-obligation membership club that guarantees tremendous discounts on all stereo records and tapes and lets you buy what you want...when you want...or not at all if you choose.

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# Speakers

## AAL

### Digital Ready Series

**dr/S 800.** Two-way infinite baffle loudspeaker system, in air-suspension enclosure, features 8" foam-surround woofer with 1" voice coil and 3 1/2" cone tweeter. Vinyl-laminated cabinet. FR is 50-20,000 Hz; imp 8 ohm nominal; crossover 5,000 Hz; power handling 5-25 W; 18 1/8" x 11 1/8" x 8" ... \$89/ea

**dr/S 1000.** Two-way air-suspension bookshelf system features 8" foam-surround woofer with 1" voice coil and 3 1/2" cone tweeter. Utilizes vinyl-laminated cabinet. FR 45-20,000 Hz; imp 8 ohms nominal; crossover 5,000 Hz; 23" x 11 1/2" x 8" ... \$99/ea

**dr/S 3000.** Three-way air-suspension system features 12" foam-surround woofer with 1" voice coil; 5" sealed back midrange and a 3 1/2" cone-type tweeter. FR is 40-20,000 Hz; crossovers 2.5-5 kHz; imp 8 ohms nominal; power handling 5-75 W per ch; 24" x 15" x 10" ... \$99/ea

**dr/S 4000.** Three-way system air-suspension system with 12", foam-surround woofer, 1 1/2" voice coil; 5" sealed back midrange and a 3 1/2" cone type tweeter. FR 30-20,000 Hz; crossovers 2.5-5 kHz; 8 ohm nominal imp; power handling 5-75 W per ch; 27" x 16" x 11" ... \$189/ea

**dr/S 5000.** Four-way vented bass reflex system features 12" foam-surround woofer; 5" ferrofluid-cooled, sealed back midrange with a 3 1/2", cone-type and 3" piezo electric tweeter. Utilizes vinyl-laminated cabinet and features front-mounted fuse protection element. FR 25-22,000 Hz; crossovers 1.5-5 kHz; imp 8 ohms nominal; power handling 10-100 W per ch; 27" x 16" x 11" ... \$219/ea

**dr/S 6000.** Four-way air-suspension speaker system features 15" foam-surround woofer with 1 1/2" voice coil; 5" ferrofluid sealed-back midrange with 3 1/2" cone-type tweeter and 3" piezoelectric tweeter. Features fuse protection element and front-mounted, high-frequency and mid-frequency level controls. Vinyl-laminated cabinet. FR 20-22,000 Hz; crossovers 1.5-5 kHz; imp 8 ohms; power handling 10-110 W per ch; 29" x 18 1/2" x 15" ... \$279/ea

**dr/S 7000.** Multi-driver bass-reflex loudspeaker system features twin 10" foam-surround woofers with 1 1/2" voice coils; 5" sealed back ferrofluid midrange and 3" piezo tweeter. FR 20-22,000 Hz; crossovers 1-5 kHz; imp 4 ohms nominal; power handling 10-100 W per ch; 32 1/4" x 14 3/8" x 10 3/8" ... \$299/ea

**dr/S 8000.** Floor-standing, three-way air-suspension loudspeaker features 15" polypropylene woofer with 2" voice coil that incorporates heavy gauge copper wire around a high-temp aluminum core; two 5" sealed back, polypropylene, ferrofluid-damped midrange drivers and four quartz crystal tweeters. FR 17 Hz to 20 kHz; crossovers 1.5-5 kHz; imp 8 ohms nominal; power handling 10-150 W per ch; 29" x 18 1/2" x 15" ... \$399/ea

## ACCULAB by RTR INDUSTRIES

### Digital Reference Loudspeaker Series

**550.** 5-way speaker with computer-optimized passive radiator vented enclosure with base; 12" woofer with 1 1/2" voice coil and nylon-laminate composition cone; 12" mass-aligned passive radiator; 3 3/8" high defini-

tion midrange; 2 1/4" extended range tweeters and 2 1/2" solid-state supertweeter; all dynamic drivers feature high-temp heat-resistant wire wound on aluminum bobbins; walnut grain vinyl finish. FR  $\pm 3.5$  dB 30-25,000 Hz; imp 8 ohms; crossover frequencies 10,000 Hz; sens 92.5 dB; input power 5-90 W rms; 15"W x 40"H x 11"D; 54 lbs ... \$640/pr

**450.** 4-way speaker with computer-optimized acoustic suspension enclosure with base, 12" woofer with 1 1/2" voice coil and nylon-laminate composition cone. 5 3/8" high definition midrange 2 3/4" extended-range tweeter; 2 1/2" solid state supertweeter; all dynamic drivers feature high-temp heat resistant wire wound on aluminum bobbins; walnut grain vinyl finish. FR 3.5 dB 32-25,000 Hz; imp 8 ohms; crossover frequencies 10,000 Hz; sens 92.5 dB; input power 5-90 W rms; 14 1/4"W x 32"H x 11"D; 45 lbs ... \$500/pr

**350.** 3-way speaker with computer-optimized acoustic suspension enclosure; 12" woofer with 1 1/2" voice coil and nylon-laminate composition cone; 3 3/4" high definition midrange and; 2 3/4" extended range tweeters; all drivers feature special high-temp heat-resistant wire wound on aluminum bobbins; walnut-grain vinyl finish; FR  $\pm 4$  dB, 36-18, 500 Hz; 5-75 W rms. 1,500 Hz, 10,000 Hz crossover frequencies; imp 8 ohms; sens 91 dB auto reset circuit breaker protection; 29 lbs ... \$400/pr

**330.** 3-way speaker with computer-optimized acoustic suspension enclosure, 10" woofer with nylon-laminate composition cone, 3 3/8" midrange and 2 3/4" extended-range tweeter; all drivers feature special high-temp heat-resistant wire wound on aluminum bobbins; walnut grain vinyl finish. FR  $\pm 4$  dB, 40-18,500 Hz, 2,000 Hz, 10,000 Hz crossover frequencies, 8 ohms imp; 91 dB sens; auto reset circuit breaker protection; 13"W x 22" H x 10 1/2"D; 29 lbs ... \$300/pr

**230.** 3-way speaker with computer-optimized acoustic suspension enclosure, 8" woofer with nylon-laminate composition cone, 3 3/8" x definition midrange + 2 3/4" extended-range tweeter; all drivers feature special high-temp heat-resistant wire wound on aluminum bobbins; walnut grain vinyl finish; FR  $\pm 4$  dB 50-18,500 Hz, 2,500 Hz, 10,000 Hz crossover frequencies, 8 ohms imp; 90 dB sens; auto reset circuit breaker protection; 11"W x 20 2/3" H x 7 1/4"D; 40 lbs ... \$200/pr

## ACOUSTIC INTERFACE

### Sound Prism Speaker System

Vented-horn speaker system with 24" x 52" compression woofer, 13" x 22" horn midrange, 7.25" x 3" horn tweeter, built-in tri-amplification; 800 W for woofer, 300 W for midrange, 100 W for tweeter. Features midrange, tweeter level controls; oiled walnut or oak cabinet. FR 10-20,000 Hz  $\pm 2.5$  dB; sens 105 dB SPL/W/m; crossovers 550 and 5k Hz; imp 8 ohms; 72"H x 27"W x 36"D; 500 lb ... \$7,500

### Sound Portal Speaker System

Vented-horn speaker system with 24" x 32i compression woofer, 19" x 7" horn midrange, 6" x 5" horn tweeter. Features midrange, tweeter level controls; oiled walnut or oak cabinet. FR 15-20,000 Hz

$\pm 2.5$ dB; crossovers 800 and 4.7 kHz; sens 101 dB SPL/W/m; min power 15 W; imp 8 ohms; 48"H x 25 1/2"W x 24"D, 175 lb ... \$1,500

### Studio Reference Speaker System

Vented speaker system with 12" woofer, 15" x 4" horn midrange, 5 1/4" x 2" horn tweeter. Features midrange, tweeter level controls; oiled walnut or oak cabinet; black cloth grille. FR 22-20,000 Hz  $\pm 2.5$ dB; crossovers 880 and 5k Hz; sens 98 dB SPL/W/m; min power 15 W; imp 8 ohms; 48"H x 18 1/2"W x 16"D; n102 lb ... \$790

### Professional Series II Speaker System

Vented speaker system with 12" woofer, 2" dome midrange, 1" dome tweeter. Features midrange, tweeter level controls; oiled walnut or oak cabinet; black cloth grille. FR 29-20,000 Hz  $\pm 2.5$  dB; crossovers 800 and 6.6k Hz; sens 95 dB SPL/W/m; min power 15 W; imp 8 ohms; 36"H x 18 1/2"W x 16"D; 80 lb ... \$550

### Tremor Subwoofer

Vented subwoofer with 2 woofers in separate subenclosures. Features oiled walnut or oak cabinet; black cloth grille. FR 29-200 Hz  $\pm 2.5$  dB; sens 96 dB SPL/W/m; min power 15 W; imp 8 ohms; 62"H x 26"W x 16"D; 150 lb ... \$690

### Transcendent Speaker System

Vented speaker system with 12" woofer, 1 1/4" dome midrange-tweeter. Features midrange-tweeter level controls; oiled walnut or oak cabinet; black cloth grille. FR 38-20,000 Hz  $\pm 2.5$  dB; crossover 1.9 kHz; sens 94 dB SPL/W/m; min power 15 W; imp 8 ohms; 24"H x 16"W x 14 1/2"D; 51 lb ... \$325

### Intimate Speaker System

Acoustic-suspension speaker system with 10" woofer, 1" dome tweeter. Features tweeter level control; oiled walnut or oak cabinet; black cloth grille. FR 49-20,000 Hz  $\pm 2.5$  dB; crossover 5 kHz; sens 93 dB SPL/W/m; min power 15 W; imp 8 ohms; 19"H x 12"W x 12"D; 29 lb ... \$220

### Shadow Speaker System

Acoustic-suspension speaker system with 8" woofer, 1" dome tweeter. Features cylindrical cabinet covered with black cloth grille. FR 69-20,000 Hz  $\pm 2.5$  dB; crossover 5 kHz; sens 91 dB SPL/W/m; min power 15 W; imp 8 ohms; 24 1/2"H x 8 3/4"D; 18 lb \$124

### Angstrom Speaker System

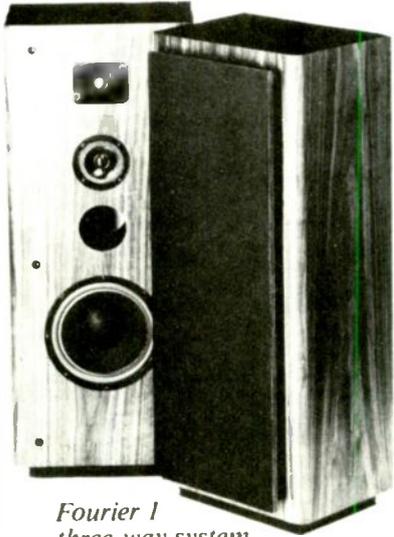
Acoustic-suspension speaker system with 6 1/2" woofer, 1" dome tweeter. Features charcoal enamel cabinet; black cloth grille. FR 78-20,000 Hz  $\pm 2.5$ dB SPL/W/m; min power 15 W; imp 8 ohms; 12 7/8"H x 6 7/8"W x 6 1/2"D; 9 lb ... \$110

## ACOUSTIC PHYSICS LAB

### The Acoustic Image Model II Loudspeaker

Speaker houses long-excursion low-mass polypropylene 10-inch driver, soft dome 1" tweeter. Features nonsaturating inductors and metal film capacitors in a 3.5 kHz gradual slope design matched to transfer

# The speakers they just couldn't beat, not even for a \$5,000 cash reward.



*Fourier 1  
three-way system  
(3.0 cubic feet)*

We believe we make significantly better speakers than anyone else. But that's just an opinion. It needed to be put to a tough, pragmatic test.

So, in a series of full-page trade ads, we repeatedly offered a \$5,000 cash reward to the first audio dealer or salesman who could show us a speaker that surpasses any given Fourier model in certain basic, scientifically verifiable performance characteristics. Not one of these insiders was able to come up with a valid challenger. Not a single one.



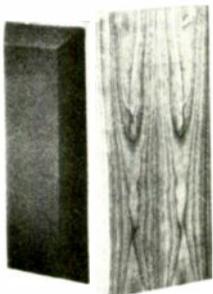
*Fourier 8  
two-way system  
(1.3 cubic feet)*

We weren't the least bit surprised. Fourier loudspeakers are mathematically optimized. Our computer models for the electrical and acoustical behavior of drivers, crossover networks and enclosures are the most complete, detailed and accurate in the world. Out of the many hundreds of

loudspeaker manufacturers, the three or four who bother with mathematical modeling at all use considerably older and less sophisticated models. You can easily hear the difference in the end product.

#### **Fourier's Lifetime Warranty**

*All Fourier speakers are protected by a Lifetime Limited Warranty program (details on request).*



*Fourier 6 two-way system  
(0.65 cubic feet)*

Go see your audio dealer about Fourier speakers. And if he tells you there's something better, ask him why he didn't collect an easy \$5,000.

# FOURIER

Mathematically Optimized Loudspeakers

function of each driver; high-density nonresonant multi-fiber construction finished in hand-rubbed walnut veneer. FR 28-22,000 Hz  $\pm 2$  dB; imp 8 ohms; 13"W x 34 $\frac{1}{2}$ "H x 13 $\frac{3}{4}$ "D; basic model II kit includes all drivers, prewired crossovers, hardware, grille cloth, damping materials, enclosure plans, and instructions ..... \$225/pr  
**Complete Model II Kit** includes all components in the basic kit plus finished walnut cabinetry and grilles ..... \$400/pr

**ACOUSTAT**

**Professional Series**

**Model Eight Speaker System**

Similar to Model Two+Two below except utilizes 2 MK-121 drive units and requires 2 stereo amps. Can produce concert-hall levels in very large rooms and commercial usage. FR 24-20,000 Hz  $\pm 2$  dB; min power 50 W x 4; nominal imp 6 ohms; 96"H x 36"W x 4"D; 210 lb ..... \$4,750/pr  
**Model Six.** Similar to Model 8 except FR 26-20,000 Hz; 28"W x 3 1/2"D; 150 lb ..... \$3,750/pr

**Model Two + Two Speaker System**

Full-range-element electrostatic speaker systems with patented MK-121 drive system in floor-ceiling vertical-line-source design. FR 28-20,000 Hz  $\pm 2$  dB; max output 115 dB SPL at 22 ft; min power 50 W; nominal imp 4 ohms; 96"H x 20"W x 3 1/2"D; 105 lb ..... \$2,095/pr

**Model Three M.** Similar to Model Two + Two except FR 30-20,000 Hz; 70 W min power required; sens 110 dB SPL at 18 ft; 72"H x 28"W x 3 1/2"D; 75 lb ..... \$1,695/pr

**Model Three MH.** Similar to Three M, but a hybrid system that contains a woofer enclosure with a crossover frequency of 100 Hz. SPL is 112 dB at 18 ft; 40 W min power required; woofer enclosure 21" x 18" x 13"; 127 lbs ..... \$1,595/pr

**Model Two M.** Similar to Model Three M except FR is 35-20,000 Hz  $\pm 3$  dB; SPL 108 dB at 18 ft; 100 W min power requirement; 72" x 20" x 3 1/2"; 95 lbs ..... \$1,395/pr

**Model Two MH.** Similar to model Three MH except SPL 110 dB at 18 ft; 72" x 20" x 3 1/2"; 110 lbs ..... \$1,295

**ACOUSTIC DESIGN GROUP**

**Triad 50 Speaker System**

Three-unit system consisting of miniaturized bass unit with 6 $\frac{1}{2}$ " woofer and two book-size satellite speaker units with separate midrange and high-frequency drivers. Features woofer driven by signal-conditioning amp at 50 W rating; three-position switch provides for flat, +4 or -4 dB setting; low diffraction, phase-aligned configuration of the satellite midrange/high-frequency unit; in oak or walnut wood veneers, or in black or white finish. Woofer, 8 $\frac{1}{4}$  x 5 $\frac{1}{8}$  x 8 inches; satellites, 8 $\frac{1}{2}$  x 5 $\frac{1}{8}$  x 5 $\frac{1}{4}$  inches. All three units: 23 lbs ..... \$500  
 Matching satellite stands ..... \$150

**ADC**

**ADC 12 Speaker**

3-way speakers with 12" woofer, 4" midrange (ferro-fluid cooled); 1" dome tweeter (ferro-fluid cooled). Features crossover frequencies at 1.2 kHz and 3.5 kHz utilizing first and second order derived Butterworth filters; fuse protection; tweeter control; push-button, quick connect/disconnect input terminals. Efficiency 91 dB SPL; nominal imp 8 ohms; min imp 6.5 ohms; power handling music peak 150 W, max rms 75 W, min rms 15 W; 26 $\frac{1}{2}$ " x 14 $\frac{1}{2}$ "W x 11 $\frac{1}{4}$ "D; 30 lbs ..... \$360/pr

**ADC 10 Speaker**

3 way speaker with 10" woofer, 4" midrange (ferro-fluid cooled), 1" dome tweeter (ferro-fluid cooled). Features crossover frequencies at 1.2 kHz and 3.5 kHz utilizing first and second order derived Butterworth filters; fuse protection; tweeter control; push-

button, quick connect/disconnect input terminals. Efficiency 91 dB SPL/W/m; imp 8 ohms nominal, min 6.5 ohms; power handling music peak 100 W, max rms 50 W, min rms 15 W; 22 $\frac{1}{4}$ "H x 12 $\frac{1}{4}$ "W x 9 $\frac{1}{2}$ "D; 18.25 lbs; 23 lbs ..... \$260/pr

**ADC 8 Speaker**

2-way tuned-duct speaker with 8" woofer, 1" dome tweeter (ferro-fluid cooled). Features crossover frequencies at 3.5 kHz utilizing first and second order derived Butterworth filters; fuse protection; push-button, quick connect/disconnect input terminals. Efficiency: 91 dB SPL/W/m; imp 8 ohms nominal, 6.5 ohms min; 18 $\frac{3}{4}$ " H x 10 $\frac{3}{4}$ " W x 9 $\frac{1}{2}$ " D; 28 lbs ..... \$180/pr

**ADS**

**L1290 Monitor Speaker**

Acoustic suspension 3-way monitor speaker system with 2 8 $\frac{1}{4}$ " high-compliance Stiffite woofers in separate chambers, 2" soft-dome midrange, 1" soft-dome tweeter. Features single-switch biamp conversion; tweeter level switch; tweeter, midrange protection fuses; mirror symmetrical angled midrange/high frequency baffles for min diffraction; removable black cloth grille. FR 42-20,000 Hz  $\pm 3$  dB; crossovers 600 and 4k Hz; sens 91 dB SPL/W/m; power rating 150 W nominal; imp 8 ohms; 41 $\frac{1}{8}$ "H x 10 $\frac{1}{2}$ "W x 11 $\frac{1}{8}$ "D; walnut veneer finish ..... \$1,300/pr  
 Black finish ..... \$1,260/pr

**L1090 Speaker System**

Three-way professional acoustic-suspension speaker system with 2 7 $\frac{1}{4}$ " high-compliance Stiffite cone woofers in separate chambers, 1 $\frac{1}{2}$ " soft-dome midrange, 3/4" soft-dome tweeter. Features tweeter protection fuse with built-in spare; high-grade walnut veneer or black finish and removable black cloth grille. FR 47-23,000 Hz  $\pm 3$  dB; crossovers 700 and 4.5k Hz; sens 90 dB SPL/W/m; power rating 150 W nominal; nominal imp 8 ohms; 37 $\frac{3}{8}$ "H x 9 $\frac{1}{2}$ "W x 9 $\frac{3}{8}$ "D. Walnut veneer finish ..... \$1,040/pr  
 Black finish ..... \$1,000/pr

**L980 Speaker System**

Acoustic-suspension 3-way speaker system with 12" woofers, 2" soft-dome midrange, 3/4" soft-dome tweeter. Separate tweeter level control; accessible tweeter fuse with built-in spare; high-grade walnut veneer or black finish with black perforated steel grille. FR 37-23,000 Hz  $\pm 3$  dB; crossovers 600 and 4k Hz; sens 90 dB SPL/W/m; imp 8 ohms; 26 $\frac{3}{8}$ "H x 15"W x 13 $\frac{3}{8}$ "D; walnut veneer finish .. \$1,000/pr  
 Black finish ..... \$960/pr

**L880.** Similar to L980 except has 10" Stiffite woofers. FR 40-23,000 Hz  $\pm 3$  dB; 23"H x 13"W x 11 $\frac{1}{8}$ " D; walnut veneer finish ..... \$800/pr  
 Black finish ..... \$760/pr

**L780 Speaker System**

Acoustic-suspension 3-way speaker system with 8 $\frac{1}{4}$ " high-compliance long-excursion Stiffite cone woofer, 1 1/2" soft-dome midrange, 3/4" soft-dome tweeter; drivers are diffraction corrected and flush mounted. Features quick-access tweeter fuse with built-in spare; black perforated steel grille. FR 45-23,000 Hz  $\pm 3$  dB; crossovers 700 and 4.5Hz; sens 90 dB SPL/W/m; power rating 150 W nominal; nominal imp 8 ohms; 20 $\frac{7}{8}$ "H x 12 $\frac{1}{4}$ "W x 10 $\frac{1}{2}$ "D; walnut veneer finish ..... \$640/pr  
 Black finish ..... \$600/pr

**L570 Speaker System**

Acoustic-suspension 2-way speaker system with 8" woofer and 1" soft-dome tweeter. Features user-ac-

cessible tweeter fuse with built-in spare; high-grade walnut or black finish with removable black convex steel grille; FR 46-20,000 Hz  $\pm 3$  dB; crossover at 1.8 kHz; sens 90 dB SPL/W/m; nominal imp 8 ohms; 19"H x 11 $\frac{1}{8}$ "W x 10 $\frac{1}{8}$ "D; walnut veneer finished ..... \$440/pr  
 Black finish ..... \$400/pr

**L470 Speaker System**

Two-way acoustic-suspension speaker system with 7" woofer and 1" soft dome tweeter. Walnut, vinyl or black finish. FR 50-20,000 Hz  $\pm 3$  dB; crossover at 2 kHz; sens 89 dB SPL/W/m; nominal imp 8 ohms; 16"H x 10"W x 9"D ..... \$320/pr

**400 Miniature Speaker System**

Two-way acoustic-suspension speaker system with 7" high-compliance ultra-long-excursion Stiffite cone woofer, 1" soft-dome tweeter; drivers are diffraction-corrected and flush-mounted. Features high-grade oak or walnut finish with radius-edged oak/walnut inserts, black convex steel grille in complementary finish. FR 60-20,000 Hz  $\pm 3$  dB; crossover at 2 kHz; sens 90 dB SPL/W/m; power rating 50 W nominal, 75 W peak program; nominal imp 4 ohms; 11 $\frac{1}{4}$ "H x 7 $\frac{3}{8}$ "W x 7 $\frac{3}{8}$ "D. Available in pairs only .. \$400/pr

**300W Miniature Speaker System**

Acoustic-suspension 2-way speaker system with 5.25" high-compliance, long-excursion Stiffite woofer, 1" soft-dome tweeter; drivers diffraction-corrected and flush-mounted. Features walnut-veneer cabinet with radius-edged solid walnut corner inserts, acoustically transparent metal grille in complementary finish. FR 65-20,000 Hz 3 dB; crossover 2.0 kHz with 12-dB/octave slope; sens 89 dB SPL/W/m; power rating 50 W nominal, 75 W peak program; imp 4 ohms; 8 $\frac{3}{8}$ "H x 6 $\frac{7}{8}$ "D x 6 $\frac{7}{8}$ "W. Available in pairs only ..... \$350/pr

**300 Miniature Speaker System**

Miniature 2-way acoustic-suspension speaker system with 5 1/4" high compliance ultra-long excursion woofer, 1" soft-dome tweeter. Features aluminum enclosure (black or silver anodized) with black convex steel grille. FR 65-20,000 Hz  $\pm 3$  dB; crossover 2.0 kHz with 12-dB/octave slope; sens 89-dB SPL/W/m; rated input 50 W continuous, min input 5 W continuous; imp 4 ohms; 8 $\frac{3}{8}$ "H x 5 $\frac{7}{8}$ "W x 5 $\frac{3}{4}$ "D \$340/pr

**200 Miniature Speaker System**

Miniature 2-way acoustic-suspension speaker system with 4" high-compliance ultra-long excursion woofer, 1" soft-dome tweeter. Features brushed aluminum enclosure (black or silver anodized) with black convex steel grille. FR 85-20,000 Hz  $\pm 3$  dB; crossover 2.0 kHz with 12-dB/octave slope; sens 88-dB SPL/W/m; rated input 30 W continuous, min input 5 W; imp 4 ohms; 6 $\frac{7}{8}$ "H x 4 $\frac{1}{4}$ "W x 4 $\frac{3}{4}$ "D ..... \$260/pr

**ACOUSTIC RESEARCH**

**Linear Systems**

**AR-9LS Speaker System**

Floor-standing columnar acoustic-suspension 4-way speaker system with 5 drivers in vertical array. Features 12" forward-firing woofer; 10" downward-firing woofer loaded by bass contour chamber; 8" lower-midrange and 3 $\frac{1}{4}$ " dome high-range drivers combined in single-magnet structure Lambda driver; oiled-walnut veneer cabinet. FR 28-32,000 Hz -3 dB; efficiency 87 dB SPL/W/m; power range 15-400 W; crossovers 200, 1.1k, 5.5k Hz; imp 4 ohms; 51 $\frac{1}{8}$ "H x 16 $\frac{1}{2}$ "W x 14 $\frac{11}{32}$ "D; 118 lb ..... \$1,700/pr

**AR-98LS Speaker System**

Bookshelf/floor-standing acoustic-suspension 4-way speaker system in vertical array design. Features 12" woofer; 8" lower-midrange driver in subenclosure; 1 1/2" dome upper-midrange and 3/4" dome tweeter combined in a single-magnet structure Lambda driver; 2-position switch to adjust FR for floor/shelf placement; oiled-walnut veneer cabinet. FR 39-32,000 Hz -3 dB; crossovers 22, 1.1k, 5.5k Hz; effi-

**NEED MORE INFORMATION?**

**Write directly to the manufacturer or distributor. A list of names and addresses starts on page 25.**

# People who know music



When a musician is in a room writing, playing and taping, he wants the sound that comes out of his speakers to be as real as the sound coming out of his instrument. A guitarist wants to recognize his own fingering on the frets. He wants to feel the unique acoustical character of the room in which he's working. When he listens to albums by other artists he demands the same honest accuracy. If his speakers dull the strings, break up the bass, and artificially color the room effects, he isn't hearing the music he bought.

Even a struggling musician could afford a pair of our new bookshelf speakers, the AR8B, 18B or 28B—and get the accuracy of systems costing many times as much. All three have the finest AR-built woofers and tweeters. All three were computer-designed in real rooms, not scientific test chambers. So they sound acoustically natural in any normal living space. Brighter in some rooms, darker in others. But always true to life. If you'd like to hear more, send for details and local dealer names.

## know how music should sound.



Left to right, the AR8B, 28B and 18B. Affordably priced from \$89 to \$149 each.

**AR** Hear what you've been missing.

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ciency 87 dB SPL/W/m; power range 15-250 W; imp 4 ohms; 29 1/2"H x 15 1/2"W x 10 19/32"D; 63 lb..... \$1,000/pr

**B Series Bookshelf Speakers**

**78LS Speaker**

Bookshelf or floor-standing acoustic suspension 3-way system with 3 drive units in a vertical array, two of which are closely spaced on a single magnet structure for uniform vertical dispersion. Features one 300 mm (12") acoustic suspension woofer; one 38 mm (1 1/2") dome midrange and one 19 mm (3/4") dome highrange driver combined in the single magnet structure driver (each individually liquid cooled). FR 39-32,000 Hz  $\pm$  3 dB; imp 4 ohms; crossover 700 Hz and 5,000 Hz; sens 87 dB SPL/W/m; power range 15-200 W..... \$860/pr

**38B Speaker**

Bookshelf or floor-standing acoustic suspension 3-way system with drive units in vertical array for precise stereo imaging. Features 200 mm (8") acoustic suspension woofer; 100 mm (4") acoustic suspension midrange; 19 mm (3/4") liquid-cooled dome highrange. FR 52-32,000 Hz  $\pm$  3 dB; imp 6 ohms; crossover 650 Hz and 3,500 Hz; sens 87 dB SPL/W/m; power range up to 100 W..... \$400/pr

**48B Speaker**

Bookshelf or floor-standing acoustic suspension 3-way system with drive units in a vertical array for precise stereo imaging. Features 250 mm (10") acoustic suspension woofer; 100 mm (4") acoustic suspension midrange; 19 mm (3/4") liquid-cooled dome highrange. FR 45-32,000 Hz  $\pm$  3 dB; imp 6 ohms; crossover 400 Hz and 3,500 Hz; sens 87 dB SPL/W/m; power range up to 150 W..... \$520/pr

**58B Speaker**

Bookshelf or floor-standing acoustic suspension 3-way system with drive units in a vertical array for precise stereo imaging. Features 300 mm (12") acoustic suspension woofer; 100 mm (4") acoustic suspension midrange; 19 mm (3/4") liquid-cooled dome highrange. FR 39-32,000 Hz  $\pm$  3 dB; imp 4 ohms; crossover 600 Hz and 4,500 Hz; sens 87 dB SPL/W/m; power range up to 175 W..... \$660/pr

**AIWA**

**SX-15 Speaker System**

Acoustic-suspension 3-way speaker system with Lamina ribbon tweeter. FR 40-50,000 Hz..... \$230/pr

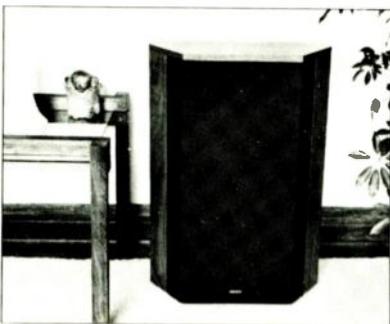
**SX-5Y Speaker System**

Acoustic-suspension 2-way speaker system with square passive radiator..... \$120/pr

**ADVENT**

**6003 Speaker System**

Acoustic-suspension 3-way speaker system with Advent woofer, Advent midrange, and 1" dome tweeter.



Genuine walnut veneer cabinet with dark brown grille cloth. FR 40-22,000 Hz  $\pm$  2.5 dB; crossovers 750 Hz and 4,500 Hz; sens 88.5 dB SPL/W/m; imp 8 ohms; 32 3/4"W x 22"H x 8 3/4"D..... \$750/pr

**5012 Speaker System**

Acoustic-suspension 2-way bookshelf speaker system with Advent woofer, 1" dome tweeter. Cabinet finish available in genuine walnut and oak veneer, solid wood front moldings. Frequency response 40-23,000 Hz  $\pm$  2.5 dB on-axis; crossover 1.8 kHz; sens 87 dB/W/m; imp 8 ohms; 26 1/2"H x 14 3/4"W x 11 3/4"D..... \$560/pr

**5002 Speaker System**

Acoustic-suspension bookshelf system with Advent woofer, 1" dome tweeter. Features 2-position crossover switch; walnut-grain vinyl finish. FR 42-23,000 Hz  $\pm$  2.5 dB; crossover 1.8 kHz; sens 87 dB/W/m; imp 8 ohms. 26"H x 14 1/4"W x 11 1/2"D..... \$500/pr 4002. Similar to 5002 minus switchable crossover; FR 46-23,000 Hz; 21 1/2"H x 13 1/4"W x 9 3/4"D..... \$420/pr

**3002 Speaker System**

Acoustic-suspension 2-way bookshelf speaker system with woofer, 1" dome tweeter. Features walnut-grain vinyl finish. FR 48-23,000 Hz  $\pm$  3 dB; crossover 2.8 kHz; sens 88 dB/W/m; imp 8 ohms; 20"H x 12"W x 8 1/4"D..... \$300/pr

**2002 Speaker System**

Acoustic-suspension 2-way bookshelf speaker system with woofer, 1 3/8" direct-radiator tweeter. Features walnut-grain vinyl finish. FR 50-23,000 Hz  $\pm$  3 dB; crossover 3.2 kHz; sens 88 dB/W/m; imp 8 ohms; 18 1/2"H x 11"W x 8"D..... \$240/pr

**AKAI**

**CW-T77 Speaker System**

Three-way speaker system with 12" woofer, 4" midrange, 1.75" tweeter. Features tweeter, midrange controls; walnut-grain vinyl cabinet. Imp 8 ohms; max power 120 W; Frequency response 30-20,000 Hz; crossovers 1.5k and 9k Hz; 29.5"H x 15.5"W x 11.2"D; 40lb..... \$540

**CW-T55 Speaker System**

Three-way speaker system with 10" woofer, 4" midrange, 1.75" tweeter. Features midrange control, walnut-grain vinyl cabinet. Imp 8 ohms; max power 70 W; FR 40-20,000 Hz; crossovers 1.5k and 8k Hz; 26.4"H x 13.4"W x 8.9"D; 28 lb..... \$400

**CW-T33 Speaker System**

Two-way speaker system with 10" woofer, 1.75" tweeter, walnut-grain vinyl cabinet. Imp 8 ohms; max power 50 W; FR 45-20,000 Hz; crossover 5 kHz; 22.8"H x 11.8"W x 8.5"D; 40 lb..... \$540/pr

**AE-63 Three-Dimensional Speaker**

3-way 3-speaker system. Features woofer 6.5"; midrange 1.4" (rear-mounted), tweeter 1"; passive radiator, rear mounted, 6.5"; imp 4 ohms; max power input 80W; FR 60-23,000Hz; crossover frequencies 800 Hz and 3,000 Hz; 8.2"W x 13.8"H x 6.8"D; 14 lb..... \$360/pr

**ALLISON**

**Model One Speaker System**

Stabilized radiation loading design with 2 10" woofers, 2 3 1/2" convex midranges, 2 1" convex tweeters. Features LC half-section crossover network; air-core chokes; nonpolarized computer-grade capacitors; features switches for selecting system acoustic power response (flat to concert-hall balance slope); biamplification capability using internal crossover; sealed oiled-walnut enclosure. Crossovers 350 and 3,750 Hz; imp 8 ohms; efficiency 0.7% at floor-wall intersection; min power 30 W/ch for 100-dB SPL in reverberant field; acoustic power output 0.5 acoustic W min over full FR with 70-W input; system resonance 45 Hz nominal; 40"H x 19"W x 10 3/4"D..... \$590

**Model Two.** Same as Model One except has 2 8" woofers, 2 3 1/2" convex midrange, 2 1" convex tweeters. System resonance 45 Hz nominal; 36" H x 16"W x 9 3/8"D..... \$510

**Model Three Speaker System**

Stabilized radiation-loading system with 10" woofer, 3 1/2" convex midrange, 1" convex tweeter. Features corner-mount design; LC half-section crossover network; switches for selecting system. Walnut-veneer, oil-finished enclosure. Crossovers at 350 and 3,750 Hz; min power 30 W/ch for 100-dB reverberant SPL; resonance 45 Hz; imp 4 ohms; 40"H x 15 1/4"W x 10"D..... \$395

**Model Nine Speaker System**

Three-way stabilized-radiation-loading speaker system with 10" woofer, 3.5" convex-diaphragm midrange, 1" convex-diaphragm tweeter, designed for placement on floor, against single wall. Features LC half-section crossover network; switches to select system acoustic power response (flat to concert-hall balance slope); biamplification capability; walnut or oak-veneer cabinet with hand-rubbed lacquer finish; steel base. Crossovers 350 and 3,750 Hz; imp 4 ohms; efficiency 0.7% at floor/wall intersection; power range 30-200 W; resonance 45 Hz; 37 1/2"H x 12 1/2"W x 10 3/4"D..... \$495

**Model Eight Speaker System**

Three-way stabilized-radiation-loading speaker system with 8" woofer, 3 1/2" convex-diaphragm midrange, 1" convex-diaphragm tweeter, designed for placement on shelf or table or attached to wall. Features LC half-section crossover network with switches to select system acoustic power response from flat to concert slope. Crossover frequencies 450 and 3,750 Hz; imp 4 ohms; efficiency 0.7%; power range 30 to 200 W; resonance 52 Hz; imp 4 ohms; power range 30-200 W; resonance 52 Hz; 12 1/4"H x 20"W x 10"D. Walnut or oak-veneer cabinet with hand-rubbed lacquer finish..... \$345

**Model Four Speaker System**

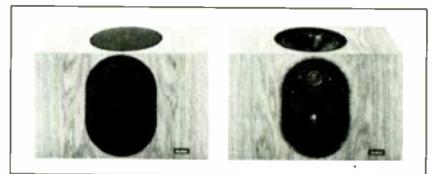
Two-way stabilized radiation-loading system with 8" woofer, 2 1" Convex Diaphragm tweeters. Designed to be used against or hung on wall with included hardware. Features walnut-veneer oiled-finished enclosure; LC quarter-section network with 3-position switch to adjust response from nominally flat to "concert hall" balance slope. Crossover 2 kHz; resonance 52 Hz; imp 8 ohms; min power 30 W/ch for 100 dB SPL in reverberant field; 19 3/8"W x 11"W x 10"D. \$280 Oak-veneer finish..... \$290

**Model Seven Speaker System**

Two-way stabilized-radiation-loading speaker system with 8" woofer, 1" convex-diaphragm tweeter, designed for placement against single wall. Features quarter-section LC network that uses air-core chokes, computer-grade capacitor; walnut or oak-veneer cabinet with hand-rubbed lacquer finish. Crossover 2 kHz; resonance 52 Hz; imp 4 ohms; power range 15-150 W; 26.5"H x 9.62"W x 9.62" D..... \$225

**Model Five Speaker System**

Two-way stabilized radiation-loading speaker system with 8" woofer, 1" convex tweeter, designed for placement against single wall. Features LC quarter-section network with switch to adjust response to flat or HF slope; oil-finished walnut-veneer enclosure. Crossover 2 kHz; resonance 52 Hz; min power 15 W for 97-dB SPL in reverberant field; 18 1/2"H x 11"W x 10"D..... \$195  
**Model Six.** Same as Model Five except resonance 59



Hx: 11.25"H x 11.25"W x 11.25"D..... \$160  
Oak veneer or white or black lacquer..... \$172

**Series 100 Speaker Systems**

Two-way stabilized radiation-loading systems which

perform optimally standing on floor. All have walnut-grain vinyl cabinet and Allison convex-diaphragm 1" tweeter; quarter-section LC crossover network with air-core choke and premium quality capacitor. Crossover frequency 2,000 Hz; sens 90 dB/2.83 V/m. Power range 15-150 W.

**Model 110.** 8" woofer; resonance 59 Hz. 18"H x 11 1/2" W x 7 1/2" D. \$130

**Model 120.** 8" woofer; resonance 52 Hz. 21 3/4" H x 13 3/4" W x 7 1/2" D. \$160

**Model 130.** 10" woofer; resonance 45 Hz. 29 1/2" H x 16 1/2" W x 8 1/4" D. \$195

ALTEC LANSING

19 Speaker System

Vented 2-way floor-standing speaker system with 15" woofer. Tangerine radial phase plug tweeter mounted to 811D sectoral horn. Features removable acoustically transparent knit fabric grille. FR 36-20,000 Hz  $\pm 5$  dB; crossover 1.2 kHz; sens 100.5 dB SPL with shelving controls at optimum; power range 10 to 350 W; imp 8 ohms; dispersion 105° at -6 dB vertical and horizontal; 39"H x 30"W x 21"D.

**Nineteen-Wal.** With black grille ..... \$2,400/pr

**Nineteen-Oak.** With brwn grille ..... \$2,400/pr

LF2 Subwoofer

Vented subwoofer speaker system with 12" bass driver, built-in 85-W power amp. Features hand-rubbed diamond-matched Endriana, sheen lacquered cabinet. FR 35-80 Hz  $\pm 3$  dB; crossover selectable 40/60/80 Hz; sens 95.5 dB SPL; dynamic range 52 dB; input imp 47k ohms; 36"W x 36"D x 16"H; 122 lb \$1,900

Model 14 Speaker System

Floor-standing vented speaker system with 12" woofer. Tangerine radial phase plug compression tweeter mounted to Mantaray constant directivity horn. Features hand-rubbed oiled walnut cabinet; removable acoustically transparent black knit fabric grille; midrange, tweeter level controls; Automatic Power control. FR 40-20,000 Hz  $\pm 5$  dB; crossover 1.5 kHz; power range 10-350 W; sens 96.5 dB SPL; dynamic range 54 dB; dispersion vertical/horizontal 40°/90° at -6 dB; imp 8 ohms 30"H x 21"W x 16 1/2"D. \$1,400/pr

Model 8 Series II Speaker System

Vented 3-way speaker system with 12" woofer, 5" midrange, LZT compression tweeter with Tangerine radial phase plug mounted to Mantaray constant-directivity horn. Features walnut-stained oiled hardwood cabinet; removable acoustically transparent black knit fabric grille. FR 60-20,000 Hz  $\pm 2.5$  dB; crossovers 700 and 5 kHz; sens 94 dB SPL; power range 20-200 W; imp 8 ohms; 29 1/2"H x 16 1/2"W x 14"D; 51 lb. \$960/pr

**Model 6 Series II.** Similar to Model 8 Series II except has 10" woofer; sens 92 dB SPL; dynamic range 47 dB; 25 1/2"H x 15 1/2"W x 13 1/2"D; 37 lb \$800/pr

**Model 4 Series II.** Similar to Model 6 Series II except has no midrange driver; FR 60-20,000 Hz  $\pm 3$  dB; crossover 2 kHz; sens 90 dB SPL; dynamic range 45 dB; 23"H x 14 5/8"W x 12 1/4"D; 30 lb. \$600/pr

Model 312 Speaker System

Vented 3-way speaker system with 12" woofer, 5" midrange, 2 1/2" tweeter. Features oak-grain vinyl cabinet; removable acoustically transparent knit fabric grille. FR 55-20,000 Hz  $\pm 4$  dB; crossovers 1.2 and 7 kHz; sens 93 dB SPL; power range 10-100 W; dynamic range 48 dB; imp 4-8 ohms; 28 1/4"H x 16 3/16"W x 12 3/16"D; 41 lb. \$500/pr

**Model 310.** Similar to Model 312 except has 10" woofer, 4" midrange driver; low-end frequency response 65 Hz; crossovers 3 and 10 kHz; sensitivity 92 dB sound pressure level; power range 10-75 W; dynamic range 46 dB 23"H x 14 5/8"W x 12 1/4"D; 30 lb. \$400/pr

Model 208 Speaker System

Two-way bass-reflex speaker with 8" low-frequency driver and 2 1/2" driver. Features ferrofluid in tweeter's voice coil assembly; oak-grained vinyl; acoustically transparent removable grill. FR 55-17,000 Hz  $\pm 3$  dB; sens 92 dB-SPL/W/m; amp operating range 5-75 W; directivity 120° horizontal, 90° vertical; dynamic

range 46 dB; nominal imp 4 ohms; crossover frequency 1.5 kHz; 19" x 10" x 10 3/8"; 10 1/2 lbs. \$240/pr

Challenger 2 Speaker System

2-way speaker system with 10" woofer and 1" Polyamide tweeter. Features high density particle board finished in furniture-grade woodgrain vinyl; flush fronts; specially designed tapered grille frames; closed-box design; acoustically transparent black grille. FR 44-17,000 Hz; sens 90 dB SPL/W/m; power handling 150 W; min amp power 10 W; nominal imp 4 ohms; crossover frequency 1 kHz; 22" x 13" x 10 1/2"; 25 lbs. \$400/pr

# ALLISON

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*frequencies—in your actual listening environment.*

*> Convex Diaphragm Tweeter for the most uniform forward-hemisphere dispersion of any speaker.*

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Audio terms are defined in the glossary on page 19.

For an explanation of abbreviations, turn to the list on page 22.

NAME \_\_\_\_\_

STREET \_\_\_\_\_

CITY \_\_\_\_\_

STATE \_\_\_\_\_

ZIP \_\_\_\_\_

**Challenger 1.** Same as Challenger 2 except 8" woofer; FR 48-17,000 Hz; power handling 100 W; 19" x 10" x 10"; 19 1/2 lbs ..... \$320/pr

**APATURE by ACR**

**Trident Three-Piece System**

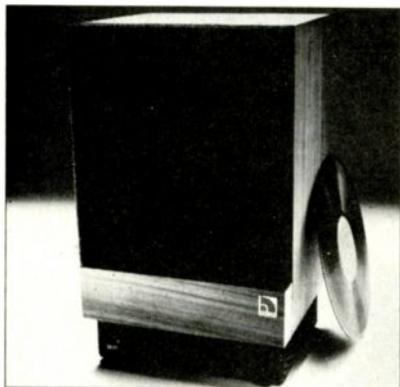
Loudspeaker system consisting of bass module subwoofer and 2 satellites. Finished in Hawaiian koa with acoustically transparent cloth grilles on nonresonant frame. Subwoofer features 10" dual V.C. styrene woofer in separate subenclosures for each channel; level control; compressed-wood cabinet. Satellites house 5.25" polypropylene midrange; ribbon tweeter; phase-compensated fast-reaction crossover; control switch. Subwoofer specs: FR 28-125 Hz; sens 90 dB SPL/W/m; min power 25 W; 16"H x 30"W x 21"D; 70 lbs. Satellite specs: FR 125-34,000 Hz; sens 90 dB SPL/W/m; min power 25 W; 12"H x 8"W x 8"D; 14 lbs.

Three-piece system ..... \$550  
LFM-2 bass module ..... \$280  
R-5 satellites ..... \$130/pr

**AUDIO PRO by SONIC RESEARCH**

**A4-14 Bi-amplified Speaker System**

Bi-amplified 3-way bass-reflex bookshelf speaker system incorporates Ace-Bass subwoofer with 2 5" down-firing rear-mount woofers and own amp, flush-mounted 4 1/2" cone midrange, 1" soft dome tweeter with separate amp. Features room-matching bass



control, tweeter control, sens control (100 mV-50 V range), L/R signal pushbutton, bass-blend pushbutton control, power on/off signal-actuated in auto mode; walnut or black-ash finish; speaker stands included. FR 30-20,000 Hz  $\pm$  2 dB; crossovers 300 and 2.5 kHz; distortion 2% at 96 dB SPL/half-space/m at 30 Hz; 20.5"H x 2.12"W x 10.5"D ..... \$898/system

**2-25 Loudspeaker System**

2-way speaker with 1" soft dome tweeter and 8" midrange woofer; FR 50-20,000 Hz -3 dB; crossover at 2,000 Hz; imp 4 ohms 20 1/4" x 11 1/4" x 10 1/4"; sens 90 dB SPL/W/m; walnut finish ..... \$450/pr

**B2-45 Matched System**

Consists of two 2-25 speakers and B2-40 powered subwoofer (see below); system response 30-20,000 Hz; output 100 dB SPL; 2-25's power range to 100 W ..... \$1,145/3-piece system

**B2-40 Amplified Subwoofer**

Bass reflex system with 2 long-throw 5 1/2" woofers plus built-in amp with soft-clipping circuit; active crossover for satellite and subwoofer; sens control; crossover filters; FR 30-200 Hz  $\pm$  1.5 dB; distortion 1% beyond 50 Hz at 100 dB SPL/half space/m; walnut or black ash finish; 20 1/2"H x 14 3/4"W x 14 3/4"D ..... \$695/ea

**B2-50 Amplified Subwoofer**

Bass-reflex system; 2 long-throw 6 1/2" woofers plus built-in amp for fast rise time control of driver performance; separate volume and crossover control to match with satellite performance; FR 20-200 Hz  $\pm$  1.5 dB; distortion 1% beyond 50 Hz at 100 dB SPL/half space/m; walnut or black ash finish; 21 1/2"H x 18 3/16"W x 17 1/16"D ..... \$995/ea

**B4-200 Amplified Subwoofer**

Super subwoofer features 4 long-throw 8" woofers; built-in 150 W amp giving 110 dB SPL from 20-200 Hz  $\pm$  1.5 dB; active variable crossover; sens control; soft clipping circuit; 44 1/2"H x 21 1/2"W x 21 1/2"D; walnut finish ..... \$2,750/ea

**AUDIOSOURCE**

**LS-Three Speaker System**

Acoustic-suspension 3-way speaker system with 5" woofer, 1 11/32" midrange, 1" tweeter. FR 80-20,000 Hz; power range 10-70 W; imp 8 ohms; sens 85 dB SPL/W/m; crossovers 1.2 and 5 kHz; cast-aluminum enclosure with metal grille; 10 1/4"H x 6 5/16"W x 5 1/8"D; 9.25 lb. .... \$160

**LS-Seven Loudspeaker**

Two-way compact speaker with 6" polypropylene woofer and wood enclosure ..... \$130

**LS-One Speaker System**

Acoustic-suspension 2-way speaker system with 4" woofer, 1" tweeter. FR 100-20,000 Hz; power range 12-40 W; imp 8 ohms; sens 83 dB SPL/W/m; crossover 2.5 kHz; walnut wood-grain or cast-aluminum enclosure with metal grille; or walnut woodgrain; 7.12"H x 4.5"W x 4.56"D; 5.5 lb. .... \$100

**LS-Eight**

Compact speaker with 3" high-compliance driver designed for use as extension speakers ..... \$50/pr

**AVID**

**Model 232ab Speaker System**

Bass-reflex 3-way speaker system with polypropylene 10" woofer, polypropylene 4 1/2" Integral Edge Midrange in subenclosure, 1" soft-dome tweeter with ferrofluid. Features walnut vinyl finish, dark brown grille. FR 40-20,000 Hz -3 dB; crossovers 650 and 5 kHz; power range 15-150 W continuous; imp 8 ohms; 28"H x 15"W x 10 3/4"D ..... \$580/pr

**Model 102ab Speaker System**

Acoustic-suspension 2-way bookshelf speaker system with polypropylene 10" woofer, 1" soft-dome tweeter with ferrofluid. Features walnut vinyl finish, dark brown solid grille. FR 43-20,000 Hz -3 dB; crossover 2.5 kHz; power range 15-100 W continuous; imp 8 ohms 25"H x 15"W x 10 1/8"D ..... \$400/pr

**Model 80ab Speaker System**

Acoustic-suspension speaker system with polypropyl-

ene 8" woofer, 1" soft-dome tweeter with ferrofluid. Features walnut-grain vinyl finished enclosure, dark brown grille. Frequency response 53-20,000 Hz -3.5 dB; power range 15-70 W continuous; imp 8 ohms; crossover 3 kHz; 19 1/2"H x 12"W x 8 3/4"D ..... \$300/pr

**Model 60ab Speaker System**

Acoustic-suspension 2-way speaker system with polypropylene 6.5" woofer, 1" soft-dome tweeter with ferrofluid. Features walnut vinyl finished enclosure, dark brown grille. FR 70-20,000 Hz -3 dB; imp 8 ohms; power range 15-60 W; crossover 3.5 kHz; 14"H x 8 3/4"W x 8"D ..... \$240/pr

**BANG & OLUFSEN**

**Beovox MS-150-Z Speaker System**

Four-way speaker system with subwoofer to handle frequencies below 150 Hz and ported reflex cabinet tuned to Bessel function for optimum room matching. Features 10" subwoofer, 8" woofer, 3" dome-type midrange, 1" tweeter; baffle moldings, speaker mount designed for min diffraction; acoustic centers of drivers aligned on common axis to eliminate phase distortion; crossover network with min phase shift; automatic protection for drivers; rosewood-veneer cabinet finish (other finishes available). FR 30-22,000 Hz; max power 150 W rms; imp 8 ohms; distortion 0.5%; dispersion 100°. Supplied with speaker stands ..... \$1,350/pr

**Beovox MC-120-Z Speaker System**

Three-way speaker system in ported cabinet tuned to Bessel function for optimum room matching with 8" woofer, 3" dome-type midrange driver, 1" tweeter. Features baffle moldings, speaker mount designed for min diffraction; acoustic centers of drivers aligned on common axis for min phase distortion; crossover network with min phase shift; automatic protection for drivers; rosewood-veneer cabinet finish (other finishes available). Frequency response 42-22,000 Hz; max power 120 W rms; distortion 0.5%; dispersion 100° ..... \$795/pr

**Beovox S-80-Z Speaker System**

Three-way speaker system in infinite-baffle cabinet with 8" woofer, 3" dome-type phase-link midrange, 1" tweeter. Features baffle moldings, speaker mounting designed for min diffraction; acoustic centers of drivers aligned on common axis to eliminate phase distortion; crossover network with min phase shift; automatic protection for drivers; rosewood-veneer cabinet finish (other finishes available). FR 50-22,000 Hz; max power 80 W rms; distortion 0.7%; dispersion 100° ..... \$595/pr

**Beovox S 55 Speaker System**

Speaker system designed to eliminate time distortion. Features 8 1/4" woofer, 4 1/2" midrange, 2 1/2" dome tweeter; baffle and cabinet designed to minimize resonance; no sharp cabinet corners to introduce diffraction effects; common acoustical axis mounting of drivers; rosewood, teak, oak, or white cabinet finish with aluminum accents. Frequency response 60-17,000 Hz  $\pm$  4 dB; crossovers 800 and 3 kHz; sens 4 W; dispersion 100°; max power 55 W rms; imp 8 ohms; 52.5 cmH x 26.5 cmW x 23 cmD; 8 kg ..... \$495/pr

**Beovox Phase-Link C-75 System**

Two-way rear-radiating log-line bookshelf speaker system with 2.4" woofers and 1" tweeter. FR 75-20,000 Hz  $\pm$  4 dB; crossover 2.5 kHz; distortion 1.0%; max power 75 W continuous; imp 6 ohms; dispersion 90°; anodized black or brushed extruded aluminum finish; 12 3/16"H x 8"D x 4 3/4"W ..... \$395/pr

**Beovox Phase-Link C-40 System**

Two-way rear-radiating log-line bookshelf speaker system with 4" woofer, 1" tweeter. FR 100-20,000 Hz  $\pm$  4 dB; crossover 2.5 kHz; distortion 1.0%; max power 40 W rms; imp 6 ohms; dispersion 90°; anodized black aluminum finish; 12 3/16"H x 8"D x 4 3/4"W ..... \$250/pr

**NOTICE TO READERS**

Prices of items described are manufacturers' suggested prices only and are subject to change without notice. Actual selling prices are determined by the dealers.

**BECKER****Model RR 8-2DP Speaker**

2-way ducted-port speaker system for floors or bookshelves. 8" polypropylene woofer with a 1" high temperature voice coil and a 1" ferro-fluid-cooled polycone tweeter. Recommended amp power 15-75 W; FR 50-22,000 Hz; sens 93 db (2.83v at 1m) ..... \$159/pr

**Model RR 10-3DP Speaker**

3-way system with 10" woofer, 5" ferro-fluid cooled midrange  $\frac{1}{4}$ " high-temperature voice coil. Midrange polymer laminated; continuously variable L-pads. Power range 15-100. FR 40-22,000 Hz, sens 95 dB SPL/2.83 V/m ..... \$249/pr

**Model RR12-3DP Speaker**

12" polypropylene woofer with 5" polymer-laminated midrange and a 1" poly dome tweeter. Has continuously variable L-pads. Recommended amp power 15-150 W; FR 35-22,000 Hz, sens 96 dB 2.83 v/ ..... \$319/pr

**RR 2-10-3DP Speaker**

3-way speaker system with continuously variable L-pads. Features dual 10" poly woofers with a 5" polymer laminated midrange and a 1" poly dome tweeter. Power range 15-225 W; FR 34Hz-22kHz; sens 97 dB SDL/2.83 V/m ..... \$409/pr

**BENNETT SOUND CORP****Compusound 150 System**

Active loudspeaker utilizing time-delay-derived crossovers, real-time computer-compensated dynamic drivers, and separate power amps for each channel. Six-channel power amp includes two independent power supplies. System includes 2 3-way speakers, 19" rack-mountable electronics unit, and connecting cable. Speakers available in oak or walnut. Amp specs: 150 W/ch at less than 0.005% IM or harmonic distortion from 20-20,000 Hz; S/N > 100 dB unwt'd; rise time 2.5  $\mu$ sec. Speaker specs: sens 90 dB SPL/W/m; 42.5"H x 14.5"W x 15.25"D ..... \$3,600

**B.E.S.****SM300 Speaker System**

Floor-standing 4-way system with dual-polymer diaphragm. Features 360° omnidirectional dispersion; rotary midrange/high frequency level controls; bi-amplification capability; wood frame. FR 30-22,000Hz; sens 93 dB/W/m; recommended power 25-250 W continuous; imp 8 ohms; 53.5"H x 22"W x 6.75"D ..... \$1,500/pr

**SM280 Speaker System**

Large floor-standing 4-way system with dual polymer diaphragm. Features 360° omnidirectional dispersion; rotary midrange/high frequency level controls; wood frame; FR 32-22,000 Hz; sens 93 dB/W/m; recommended power 10-200 W continuous, imp 8 ohms; 44.25"H x 22"W x 6.75"D ..... \$1,100/pr

**SM255 Mark II Speaker System**

Smaller floor-standing 3-way system with single polymer diaphragm. Features 360° omnidirectional dispersion; dual rotary midrange/high frequency level controls; wood frame; FR 35-22,000 Hz; sens 91 dB/W/m; recommended power 10-200 W continuous, imp 8 ohms; 30.25"H x 20"W x 5.75"D ..... \$800/pr

**SM250 Mark II Speaker System**

Smaller floor-standing 3-way system with single polymer diaphragm. Features 360° omnidirectional dispersion; rotary high frequency level control; wood frame; FR 38-22,000 Hz; sens 88 dB/W/m; recommended power 5-150 W continuous; imp 8 ohms; 28.5"H x 19"W x 4.25"D ..... \$580/pr

**SM100 Speaker System**

Smaller floor-standing 2-way system with single polymer diaphragm. Features 360° omnidirectional dispersion; simulated wood frame; FR 42-19,000Hz; sens 88 dB/W/m; power 5-125 W; imp 8 ohms; 27.75"H x 19"W x 4.25"D ..... \$460/pr

**BOSE****901 Direct/Reflecting® Speaker System**

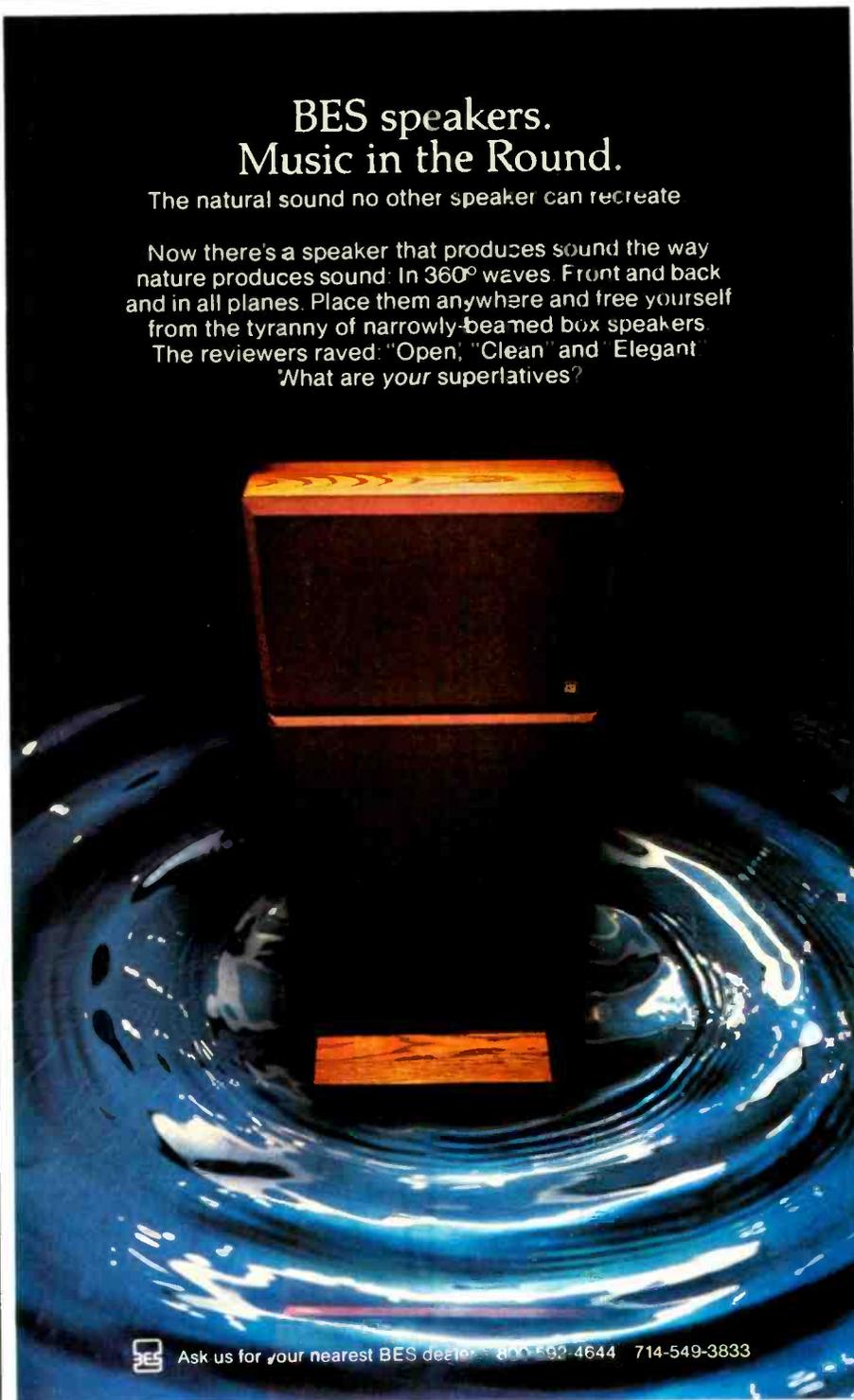
Direct/reflecting® acoustic-matrix speaker system with Active Equalizer, 8 rear-facing, 1 front-facing  $4\frac{1}{2}$ " full-range drivers. Features pentagon-shaped cabinet with multi-cell injection-molded core with particle board external panels and walnut veneer finish; active equalizer with specifically designed fixed EQ; continuously adjustable midtreble contour control to

provide 6 dB of boost or cut centered at 3 kHz; continuously adjustable midbass contour control to provide 6 dB of boost/or cut centered at 225 Hz; bass shelf control to provide 6 dB of attenuation at 40 Hz; tape monitor switch. Power range 10 W to unlimited; imp 8 ohms; dynamic range 106 dB; noise 90 dB re 1 V (A-weighted); max input 2.1 V rms at 35 Hz; imp 47k ohms. Equalizer 13"W x  $4\frac{1}{8}$ "D x  $2\frac{1}{4}$ "H. Speaker 21"W x 13"D x 12  $\frac{3}{8}$ "H. Sold only in stereo pairs (equalizer supplied with each pair) ..... \$1,399/pr  
Speakers only ..... \$1,190/pr  
901 Speaker Pedestals. Black ..... \$63/pr  
Chrome ..... \$84/pr

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**601 Series II Speaker System**

Two-way direct/reflecting® floor-standing speaker system with 4 3" tweeters, 2 8" long-excursion woofers. Tweeters, one woofer mounted above main enclosure in Free Space array configuration for lifelike stereo imaging. Features support enclosure system; dual-frequency crossover; automatic tweeter protection; walnut-grain vinyl finish. Crossovers 1.5 and 2.5 kHz; imp 8 ohms; power range 20-150 W; 29½"H x 14"W x 13"D. Sold only in matched pairs. \$944/pr

**501 Series III Speaker System**

Direct/Reflecting® 2-way acoustic-suspension floor-standing speaker system with 10" long-excursion woofer, 2 3½" tweeters. Features direct energy control (adjustable vane in front of outward-facing tweeter matches spatial characteristics to tastes, room); tweeter protection circuit; walnut-grain vinyl finish. Crossover 1.5 kHz; power range 20-100 W; imp 8 ohms; 24"H x 14 1/2"W x 14.5"D. Sold only in stereo pairs ..... \$684/pr

**301 Series II Speaker System**

Direct/Reflecting® ported 2-way bookshelf speaker system with 8" woofer, two 3" tweeters in Free Space Array™. Features dual-frequency crossover to allow woofer and tweeter to operate simultaneously over nearly a full octave; tweeter protection circuit; particle board cabinet with walnut-grain vinyl veneer finish. Transition frequencies 3 kHz woofer, 1.2 kHz tweeter; power range 10/60 W/ch continuous; imp 8 ohms; 17"W x 10.5"H x 9.5"D. Sold only in stereo pairs ..... \$390/pr

**201 Speaker System**

Direct/Reflecting® speaker system with high-density polystyrene enclosure with contoured vent surfaces to reduce low-frequency distortion, direct energy control that adjusts radiation pattern of outward-firing tweeter beyond 2 kHz. Features Dual Frequency crossover network that allows woofer and tweeter to simultaneously operate over nearly full octave range; 6" woofer; 2" tweeter; asymmetrical driver array; direct energy control; ducted-vent enclosure; automatic tweeter protection. Crossover transition frequencies 1.5 and 2.5 kHz; power range 10-60 W rms; imp 8 ohms; 14.12"W x 7.87"H x 6.75"D; 6.2 lb/\$262/pr

**BOSTON ACOUSTICS****A400 Speaker System**

Three-way, 4-speaker system, with dual 8" woofers, 6½" midrange unit in its own internal subenclosure; 1" copolymer dome CFT/1 tweeter; crossover frequency of 300 Hz from woofer to midrange; oak or walnut ..... \$900/pr

**A200 Speaker System**

Acoustic-suspension floor-standing 3-way speaker with 10" woofer mounted close to floor, 4.5" flush-mounted cone midrange in sealed subenclosure, 1" flush-mount polyamide dome tweeter with ferro-fluid. Features walnut veneer cabinet with removable black cloth grille; integral black pedestal base. FR 32-20,000 Hz ± 2.5 dB; crossovers 450 and 3 kHz; sens 90 dB/W/m; min power 15 W; imp 8 ohms; 41"H x 21"W x 6 3/8"D ..... \$750/pr  
Oak veneer cabinet with wheat-colored grille \$750/pr

**A150 Series II Speaker System**

3-way speaker with 10" acoustic suspension woofer, 1" CFT/1 dome tweeter and 3½" midrange. FR 38-25,000 Hz ± 3 dB; imp 8 ohms; crossover frequencies 650 Hz and 3,000 Hz; power handling 100 W (DIN 45 573); 32½"H x 16"W x 8¾"D. Oak or walnut veneers ..... \$590/pr  
Wood-grain vinyl finish ..... \$500/pr

**A100 Series II Speaker System**

Two-way acoustic suspension speaker with 10" low-frequency driver and 1" CFT high-frequency unit. Features self-damped copolymer dome and magnetic fluid convection cooling of CFT voice coil structure; wood-grained vinyl-veneered cabinet; black pedestal base standard. FR 38-25,000 Hz ± 3 dB; crossover

at 2,000 Hz; power handling 75 W (DIN 45573). 32½"H including base; 16"W x 8¾"D .. \$370/pr

**A70 Speaker System**

Acoustic-suspension 2-way speaker system with 8" woofer, .5" cone tweeter with ferrofluid. Features woodgrain-vinyl finish with removable black cloth grille. FR 40-20,000 Hz ± 3 dB; crossover 2 kHz; sens 90 dB/W/m; min power 15 W; imp 6 ohms nominal; 24" x 14" x 7 3/4"D ..... \$280/pr

**A60 Speaker System**

Acoustic-suspension 2-way speaker system with 8" woofer, ½" cone tweeter with ferrofluid. Features woodgrain-vinyl finish with removable black cloth grille. FR 55-20,000 Hz ± 3 dB; crossover 3 kHz; sens 90 dB/W/m; min power 10 W; imp 8 ohms; 18" x 11 1/2" x 7 1/2"D ..... \$200/pr

**A40 Speaker System**

Acoustic-suspension 2-way speaker system with 6 1/2" woofer, 3/4" dome tweeter with ferrofluid. Features woodgrain-vinyl finish; removable black cloth grille. Frequency response 68-20,000 Hz ± 3 dB; crossover 3.5 kHz; sens 88.5 dB SPL/W/m; min power 5W; imp 8 ohms; 13 1/2"H x 8 1/4"W x 7 3/4"D ..... \$150/pr

**BOZAK****CS-310B Concert Grand Contemporary**

Speaker with 4 B-199B woofers, 2 B-2098 midranges, 8 tweeters in vertical column. FR 16-20,000 Hz; imp 8 ohms; power range 60-350 W; matte walnut enclosure; 52"H x 36"W x 19"D. \$3,798/pr  
**CS-410CL.** Same as CS-310B except Classic cabinet ..... \$3,998/pr  
**CS-410M.** Same as CS-310B except Moorish styling ..... \$4,198/pr

**Symphony No. 1 CS-4000A Modern**

Infinite-baffle, 3-way floor-standing speaker with 2½" woofers, 6½" midranges, 8 2" tweeters in array. FR 35-20,000 Hz; crossovers 400 and 2.5 kHz at 6 dB/octave; imp 8 ohms; max power 250 W program; walnut enclosure; 44 ½"H x 26½"W x 15½"D ..... \$2,398/pr  
**CS-4000 CL.** Same as CS-4000A with Classic styling ..... \$2,598/pr  
**CS-4000 M.** Same as CS-4000A with Moorish styling ..... \$2,798/pr  
**CS-4005A.** Same as CS-4000A except low-boy enclosure; 27½"H x 36"W x 20"D ..... \$2,398/pr

**Concerto VII CS-501A Speaker**

Floor-standing 3-way speaker with 12" high-compliance woofer, 6½" midrange, 3 tweeters mounted in arc array for improved dispersion. FR 40-20,000 Hz; crossovers 800 and 2.5 kHz at 6 dB/octave; imp 8 ohms; max power 250 W program; walnut cabinet; 30"H x 20½"W x 16"D ..... \$1,398/pr

**LS-330A Speaker**

Infinite-baffle 3-way speaker with 12" woofer, 6" midrange, 1" soft-dome tweeter. FR 40-20,000 Hz; crossovers 500 and 2.5 kHz; max power 200 W continuous music; imp 8 ohms; walnut cabinet; 34 1/2" x 15½"W x 12½"D ..... \$1,038/pr  
**LS-250A.** Similar to LS-330A except uses 4½" midrange driver; Frequency response 45-20,000 Hz; crossovers 500 and 2 kHz; 23¼"H x 14½"W x 12¼"D ..... \$598/pr

**CS-400 Speaker System**

Infinite-baffle 3-way speaker with 12" variable-density woofer, 6" aluminum midrange, 2 aluminum "Z" tweeters. FR 40-20,000 Hz; crossovers 800 and 2.5 kHz; maximum power 100 W continuous; imp 8 ohms; walnut cabinet; 25½"H x 18"W x 13¼"D ..... \$858/pr

**MB-80 Speaker System**

Miniature two-way high-performance acoustic-suspension speaker. Features 6" aluminum cone woofer, 1" soft-dome tweeter; failsafe tweeter protection circuit;

oak veneer cabinet. FR 80-20,000 Hz; crossover 1.6 kHz; max power 250 W continuous music; imp 8 ohms; 12½"H x 7½"W x 7½"D ..... \$500/pr  
Also in satin black lacquer finish ..... \$500/pr

**LS-220A Speaker System**

Tower 2-way speaker with 8" aluminum woofer, 1" soft-dome tweeter. FR 60-20,000 Hz; crossover 3 kHz at 18 dB/octave; max power 100 W continuous; 36"H x 11½"W x 9½"D ..... \$498/pr

**B-1002 Bard Outdoor Speaker**

All-weather 2-way speaker with 8" aluminum midrange/woofer, 2" aluminum tweeter. FR 50-20,000 Hz; max power 60 W continuous music; imp 8 ohms; uses jack and plug connector; 18" dia. x 21" x 12" ..... \$498/pr  
**B1000.** Same as B-1002 except without tweeter ..... \$338/pr

**LS-200A Speaker System**

Tuned-port 2-way bookshelf speaker with 8" aluminum midrange/woofer, 1" soft-dome tweeter. FR 60-20,000 Hz; crossover 2.5 kHz; max power 150 W continuous music; imp 8 ohms; 20¼"H x 11¾"W x 10¾"D ..... \$358/pr

**Professional Series****CM-109-23AW Speaker**

Columnar 3-way, 3-line speaker with 8" woofers in bass array with drivers over inverse tapered slot, 9 4½" midrange drivers, 8 2" tweeters. FR 30-16,000 Hz; crossovers 800 and 2.5 kHz; efficiency 126 dB at 150 W, 4-ft on-axis; imp 8 ohms; max power 150 W continuous; marine plywood enclosure with beige enamel finish; 57"H x 22¾"W x 15¾"D ..... \$3,398/pr  
**CM-109-23W.** Same as CM-109-23AW except for biamp operation ..... \$3,198/pr

**CM-450-4 Speaker System**

Columnar speaker designed for voice/speech, outdoor low-level music, classrooms, lecture halls, auditoriums. Features 4 4" aluminum-cone full-range drivers; weather-proof cabinet; mounting brackets. Measures 20¼"H x 6½"W x 4¾"D ..... \$458/pr  
**CM-450-6.** Same as CM-540-4 except includes 6 drivers. Measures 30 1/2"H ..... \$598/pr

**BSR****Model 153 Speaker**

15" 3-way acoustic-suspension loudspeaker with walnut vinyl cabinet ..... \$200

**Model 123 Speaker**

12" 3-way acoustic-suspension loudspeaker with walnut vinyl cabinet ..... \$130

**Model 103B Speaker**

10" 3-way acoustic-suspension loudspeaker; walnut vinyl cabinet ..... \$100

**Model 82 Speaker**

8" 2-way tuned-duct loudspeaker; walnut vinyl cabinet ..... \$70

**B&W LOUDSPEAKERS LTD****801F Speaker**

Floor-standing 3-way acoustic-suspension speaker with vertically aligned drivers to minimize time delays. Features crossover system; Audio Powered Overload Circuit to prevent driver damage; choice of cabinet finishes. FR 45-20,000 Hz ± 2 dB; power range 50 W-no upper limit due to APOC; imp 8 ohms; 37.3"H x 22"D x 17"W; 97 lb. Walnut, teak, or black ash finish ..... \$3,500/pr  
Rosewood finish ..... \$3,950/pr

**802F Speaker System**

Acoustic-suspension floor-standing speaker with 2 165mm woofers, 100mm midrange, 26mm tweeter.

Features Butterworth Squared crossovers; APOC; choice of cabinet finishes. FR 55-20,000 Hz  $\pm 2$  dB; power range 50 W-no upper limit due to APOC; 2nd- and 3rd-harmonic distortion  $< 1\%$ , 100-20,000 Hz for 90 dB SPL; sens 85 dB SPL/W/m; 41"H  $\times$  14 1/2"W  $\times$  11 3/4"D; 70 lb.  
Walnut, teak, or black ash finish ..... \$2,500/pr  
Rosewood finish ..... \$2,950/pr

#### DM7/II Speaker System

Floor-standing acoustic-suspension speaker with 160mm midwoofer, 26mm tweeter. Features 14-element crossover; APOC; choice of cabinet finishes. FR 80-20,000 Hz  $\pm 2$  dB; power range 40 W-no upper limit due to APOC; 2nd- and 3rd-harmonic distortion 3% sens 86 dB SPL/W/m; imp 8 ohms; 35 7/16"H  $\times$  15"D  $\times$  10 11/16"W; 64 lb.  
Walnut finish ..... \$1,290/pr

#### DM14 Speaker System

Acoustic-suspension speaker with 150mm midwoofer, 26mm tweeter. Features overload protection; choice of cabinet finishes. FR 80-20,000 Hz  $\pm 2$  dB; power range 15 W-no upper limit due to overload protection; 2nd/3rd-harmonic distortion  $< 1\%$ / $< 3\%$ ; sens 85 dB SPL/W/m; imp 8 ohms; 22 1/2"H  $\times$  11 1/2"D  $\times$  10"H; 35 lb.  
Walnut, teak, or black ash finish ..... \$990/pr  
Rosewood finish ..... \$1,130/pr

#### The DM17 Limited Speaker

Speaker with 2 drivers arranged with the top-mounted treble unit time-aligned in relation to the bass/midrange driver. Features bextrene thermoplastic cone; dome-shaped 26mm-diaphragm high-frequency driver pairs are computer-matched to  $\pm 0.5$  dB; resonance-free cabinet; automatic protection; suitable for amps having power output of 40 W or greater; selected veneers of black ash or walnut; FR better than 85-20,000 Hz  $\pm 2$  dB free-field on listening axis at 2m; imp 8 ohms; sens 85 dB SPL/W/m into 8 ohms; 8 3/4"W  $\times$  10 1/2"D  $\times$  16"H; 19.8 lb ..... \$790/pr

#### DM12 Speaker System

Compact acoustic-suspension speaker with 150mm midwoofer, 26mm tweeter. Features choice of cabinet finishes. FR 85-20,000 Hz  $\pm 2$  dB; power range 15 W-no upper limit due to overload protection; 2nd/3rd-harmonic distortion  $< 1\%$ / $< 0.5\%$ ; sens 85 dB SPL/W/m; imp 8 ohms; 14"H  $\times$  10 1/2"D  $\times$  8 3/4"W; 21 lb.  
Walnut, teak, or black ash finish ..... \$670/pr  
Rosewood finish ..... \$750/pr

#### DM220 Speaker

Three-way system employing two 8" drivers; one for a lower bass; the other handles upper bass and mid-range frequencies; 1" dome tweeter; available in American walnut or black ash simulated veneers. Sens 90 dB SPL/W/m; Frequency response 53-20,000 Hz; recommended power range 10-75 W rms; 26.75" H  $\times$  11.4"W  $\times$  12.6"D; 30.4 lbs; useful bass cutoff frequency 45 Hz; distortion less than 3%; 2nd harmonic; less than 0.5%, 3rd harmonic ..... \$500/pr

#### LM-1 Leisure Monitor Speaker

Two-way mini speaker with colored nextel finishes, protection against overload, for home and car use. Available in brown, beige, charcoal, black, or red. Min power 10 W; 4" woofer, 7/8" tweeter ..... \$498/pr  
LM-1/PM. Panel-mount version ..... \$450/pr  
LM-1/Mar. Marine version, protected against corrosion ..... \$598/pr  
LM-1/PM-Mar. Marine version, panel mount \$550/pr

#### DM110 Speaker

Two-way vented speaker employing 2 drive units, 8" woofer crossed over to 1" dome tweeter via a 4th-order Butterworth squared circuit that provides frequency division at 3,000 Hz. Sens 91 dB SPL/W/m; FR 70-20,000 Hz  $\pm 3$  dB; recommended power 10-50 W rms. 19.3"H  $\times$  10.25"W  $\times$  9.8"D; 18.5 lbs ..... \$300/pr

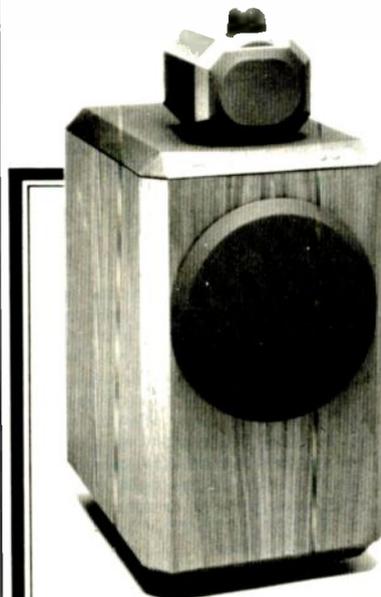
### CABASSE

#### Galion Speaker System

Four-way floor-standing speaker with all drivers located on same vertical axis and gradually stepped from top to bottom to create optimum imaging and minimum time-domain distortion. Lifetime warranty. Features 30 cm woofer; 17 cm lower mid; 5.5 cm dome mid; 2.5 cm tweeter; cast speaker frames; hand rubbed and matched walnut veneer cabinets. Frequency response 50-20,000 Hz  $\pm 3$  dB (8 ohms); sensitivity 94 dB/1W/1M; power handling 110 W continuous, 775 W peaks; 100  $\times$  36  $\times$  34cm; 33 kg ..... \$2,400/pr

#### Clipper Speaker System

Three-way speaker system with all drivers located on the same vertical axis and gradually stepped from top to bottom to create optimum imaging and min time-domain distortion. Lifetime warranty. Features 30cm woofer; 12 cm mid-range; 5.5 cm dome tweeter; cast frame drivers; frequency response 55-20,000 Hz  $\pm 3$  dB; sensitivity 94 dB/W/m; 110 W continued power rate; 775 W peak; hand rubbed and matched walnut veneer cabinets; 74  $\times$  35  $\times$  33 cm; 2.2 kg ..... \$1,600/pr  
Sloop. Similar to Clipper except 2.5 cm dome mid-range; FR 60-20,000 Hz  $\pm 3$  dB; 64  $\times$  35  $\times$  33 cm; 26 kg ..... \$1,200/pr



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\*Decca, Deutsche Grammophon, CBS, Capitol, EMI, Polygram

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**Brick Speaker System**

Two-way enclosed system with 21 cm woofer, 2.5 cm dome tweeter; cast speaker frames; all drivers are located on the same vertical axis and are gradually stepped from top to bottom to create optimum imaging and min time-domain distortion. Lifetime warranty. FR 70-20,000 Hz  $\pm$  3 dB; 93.5 dB/W/m; capable of withstanding 350 W peaks. Features hand-rubbed and matched walnut veneer cabinets; computerized optimization of all design parameters; 8 ohms; 64  $\times$  30  $\times$  25 cm; 13 kg. .... \$700/pr

**CANTON****Ergo A Speaker System**

Amplified 3-way floor-standing speaker with 2 250-mm woofers, 125-mm midrange, 20-mm tweeter, separate bass, midrange, treble hybrid amps. Features signal correction circuit; thermal overload, short-circuit protection; bass level control; switchability for left/right configuration; oak, black, or white finish; perforated steel grille. FR 20-30,000 Hz; crossovers 130 and 2.2 kHz; max amp power 100 W/ch; THD/IM distortion < 0.05%/< 0.05%; S/N > 80 dB woofer amp, > 90 dB midrange, tweeter amps; 39"H  $\times$  15"W  $\times$  15"D ..... \$3,500/pr

**Ergo P Speaker**

3-way floor-standing speaker with 25 mm titanium dome tweeter; midrange cone diaphragm 120 mm; long-throw woofer, cone diaphragm 260 mm. Features enclosure surfaces black or oak veneer; grille of perforated steel plate; color to match enclosure; permafex spring clamps for easy connection; 5 meter connecting cable; removable grille; integrated speaker stand; nominal imp 4 ohms; nominal power handling 110/160 W; FR 20-30,000 Hz; crossovers 450 Hz; 3,100 Hz ..... \$2,000/pr

**CT 1000 Speaker System**

3-way floor-standing speaker with 25mm dome tweeter (titanium); 120mm dome midrange cone; long-throw 310 mm woofer. Features enclosure surfaces black or oak veneer; grille of perforated steel plate; color to match enclosure; permafex spring clamps for easy connection; 5 meter connecting cable; removable grille; FG 200 speaker stand as optional accessory; nominal imp 4 ohms; nominal power handling 110/160 W; FR 20-30,000 Hz; crossovers 450 Hz, 3,100 Hz; 13.98"W  $\times$  25.98"H  $\times$  12.6"D; 21.5 kg ..... \$1,350/pr  
With optional FS200 speaker stands ... \$1,500/pr

**"Quinto" Series Speaker Systems**

Speaker systems in this series feature dome-type drivers; highly sealed plywood cabinets; 4-ohm imp, perforated low-resonance metal grilles; walnut-veneer finish with bronze-brown grille, or textured white lacquer with white grille.

**Quinto 540.** Floor-standing 3-way system with 310-mm woofer, 38-mm midrange, 20-mm tweeter. FR 22-30,000 Hz; crossovers 800 and 3.5 kHz; power range 40-140 W; distortion < 0.3%; 22.5"H  $\times$  13.4"W  $\times$  12.4"D ..... \$1,000/pr

**FG 200.** Stand for Quinto 540 ..... \$150/pr

**"Quinto" 530.** Similar to Quinto 540 except bookshelf design with 260-mm woofer, 28-mm midrange, 20-mm tweeter. Low-end response 25 Hz; crossovers 1k and 5 kHz; power range 30-100 W; distortion < 0.6%; 18.12"H  $\times$  12.25"W  $\times$  10.62"D \$750/pr

**"Quinto" 520.** Similar to Quinto 530 except has 220-mm woofer. Low-end response 28 Hz; crossovers 800 and 5 kHz; power range 25-80 W; distortion < 0.8%; 15<sup>3</sup>/<sub>8</sub>"H  $\times$  9<sup>3</sup>/<sub>8</sub>"W  $\times$  9<sup>1</sup>/<sub>2</sub>"D ... \$600/pr

**"Quinto" 510.** Similar to Quinto 520 except has 200-mm woofer. Low-end response 36 Hz; power range 25-80 W; 13<sup>3</sup>/<sub>8</sub>"H  $\times$  8<sup>3</sup>/<sub>8</sub>"W  $\times$  8<sup>1</sup>/<sub>8</sub>"D.. \$500/pr

**GLE-40 F Speaker System**

Low-profile 2-way speaker acoustically tuned for wall mounting. Features dome tweeter (fabric), 20 mm; long throw woofer, cone diaphragm, 160 mm; enclosure surfaces black, white or walnut veneer; grille of perforated steel plate; color to match enclosure; permafex spring clamps; 5 meter connecting cable;

wall mounting fixture; removable grille; nominal imp 4 ohms; nominal power handling 40/60 W; FR 48-30,000 Hz; crossover at 1,700 Hz; 12.6"W  $\times$  8.66"H  $\times$  3.15"D; 3.1 kg ..... \$350/pr

**Mini-Speaker Systems****Plus L Speaker System**

Designed as a satellite for Plus B subwoofer (below), 2-way speaker has 110-mm woofer, 20-mm tweeter. Features flush wall mounting; walnut or black/white finish; removable grille. FR 45-30,000 Hz; crossover 2.2 kHz; power range 10-60 W; imp 4 ohms; 7<sup>3</sup>/<sub>8</sub>"H  $\times$  4<sup>3</sup>/<sub>4</sub>"W  $\times$  3<sup>15</sup>/<sub>16</sub>"D ..... \$350/pr  
**Plus Set.** Full-range system consisting of 1 Plus B subwoofer/amp, 2 Plus L satellites ..... \$1,450

**GL-260 Speaker System**

Low-profile 2-way speaker with 160-mm woofer, 20-mm tweeter. Features wall-mounting suitability; black, white, or brown finish; perforated metal grille. FR 42-30,000 Hz; crossover 1.7 kHz; power range 10-60 W; distortion < 1%; imp 4 ohms; 10.5"H  $\times$  7.12"W  $\times$  4.75"D ..... \$350/pr  
**GL-210.** Similar to GL 260 except has 110-mm woofer. Designed as satellite for GLS 50 subwoofer (below). Low-end response 48 Hz; crossover 2.1 kHz; power range 5-35 W; 7<sup>3</sup>/<sub>8</sub>"H  $\times$  4<sup>3</sup>/<sub>4</sub>"W  $\times$  4<sup>3</sup>/<sub>4</sub>"D ..... \$250/pr

**Subwoofers****Plus A Subwoofer**

Self-powered super-subwoofer (bass cube) with built-in integrated power stereo amps for midrange-tweeter satellites; bass amp with 2 hybrid amps in thin film configuration as bridge circuit. Features 2 long-throw woofers (cone diaphragm 310 mm); enclosure surfaces black (veneer available at extra charge); grille of perforated steel plate; color to match enclosure; crossover frequency; bass level and input sens digitally selected and freely switchable on upper front panel; digital feed of input data; digital display (manual override) via LED scale, separate for subwoofer, left and right chs; 30.71"W  $\times$  22.64"H  $\times$  16.93"D; FR 16-30,000 Hz (with satellites) ..... \$2,400/ea  
Complete with Quinto 520 speakers as satellites ..... \$3,000

**Plus B Subwoofer**

Amplified subwoofer with 310-mm long-throw woofer, separate bass, midrange, treble hybrid amps. Features signal correction circuit; thermal overload; short-circuit protection; bass level control; automatic/manual switching with time-delay relay; terminals, switching controls for up to 4 satellite speakers; walnut, black, or bronze-brown finish; removable perforated steel grille. FR 20-130 Hz; crossover 130 Hz; max amp output power 100 W each; THD and IM distortion < 0.05% all amps; 15<sup>1</sup>/<sub>8</sub>"H  $\times$  15"D  $\times$  13<sup>3</sup>/<sub>8</sub>"W ..... \$1,100/ea

**GLS 50 Subwoofer**

Passive subwoofer with 310-mm long-throw woofer. Features black or walnut-veneer finish; perforated steel grille. FR 22-120 Hz; crossover 120 Hz; power range 20-70 W; sens 9 W; distortion < 0.4%; 13.4" cube ..... \$400

**CELESTION****SL6 Speaker System**

Acoustic-suspension 2-way speaker with 1<sup>1</sup>/<sub>4</sub>" copper-alloy dome tweeter, VHP woofer. Features unique system design for min vibration distortion. American walnut cabinet. .... \$800/pr  
With rosewood finish ..... \$1,000/pr

**NEED MORE INFORMATION?**

Write directly to the manufacturer or distributor. A list of names and addresses starts on page 25.

**Ditton 250 Speaker System**

Acoustic suspension 3-way speaker with ULTRA 1" dome tweeter; 5" cone midrange; 8" PVC-surround woofer. Features flush-mounted, vertically aligned drivers; walnut cabinet; 22<sup>1</sup>/<sub>2</sub>"H  $\times$  11<sup>1</sup>/<sub>2</sub>"W  $\times$  9<sup>1</sup>/<sub>2</sub>"D ..... \$600/pr

**Ditton 110 Speaker System**

Acoustic-suspension speaker with ULTRA dome tweeter, 8" long-throw PVC-surround woofer. Features vertically aligned, flush-mounted drivers; walnut vinyl cabinet; 17"H  $\times$  10"W  $\times$  8<sup>1</sup>/<sub>4</sub>"D... \$400/pr

**Ditton 100 Speaker System**

Compact 2-way speaker with 6<sup>1</sup>/<sub>2</sub>" PVC surround woofer; 1" ULTRA tweeter. Features vertically aligned flush-mounted drivers; walnut-grain vinyl finish; black



grille cloth. FR 78-20,000 Hz; crossover 2,300 Hz; power range 10-40 W; sens 87 dB SPL/W/m; imp 8 ohms; 13"H  $\times$  8<sup>1</sup>/<sub>4</sub>"W  $\times$  7<sup>3</sup>/<sub>4</sub>"D; 9.75 lb \$520/pr

**CERWIN-VEGA****Digital Series Speaker Systems****D-9 Speaker System**

Three-way, four-driver, floor-standing system with 15" woofer, dual 6" midrange and 1" tweeter. Features Helmholtz/Theile enclosure fabricated from high-density pressed board with woodgrain vinyl finish and acoustically transparent brown stretch grille. Frequency response 29-20,000 Hz; power range 5-350 W; sens 101 dB; imp 4 ohms; crossover frequencies 500 and 3,500 Hz; 35<sup>1</sup>/<sub>2</sub>"  $\times$  18"  $\times$  17<sup>3</sup>/<sub>4</sub>"; 85 lbs ..... \$950/pr

**D-7 Speaker System**

Tower-type 3-way speaker with 12" woofer, dual 6" cone distributed midrange driver in large chamber, 1" horn tweeter. Features circuit protection; midrange, tweeter level controls; choice of finishes. FR 25-17,000 Hz  $\pm$  3 dB; crossovers 700 and 3.5 kHz; sens 98 dB SPL/W/m; max power 125 W; imp 8 ohms ..... \$800/pr

**D-5 Speaker System**

Floor/shelf 3-way speaker with 12" woofer, 6" cone midrange, 1" horn tweeter. Features circuit protection; midrange, tweeter level controls; choice of finishes. FR 32-17,000 Hz  $\pm$  3 dB; crossovers 700 and 3.5 kHz; sens 86 dB SPL/W/m; max power 100 W; imp 8 ohms ..... \$600/pr

**D-3 Speaker System**

Shelf-type 3-way speaker with 10" woofer, 6" cone midrange, 1" horn tweeter. Features circuit protection; midrange, tweeter level controls; choice of finishes. FR 30-17,000 Hz  $\pm$  3 dB; crossovers 700 and 3.5 kHz; sens 92 dB SPL/W/m; imp 8 ohms \$500/pr

**D-2 Speaker System**

2-way speaker with 10" woofer in a cast aluminum frame and 1" voice coil horn. Features high frequency level control; resettable high frequency protection circuit breaker; direct radiating vented enclosure; walnut wood grain vinyl finish; black cloth grille. FR 30-20,000 Hz; power handling min/max 5/125 W; sens 96 dB; nominal imp 8 ohms; crossover frequency 3,000 Hz; 24<sup>1</sup>/<sub>2</sub>"  $\times$  14"  $\times$  10"; 38 lbs .. \$400/pr

**D-1 Speaker System**

2-way system with 8" woofer and 1" voice coil high frequency horn. Features resettable high frequency protection circuit breaker; vented design cabinet; walnut wood grain vinyl; black cloth grille. FR 30-20,000 Hz; power min/max 5/100 W; sens 94 dB W/m; 8 ohms imp; crossover frequency 3,000Hz . \$350/pr

**SAT I Speaker Systems**

Full-spectrum speaker consisting of pair of satellites, single subwoofer. Satellites feature 6" woofer, 1" horn tweeter; FR 100-17,000 Hz  $\pm 3$  dB; crossover 3 kHz; sens 90 dB SPL/W/m; max power 90 W; imp 8 ohms; circuit protection; midrange, tweeter level controls. SW-12 subwoofer features dual voice coil floor-facing 12" woofer; FR 30-110 Hz  $\pm 4$  dB; built-in crossover to satellites at 110 Hz; sens 95 dB SPL/W/m; max power 100 W; imp 8 ohms  $\times 2$ ; choice of finishes.

2 Sat I satellites, SW-12 subwoofer ..... \$600  
SW-12 subwoofer alone ..... \$300

**DAHLQUIST****DQ-10 Speaker System**

Air-suspension phased array moving-coil 5-way speaker with 10" woofer, 5" midbass, 2" soft-dome midrange,  $\frac{3}{4}$ " dome tweeter, piezoelectric ceramic supertweeter. Features low-diffraction time-delay correction; treble-slope control; solid walnut or oak trim with black or white grille cloth; manufactured in mirror-imaged pairs. FR 37-27,000 Hz; crossovers 400, 1k, 6k, 12.5 kHz; power range 60-200 W; imp 8 ohms;  $31\frac{1}{2}" \times 30\frac{1}{2}" \times 9"$  D ..... \$1,000/pr  
ST-10 stand ..... \$80/pr

**DQ-1 W Subwoofer**

Subwoofer with 13" driver in heavy cast frame for biamplified systems. Features walnut or oak finish with black or white grille cloth;  $28"H \times 18"W \times 14"D$  ..... \$350

**Dynamic Tracking Studio Monitors****DQM-9 Speaker System**

Dual rear-firing tuned port speaker features rigid die-cast zinc chassis drivers in "unbox" enclosure; 11" woofer and 5" cone midrange feature flat wound ribbon wire voice coils; tweeter is 1" dome. FR 28-22,000 Hz; power range 25-200 W; sens 95 dB at 1,000 Hz; crossovers 450 and 3.5 kHz; imp 8 ohms;  $25"W \times 14\frac{1}{2}"H \times 13\frac{1}{4}"D$ ; 65 lbs; suede gray nextel ..... \$1,200/pr  
Simulated walnut grain ..... \$1,120/pr

**DQM-9 Compact Speaker System**

Dual rear-firing tuned-port speaker features rigid die-cast zinc chassis drivers in "unbox" enclosure; 9" woofer and 5" cone midrange feature flat-wound ribbon wire voice coils; tweeter is 1" dome; FR 35-22,000Hz; power range 25-140 W; sens 92 dB at 1,000 Hz; crossovers 450 and 3.5 kHz; imp 8 ohms;  $22\frac{3}{4}" \times 14\frac{1}{4}" \times 11\frac{1}{4}"D$ ; 55 lbs; suede gray nextel ..... \$900/pr  
Simulated walnut grain ..... \$820/pr

**DQM-7 Compact Speaker System**

Dual rear-firing tuned-port speaker features rigid die-cast zinc chassis drivers in "unbox" enclosure; 9" woofer; features flat-wound ribbon wire voice coil; tweeter is 1" dome; FR 37-22,000Hz; power range 25-120 W; sens 92 dB at 1,000 Hz; crossover 3 kHz; imp 8 ohms;  $21\frac{3}{4}" \times 13\frac{3}{4}" \times 11\frac{1}{4}"D$ ; 50 lbs; suede gray nextel ..... \$730/pr  
Simulated walnut grain ..... \$650/pr

**DQM-5 Speaker System**

Dual rear-firing tuned-port speaker in "unbox" enclosure. Features flat 9" woofer; features flat wound ribbon wire voice coil; tweeter is 1" dome; FR 37-22,000 Hz; power range 25-120 W; sens 90 dB at 1,000 Hz; crossover 3 kHz; imp 8 ohms;  $21\frac{3}{4}" \times 13\frac{3}{4}" \times 11\frac{1}{4}"D$ ; 46 lbs; suede gray nextel ..... \$600/pr  
Simulated walnut grain ..... \$520/pr

**DQM-3 Speaker System**

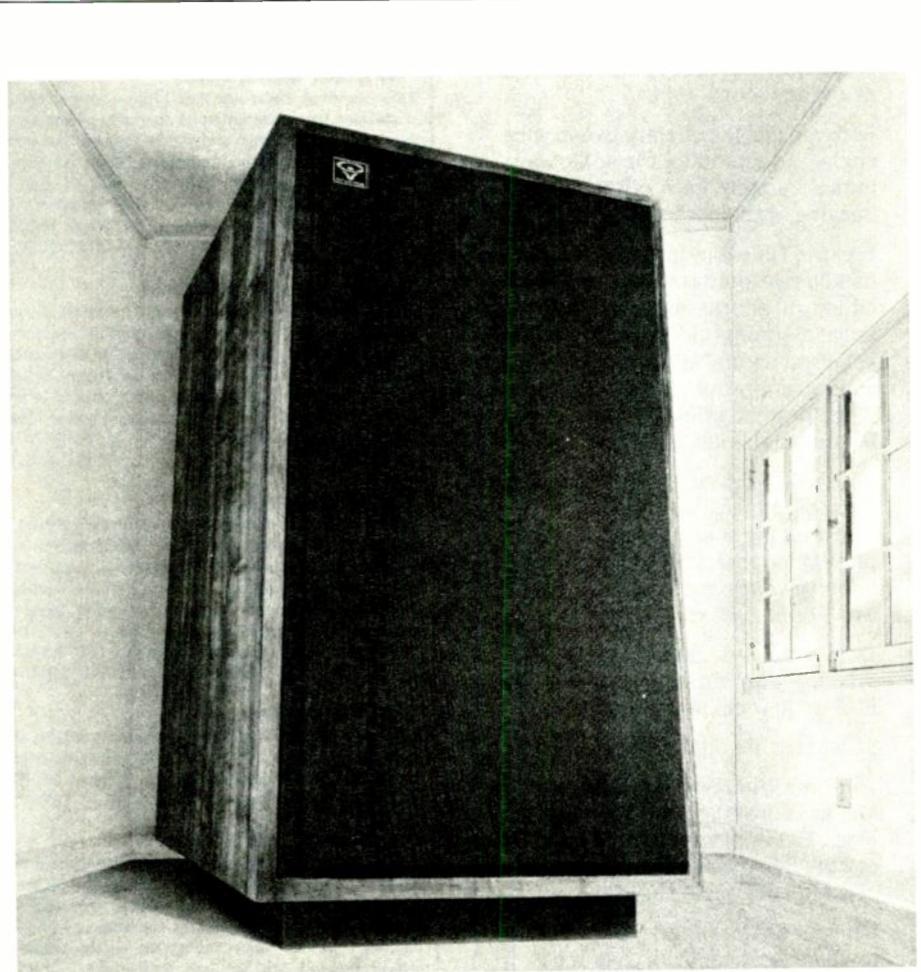
Acoustic-suspension speaker in "unbox" enclosure, 8" woofer. Features flat wound ribbon wire voice coil; tweeter is 1" dome; FR 50-20,000 Hz; power range 25-120 W; sens 90 dB at 1,000 Hz; crossover 2 kHz; imp 8 ohms.  $17\frac{3}{4}" \times 11\frac{3}{4}" \times 10\frac{3}{4}"D$ ; 35 lbs; suede gray nextel ..... \$450/pr  
Simulated walnut grain ..... \$400/pr

**ST-9 Speaker Stand**

Floor stand for DQM series speakers; provides rigid mounting, 3.5" upward tilt; matte black finish; capacity 100 lbs.  $11\frac{1}{4}" \times 14"H \times 12"D$ ;  $7\frac{1}{2}$  lbs ..... \$80/pr

**dbx****dbx Soundfield Imaging Speaker Systems**

Two floor-standing enclosures, each with four 10" woofers, four  $4\frac{1}{2}"$  midranges, and six  $\frac{1}{2}"$  tweeters. Phased-array design produces both measurably flat frequency and power response 20-20,000 Hz and stable and consistent central image anywhere in listening area (no main listening axis). Computer-designed crossover individually tailors amplitude and phase of each driver to produce psychoacoustically optimized radiation pattern and constant imp 4 ohms  $\pm 1/2$  ohm 20-20,000 Hz. System includes processor to go in preamp/receiver tape monitor loop. Pro-



The Digital Age is upon us. It will provide a whole new dimension in listening dynamics and clarity—but, only when used with loudspeakers capable of reproducing the range, dynamics and realism digital recording makes possible.

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 **Cerwin-Vega! Digital Series**

# Is the lower-priced QED® Loudspeaker as good as the Time Window®?

For some people it is.

Both the Time Window and the QED Loudspeaker are made by DCM, "for the Audiophile who would rather listen to music than to equipment."® Like all DCM loudspeakers, they are designed for the serious listener who also lives in the real world. Both are enjoyed by serious listeners on six continents.

Both the QED and the Time Window are 36-inch floor-standing columns that are easy to place for optimum sound in nearly any room.

Both are phase-coherent over a wide angle, and reproduce the sonic waveform accurately. Each offers vivid imaging, with depth, detail and clarity.

Like the Time Window, the QED can handle awesome amounts of power; either will effortlessly deliver every detail at alarmingly loud levels. But both sound so natural at extremely low levels, you can enjoy the full dynamic contrast of the best recordings without ever playing them too loud for comfort.

Both reveal the subtlest differences of the most expensive components yet provide amazing sound with modestly priced electronics. However you may improve your system in the future, you won't outgrow your DCM loudspeakers.

Even better, you can enjoy either in practically any existing system with as little as 10 watts per channel.

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## Speakers

9

## Speakers

cessor equalizes speaker FR and also features power amp monitor/speaker protector; rumble suppressor; adjustable HF/LF EQ and high-pass/low-pass filters for ends of audio band; automatic ch balancing for out-of-balance program material; ambience control; bypass for headphone listening; and replacement tape monitor; power range 30 to 400 W/ch; system will produce > 110 dB SPL in 3,000 cu. ft. room; walnut or oak veneer with dark brown grilles; 42"H x 14 1/2"W/D ..... \$2,500

### DCM

#### Time Bass Woofer System

Phase-coherent subwoofer system features phase-compensated crossover to accommodate satellite speakers of various efficiencies without biampification; bypass switch for biamping with electronic crossover if desired. Minimum imp 4 ohms; 31"H x 18"W x 18"D ..... \$792/pr

#### Time Window® Speaker System

Floor-standing 3-way speaker system with variable-dispersion time-coherent point source to permit separate adjustment of high and middle frequencies in ambient sound field without changing total frequency/energy balance. Power range 40-1,000 W; imp 8 ohms; accurately reproduces 30-µsec impulse over entire listening area; 44"H x 17"W x 15 1/2"D ..... \$2,200/pr

#### Time Window Three Speaker System

Floor-standing 3-way speaker system which is substantial, yet easy to move and practical in the home. Features time-coherent point source for more accurate off-axis sound reproduction; separately adjustable high and middle frequency energy output in ambient sound field; sens 90 dB/2.8 V/m power range 20-200 W; imp 4-8 ohms; 39"H x 16 1/4"W x 12 7/8"D ..... \$1,400/pr

#### Time Window Speaker System

Floor-standing 2-way speaker system with cylindrical back and triangular prism front. Optimized for min time-dispersion error. Incorporates 2 proprietary 6 1/2" low/mid-frequency drivers, 2 dome tweeters symmetrically placed on 2 angled front faces of prism. FR 25-20,000 Hz; power range 10-200 W continuous; imp 6-8 ohms; dispersion 180° horizontal, 60° vertical; 36"H x 14 3/4"W x 11 3/4"D \$800/pr

#### QED Speaker System

Floor-standing 2-way speaker system with woofer and tweeter. FR 30-18,000 Hz; sens 91 dB/W/m; power range 10-100 W continuous; imp 8 ohms; 36"H x 11 3/4"W x 9 3/4"D ..... \$600/pr

#### ImageMaster Speaker System

Folded transmission line 3-way bookshelf system features high 93 dB/2.8V/1 meter sens along with accurately equalized time domain (impulse) response and high power handling capability; electronically phased radiation pattern improves stereo image stability; power range 5-100 W; imp 8 ohms; 23 3/4"H x 12 7/8"W x 13 1/4"D; walnut cabinet ..... \$600/pr Walnut vinyl cabinet ..... \$500/pr

#### Microphone Speaker System

Unique-shape 2-way bookshelf speaker system that makes efficient use of shelf space. System resonance 30 Hz; sens 84 dB/W/m; power range 5-100 W; imp 8 ohms; 13"H x 12 1/2"D x 9"W.

Rosewood or zebrawood ..... \$477/pr  
Walnut cabinet ..... \$437/pr  
Walnut vinyl cabinet ..... \$397/pr

### DESIGN ACOUSTICS

#### PS-30 Three-Piece Speaker System

Consists of 2 DA-10 satellites, DA-20LF bass module. Satellites are low-diffraction design with 5" mid-woofer, 1" soft-dome tweeter. Bass module has 12" dual voice coil, long-throw woofer; power satellites/subwoofer 35/250 W; imp 8 ohms \$1,400/set

#### PS-LF Bass Module

Down-firing dual voice coil, long-throw 12" woofer with twin crossover networks at 18 dB/octave, 140 Hz. Features input for use with DA-10 satellites (below); biamp inputs for use with other satellites. Response to below 40 Hz; oiled-walnut cabinet; black cloth grille; power range 15-250 W; 21"H x 16"W x 16"D ..... \$700/pr

#### PS-5 Speaker System

Acoustic-suspension 2-way miniature bookshelf speaker system with 5" woofer, 1" dome tweeter. Features midrange, tweeter level controls; oiled-walnut cabinet; solid walnut beveled baffle; black cloth grille. FR 80-16,000 Hz ±1.5 dB; crossover 2.5 kHz; sens 85 dB SPL/W/m; power range 15-50 W; imp 4 ohms; 11 1/4"H x 7 3/8"W x 5 1/2"D ... \$350/pr

#### Point Source Series

PS-10. Acoustic-suspension 3-way speaker system with down-firing 10" long-throw woofer, 5" mid-woofer, 1" soft-dome tweeter. Features tweeter level control; mirror-image driver placement; acoustically treated baffle; walnut-vinyl finish; brown cloth grille. FR 40-22,000 Hz; crossovers 190 and 2k Hz; sens 90 dB SPL/W/m; power range 15-200 W; imp 8 ohms; 14"H x 13 3/4"D x 11"W ..... \$500/pr  
PS-8. Similar to PS-10 except 2-way design with 8" woofer, 1 1/2" dome tweeter; FR 55-21,000 Hz; crossover 800 Hz; 13 3/4"D x 11"H x 9"W ..... \$360/pr

### DIGITAL V SPEAKER SERIES by RTR

#### Model 500 Speaker System

4-way speaker with computer-optimized vented enclosure, 15" woofer with nylon-laminate composition cone, 2.5" high definition midranges with specially treated cones; 2" x 6" solid-state tweeter; 2" x 5" solid-state supertweeter. Dynamic drivers feature high-temp heat-resistant wire wound on aluminum bobbins; walnut-grain vinyl finish. Power range 5-150 W rms; auto-reset circuit breaker protection; FR 20-32,000 Hz; 500 Hz, 5000 Hz, 10,000 Hz crossovers; 8 ohms imp; 97 dB sens; 18 1/2"W x 37 3/4"H x 11"D; 62 lbs ..... \$1,200/pr

#### Model 400 Speaker System

3-way speaker with computer-optimized acoustic suspension column enclosure; 2-10" woofer with nylon laminate composition cone; 2-4" midrange, 2-2 1/2" solid-state tweeters/supertweeters. All dynamic drivers features high-temp heat-resistant wire wound on aluminum bobbins; walnut grain vinyl finish. FR 24-30,000 Hz; 5-100 W rms; 2,000 Hz, 7,500 Hz crossover FR; 4 ohms imp; 96.5 dB sens; 15"W x 40"H x 11"D; 54 lbs ..... \$920/pr

## NOTICE TO READERS

Prices of items described are manufacturers' suggested prices only and are subject to change without notice. Actual selling prices are determined by the dealers.

# For those who question whether digital is ready, now there's a way to find out.

You're looking at the Dahlquist DQM Series of high performance loudspeakers. They're the result of Dahlquist's commitment to build studio monitors for the pioneers of digital recording technology.

What these producers and engineers need for a digital studio monitor, the Dahlquist

DQM Series was designed to deliver...the energy of the original performance.

Even though the compact digital disc is slightly less demanding than professional digital, the progress is still enormous.

Here's how the Dahlquist DQM Series delivers what digital demands.

#### The un-box enclosure

To eliminate the acoustical problems caused by increased cabinet excitation, Dahlquist developed a unique graded-density double side-wall cabinet. To control diffraction for accurate lateral and in-depth imaging, Dahlquist also coated each front baffle with electro-statically aligned fibres.

#### Flat wound ribbon wire voice coils

To further enhance performance DQM drivers feature flat wound ribbon wire voice coils for a 40% increase in winding density. The resulting increase in bass/midrange speed, precision and efficiency enables Dahlquist DQMs to fully exploit the acoustic potential digital offers. In the DQM-9, DQM-9 Compact and DQM-7 Compact the driver chassis are machined from acoustically superior die cast zinc alloy.

The Dahlquist DQM Series—five models ranging from \$200 to \$600 apiece. They're ready when you are.

DQM-7  
Compact

DQM-3

DQM-9  
Compact

## DAHLQUIST

501 (1st) Willets Path, Hauppauge, N.Y. 11788 In Canada, Evolution Audio, Ontario.

CIRCLE NO. 12 ON READER SERVICE CARD

**Model 300 Speaker System**

4-way speaker computer-optimized acoustic suspension enclosure, 12" woofer with nylon-laminate composition cone, 2-4" midrange; 3" extended-range tweeter; 2 1/2" solid-state supertweeter. All dynamic drivers feature high-temp heat-resistant wire wound on aluminum bobbins; walnut grain vinyl finish; FR 30-30,000 Hz; 10-90W rms; 7500 Hz, 10,000 Hz; crossover FR; 8 ohms imp; 95 dB sens; 14 1/4"W x 30"H x 11"D; 44 lbs; auto reset circuit breaker protection ..... \$800/pr

**Model 200 Speaker System**

3-way speaker computer-optimized acoustic suspension enclosure, 10" woofer with nylon-laminate composition cone, 4 high definition midrange, 2-3" extended-range tweeter. All drivers feature special

high-temp heat-resistant wire wound on aluminum bobbins; walnut-grain vinyl finish. FR 32-20,000 Hz; power range 10-75 W rms; 2,000 Hz; 10,000 Hz crossover frequencies; 8 ohms imp; 94.5 dB sens; auto reset circuit breaker protection; 39 lbs; 14 1/4"W x 25 1/2"H x 11"D ..... \$520/pr

**Model 100 Speaker System**

3-way speaker computer-optimized acoustic enclosure, 8" woofer with nylon-laminate composition cone; 4" high definition midrange; 2-3" extended-range tweeter; all drivers feature special high-temp heat-resistant wire wound on aluminum bobbins; walnut grain vinyl finish; FR 36-20,000 Hz; 10-60 W rms; 2,500 Hz, 10,000 Hz crossover frequencies; 8 ohms imp; 94 dB sens; auto reset circuit breaker protection; 27 lb ..... \$400/pr

**EGO SYSTEMS LOUDSPEAKERS**

**Super Ego Series**

**Super Tower Speaker System**

Floor-standing tower speaker system with 2 10" woofers, 10" passive radiator, 5" midrange, 1" Mylar dome tweeter with ferrofluid. Features fuse protection; phase compensation switches; brightness control;



tril; alagash vinyl finish; removable black cloth grille. FR 22-23,000 Hz; crossovers 400 and 4k-8k Hz; power range 10-150 W; sens 97 dB SPL/W/m; 37"H (includes integral 2" pedestal) x 14 1/4"W x 14"D; 67 lb ..... \$1,190/pr

**SE 12.3 Speaker System**

Ducted-port 3-way speaker system with 12" woofer, 5" midrange, 1" Mylar dome tweeter with ferrofluid. Features LED peak-level indicator, spring terminals; brightness control; midrange pad; fuse protection; Controlled Dispersion Energizer™, Dual-Phase compensation™ switches; front-mounted crossover panel; removable black knit grille. FR 30-21,000 Hz; crossovers 700 and variable 5k-8k Hz; power range 10-100 W rms; SPL 97 dB; imp 4 ohms; 26 1/2"H x 15 1/2"W x 11 1/2"D; 48 lb ..... \$790/pr

**SE 10 Speaker System**

Bass-reflex 3-way speaker system with 10" woofer, 4 1/2" midrange, 1" Mylar dome tweeter with ferrofluid. Features tweeter brightness control; LED peak level indicator; phase compensation™ switch with compress/expand settings; black removable knit grille. FR 36-21,000 Hz ±3 dB; crossovers 700 and variable 5k-8k Hz; sens 96 dB SPL/W/m; power range 10-80 W continuous; imp 4 ohms; 23 1/2"H x 14"W x 11 1/2"D; 36 lb ..... \$590/pr

**SE 8 Speaker System**

Bass-reflex 3-way speaker system with 8" woofer 2 1/2" tweeter; 3 1/2" midrange, 1" tweeter with ferrofluid. Features tweeter brightness control; LED peak level indicator; oiled-walnut veneer cabinet; black knit grille. FR 40-20,000 Hz ±3 dB; crossovers 2 kHz and variable 4k-8k Hz; sens 95 dB SPL/W/m; power range 10-50 W continuous; imp 4 ohms; 20 1/2"H x 12 1/4"W x 9 1/2"D 22 lb .. \$390/pr

**SE 6 Speaker System**

Acoustic suspension 2-way speaker system with 6 1/2" polypropylene woofer, 2 1/2" tweeter; FR 45-18,000 Hz; crossover at 3 kHz; power range 5-40 W rms; sens 91 dB SPL/W/m; imp 4 ohms; removable black knit grille; 14 1/4" x 8 1/4" x 7 3/4" D ..... \$278/pr

**Sound Pulse Series**

**SP 80.** Two-way bookshelf system with 8" woofer and 3" tweeter, ducted port design; FR 45-19,000 Hz; crossover at 3,000 Hz; power range 10-40 W rms; imp 8 ohms; removable knit grille; 20"H x 12"W x 9 1/2"D; 18 lb ..... \$210/pr  
**SP120.** Three-way system with 12" woofer, 5" midrange, and 1" mylar dome tweeter, ducted port design; Frequency response 35-20,000 Hz; crossover at 700 and 4,000 Hz; power range 8-80 W rms; imp 4 ohms; removable knit grille; 29"H x 17"W x 11 7/8"D; 36 lb ..... \$490/pr

**Super Mini Series**

Compact mini speaker systems designed to fit in locations where space is at a premium.  
**Super-mini.** Compact speaker system; features 5" polypropylene woofer; 5" polypropylene passive radiator; 1" Mylar dome tweeter with ferrofluid; removable black knit grille. FR 42-21,000 Hz; crossovers 100 Hz acoustic, 2.5 kHz electrical; power range 10-70 W; imp 4 ohms; removable black knit grille; 1 1/4"H x 7 1/2"D x 7"W; 11 lb ..... \$300/pr  
**Mini.** Similar to Super-Mini except has 2" cone tweeter with ferrofluid. FR 45-18,000 Hz; crossovers 120 Hz acoustic, 2 kHz electrical; power range 10-50 W; imp 4 ohms; 11"H x 6 1/4"W x 6 1/4"D; 9 lb ..... \$230/pr

**ENERGY**

**22 Reference Connoisseur**

Two-way bass-reflex mirror-imaged speaker, matched 1/16 dB left and right. Six different exotic matched wood veneers available. Features 7" polypropylene



cone woofer with PVC stitched suspension; 1.5" dual hyperdome™ tweeter. FR 25-20,000 Hz ±1.5 dB off axis; sens 89 dB SPL/W/m; imp 8 ohms; power range 20-200 W; 35 3/4"H x 11"W x 14"D; 80 lbs ..... \$1,500-2,200/pr

**22 Pro Monitors**

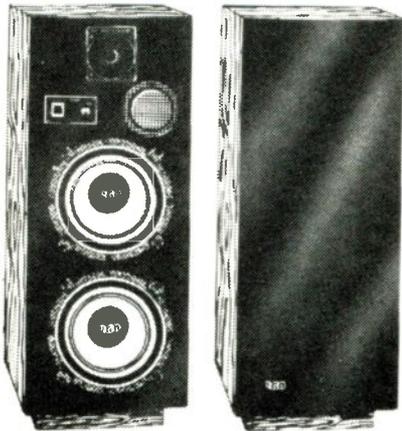
Two-way bass-reflex mirror-imaged speaker, matched 0.5 dB left and right. Includes stands. Features 7" polypropylene cone woofer with PVC stitched suspension; 1.5" dual hyperdome™ tweeter. Walnut-grain vinyl with black sag-resistant fabric grilles. FR 28-20,000 Hz ±1.5 dB off axis; sens 89 dB SPL/W/m; imp 8 ohms; power range 20-200 W; 24 1/4"H x 10 1/2" x 12"D; 34 lbs ..... \$800/pr

**ENTEC**

**Subwoofer System**

Combines servo-controlled analog computer, two dedicated amps, and active crossover in single enclosure

**TAKE THE SUPER-EGO TRIP**



One of the superb speakers from our Super-Ego<sup>®</sup> series is what you want for a great stereo trip! Never before has there been a product line packed with so many unique features. It would take 5 speakers to get all the features of one great EGO<sup>®</sup> speaker system! Our 1" mylar dome tweeters with Ferrofluid make Ego almost impossible to blow-out! We offer you peak level L.E.D. indicators and... EGO's exclusive new Phase Compensation™ switches that adjust midrange tones! The flexibility of these speakers to suit your taste and acoustic environment, plus our use of high quality drivers, make EGO<sup>®</sup> speakers truly great sounding...at an affordable price!

What we say about our quality, we back up with our 7-year limited warranty! So take a Super-Ego<sup>®</sup> trip for yourself. Hear the difference it can make in your system. And, see the Car Stereo Section for information about our Newest Car Speaker, the EC-692, With Built-In Midrange Control!



**INTER-EGO SYSTEMS, INC.**  
 50 WERMAN CT., PLAINVIEW, N.Y. 11803

CIRCLE NO. 33 ON READER SERVICE CARD

with two subwoofers, each with three 10" long-exursion woofers. Controls for bass output; phase; low-frequency response limit. Standard finish is black pin-stripe Formica with black sculpted foam grille. FR 15-100 Hz  $\pm 2$  dB; max pressure slew rate 1,000 cubic inches/sec; amp power 250 W, producing 126 dB SPL with <3% distortion. Each subwoofer is 37"H x 12"W x 16.75"D.

System with two subwoofers ..... \$3,495  
System with one subwoofer ..... \$1,895

**EPICURE**

**3.0 Series II Speaker System**

Floor-standing 3-way speaker system with 10" woofer, 6" midrange, 1" acoustic-loading spherical tweeter in truncated-pyramid cabinet. Frequency response 32-20,000 Hz  $\pm 3$  dB; crossovers 475 and 2k Hz; imp 4 ohms; 41 $\frac{3}{4}$ "H x 17 $\frac{1}{2}$ " bottom x 8 $\frac{1}{2}$ " top..... \$1,170/pr

**2.0 Speaker System**

Floor-standing 2-way speaker system with 6" woofer, 8" passive radiator, 1" acoustic-loading spherical tweeter. Comes with integral stand. FR 38-20,000 Hz  $\pm 3$  dB; crossover 2 kHz; imp 6 ohms; 34"H x 10 $\frac{3}{4}$ "W x 12 $\frac{3}{4}$ "D..... \$710/pr

**1.0 Speaker System**

Miniature 2-way speaker system with 6" woofer, 1" acoustic-loading spherical tweeter, diffraction-controlling foam cabinet front. FR 50-20,000 Hz  $\pm 3$  dB; crossover 2 kHz; imp 6 ohms; 14 $\frac{1}{2}$ "H x 10 $\frac{1}{4}$ "W x 8"D..... \$398/pr

**EPI**

**EPI Time/Energy Series Speakers**

All EPI time/energy series speakers feature two-layer woofer cones and tweeter diaphragms; stiff plastic layer that resists flexing; damping layer that controls resonances; ferrofluid cooling in the midrange and tweeter.

**T/E 360 Speaker System**

Floor-standing 3-way speaker system with patented 10" focused field woofer, 12" passive piston bass radiator; 4" sealed frame midrange and 1" tweeter. Features oak-grain vinyl veneered cabinet and brown grille cloth; frequency response 32-20,000 Hz  $\pm 3$  dB; crossovers 700 and 3,000 Hz; power range 20-250 W; imp 4 ohms; 37 $\frac{1}{2}$ "H x 17"W x 10 $\frac{1}{2}$ "D ..... \$750/pr

**T/E 320 Speaker System**

Floor-standing 3-way speaker system with patented 10" focused field woofer; 4" sealed frame midrange and 1" tweeter. Features walnut-grain vinyl veneered cabinet and brown grille cloth; FR 42-20,000 Hz  $\pm 3$  dB; crossovers 700 and 3,000 Hz; power range 20-250 W; imp 4 ohms; 29"H x 17"W x 10 $\frac{1}{2}$ "D ..... \$500/pr

**T/E 120 Speaker System**

Bookshelf/floor standing 2-way speaker system with 10" woofer and 1" tweeter. Features walnut-grain vinyl veneer cabinet and brown grille cloth; FR 38-20,000 Hz  $\pm 3$  dB; crossover 1,600 Hz; power range 15-90 W; imp 8 ohms; 25 $\frac{1}{4}$ "H x 15"W x 10 $\frac{1}{2}$ "D..... \$360/pr

**T/E 100 Plus Speaker System**

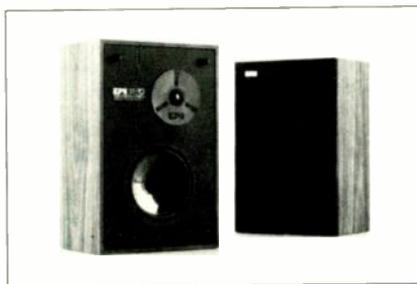
Bookshelf 2-way speaker system with 8" woofer and 1" tweeter. Features walnut-grained vinyl veneered cabinet and brown grille cloth; Frequency response 38-20,000 Hz  $\pm 3$  dB; recommended power range 15-90 W; imp 8 ohms; 21 $\frac{3}{4}$ "H x 13 $\frac{1}{2}$ "W x 8 $\frac{3}{4}$ "D ..... \$280/pr

**T/E 100 Speaker System**

Bookshelf 2-way speaker system with 8" woofer and 1" tweeter. Features walnut-grained vinyl veneered cabinet and brown grille cloth; FR 40-20,000 Hz  $\pm 3$  dB; power range 15-90 W; imp 8 ohms; 20"H x 12"W x 8 $\frac{3}{4}$ "D..... \$250/pr

**T/E 70 Speaker System**

Bookshelf 2-way speaker system with 6" woofer and 1" tweeter. Features walnut-grained vinyl veneered



cabinet and brown grille cloth; FR 55-20,000 Hz  $\pm 3$  dB; power range 15-90 W; imp 8 ohms; 16"H x 10 $\frac{1}{2}$ "W x 7 $\frac{1}{2}$ "D..... \$184/pr

**ESB USA**

**7/05 Speaker**

Passive-radiator 4-way floor-standing speaker. Features 12" woofer; 8" mid/low driver; 2" soft-dome tweeter; crossover frequencies 500, 2,000, 5,000 Hz; controls (in 1.5 dB steps) for each driver. Recommended power per ch 80-400 W rms; imp 6 ohms; sens 89 dB (2.83 V/m/pink noise); FR 25-20,000 Hz, -3 dB at 35 Hz; rosewood finish. 67 $\frac{1}{4}$ "H x 19"W x 14.5"D; 143 lbs..... \$4,500/pr

**7/06 Speaker**

Acoustic-suspension 4-way floor-standing speaker. Features 12" woofer; 8" mid/low driver; 2" soft-dome tweeter; crossover frequencies 500, 2,000, 5,000 Hz; controls (in 1.5 dB steps) for each driver. Recommended power per ch 50-250 W rms; imp 6 ohms; sens 89 dB (2.83 V/m/pink noise); FR 25-20,000 Hz, -3 dB at 35 Hz; rosewood finish. 55"H x 19"W x 11.5"D; 106 lbs..... \$3,000/pr

**7/07 Speaker**

Acoustic-suspension 4-way floor-standing speaker. Features 12" woofer; 8" mid/low driver; 1 $\frac{1}{2}$ " soft-dome tweeter. crossover frequencies 500, 2,000, 6,000 Hz; controls (in 1.5 dB steps) for each driver.



Recommended power per ch 50-220 W rms; 6 ohms; sens 88 dB (2.83 V/m/pink noise); FR 30-20,000 Hz, -3 dB at 40 Hz; walnut finish. 47"H x 16"W x 12"D; 90 lbs ..... \$2,000/pr

**7/08 Speaker**

Acoustic-suspension 3-way floor-standing speaker. Features 10" woofer; 1" soft-dome tweeter; crossover frequencies 650, 6,000 Hz; controls (in 1.5 dB steps) for each driver. Recommended power per ch 40-200 W rms; 6 ohms; sens 87 dB (2.83 V/m/pink noise); FR 35-20,000 Hz, -3 dB at 45 Hz; walnut finish. 37"H x 15"W x 11"D; 55 lbs.... \$1,300/pr

**7/09 Speaker**

Acoustic-suspension 3-way bookshelf speaker. Features 10" woofer; 1" soft-dome tweeter; crossover frequencies 800, 6,000 Hz; controls (in 1.5 dB steps) for each driver. Recommended power per ch 40-180 W rms; 6 ohms; sens 87 dB (2.83 V/m/pink noise); FR 35-20,000 Hz, -3 dB at 45 Hz; walnut finish. 13"H x 21"W x 13"D; 40 lbs..... \$800/pr

**ESS**

**AMT Series**

**AMT 1D Speaker System**

Floor-standing passive-radiator 2-way speaker system with 12" polypropylene woofer, 12" passive radiator 21.5 sq inches. Features midrange presence, brilliance controls; oiled walnut finish; black-brown grille. FR 35-23,000 Hz  $\pm 3$  dB; crossover 800 Hz; max power 400 W music; imp 6 ohms; horizontal/vertical dispersion 120°/30°; sens 91 dB SPL/W/m; 35.25"H x 16.25"W x 16.25"D 85 lbs \$1,270/pr

**AMT Bookshelf Speaker System**

Passive-radiator 2-way bookshelf speaker system with 12" woofer, 12" passive radiator, 21.5 in<sup>2</sup> Heil air motion transformer with polyester articulated silicon-edged diaphragm. Features presence/brilliance control; oiled-walnut finish; black-brown grille. FR 40-23,000 Hz  $\pm 3$  dB; crossover 800 Hz; max 400 W music power; imp 6 ohms; horizontal/vertical dispersion 120°/30°; sens 91 dB SPL/W/m; 24"H x 14"W x 14"D ..... \$1,100/pr

**Performance Series**

**PS-12C Speaker System**

Passive-radiator speaker system with 12" woofer, Heil air-motion transformer with 10.4-sq-in. radiating area. Features walnut vinyl finish. FR 32-22,000 Hz  $\pm 3$  dB; crossover 1.8 kHz; power range 15-160 W; sens 93 dB SPL/W/m; imp 6 ohms; 25"H x 14 $\frac{1}{2}$ "W x 13 $\frac{1}{2}$ "D ..... \$718/pr

**PS-5C Speaker System**

Passive radiator speaker system with 10" woofer, Heil tweeter/midrange driver. Features walnut-grain. FR 40-22,000 Hz  $\pm 3$  dB; power range 15-140 W; imp 6 ohms; crossover 2.4 kHz; sens 93 dB SPL/W, m; 24.12"H x 14"W x 14"D; 36 lb \$628/pr

**PS-9C Speaker System**

Passive-radiator speaker system with 8" woofer, Heil tweeter/midrange driver. Features tweeter level control; walnut-grain finished; FR 50-22,000 Hz  $\pm 3$  dB; power range 15-100 W imp 6 ohms; crossover 1,800 Hz; sens 91 dB SPL/W/m; 19 $\frac{3}{4}$ "H x 11 $\frac{1}{4}$ "W x 11 $\frac{1}{4}$ "D 33 lbs ..... \$409/pr

**High-Dynamic-Range Speakers**

**HD-1000 Speaker System**

Similar to HD-1200 except 10" woofer; nominal imp 4 ohms; SPL 96 dB W/m; FR 40-23,000 Hz; crossover frequencies 1,500 Hz, 8,000 Hz; 22" x 12 $\frac{1}{4}$ " x 12"; 35.5 lb ..... \$418/pr

**HD-1200 Speaker System**

Ported speaker with 12" woofer; dynamic midrange horn and 2 x 5" piezoelectric tweeter; brilliance and midrange controls; walnut vinyl; nominal imp 4 ohms; SPL 96 dB; FR 34-23,000 Hz; 25" x 14 $\frac{1}{2}$ " x 12"; 42.5 lb ..... \$522/pr

**HD-1020 Speaker System**

Similar to HD-1200 except no midrange or midrange control; nominal imp 4 ohms; SPL 96 dB/W/m; FR 45-23,000 Hz; crossover frequency 3,000 Hz. 22" x 12 $\frac{1}{4}$ " x 12"; 35.5 lb ..... \$314/pr

**ELECTRO-VOICE**

**Interface: C Series II Speaker System**

Vented 3-way floor-standing speaker with 10" woofer, 6 $\frac{1}{2}$ " vented midrange, 1 $\frac{1}{2}$ " dome supertweeter with

acoustic lens. Features active equalizer; tweeter protection; walnut veneer finish. FR 30-18,000 Hz  $\pm 2.5$  dB; crossovers 42 Hz acoustic, 400 and 2.5k Hz electrical; sens 93 dB SPL/W/m; power range 2.8-350 W; imp 6 ohms; 31 $\frac{1}{2}$ "H x 20"W x 12 $\frac{1}{2}$ "D ..... \$2,800/pr

#### Interface: B Series III

Vented 2-way speaker with 12" woofer, 8" midwoofer, 1 $\frac{1}{2}$ " dome supertweeter with acoustic lens. Features tweeter protection; active equalizer; walnut veneer cabinet. FR 30-18,000 Hz  $\pm 2.5$  dB; crossovers 42 Hz acoustic, 400 and 2.5k Hz electrical; sens 92 dB SPL/W/m; power range 3.6-250 W; imp 8 ohms; 29 $\frac{1}{4}$ "H x 16"W x 11"D ..... \$2,000/pr

#### Interface: A Series III

Vented 2-way bookshelf speaker with 12" woofer, 8" midwoofer, 1 $\frac{1}{2}$ " dome supertweeter with acoustic lens. Features tweeter protection; active equalizer; walnut veneer cabinet. FR 35-18,000 Hz  $\pm 2.5$  dB; crossovers 49 Hz acoustic, 1.5 kHz electrical; sens 92 dB SPL/W/m; power range 90-250 W; imp 8 ohms; 24 $\frac{1}{2}$ "H x 15 $\frac{1}{4}$ "W x 8 $\frac{1}{4}$ "D ..... \$1,680/pr

#### CD-35i Speaker System

Features 12" polypropylene woofer; 1.5" dome midrange; 1" dome tweeter; separate Direktor components control dispersion of midrange and tweeter; removeable grille; tilt down brushed brass trim panel; adjustments for presence and brilliance; auto power sentinel; walnut veneer finish; FR flat from 40-30,000 Hz; imp 6 ohms nominal, 5 ohms min; crossover 1,500 and 8,000 Hz; 32.2"H x 21.3"W x 10.5"D; 66 lbs. .... \$1,400/pr

**D-35.** More basic model with similar components and crossover to CD35i, but grille permanently affixed and no speaker adjustments and no power sentinel circuitry; dark oak veneer finish ..... \$1,100/pr

#### Interface: 3 Series II Speaker System

Speaker with 12" woofer, 8" midwoofer, 1 $\frac{1}{2}$ " dome supertweeter with acoustic lens. Frequency response 40-18,000 Hz  $\pm 4$  dB; crossover 1.5 kHz; sens 92 dB SPL/W/m; power range 3.6-250 W; imp 8 ohms; walnut-grain vinyl finish; 25 $\frac{1}{4}$ "H x 14 $\frac{1}{4}$ "W x 13 $\frac{1}{2}$ "D ..... \$600/pr

#### Interface: 2 Series II Speaker System

Speaker with 10" woofer, 8" midwoofer, 1 $\frac{1}{2}$ " dome supertweeter with acoustic lens. FR 47-18,000 Hz  $\pm 4$  dB; crossover 1.5 kHz; sens 92 dB SPL/W/m; power range 3.6-250 W; imp 8 ohms; walnut-grain vinyl finish; 24 $\frac{1}{4}$ "H x 13 $\frac{1}{4}$ "W x 10 $\frac{1}{4}$ "D ..... \$520/pr

#### Sentry 500 Professional Monitor System

Sentry 500 employs a super-dome tweeter capable of handling 25 W of input power coupled to high-frequency dispersion-controlling director which channels acoustic output into controlled spatial zone; increase the effective power handling ability of the tweeter in its lower 1 $\frac{1}{2}$  octaves. Features 12" direct radiator woofer with fourth-order Butterworth tuning; cabinet of scratch-resistant, matte black vinyl; WB23 wall mount kit; 4-position high frequency control; "bi-amp" plug; SEQ step-down kit allows extension of the system's 3 dB-down point ( $f_3$ ) to 28 Hz; FR 40-18,000 Hz  $\pm 3$  dB 1 meter on axis, anechoic environment; crossover 1,500 Hz; nominal imp 8.0 ohms; min imp 6.0 ohms; 23.75"H x 27"W x 13"D; 70 lbs ..... \$920/pr

#### Sentry 100A Professional Monitor System

2-way studio monitor with 8" woofer with optimally vented Butterworth tuning, dome supertweeter. Crossover 2 kHz; FR 45-18,000 Hz  $\pm 3$  dB; imp 6 ohms; SPL/W/m 91 dB; sens 41.8 dB; max power 30 W continuous; black matte vinyl cabinet; gray cloth grille; 17.25"H x 12"W x 11"D; 28 lb. .... \$440/pr

#### Interface: 1 Series II Speaker System

Speaker with 8" midwoofer, 1 $\frac{1}{2}$ " dome supertweeter with acoustic lens. FR 56-18,000 Hz  $\pm 4$  dB; power range 3.6-250 W imp 8 ohms; walnut-grain vinyl finish; 21 $\frac{1}{4}$ "H x 11 $\frac{1}{4}$ "W x 9 $\frac{1}{4}$ "D ..... \$400/pr

## FISHER

### STE1200 Speaker System

Floor-standing bass-reflex speaker with 12" woofer; 2 $\frac{1}{4}$ " midrange, 1 $\frac{1}{2}$ " metal-ring tweeter. Features tweeter, midrange level controls; walnut-veneer finish; removeable grille. FR 30-30,000 Hz; imp 8 ohms; crossovers 500 and 5k Hz; power range 20-100 W; sens 92 dB SPL/W/m; 35 $\frac{1}{4}$ "H x 17 $\frac{1}{4}$ "W x 16"D; 112 lb ..... \$1,790/pr

### STE1150 Speaker System

Bass-reflex speaker with 12" woofer, 1 $\frac{1}{2}$ " midrange driver, 1 $\frac{1}{4}$ " dome tweeter. Features tweeter, midrange level controls; walnut veneer finish; removeable grille. FR 40-20,000 Hz; imp 8 ohms; power range 15-75 W; crossovers 500 and 5k Hz; sens 92 dB SPL/W/m; 30 $\frac{1}{4}$ "H x 16 $\frac{1}{2}$ "W x 14 $\frac{1}{4}$ "D; 66 lb ..... \$1,390/pr

### ST925 Speaker System

Bass-reflex speaker with 15" woofer, 6" midrange; level controls; candlelight hickory vinyl finish; removeable grille. FR 40-20,000 Hz; imp 8 ohms; power range 25-130 W; crossovers 1.5 and 7 kHz; sens 90 dB SPL/W/m; 31 $\frac{1}{2}$ "H x 18 $\frac{1}{2}$ "W x 13 $\frac{1}{2}$ "D; 51 lb ..... \$840/pr

### ST920 Speaker System

Bass-reflex speaker with 12" woofer, 5" midrange, 4" horn tweeter. Features midrange, tweeter level controls; candlelight hickory vinyl finish; removeable grille. FR 45-20,000 Hz; imp 8 ohms; crossovers 1.5 and 6 kHz; power range 20-90 W; sens 94 dB SPL/W/m. 28"H x 16"W x 12 $\frac{1}{4}$ "D; 41 lb ..... \$700/pr

### STE1080 Speaker System

Bass-reflex speaker with 10" woofer, 1 $\frac{1}{4}$ " dome tweeter. Features walnut-grain vinyl finish; removeable grille. FR 40-20,000 Hz; imp 8 ohms; power range 10-40 W; crossover 2.5 kHz; sens 91 dB SPL/W/m; tweeter level control; 21 $\frac{1}{4}$ "H x 12"W x 12"D; 27 $\frac{1}{2}$  lb ..... \$590/pr

### ST915 Speaker System

Bass-reflex speaker with 10" woofer, 5" midrange, 3" tweeter. Features tweeter, midrange level controls; candlelight hickory vinyl finish; removeable grille. FR 50-20,000 Hz; imp 8 ohms; power range 10-50 W; crossovers 1.5 and 6 kHz; sens 92 dB SPL/W/m; 26 $\frac{1}{4}$ "H x 14 $\frac{1}{4}$ "W x 11 $\frac{1}{4}$ "D; 31 lb ..... \$500/pr

### STEC7 Speaker System

Bass-reflex speaker with 8" woofer, 4 $\frac{1}{2}$ " midrange, 2" cone tweeter. Features silver vinyl veneer finish. FR 50-20,000 Hz; imp 6 ohms; power range 10-60 W; crossovers at 1 and 5 kHz; sens 91 dB SPL/W/m; 17 $\frac{1}{2}$ "H x 10 $\frac{3}{4}$ "W x 9 $\frac{1}{4}$ "D; 19 lb ..... \$450/pr

### MS157 Speaker System

Bass-reflex speaker with 12" woofer, 5" midrange, 3" tweeter. Features walnut-grain vinyl finish; removeable grille. FR 40-20,000 Hz; imp 8 ohms; power range 8-60 W; crossovers at 1 and 5 kHz; sens 92 dB SPL/W/m; 29 $\frac{1}{4}$ "H x 14 $\frac{1}{4}$ "W x 11 $\frac{1}{2}$ "D; 26 lb ..... \$320/pr

### SME 261 Speaker System

Compact 2-way speaker with 4" woofer, 1" tweeter. Features silver-vinyl finish. FR 80-20,000 Hz; crossover 4.5 kHz; power range 10-50 W; sens 85 dB SPL/W/m; imp 8 ohms; 7 $\frac{1}{4}$ "H x 4 $\frac{1}{4}$ "W x 4 $\frac{1}{2}$ "D; 5 lb ..... \$300/pr

### MS147 Speaker System

Bass-reflex speaker with 10" woofer, 5" midrange, 3" tweeter. Features walnut-grain vinyl finish; removeable grille. FR 50-17,000 Hz; imp 8 ohms; power range 6.5-45 W; crossovers 1 and 5 kHz; sens 92 dB SPL/W/m; 26 $\frac{1}{4}$ "H x 14 $\frac{1}{4}$ "W x 11"D; 22 lb ..... \$200/pr

### ST 280 Speaker System

Bass-reflex 2-way speaker with 8" woofer, 3" cone

tweeter. Features woodgrain-vinyl finish; removeable grille. FR 55-20,000 Hz; crossover 3 kHz; power range 8-40 W; sens 90 dB SPL/W/m; imp 8 ohms; 17 $\frac{1}{4}$ "H x 11 $\frac{1}{4}$ "W x 8 $\frac{3}{4}$ "H ..... \$260/pr

### MS M140 Speaker System

Bass-reflex 2-way speaker with 6" woofer, 2 $\frac{1}{2}$ " tweeter. Features candlelight-hickory vinyl finish. FR 60-20,000 Hz; crossover 6 kHz; power range 5-30 W; sens 92 dB SPL/W/m; imp 8 ohms; 11 $\frac{1}{4}$ "W x 9 $\frac{1}{4}$ "D x 8 $\frac{1}{4}$ "H ..... \$200/pr

### MSM100 Speaker System

Bass-reflex speaker with 6" woofer, 2 $\frac{1}{2}$ " tweeter. FR 60-20,000 Hz; imp 8 ohms; power range 5-30 W; crossover 6 kHz; sens 90 dB SPL/W/m; rosewood-grain vinyl finish; 10 $\frac{1}{4}$ "H x 8 $\frac{1}{4}$ "W x 9 $\frac{1}{4}$ "D ..... \$180/pr

## FOURIER SYSTEMS

### Fourier 1 Loudspeaker

Floor-standing 3-way speaker with 1" aperiodic soft-dome tweeter, 4 $\frac{1}{2}$ " midrange cone, and 10" long-throw woofer in Thiele/Small-aligned B<sub>4</sub> vented enclosure with 3.0 cubic feet internal volume. Features walnut veneer; nondiffractive front edges; black Formica top; constant-voltage crossover with modified QB<sub>2</sub> (distributed poles); all drivers connected in phase. FR essentially flat 32-20,000 Hz on axis; max power 250 W on music; efficiency 90 dB SPL/W/m; imp 5.5 ohms ( $\pm 1$  over 150 Hz); 40"H (including 1 $\frac{1}{2}$ " base) x 16"W x 11 $\frac{1}{2}$ "D (plus 1 $\frac{1}{4}$ " black cloth grille) ..... \$1,549/pr

### Fourier 8 Loudspeaker

Two-way bookshelf speaker with 8" polypropylene-cone long-throw woofer with 20-oz ceramic magnet and 1" aperiodic soft-dome tweeter in Thiele/Small aligned B<sub>4</sub> vented enclosure of 1.3 cubic feet. Features walnut-veneer cabinet with nondiffractive edges; parallel configuration crossover with computer-designed topology to compensate for electromechanical characteristics of drivers and yield actual fourth-order slopes. FR essentially flat from 41-20,000 Hz on axis; max power 200 W music; efficiency 90 dB SPL/W/m; imp 4 ohms ( $\pm 1.5$  ohms) above 125 Hz; 22"H x 11 $\frac{1}{2}$ "W x 12 $\frac{1}{4}$ "D (plus 1 $\frac{1}{2}$ " foam grille) ..... \$799/pr

### Fourier 6 Loudspeaker

Two-way bookshelf speaker with Thiele/Small-aligned C<sub>4</sub> vented enclosure of 0.65 cubic feet. Features 6 $\frac{1}{2}$ " long-throw polypropylene woofer with 20-oz ceramic magnet; 1" aperiodic soft-dome tweeter; parallel configuration fourth-order Bullock crossover; nondiffractive walnut-veneered cabinet. FR essentially flat from 55-20,000 Hz on axis; efficiency 90 dB SPL/W/m; max power 200 W with music; imp 8 ohms; 17 $\frac{1}{2}$ "H x 9 $\frac{1}{2}$ "W x 10 $\frac{3}{4}$ "D (plus 1" removable black foam grille) ..... \$499/pr

## FRAZIER

### Eleven System

Speaker system with 15" and 12" woofers, 4 4" midranges, each pair isolated in separate sealed enclosures, 2 dc piezoelectric horn supertweeters. Crossovers 400 and 4k Hz; efficiency 103-dB SPL/W/m; max power 100 W continuous; imp 4 ohms; stepped high-frequency, midrange controls; oiled-walnut veneer finish; black foam grille; 55"H x 30"W x 18"D ..... \$1,532/pr

### Seven-D System

Floor-standing speaker with 12" woofer, 4 $\frac{1}{2}$ " high-compliance midrange with rolled edge, soft-dome tweeter. Features front-mounted woofer, midrange, tweeter controls; walnut-veneer finish; black knit grille. FR 25-22,000 Hz; power range 5-100 W; imp 8 ohms; crossovers 500 and 4k Hz; efficiency 98 dB SPL/W/m; 29"H x 19"W x 16 $\frac{1}{4}$ "D; 98 lb. .... \$1,124

### Mark V-D System

Speaker system with 12" woofer, 4" midrange, 1" soft-dome tweeter. Features front-mounted woofer,

midrange; midrange, tweeter level controls; walnut-veneer cabinet; knit grille. FR 35-22,000 Hz; power range 5-100 W; imp 8 ohms; efficiency 97 dB SPL/W/m; 25 $\frac{1}{4}$ "H x 14"W x 12 $\frac{1}{2}$ "D; 55 lb \$846/pr

**Concerto D Speaker System**

Floor-standing speaker with 10" woofer, 3" x 7" compression horn tweeter, 1" dome tweeter. Features midrange, tweeter level controls; walnut-veneer finish; knit grille. FR 35-22,000 Hz; power range 5-75 W; imp 8 ohms; crossovers 2 and 4 kHz; efficiency 97 dB SPL/W/m; 21 $\frac{1}{2}$ "W x 16 $\frac{1}{8}$ "D x 16"W; 56 lb ..... \$688/pr

**Mark IV-D Speaker System**

Speaker system with 10" stiff-suspension woofer, 1" dome tweeter. Features front-mounted woofer; tweeter level control; walnut-veneer finish; knit grille. FR 40-22,000 Hz; power range 5-50 W; imp 8 ohms; crossover 4 kHz; efficiency 96 dB SPL/W/m; 24"H x 14"W x 12"D; 44 lb ..... \$510/pr

**Monte Carlo D Speaker System**

Bookshelf speaker with 8" woofer, 1" ferrofluid dome tweeter. Features walnut-veneer finish; black double-knit grille. FR 50-22,000 Hz; power range 5-50 W; imp 8 ohms; efficiency 94 dB SPL/W/m; 19"H x 12"D x 10"W; 31 lb ..... \$320/pr

**CAD-1 System**

Bookshelf speaker with 8" woofer, 3" solid-backed cone tweeter. FR 50-14,000 Hz; crossover 3 kHz; power range 15-32 W continuous; sens 93 dB SPL/W/m; imp 8 ohms; walnut-grain vinyl finish; black knit fabric grille; 19"H x 10 $\frac{1}{2}$ "W x 10 $\frac{1}{2}$ "D ..... \$220/pr

**FRIED PRODUCTS**

**Model O Subwoofer**

Mirror-image dual-channel subwoofer with transmission-line design, 10" woofer. Normal input for use with Fried satellite speakers, biamp input for use with other satellites. Response within 3 dB at 20 Hz; power range 25-200 W; fuse protected; 31"H x 24 $\frac{1}{2}$ "W x 13 $\frac{1}{2}$ "D

Kit ..... \$650/pr  
Factory assembled ..... \$2,500/pr

**Model S.M.** Similar to Model O except max 12" woofer; power 400 W; 38"H x 29 $\frac{1}{2}$ "W x 15"D

Kit ..... \$750/pr  
Factory assembled ..... \$3,000/pr

**G/2A Loudspeakers**

Aperiodic, wide band 3-way loudspeakers incorporating all series crossover networks, high technology drivers and "flow resistance" enclosures for both mid and bass, woofers are high force factor polypropes; mid units are 6 $\frac{1}{2}$ " composite polypropes aperiodic dome; mid and treble units mounted on sloping baffle; cabinet is laminated fibercore with natural walnut overlay; bass chamber has "free flow" filters; black foam grille; FR  $\pm$ 3 dB 22-22,000 Hz; sens 92 dB/2.83V/m; imp 8 ohms, very flat essentially resistive; crossover all series, zero phase error, 99 Hz, 2.5,000 Hz; input power 25-200 W/ch; 44"H x 16"W x 18"D; 100 lb; ..... \$1,700/pr  
**W/2.** Similar to G/2A speakers except tilt back front panel; 8" woofer; FR 25-22,000 Hz; 39"H x 12"W x 18"D; 180 lb ..... \$1,200/pr

**C Satellite Speaker Kit**

Pyramidal 2-way speaker designed for use with Model O subwoofer. Features 6" bass/midrange, dome tweeter; pressure-release damped venting; 10 $\frac{1}{2}$ "

(bottom) x 6" (top) W x 9" (bottom) x 6 $\frac{1}{2}$ " (top) D ..... \$400/pr  
Factory assembled ..... \$800/pr

**A/2 Speaker System**

Speaker system with 18" polypropylene woofer, 1" soft-dome tweeter. Features edge-on free-flow filters; line tunnel. Frequency response 45-20,000 Hz  $\pm$ 3 dB; power range 25-100 W; imp 8 ohms; crossover 2 kHz; sens 89 dB SPL/W/m; 23"H x 13"W x 10 $\frac{1}{2}$ "D ..... \$500/pr

**Q/2 Speaker System**

Speaker system with 8" polypropylene woofer, dome tweeter. Features edge-on free-flow filters; circuit-breaker protection. FR 45-20,000 Hz; power range 20-100 W; vinyl finish; 20"H x 13"W x 10 $\frac{1}{2}$ "D ..... \$350/pr

**Beta Loudspeaker**

Full-range speaker of mini-monitor proportions with polyprope cones and linear crossovers. Features 6 $\frac{1}{2}$ " polyprope woofer; composite tweeter with 2" cone and  $\frac{3}{8}$ " dome; phase compensated, slow-slope crossover; pressure release bass loading free flow filter system; 13 $\frac{1}{2}$ "H x 8"W x 8"D ..... \$250/pr

**GENESIS**

**210 Speaker System**

Floor-standing 2-way speaker with 8" woofer, 10" passive radiator, 1" ferrofluid-suspension inverted-dome tweeter. Features 2-position tweeter control; walnut-grain vinyl finish; beveled low-diffraction-frame black grille. FR 30-20,000 Hz  $\pm$ 4 dB; crossovers 45 and 1.8k Hz; sens 89 dB/W/m; power range 20-100 W; imp 8 ohms; 31"H x 16 $\frac{1}{2}$ "W x 10 $\frac{1}{2}$ "D ..... \$500-\$560/pr

**G 20 Speaker System**

Floor-standing 2-way vented loudspeaker with 8" impact-protected woofer 10" mass-loaded passive radiation; 1" ferrofluid suspension inverted dome tweeter; walnut-grain vinyl cabinet with black grille. FR 34-20,000 Hz4 dB; crossover points at 45 and 1800 Hz; nominal imp 8 ohms; sens 89 dB/W/m on axis; 20-100 W recommended amp power; 27 $\frac{1}{2}$ "H x 14"W x 10 $\frac{1}{2}$ "D; lifetime limited warranty ..... \$450/pr

**110 Speaker System**

Acoustic-suspension 2-way speaker with 10" woofer, 1" ferrofluid-suspension inverted-dome tweeter. Features walnut-grain vinyl finish; low diffraction-frame black grille. FR 38-20,000 Hz  $\pm$ 4 dB; crossover 1.8 kHz; sens 89 dB/W/m; power range 20-100 W/ch; imp 8 ohms; 27"H x 14 $\frac{1}{2}$ "W x 10 $\frac{1}{2}$ "D ..... \$400-\$420/pr

**1 Speaker System**

Acoustic-suspension 2-way speaker with 8" woofer, 1" inverted-dome tweeter. Features walnut-grain vinyl finish. FR 58-20,000 Hz  $\pm$ 4 dB crossover 1.8 kHz; sens 89 dB/W/m; power range 15-50 W; imp 8 ohms ..... \$220-\$240/pr

**Genesis Basic Loudspeaker**

Bookshelf 2-way acoustic suspension loudspeaker with 6" woofer; 1" ferrofluid suspension inverted dome tweeter, walnut vinyl cabinet with black molded grill; FR 68-20,000  $\pm$ 4 dB; 1,800 Hz crossover frequency; nominal imp 8 ohms; sens 89/W/m on axis; 10-50 W recommended amp power; 16 $\frac{3}{8}$ " x 10 $\frac{1}{2}$ "W x 6 $\frac{3}{16}$ "D; lifetime limited warranty ..... \$200/pr

**GOLD SOUND**

**System 14 Speaker Kit**

Floor-standing bass-reflex 4-way speaker kit with 18" JBL woofer, 10" JBL midbass 4" x 8" horn with JBL midrange driver and 5" x 5" JBL horn tweeter. FR 26-21,000  $\pm$  3 dB; power range 10-600 W; efficiency 95 dB; max volume 123 dB (pro version 36-21,000  $\pm$ 3 dB; efficiency 98 dB; max volume 126

dB); 150, 1,200 and 5,000 Hz crossover with midbass, midrange and tweeter level controls; imp 8 ohms; available as single-cabinet full-range system; 46"H x 29"W x 19"D, or separate satellites (23"H x 13"W x 11"D) and subwoofer (36"W x 36"D x 19"H).

Speakers, crossover and plans (with 2 JBL 18") ..... \$1,976/pr  
Speakers, crossover and plans (with one JBL 18") ..... \$1,600/pr

**System 13 Speaker Kit**

Floor-standing bass-reflex 4-way speaker kit with 15" JBL woofer; 10" JBL midbass; 4" x 8" horn midrange and 5" x 5" JBL horn tweeter; FR 28-21,000  $\pm$  3 dB; power range 10-300 W; efficiency 93 dB; max volume 118 dB; 150, 1,200 and 5,000 Hz crossover with midbass, midrange and tweeter level controls; imp 8 ohms available as single cabinet full range systems (36"H x 24"W x 18"D) or separate satellites (23"H x 13"W x 11"D) and subwoofer (32"W x 32"D x 19"H).

Speakers, crossover and plans (with 2 JBL 15") ..... \$1,400/pr  
Speakers, crossover and plans (with 1 JBL 15") ..... \$1,180/pr

**System 12 Speaker Kit**

Floor standing bass-reflex 3-way speaker kit with 15" JBL woofer, 8" x 18" radial horn with EV midrange driver and 5" x 6" EV radial horn tweeter; FR 29-18,000  $\pm$  3 dB; power range 10-300 W; efficiency 93 dB; max volume 118 dB; (pro version, 97 dB efficiency, 122 dB; max 44-18,000  $\pm$  3 dB; 500 and 5,000 Hz crossover with midrange and tweeter level controls; imp 8 ohms 36"H x 24"W x 18"D. Speakers, crossover, and plans ..... \$998/pr

**System II Speaker Kit**

Floor-standing 3-way bass-reflex speaker kit with 2 10" JBL woofers 5" JBL midrange and 5" x 6" EV radial horn tweeter; FR 36-18,000  $\pm$  3 dB; power range 10-200 W; efficiency 93 dB; max volume 116 dB; 60C and 4,000 Hz crossovers; midrange and tweeter level controls; imp 4 ohms; 30"H x 19"W x 12"D. Speakers, crossovers and plans ..... \$789/pr

**System 10 Studio Monitor Kit**

Bookshelf bass-reflex 4-way speaker kit with 12" JBL woofer; 5" JBL midrange; 1 ferrofluid soft-dome tweeter; ribbon supertweeter; FR 38-20,000  $\pm$ 3 dB; power range 10-150 W; efficiency 92 dB; tweeter level controls; imp 8 ohms; oiled walnut finish with brown grille cloth; 26"H x 16"W x 12"D. Speakers, crossovers and plans ..... \$569/pr  
Above with cabinet kit ..... \$769/pr

**System 9 Speaker Kit**

Bookshelf bass-reflex 4-way speaker kit with 10" JBL woofer; 4" polypropylene midrange with ferrofluid; 1" ferrofluid soft-dome tweeter ribbon supertweeter; FR 39-20,000  $\pm$ 3 dB; power range 10-150 W; efficiency 90 dB; max volume 112 dB; 350 4,000 Hz and 10,000 Hz crossover; imp 8 ohms; oiled-walnut finish brown grille cloth; 26"H x 16"W x 12"D. Speakers, crossover and plans ..... \$499/pr  
Above, with cabinet kit ..... \$699/pr

**System 8 Speaker Kit**

Floor standing bass-reflex 4-way speaker kit with two 8" JBL woofers; 4" polypropylene midrange with ferrofluid; 1" ferrofluid soft dome tweeter, ribbon supertweeter; FR 36-20,000  $\pm$ 3 dB; power range 10-120 W; efficiency 92 dB; max volume 112 dB; 400, 4,000 Hz and 10,000 Hz crossovers; imp 4 ohms; 30"H x 19"W x 12"D; speakers, crossover and plans ..... \$444/pr

**System 7 Speaker Kit**

Floor-standing bass-reflex 4-way speaker kit with two 12" polypropylene woofers 6" polypropylene midrange 1" ferrofluid dome tweeter and ribbon supertweeter; FR 36-20,000 Hz  $\pm$ 3 dB; power range 20-200 W; efficiency 95 dB; max volume 118 dB; crossover 150, 4,000 Hz and 10,000 Hz; 8 ohms;

**NEED MORE INFORMATION?**

Write directly to the manufacturer or distributor. A list of names and addresses starts on page 25.

single cabinet full-range system (39"H x 19"W x 12"D) or separate satellites (14"H x 8"W x 5"D) and subwoofer (18"H x 32"W x 32"D). Speakers, crossover and plans ..... \$378/pr

**System 6 Speaker Kit**

Floor-standing bass-reflex 3-way speaker kit with two 10" polypropylene woofers; 6" polypropylene midrange and 1" ferrofluid soft-dome tweeter; FR 39-20,000 ±3 dB; power range 10-160W; efficiency 94 dB; max volume 116 dB; crossovers 150 and 4,000 Hz; imp 8 ohms; single-cabinet full-range system 30"H x 19"W x 12"D or separate satellites (14"H x 8"W x 5"D) and subwoofer (18"H x 29"W x 29"D). Speakers, crossover and plans ..... \$298/pr

**System 5 Mini Monitor Speaker Kit**

Compact bass-reflex 3-way speaker kit with 8 JBL woofer; 4" polypropylene midrange with ferrofluid and 1" ferrofluid soft-dome tweeter; FR 45-20,000 ±3 dB; power range 20-80 W; efficiency 89 dB; max volume 108 dB; 400 and 4,000 Hz crossovers; imp 8 ohms; oiled-walnut finish brown grille cloth 19"H x 11"W x 9"D. Speakers, crossover and plans ..... \$264/pr  
Above with cabinet kit ..... \$364/pr

**System 4 Speaker Kit**

Bookshelf bass-reflex 3-way speaker with 12" polypropylene woofer; 4" polypropylene midrange with ferrofluid and 1" ferrofluid soft-dome tweeter; FR 38-20,000 ±3 dB; power handling 10-100 W; efficiency 92 dB; max volume 111 dB; 400 and 4,000 Hz crossover imp 4 ohms; oiled walnut finish brown grille cloth; 26"H x 16"W x 12"D. Speakers, crossover and plans ..... \$198/pr  
Above with cabinet kit ..... \$398/pr

**System 3 Speaker Kit**

Bookshelf bass-reflex 3-way speaker kit with 10" polypropylene woofer; 4" polypropylene midrange with ferrofluid and 1" ferrofluid soft-dome tweeter; FR 42-20,000 ±3 dB; power range 10-80 W; efficiency 92 dB; max volume 111 dB; 400 and 4,000 Hz crossovers; imp 4 ohms; oiled-walnut finish, brown grille cloth. Speakers, crossover and plans ..... \$169/pr  
Above with cabinet kit ..... \$289/pr

**System 2 Speaker Kit**

Compact bass-reflex speaker kit with 8" polypropylene woofer and 1" ferrofluid soft dome tweeter; FR 46-20,000 ±3 dB; power range 10-80 W; efficiency 91 dB; max volume 110 dB; 3,000 Hz crossover; imp 4 ohms; oiled-walnut finish, brown grille cloth; 19"H x 11"W x 9"D. Speakers, crossover and plans ..... \$99/pr  
Above with cabinet kit ..... \$199/pr

**System 1 Speaker Kit**

Compact bass-reflex 2-way speaker with 6" polypropylene woofer and 1" ferrofluid soft-dome tweeter; FR 50-20,000 ±3 dB; power range 10-60 W; efficiency 91 dB; max volume 108 dB 3,000 Hz crossover; imp 8 ohms; oiled walnut finish; brown grille cloth 19"H x 11"W x 9"D. Speakers, crossover and plans ..... \$69/pr  
Above, with cabinet kit ..... \$169/pr

**GRAFYX**

**Grafyx 1**

Two-way speaker with vented enclosure features 5 1/4" polypropylene foam-surrounded woofer with 1" high-temp aluminum voice coil and 10mm, ultra-light, polycarbonate dome tweeters. Vinyl laminate cabinet. FR 50-20,000 Hz, power handling 5-50 W/ch; 12"

x 8 1/16" x 7 1/16"; 13 lb ..... \$198/pr

**Grafyx 2**

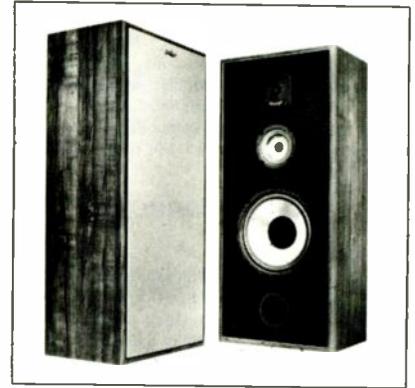
Two-way speaker housed in vented enclosure features 6" polypropylene foam-surround woofer with 1" high-temp aluminum voice coil and 1" ferrofluid-damped, linen, soft-dome tweeter. Utilizes wood-grained, vinyl-laminated cabinet. FR 45-20 KHz with system resonant frequency of 55 Hz at max amplitude; imp of 8 ohms nominal; crossover 6.4 KHz; sens 92 dB at 1 KHz, 1 W; power handling 5-65 W/ch; 23" x 11 1/2" x 8 1/32"; 27 lbs ..... \$298/pr

**Grafyx 3**

Two-way, vented enclosure speaker system features 8" polypropylene foam-surround woofer with 1", high-temp aluminum voice coil and 1" ferrofluid-damped, linen, soft dome tweeter. Utilizes wood-grained, vinyl-laminated cabinet. FR 41-20 KHz with system resonant frequency of 45 Hz at max amplitude; imp 8 ohms nominal; crossover 2.5 KHz; sens 90 dB at 1 KHz, 1 W; power handling 5-75 W/ch; 27 1/2" x 13 1/16" x 9 1/16"; 38 lbs ..... \$398/pr

**Grafyx 4**

Three-way vented enclosure speaker system features 10" polypropylene foam-surround woofer with 1 1/2",



high-temp aluminum voice coil, 5" sealed-back polypropylene midrange and 1" ferrofluid-damped, linen, soft dome tweeter. Utilizes wood-grained, vinyl-laminated cabinet. FR 30-20 KHz with system resonant frequency of 37 Hz at max amplitude; imp of 8 ohms nominal; crossover 1.8-7 kHz; sens is 91.5 dB at 1 kHz, 1 W; power handling 5-100 W/ch; 32 1/4" x 14 1/4" x 10 1/32"; 53 lbs ..... \$498/pr

**HARTLEY PRODUCTS**

**The Reference**

Floor-standing 4-way speaker with 24" super woofer, 10" midrange, two 7" tweeters, 1" supertweeter. Crossovers 250, 3k, 7k Hz; FR 16 25,000 Hz; power range 25-300 W; imp 5-8 ohms; wood cabinet with removable knit grille; 50 1/4"H x 36"W x 24"D ..... \$4,340/pr

**The Concertmaster**

Floor-standing 4-way speaker with 18" woofer, 10" midrange, (2) 7" tweeters crossovers 250, 3k, 7k Hz; FR 16-25,000 Hz; power range 25-300 W; imp 5-8 ohms; wood cabinet with removable black grille; 41 1/2"H x 29"W x 18"D ..... \$3,340/pr

**H-Series**

All cabinets in H Series have hand-rubbed walnut veneers, black knit grilles.

**H-100.** Aligned air-column speaker with 8" long-throw woofer with 1 1/2" high-temperature voice coil, chemically treated cone, 1 1/2" air-column midrange, 2" low-mass cone tweeter. FR 50-20,000 Hz ±4 dB; power range 5-50 W rms, unclipped; crossover 2.3 kHz; 21 1/2"H x 10 1/2"W x 10 1/2"D ..... \$320/pr  
**H-200.** Aligned air-column speaker with 10" long-throw woofer with 1 1/2" high-temperature voice coil, chemically treated cone, 2 1/2" air-column midrange,

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CIRCLE NO. 34 ON READER SERVICE CARD

1" coated mylar dome tweeter. FR 35-25,000 Hz  $\pm$ 3 dB; power range 5-100 W rms; imp 8 ohms; crossover 2.6 kHz; 30"H x 15"W x 15"D ..... \$550/pr  
**H-300.** Aligned air column speakers with 2 10" long-throw woofers with 1 1/2" high-temperature voice coil, chemically treated cone assembly, 4 1 1/2" air-column midranges, 2 1" mylar dome tweeters. FR 30-25,000 Hz  $\pm$ 3 dB; power range 5-150 W rms; imp 4 ohms; crossover 3.4 kHz; 43"H x 15"W x 15"D. \$850/pr

**SPL-1 System**

System includes 2 SW-10 bass modules, ST-4 phasor arrays, tilt stands for SW-10, aluminum adjustable stands for ST-4, mounting screws, stereo crossover, Allen key. All parts have hand-rubbed walnut veneers; black knit grilles. System FR 38-25,000 Hz  $\pm$ 2 dB.  
**SW-10.** Aligned air-column bass module with 10" woofer with 1" high-temperature dual voice coil, polymer cone, magnetic suspension, EFM magnet; 3" polymer cone midrange, magnetic suspension, with 2 3" air columns; imp 6 ohms; power 15-100 W rms.  
**ST-4.** Polar-aligned phasor with phasor-array supertweeter; imp 8 ohms; power range 15-150 W rms; 12"H x 5"W x 5"D.  
 System price ..... \$1550

**HEYBROOK by MECOM**

**Heybrook HB-1**

Acoustic suspension 2-way bookshelf speaker with 8" doped cone woofer; 1" dome tweeter. Features removable rear panel for bi-amplification. FR 42-18,000 Hz; imp 8 ohms; power range 10-75 W. Finishes walnut vinyl and gloss black. 18 3/4"H x 11 1/2"W x 9 3/4"D; 19 lbs ..... \$678/pr

**Heybrook HB-2**

Reflex tuned 2-way bookshelf speaker with 6 1/2"

bextrene woofer; 1" dome tweeter; 15 element crossover; FR 40-20,000 Hz; imp 8 ohms; power range 20-75 W. Finishes real walnut, teak, oak, and gloss black. 16 1/2"H x 9 3/4"W x 9 3/4"D; 19 lbs .. \$978/pr

**Heybrook HB-3**

Acoustic suspension 3-way speaker with 10" doped cone woofer; 4" doped cone midrange and 3/4" dome



tweeter; removable rear panel for bi- and tri-amplification. FR 35-20,000 Hz; power range 15-20 W. Finishes real walnut, teak, and gloss black. 25"H x 13 3/4"W x 11 1/4"D; 46 lbs ..... \$989/pr

**HITACHI**

**HS-410 Speaker System**

Bass-reflex speaker with 30-cm metal-cone woofer, 10-cm metal-cone midrange, 2.5-cm metal-cone tweeter. Features midrange, tweeter level controls;

Padouk finish; removable brown cloth grille. FR 35-20,000 Hz -15 dB; crossovers 1k and 3.5k Hz; rated/max power 60/120 W; sens 91 dB SPL/W/m; imp 8 ohms; 26 1/8"H x 14 3/8"W x 12 3/8"D; 31 lb 14 oz ..... \$600/pr  
**HS-310.** Similar to HS-410 except has 25-cm woofer, no controls. Crossovers 1 and 4 kHz; rated/max power 50/100 W; 22 1/4"H x 12 3/4"W x 12 3/4"D; \$400/pr



**HSA Series Speaker Systems**

All speakers in this series are ported bookshelf designs with wood-grain vinyl finish, removable black cloth grille.

**HSA3122.** 3-way system with 12" woofer, 5" midrange, 2" horn tweeter. FR 35-20,000 Hz; max power 80 W rms; imp 8 ohms; 26 1/4"H x 15 1/4"W x 12 3/8"D; 37 lb ..... \$340/pr

**HSA3102.** Similar to HSA3122 except has 10" woofer. Low-end response 40 Hz; max power 50 W; 23 1/4"H x 13 1/2"W x 10 3/4"D; 28 lb .. \$260/pr

**HSA2102.** Similar to HSA3122 except 2-way system with 10" woofer, 2 1/2" tweeter. Low-end frequency re-

**MADE FOR MUSIC HEYBROOK**

**THE HEYBROOK TONEARM**



A perfect match for the TT2

**HB1**

A lively new performer joins the range. Easily driven by budget amplifiers, yet possessing an open dynamic quality capable of reproducing musical subtleties revealed by the very best systems. Convertible for active operation.



**HB3**

A monitor quality loud speaker. The performance is best described as exciting. The dynamic range and extraordinary clarity allow the listener to easily relate to the musical performance. Now convertible for active operation.



**TT2**



A two-speed turntable, incorporating a massive suspended chassis within a substantial solid plinth. The resulting sound is clean and lively with satisfying solidity and weight. High quality engineering for high quality musical reproduction.

**HB2**

A classic design. Highly acclaimed for five years. The neutral spacious and uncoloured reproduction is enhanced by an amazingly extended bass which gives music the realism usually lacking in small speakers.



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sponse 45 Hz; 22<sup>7</sup>/<sub>32</sub>"H x 12<sup>7</sup>/<sub>16</sub>"W x 10<sup>1</sup>/<sub>2</sub>"D; 24 lb ..... \$200/pr

**HSA 4121 Tower Speakers**

12" 3-way tower speakers. Features 12" woofer with 12" passive radiator; 2<sup>1</sup>/<sub>2</sub>" x 5<sup>1</sup>/<sub>2</sub>" tweeter; 4<sup>1</sup>/<sub>8</sub>" midrange; acoustically transparent knit grille; pushbutton connector terminals; auto reset circuit breaker protection; Frequency response 30-30,000 Hz useable, ±4dB. 60Hz to 20,000Hz; imp 8 ohms; sens 91 dB/W/m, pink noise input, anechoic conditions; max power handling 80 W rms ..... \$440/pr

**HS-70F Speaker System**

3-way bass-reflex speaker system with 30cm woofer and 2cm tweeter. Features urethane foam-filled flat-cone woofer; foam-filled flat-cone midrange; flat dome tweeter; metal cones; gathered edge speaker cones; internal crossover circuitry uses more than 99.99% pure oxygen-free copper wiring. Frequency response 30-20,000 Hz -15dB; crossover frequencies 630, 3150 Hz; nominal impedance 4-8 ohms 16<sup>1</sup>/<sub>4</sub>"W x 26<sup>1</sup>/<sub>2</sub>"H x 15<sup>1</sup>/<sub>8</sub>"D; 55 lb ..... \$1,600/pr

**HS-50F.** Similar to HS-70F except for diffraction-effect self-compensated midrange and tweeter design and Frequency response 35-20,000 Hz -15dB; crossover frequencies 630, 2,800 Hz; nominal imp 6 ohms; 14<sup>1</sup>/<sub>8</sub>"W x 24<sup>1</sup>/<sub>8</sub>"H x 14<sup>1</sup>/<sub>8</sub>"D; 42 lb ..... \$1,760/pr

**HS-40F.** Similar to HS-50F except for FR 40-20,000 Hz -15dB; crossover frequencies 800, 2800 Hz; 12<sup>1</sup>/<sub>2</sub>"W x 22<sup>1</sup>/<sub>8</sub>"H x 12<sup>1</sup>/<sub>8</sub>"D; 31 lb . \$1,360/pr

**IDS by BECKER**

**IDS Model V Speaker**

Ducted-port speaker with LED for power indication; tweeter and midrange level control; quick-connect ter-

minals; crossover points 900, 5,000 Hz; FR 25-20,000 Hz; operative power range 10-100 W; system resonance 42 Hz; SPL 93 dB/W/m; imp 4 ohms; 35<sup>3</sup>/<sub>4</sub>" x 13" x 12" ..... \$270

**IDS Model III Speaker**

Ducted-port speaker with LED power indicator; tweeter and midrange level control, quick-connect terminals; crossover points 1,500, 6,000 Hz; FR 40-20,000 Hz; power range 10-80 W; system resonance 45 Hz; SPL 91 dB/W/m; 8 ohms; 27" x 15" x 10" ..... \$230

**IDS Model II**

Ducted-port speaker with quick-connect terminals, 10" woofer, 5" midrange; 3" acoustic lens tweeter; crossover point 2,000, 6,000 Hz; FR 45-19,000 Hz; operative power range 5-50 W; system resonance 48 Hz; SPL 91 dB/W/m; imp 8 ohms; 22" x 13" x 10" ..... \$160

**IDS Model I**

Ducted-port speaker with quick-connect terminals, 8" woofer, 3" acoustic lens tweeter; crossover point 3,000 Hz; FR 50-19,000 Hz; operative power range 5-30 W; system resonance 50 Hz; SPL 91.5 dB/W/m; imp 6.8 ohms; 19" x 11" x 8" .. \$120

**IMF ELECTRONICS**

**Special Application Control Monitor**

Features styrene and fibreglass coned bass driver; internal bracing of midrange and bass enclosures; ferro-fluid-cooled tweeter and supertweeter; external heavy audio cable; internal low-loss multi-strand heavy, flexible configuration; frequency tilt control, slope adjustment; supplied with stands, damping separators, brackets and interconnecting harness; ve-

neered in American walnut. Drive units: 300 x 210mm (11<sup>3</sup>/<sub>8</sub>" x 8<sup>1</sup>/<sub>8</sub>" styrene/fibreglass cone; 130mm (5") midrange—engineered polymer cone; 45mm (1<sup>3</sup>/<sub>8</sub>" tweeter; high-gauss ferro-fluid damped 20mm (3/4") HF tweeter; crossover frequencies 350 Hz, 3,000 Hz, and 13,000 Hz; FR 17 Hz-40,000 Hz; efficiency 80-82 dB W/m with plnk noise; imp 8 ohms; recommended power >50 W/ch rms; 50<sup>1</sup>/<sub>8</sub>" x 16<sup>1</sup>/<sub>4</sub>" x 18<sup>1</sup>/<sub>4</sub>"; 220 lb ..... \$4,600/pr

**Reference Standard Mk. VII**

Floor-standing 4-way speaker with 11<sup>3</sup>/<sub>8</sub>" x 8<sup>1</sup>/<sub>8</sub>" woofer, 5" midrange, 1<sup>3</sup>/<sub>8</sub>" tweeter, 3/4" supertweeter. Features tilt, slope controls; heavily braced cabinet; American walnut finish; removable grille. FR 17-40,000 Hz; crossovers 350, 3k, 13k Hz; sens 80-82 dB at 1 W, depending on control settings; min power 50 W rms; imp 8 ohms; 45<sup>1</sup>/<sub>8</sub>"H with stand x 19<sup>1</sup>/<sub>8</sub>"W x 16<sup>1</sup>/<sub>4</sub>"D ..... \$3,600/pr with stands

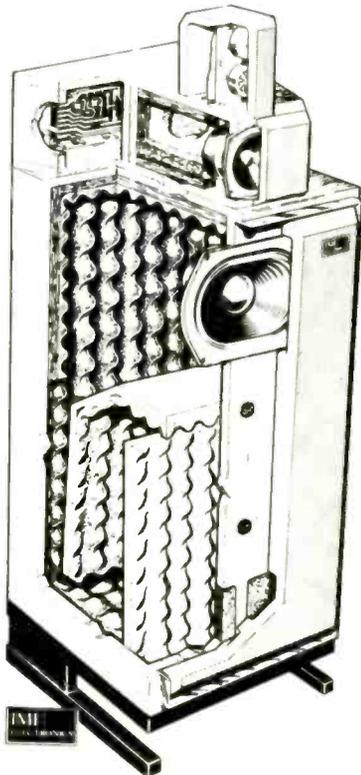
**Professional Monitor Speaker System**

Floor-standing 4-way speaker with 11<sup>3</sup>/<sub>8</sub>" x 8<sup>1</sup>/<sub>8</sub>" woofer, 5" midrange, 1<sup>3</sup>/<sub>8</sub>" tweeter, 3/4" supertweeter. Features perspective control; heavily braced cabinet; American walnut finish; removable grille. FR 19-40,000 Hz; crossovers 350, 3k, 13k Hz; min power 40 W rms; sens 82 dB at 1 W; imp 8 ohms; 41<sup>1</sup>/<sub>8</sub>"H with stand x 18<sup>1</sup>/<sub>8</sub>"W x 15<sup>1</sup>/<sub>8</sub>"D ..... \$2,580/pr with stands

**Studio Monitor Speaker System**

Floor-standing 3-way speaker with 8" woofer, 4" midrange, 3/4" tweeter. Features perspective control; heavily braced cabinet; American walnut finish; removable grille. FR 23-40,000 Hz; crossovers 375 and 3k Hz; min power 30 W rms; sens 81 dB at 1 W; imp 8 ohms; 39<sup>1</sup>/<sub>8</sub>"H with stand x 15<sup>1</sup>/<sub>8</sub>"W x 13<sup>1</sup>/<sub>8</sub>"D ..... \$1,575/pr with stands

**IMF Electronics Has A Wide Range Of Loudspeakers For The Wide-Range Sounds Of The Digital Era.**



Whether it be for a baronial hall in an English "stately home" or for discriminating audiophiles who simply want the very best reproduction of their recordings, or as a ruthlessly accurate loudspeaker which can cope with the rigorous demands of professional high level monitoring at recording sessions, our top of the line Special Application Control Monitor is the obvious choice.

The SACM is a big (50"H x 16"D x 18"W) loudspeaker with a big sound. Constructed of epoxy-saturated high density particle board, this virtually inert material minimizes resonant colorations. The SACM employs IMF Electronics latest embodiment of transmission-line bass loading. This complex structure requires a high degree of craftsmanship in its construction. With its special internal damping, it provides ultra-low distortion bass response down to 17 Hz — bass that is almost palpable and of visceral impact. All IMF Electronics drive units are manufactured in our own factory. The bass driver is our 11<sup>3</sup>/<sub>8</sub>" x 8<sup>1</sup>/<sub>8</sub>" styrene/fibreglass cone, crossing over at 350 Hz to our 5 inch polymer cone mid-range driver which is housed in its own special wedge-shaped enclosure, whose non-parallel sides eliminate standing waves. At 3 kHz our 1<sup>3</sup>/<sub>8</sub>" ferro-fluid damped tweeter comes into play and at 13 kHz our ferro-fluid damped 3/4" chemical dome super-tweeter extends the high frequency response to 40 kHz!

For those who want the ultimate expression of the dynamic capabilities of the CD digital discs, the SACM is at the pinnacle of audio performance.

The advantages of transmission-line bass loading are also available in our R.S.P.M. Mark VII, Professional Monitor and least expensively, in our Studio Monitor.

The superior performance characteristics of our Special Application Control Monitor are unique, but for those who simply are limited in space or do not have the wherewithal for the SACM, we suggest they audition our extraordinary HPCM (High Performance Control Monitor).

We do not know of any other loudspeaker of its size (26.8"H x 14.8"D x 11.6"W) that has a frequency response of 37 Hz to beyond audibility, and can reproduce the full dynamic range of digital discs at very high playback levels.

The HPCM gives the smooth, clean, highly-detailed sound that characterizes our Special Application Control Monitor in a compact, no-compromise, cost effective system.

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**HPCM Speaker**

Compact high performance control monitor. Features narrow baffle with reverse angled edges; styrene and fibreglass coned woofer; ferro fluid damped; mid range and tweeter; in-line drive units; full third-order crossover. Crossovers at 300 Hz and 2.8k Hz; FR 37 Hz to beyond audibility; efficiency pink noise -86 dB W/m; 8 ohms; power >30 W/ch rms; walnut veneer brown foam fronts; 26.8" x 14.8" x 11.6"; 79.20 lb ..... \$1,196/pr

**CM2a Compact Loudspeaker**

Of acoustic suspension design with ferro fluid damped tweeters, ferro fluid damped midrange, flat baffles, and frameless foam grilles. Drive units 200mm tweeter soft dome, ferro fluid; crossover frequency 3,000 Hz; FR 54 Hz to beyond audibility; efficiency 86 dB W/m with pink noise; imp 8 ohms nominal; power range 10-100 W/ch rms; walnut veneer, with brown foam fronts, optional black lacquer with black foam fronts; 482 x 255 x 271mm wide; 13.4 lb ..... \$395/pr

**CM3a.** Same as CM2a except drive units 200mm bass unit plastic cone, 100mm midrange plastic cone, ferro fluid; crossover frequency 340 Hz and 3.2k Hz; FR 45 Hz to beyond audibility; efficiency 84 dB W/m with pink noise; imp 8 ohms nominal; recommended power 20-150 W/ch rms; walnut veneer with brown foam fronts, optional black lacquer with black foam fronts; 572 x 280 x 302mm wide; 26.5 lb ..... \$675/pr

**MCR 2A Speaker System**

Acoustic-suspension 2-way speaker with 5" mid-woofer, 3/4" tweeter. Features American walnut veneer finish; removable grille. FR 65-40,000 Hz; crossover 3 kHz; min power 20 W rms; sens 83 dB at 1 W; imp 8 ohms; 14 7/8" H x 9" W x 9" D ..... \$465/pr

**INFINITY****IRS Reference Standard Speaker System**

Modular 4-piece 3-way floor-standing speaker: 2 woofer modules with 6 12" woofers in feedback loop of servo amp (2 1,500-W woofer amps), 2 midrange/tweeter modules with 12-dipole midrange drivers, 36 tweeters in dipole line-source array (24 front/12 rear-facing). Features bass variable low-pass filters; low-pass variable damping; woofer level controls; selectable input imp midrange/tweeter amp control; woofer phase switch; servo bass on/off circuit; Monster Cable wiring for midrange, woofer. FR 16-40,000 Hz  $\pm$ 2 dB; crossovers 70 Hz nominal, 60-120 Hz at main control unit woofer/midrange, 5 kHz midrange/tweeter; midrange/tweeter amp input range 100-500 W/ch; oiled and "Grand Piano" Indian Rosewood finish; includes 100-ft cable for hookup of midrange/tweeter to midrange/tweeter amp. Woofer modules: 7'6" H x 18" square; midrange/tweeter modules 7'6" H x 40" W (with hollow and sand-filled curved wing sections) ..... \$30,000/system

**Reference Standard Series Speakers****Reference Standard 1**

Modular 4-piece floor-standing speaker: 2 woofer modules with 6 servoed 8" polypropylene woofers, 2 midrange/tweeter curved sections with 7 dipole EMIT drivers, 3 EMIT tweeters, 1 super-high-dispersion EMIT in dipole source array. Features bass variable low-pass filters; low-pass variable damping with level control; selectable imp controls for midrange/tweeter amp; bass amp phase switch; servo-controlled bass circuitry; Monster Cable throughout; mid-tweeter, high-tweeter control on rear of midrange/tweeter module; lacquered oak and hardwood veneers. FR 22-32,000 Hz  $\pm$ 1.5 dB; woofer crossover variable 100-200 Hz; crossovers 125, 750, 3k, 8k Hz; 60" H x 12" W x 12" D bass column; 60" H x 24" W screens ..... \$4,995/system

**Reference Standard IIa Speaker System**

Floor-standing 5-way w/active equalizer (contour and

level) for extended low FR. 3 EMIM midrange drives, 2 EMIT (1 front, 1 back) tweeters, and 1 EMIT supertweeter. Oak diffraction wings. 55" H x 25" W x 20" D ..... \$2,995/system

**Reference Standard IIIa Speaker System**

Floor-standing 3-way speaker with 2 10" polypropylene woofers with L-C tuning for bass extension, 2" polypropylene dome midrange, EMIT tweeter. Designed for min diffraction distortion. Features hand-rubbed oak hardwoods and veneers. FR 35-32,000 Hz  $\pm$ 3 dB; crossovers 1 and 4 kHz; power range 50-200 W; 48" H x 18" W x 7 1/2" D ..... \$1,300/pr

**Reference Standard 4 Speaker System**

Floor-standing 3-way speaker with 2 8" polypropylene woofers with L-C tuning for bass extension, 2" polypropylene dome midrange, EMIT tweeter. Features hand-rubbed oak hardwoods and veneers. FR 40-32,000 Hz  $\pm$ 3 dB; crossovers 1 and 4 kHz; power range 40-150 W; imp 4-8 ohms; 33" H x 13 1/2" W x 10" D ..... \$940/pr

**Reference Standard 5.** Similar to Reference Standard 4 except has 2 6 1/2" woofers; 43-32,000 Hz  $\pm$ 3dB. Power range 35-125 W; 28 1/4" H ..... \$770/pr

**Reference Standard 6 Speaker System**

Floor-standing or bookshelf 3-way speaker with 8" polypropylene woofer with L-C tuning for bass extension, 2" polypropylene dome midrange, EMIT tweeter. Features hand-rubbed oak hardwoods and veneers. FR 45-32,000 Hz  $\pm$ 3 dB; crossovers 600 and 4k Hz; power range 35-100 W; imp 4-8 ohms; 22" H x 13 1/2" W x 10" D ..... \$598/pr

**RS Series Speakers**

**RS-7.** Sealed-box 3-way speaker with 8" polypropylene woofer, 5" midrange, EMIT tweeter. Features midrange, tweeter controls; oak-vinyl finish. FR 45-32,000 Hz  $\pm$ 3 dB; crossovers 500 and 5k Hz; power range 35-125 W; imp 4-8 ohms; 23" H x 13" W x 9 1/2" D ..... \$430/pr

**RS-8a.** 3-way, sealed box w/6 1/2" polypropylene woofer, 4 1/2" polypropylene midrange and 3/4" PolyCell tweeter. 47-22,000 Hz  $\pm$ 3dB. 4-8 ohms 23" D x 12" W x 9 1/2" D ..... \$338/pr

**RS-9.** Has 2 6 1/2" polypropylene woofers, PolyCell dome tweeter, no controls. FR 48-22,000 Hz; crossover 2.5k Hz; 18" H x 12" W x 9 1/2" D ..... \$218/pr

**RS-10.** Smaller version of RS9. 6 1/2" polypropylene woofer and 3/4" PolyCell tweeter. 13 1/2" H x 8 3/4" W x 7 3/4" D ..... \$158/pr

**Infinitesimal III Speaker System**

Die-cast 2-way mobile or home speaker with 5" polypropylene woofer, EMIT tweeter. Accessory bracket available. FR 65-32,000 Hz  $\pm$ 3 dB; crossover 3 kHz; power range 10-60 W; 11 1/4" H x 6 1/4" W x 5 3/4" D ..... \$398/pr

**INTERAUDIO****Alpha Four Speaker System**

Floor-standing speaker with 10" woofer, 10" Dual Compliance™ passive radiator, 6 1/2" midrange, 2 3" tweeters with OmniVector™ lenses. Features automatic tweeter protection and Total System Protection with fiber-optic indicators; push-type input terminals; walnut-grain vinyl finish; removable black cloth grille. FR 24-20,000 Hz; crossovers 60, 400, 2.5k Hz; power range 15-200 W continuous; sens 91 dB; imp 8 ohms; 44" H x 14 1/2" W x 11 1/2" D ..... \$918/pr

**Alpha Three.** Similar to Alpha Four except no passive radiator, single tweeter/lens assembly. Low-end response 28 Hz; crossovers 400 and 2.5k Hz; max power 150 W; sens 90 dB; 32" H ..... \$680/pr

**Alpha Two.** Similar to Alpha 3 except bookshelf design with no midrange driver. Low-end response 32 Hz; crossover 2 kHz; sens 89 dB; max power 100 W; 22 1/4" H x 13 1/4" W ..... \$478/pr

**Alpha One.** Similar to Alpha 2 except 8" woofer. Low-end response 38 Hz; power range 10-75 W continuous; 18 1/4" H x 11 1/2" W x 9 1/2" D ..... \$318/pr

**INTEREGO SYSTEMS**  
(see Ego Systems Loudspeakers)**JAMO****CBR 1703 Speaker System**

Floor-standing bass-reflex 4-way speaker with 13" woofer, 7" midrange, 2" dome high midrange, 1" dome tweeter. Features midrange, tweeter controls; tweeter/midrange overload diodes; pedestal FR 22-22,000 Hz; crossovers 350, 1.5k, 5.5k Hz; max peak/continuous power 250/170 W; sens 96 dB at 1 m. 1.2 W; imp 4-8 ohms; 32" H x 17" W x 14" D; 68 lb ..... \$650

**CBR 1303.** Similar to 1703 except 3-way system with 11" woofer, 4 1/2" midrange, 1" dome tweeter. Low-end response 24 Hz; crossovers 750 and 4k Hz; peak/continuous power 200/130 W; sens 96 dB at 1.8 W; 28" H x 14" W x 13" D; 46 lb ..... \$440

**CBR 903.** Similar to 1302 except floor-standing/bookshelf design with 8 1/2" woofer, 4 1/2" midrange, 1" dome tweeter. FR 28-20,000 Hz; crossovers 800 and 4.5k Hz; peak/continuous power 140/90 W; sens 96 dB at 2.1 W; 24" H x 12" W x 11" D; 31 lb ..... \$300

**703.** Similar to CBR 902 except has 9" woofer, no midrange control. Low-end response 32 Hz; crossovers 900 and 4.5k Hz; peak/continuous power 100/70 W; sens 96 dB at 2 W; 21" H x 11" D x 10" W; 22 lb ..... \$220

**503.** Similar to 703 except 2-way design with 9" woofer, 1" dome tweeter; has no controls, only tweeter overload diode. Low-end response 34 Hz; crossover 1.8 kHz; peak/continuous power 80/50 W; sens 96 dB at 2.3 W; 19" H x 10" W x 9" D; 16.5 lb \$150

**Mini CBR Speaker System**

Compact 2-way bass-reflex speaker with 5 1/2" woofer, 1" dome tweeter. Features tweeter overload protection. FR 37-20,000 Hz; crossover 1850 Hz; max power 110 W music; sens 92.2 dB SPL/W/m; imp 4-8 ohms; 12" H x 10" D x 7 1/2" W; 12 lb ..... \$170

**Power Series**

All models in black and walnut finish, have removable grilles.

**P 500 Speaker System**

Floor-standing 3-way CBR speaker with 12" woofer, 15 1/2" x 3 1/4" horn midrange with 2" driver, 5 3" horn tweeters with 1" drivers. Features midrange, tweeter controls; midrange, tweeter overload protection; pedestal. FR 22-20,000 Hz; crossovers 1 and 4.5 kHz; max power 500 W music; sens 96.1 dB SPL/W/m; imp 4-8 ohms; 30" H x 18" W x 14" D; 75 lb ..... \$600

**P 350.** Similar to P 500 except has 9 3/4" woofer, 13" x 3 1/4" horn midrange, single 5 1/2" x 2 1/2" horn tweeter. Crossovers 1.25 and 5 kHz; max power 350 W music; sens 96 dB SPL/W/m; 26 1/2" H x 15" W x 12" D; 48.5 lb ..... \$370

**P 200.** Similar to P 350 except has 8 1/4" woofer, 11" x 2 1/4" horn midrange, 5 1/2" x 2 1/2" horn tweeter, no controls. Low-end response 25 Hz; crossovers 1.4 and 4.8 kHz; max power 200 W music; sens 95.6 dB SPL/W/m; 23 1/2" H x 13" W x 10 1/2" D; 33 lb ..... \$260

**P 150.** Similar to P 200 except 2-way bass-reflex design with 8 1/4" woofer, 5 1/2" x 2 1/2" tweeter. Low-end response 30 Hz; crossover 2.5 kHz; max power 150 W music; sens 95.8 dB SPL/W/m; 20" H x 12" W x 9" LD; 19.8 lb ..... \$160

**JBL****L Series****D44000 Paragon Speaker System**

Radial-reflection, dual 3-way floor-standing speaker with 2 15" compression horn woofers, 2 compression midranges, 2 uhf ring radiators. Features midrange, uhf level controls; special dispersion surface to recreate stereo image; oiled walnut finish. Crossovers 500 and 7k Hz; power range 10-200 W continuous; imp 8 ohms; 35 1/2" H x 103 3/4" W x 24 1/4" D ..... \$9,000/system

**L250 Speaker System**

Floor-standing 4-way speaker with 14" woofer, 8" midwoofer, 5" midrange, 1" tweeter. Features busbar midrange, high, ultra-high level adjustment; high-resolution crossover network; walnut or black finish; choice of removable fabric grille colors. Crossovers 400, 1.6k, 4.5k Hz; max power 400 W; sens 90 dB SPL/W/m; imp 8 ohms; 52"H x 22 $\frac{1}{2}$ "W x 14 $\frac{1}{4}$ "D; 135 lb. Walnut finish ..... \$3,000/pr  
Black finish ..... \$3,000/pr

**L150A Millennium Speaker System**

Floor-standing 3-way speaker with 12" woofer, 12" passive radiator, 5" midrange in isolated chamber, 1" dome radiator. Features midrange, tweeter level controls; compressed wood cabinet with American black walnut veneer finish; brown, rust, or camel grille. Crossovers 1.1 and 3.7 kHz; power range 10-300 W continuous; sens 89 dB SPL/W/m; 41 $\frac{1}{2}$ "H x 17"W x 13"D; 83.5 lb ..... \$1,500/pr

**L112 Century II Speaker System**

Ducted-port 3-way bookshelf speaker with 12" woofer, 5" midrange, 1" dome tweeter. Features mirror-imaged pairing; oiled-walnut finish; brown grille. Crossovers 1.1 and 3.7 kHz; power range 10-300 W continuous; imp 8 ohms; 24 $\frac{1}{2}$ "H x 14 $\frac{1}{4}$ "W x 13"D ..... \$1,100

**L96 Delta Speaker System**

Ported 3-way bookshelf speaker with 10" woofer, 5" midrange, 1" tweeter. Features midrange, tweeter level controls; oiled-walnut finish; removable brown cloth grille. Crossovers 1.1 and 3.7 kHz; max power 250 W; sens 87 dB SPL/W/m; imp 8 ohms; 23 $\frac{1}{2}$ "H x 14 $\frac{1}{4}$ "W x 11 $\frac{1}{4}$ "D ..... \$800/pr

**L86 3-Way Loudspeaker System**

Speaker with 8" bass driver; 5" midrange and light-weight dome tweeter; recommended amp power 10-200 W; nom imp 8 ohms; crossover frequencies 800 Hz, 3,700 Hz; sens 88 dB SPL/W/m; 2 $\frac{1}{8}$ " x 13" x 10"; 35 lb ..... \$590/pr

**L56 Delphi Speaker System**

Ported 2-way bookshelf speaker with 10" woofer, 1" tweeter. Features oiled-walnut finish; removable brown grille. Crossover 2.2k Hz; power range 10-150 W; sens 90 dB SPL/W/m; imp 8 ohms; 22 $\frac{1}{4}$ "H x 14"W x 11 $\frac{1}{4}$ "D; 44 lb ..... \$490/pr

**L46 Sigma Speaker System**

Ported 2-way speaker with 8" woofer, 1" tweeter. Features oiled-walnut finish; removable brown grille. Crossover 3 kHz; power range 10-100 W; sens 88 dB SPL/W/m; imp 8 ohms; 20 $\frac{3}{4}$ "H x 12 $\frac{1}{2}$ "W x 10 $\frac{1}{2}$ "D; 29 lb ..... \$360/pr

**L15 Speaker System**

Ported 2-way bookshelf speaker with 6 $\frac{1}{2}$ " woofer, 1" tweeter. Features oiled-walnut finish; removable brown grille. Crossover 2.5 kHz; power range 10-100 W; sens 87 dB SPL/W/m; imp 8 ohms; 14 $\frac{1}{4}$ "H x 9 $\frac{3}{4}$ "W x 7 $\frac{1}{4}$ "D; 35 lb ..... \$300/pr

**Radiance Series****4312 Monitor II Speaker System**

Ported bookshelf 3-way speaker with 12" woofer, 3" midrange, 1.4" tweeter. Features midrange, tweeter level controls; American black walnut cover finish; removable grille. Crossovers 1.5 and 6 kHz; power 10-200 W; sens 91 dB SPL/W/m; imp 8 ohms; 23 $\frac{1}{2}$ "H x 14 $\frac{1}{4}$ "W x 11 $\frac{1}{4}$ "D; 52 lb ..... \$870/pr

**J-Series****J-350 Loudspeaker System**

Loudspeaker with 10" low frequency driver in combination with a 10" passive radiator and 1" HF dome radiator. Features multi-element high resolution crossover network; bypass capacitors for improved transient response; compressed wood and damping material; oak grained vinyl exterior; smoked glass top ..... \$600/pr

**J-325 Loudspeaker System**

Ported 3-way speaker with 5" midrange; 1" dome radiator; multi-element high resolution crossover network; hand-crafted enclosure of dense, compressed wood; oak-grained vinyl exterior ..... \$400/pr

**J-320 Loudspeaker System**

3-way ported speaker with 8" woofer; 1" dome high-frequency radiator and 5" midrange transducer; multi-element high resolution crossover network; dense compressed wood; oak grained vinyl exterior ..... \$340/pr

**J-216 Loudspeaker System**

2-way bookshelf speaker with 6 $\frac{1}{2}$ " bassdriver and 1" dome high frequency driver. Features multi-element high resolution crossover network; dense compressed wood with oak-grained vinyl exterior \$200/pr

**LT-1 "Mini" Loudspeaker**

Mini loudspeaker with 5 $\frac{1}{4}$ " low frequency driver; 1" dome radiator and high resolution dividing network. Can be mounted in automobile rear decks, vans, mobile homes and boats; recommended amp range 5-50 W per ch; nominal imp 4 ohms; crossover frequency 2,000 Hz; sens 86 dB SPL/2.83 V/m ..... \$500/pr

**B-380 Bass System**

Bass system with 15" loudspeaker and 4" ribbon wire voice coil in a vented alignment. Features hand-crafted oiled American black walnut veneer cabinet; biamp option with BX63; max recommended amp power 600 W continuous sine wave; crossover frequency 63 Hz; sens 90 dB; 27 $\frac{1}{2}$ " x 20 $\frac{3}{4}$ " x 17" ..... \$495/ea

**B460 Bass System/Subwoofer**

Bass system consists of a JBL Model 2245H 18" driver mounted in a vented enclosure of 8 cubic feet; the combination is third-order quasi-Butterworth. Features die-cast aluminum frame; integrally stiffened cone with foam surround; an edgewound voice coil; 4" diameter and nearly 1" long; individually machined magnetic pole piece and back plate; cone coated with aquaplas, a damping formulation to ensure optimum mass and density; driver features a large high flux symmetrical field geometry magnetic structure which reduces second harmonic distortion; enclosure is density compressed wood, 1" thick and heavily braced; min recommended amp power 200 W continuous wave; normal imp 8 ohms; crossover frequency 63 Hz (external crossover); sens 94 dB SPL; magnetic assembly weight 20 lb; 24 $\frac{1}{2}$ "H x 38 $\frac{1}{4}$ "W x 24 $\frac{1}{4}$ "D; shipping weight 125 $\frac{1}{2}$  lb .... \$1,250/ea

**JENSEN****System C Speaker System**

Vented bookshelf 3-way speaker with 10" woofer, 2" soft-dome midrange, 1" soft-dome front-firing tweeter, 2" rear-firing tweeter. Features midrange, tweeter level controls; oak veneer cabinet; dark brown grille. FR 47-21,000 Hz +2/-4 dB; crossovers 900 and 5.5k Hz; sens 87 dB SPL/W/m; power range 9-125 W; imp 8 ohms; 24 $\frac{1}{4}$ "H x 14 $\frac{1}{4}$ "W x 12 $\frac{1}{4}$ "D \$440

**System 500 Speaker System**

Acoustic-suspension 3-way speaker with 12" woofer, 5" midrange, 1" soft-dome tweeter in front, 2" direct radiator tweeter in rear. Features midrange, tweeter level controls; dark brown cloth grille; oak-grain vinyl finish. FR 38-20,000 Hz  $\pm$ 3 dB; crossovers 760 and 4.2k Hz; imp 8 ohms; power range 10-100 W continuous; 29"H x 15 $\frac{1}{4}$ "W x 11 $\frac{1}{4}$ "D; 45 lb .. \$300

**System 400 Speaker System**

Acoustic-suspension 3-way speaker with 10" woofer, 3 $\frac{1}{2}$ " midrange, 1" dome tweeter. Features midrange; tweeter level controls; brown grille; oak-grain vinyl finish. FR 45-20,000 Hz  $\pm$ 3 dB; crossovers 1.5 and 4.2 kHz; imp 8 ohms; power range 10-90 W continuous; 26 $\frac{1}{4}$ "H x 13"W x 10 $\frac{1}{4}$ "D; 31 lb .... \$230

**1230 Speaker System**

Acoustic-suspension 3-way speaker with 12" woofer,

5" midrange, 3" direct-radiator tweeter. Features walnut-grain vinyl finish; black cloth grille. FR 56-21,000 Hz; crossovers 3.5 and 10 kHz; power range 10-70 W continuous; imp 8 ohms; 27"H x 16 $\frac{1}{4}$ "W x 11 $\frac{1}{4}$ "D ..... \$199  
1030. Similar to 1230 except has 10" woofer. Lowend response 58 Hz; power range 10-60 W; 24 $\frac{1}{2}$ "H x 15"W x 10 $\frac{1}{4}$ "D ..... \$169  
820. Similar to 1030 except 8" woofer, no midrange driver; crossover 3.5 kHz; power range 10-50 W; 20 $\frac{1}{4}$ "H x 11 $\frac{1}{4}$ "W x 9 $\frac{1}{4}$ "D ..... \$119

**System 300 Speaker System**

Acoustic-suspension 2-way speaker with 10" woofer, 1" soft-dome tweeter. Features tweeter level control; dark-brown cloth grille; oak-grain vinyl finish. FR 48-20,000 Hz  $\pm$ 3 dB; crossover 3.1 kHz; imp 8 ohms; power range 10-75 W continuous; 23" x 13" x 10 $\frac{1}{4}$ "; 23 lb ..... \$175

**System 200/A Speaker System**

Acoustic-suspension 2-way speaker with 8" woofer, 1" dome tweeter. Features tweeter level control; oak-grain vinyl finish; brown cloth grille. FR 56-20,000 Hz  $\pm$ 3 dB; crossover 3.1 kHz; imp 8 ohms; power range 10-60 W continuous; 18 $\frac{1}{4}$ "H x 11"W x 9 $\frac{1}{4}$ "D; 16 lb ..... \$140

**JVC****Zero Series**

**Zero 6.** Acoustic-suspension 3-way speaker with 12" woofer, 4" ceramic-coated metal-cone midrange. Features midrange, tweeter level controls; removable grille. FR 35-100,000 Hz; max power 100 W rms; 25 $\frac{1}{4}$ "H x 14 $\frac{1}{4}$ "W x 13 $\frac{1}{4}$ "D; 48.4 lb. \$880/pr  
**Zero 4.** Similar to Zero 6 except has 10" woofer, 2 $\frac{1}{4}$ " cone/soft-dome midrange. Maximum power 75 W 22 $\frac{1}{4}$ "H x 12 $\frac{1}{4}$ "D x 12 $\frac{1}{4}$ "W; 36.3 lb \$660/pr  
**Zero 2.** Similar to Zero 4 except single level control. High-end response 25 kHz; max power 50 W; 20 $\frac{1}{4}$ "H x 12 $\frac{1}{4}$ "D x 11 $\frac{1}{4}$ "W; 26.4 lb ..... \$500/pr

**Bass-Reflex Series**

**SK-90.** Ported 3-way speaker with 12" free-edge woofer, 5" free-edge midrange, 1" dome tweeter. Features midrange, tweeter controls. FR 30-40,000 Hz; max power 100 W rms; 26 $\frac{1}{4}$ "H x 15"W x 13"D; 46.3 lb ..... \$560/pr  
**SK-50.** Similar to SK-90 except has 10" woofer, 2 $\frac{1}{4}$ " midrange. Low-end response 40 Hz; max power 60 W rms; 21 $\frac{1}{4}$ "H x 12 $\frac{1}{4}$ "W x 11 $\frac{1}{4}$ "D; 27 lb \$300/pr  
**SK-30.** Similar to SK-50 except has 8" woofer, 2 $\frac{1}{4}$ " tweeter, no midrange driver. Maximum power 85 W peak ..... \$200/pr

**KEF****KM-1 Monitor Loudspeaker**

Monitor speaker designed to produce high sound-pressure levels without sacrificing sonic accuracy. Includes integral power amp with 2 power supplies and 8 output sections producing a max output >1,200 W. Features 3-way dividing/equalizing network fed



from separate power supply; floating input circuit; S-type soft-clipping limiter; full electronic overload protection. Sound-pressure level on peaks of 120 dB under typical listening conditions; FR 30-20,000 Hz  $\pm$ 2 dB; S/N > 100 dB; 2nd and 3rd harmonic distortion < 1.0% 20-20,000 Hz (measured at 1 m on axis

# After 25 years, KLH quality still comes through loud and clear.

Few question the fact that KLH is one of the great names in audio. Why? The answer is simple: quality. Year after year. Model after model. Component after component.



## In table top radios.

Back in the 60's, KLH set the industry on its ear with a table top radio (Model 21) that had the sound of a giant hi-fi system in one little package.

KLH did it again with the *TR-82 FM Table Top Stereo*—the Model 21 classic reborn with technology of the 80's. True high fidelity FM stereo sound. With an LED display of station frequency and time (yes, it's a clock radio, too). With a host of big-system features: independent bass & treble controls...FM muting... loudness compensation...stereo balance control... front panel headphone jack...auxiliary input capability (like a cassette player!)...an impressive 6 watts RMS per channel both channels driven at 40-20,000 Hz with minimum THD at 8 ohms of 0.9%.

## In digital-ready speakers at the listening end.

With KLH Series 600 Speakers, you're ready for digital sound. These true tuned port systems feature high-flux-density design woofers for more precise reaction to input signals...ferrofluid midrange drivers (Models 610, 612, 620) for clean, rich "presence"...and wide-dispersion tweeters.

**KLH 620**—a tower of 3-way audio power with two 10" woofers that take you down to a powerful rich-sounding bass. Recommended for 10 to 140 watts-per-channel amplifiers.

**KLH 612**—a 3-way system with 12" woofer for deep, solid bass, plus impressive performance in the mid and high frequencies. Recommended for 10 to 110 watts-per-channel amps.

**KLH 610**—head and shoulders above any other speaker in its price range. Clean, clear, 3-way KLH performance. Recommended for 10 to 90 watts-per-channel amps.

**KLH 608**—a 2-way unit that's small in size but big in performance. Just right for those who want great hi fi on a budget. Recommended for amps or receivers rated 10 to 75 watts-per-channel.

For technical data on any of the above KLH components, write: KLH Research & Development, 7 Powder Horn Drive, Warren, NJ 07060 (201) 560-0060.



CIRCLE NO. 37 ON READER SERVICE CARD

at mean SPL of 96 dB under anechoic conditions); volume compression <1 dB 20-20,000 Hz to 120 dB; input impedance 20k ohms balanced; input sensitivity 0.774 V nominal (0 dB), adjustable in 2 dB steps from -20 dBm to +12 dBm for full output. 264 lbs (120 kg); 30.5"H x 52.75"W x 26"D..... \$25,000/pr

**Model 105.2 Speaker System**

Floor-standing 3-way speaker with min interunit time delay. Flat FR 38-22,000 Hz. Features visual indication of optimum listening area; variable system geometry extends choice of listening position; contoured midrange, tweeter cabinets reduce off-axis coloration; novel bass-loading technique; electronic protection (S-STOP) against overload, fault conditions; peak level indicator; pairing of systems for sens, FR match to within 0.5 dB. Max output 107 dB SPL on program peaks; THD <1%, 20-20,000 Hz; 965 mmH x 415 mmW; 80lb..... \$2,800/pr

**Model 105.4 Speaker System**

Floor-standing 3-way speaker. Features flat FR 60-22,000 Hz; contoured mid-range, tweeter cabinets; visual indication of optimum listening area; variable system geometry; novel bass loading; S-STOP; pairing of systems for sens match to within 0.5 dB; max output 108 dB; THD <1%, 30-20,000 Hz; imp 8 ohms; 963mmH x 350mmW x 380mmD; 45 lb each..... \$1,850/pr

**Model 103.2 Speaker System**

Floor-standing 2-way speaker with novel bass loading; S-STOP protection; pairing of systems for sens, FR match to within 0.5 dB. FR flat 60-20,000 Hz; SPL output 106 dB on program peaks; THD <1%, 50-20,000 Hz; imp 8 ohms; 506 mmH x 265 mmW x 249 mmD; 19 lb..... \$900/pr

**Carlton III**

Two-way floor-standing loudspeaker fitted with a passive bass radiator which extends low frequency down to 47 Hz; and a computer-designed 'seamless' dividing network which eliminates phasing. FR 47-20,000 Hz ±2.5 dB; max output of 106 dB; THD <1% from 60-20,000 Hz; nominal imp 8 ohms; 26.21 lbs.; 27 1/2"H x 12 1/4"W x 11"D..... \$750/pr

**Model 101 Speaker System**

Acoustic-suspension 2-way speaker with 110 mm woofer, milinex dome tweeter. Features teak/walnut cabinet; black/brown cloth grille. Frequency response 90-30,000 Hz ±2 dB; sens 81 dB SPL/W/m; input range 20-100 W; imp 8 ohms; 340 mmH x 190 mmD x 180 mmW..... \$590/pr

**Carina II Speaker**

Two-way compact 3-drive-unit loudspeaker with high-frequency unit mounted between twin bass drivers to provide higher power output and reduced distortion, especially when playing Compact Discs. Features KEF Series 'C' loading technique to extend bass without overloading on infrasonic signals; ferrofluids provide cooling for the voice coil, eliminating the risk of thermal damage. FR 55-20,000 Hz ±3 dB at 2m on reference axis; max output 108 dB; THD <1% 70-20,000 Hz; nominal imp 8 ohms; 80 W program rating; 20.7 lbs; 23 3/8"H x 11 3/4"W x 10"D..... \$500/pr

**KENWOOD**

**LSK-500D Speaker System**

3-way 3-speaker acoustic suspension system with 11" woofer, 4 1/8" midrange and 2 3/4" tweeter. Walnut grained vinyl enclosure 13 3/8"W x 23 1/4"H x 10 3/8"D; 25 lbs ea..... \$380/pr

**LSK-400D Speaker System**

3-way 3-speaker with 10" woofer; 4 3/8" midrange and 2 3/8" tweeter; acoustic suspension. Walnut grained vinyl enclosure 12 3/8"W x 21 1/4"H x 10 3/8"D; 44 lbs..... \$326/pr

**LSK-400D.** Same as LSK-500 except 10" woofer..... \$326/pr

**LSK-200D Speaker System**

2-way 2-driver acoustic-suspension system with 8" woofer and 2 3/4" tweeter. Walnut grained vinyl enclosure 11 1/2"W x 20 1/8"H x 8 1/2"D; 31 lbs..... \$155/pr

**KINETIC AUDIO INT'L**

**Titan Speaker System**

Tapered Acoustical Trapezoidal Line/Labyrinth 5-way speaker with 2 12" polypropylene woofers, 6 1/2" polystyrene midwoofer, 2" dome midrange/tweeter, 1 1/4" dome tweeter, 3/4" dome supertweeter. Woofers have long-excursion design for lowest FR; midwoofer has diffractionless surround; midrange/tweeter driver has



magnetic liquid. Linear-phase system design features 4 high-power noninductive controls. Impedance selectable 4/8/16 ohms; power range 25-200 W rms; sens 92 dB SPL/W/m; FR 12-22,000 Hz ±1.5 dB; crossovers 90, 1k, 3k, 7k, Hz; 60"H x 22"D x 18"W; 245 lb..... \$4,998/pr

**Trapezium Speaker System**

Tapered Acoustical Trapezoidal Line/Labyrinth 5-way floor-standing speaker with 12" polypropylene woofer, 6 1/2" polystyrene midwoofer, 2" dome midtweeter, 1 1/4" dome tweeter, 3/4" dome supertweeter in linear-phase array. Features 4 level controls; hand-rubbed Tung-oiled walnut-veneer finish; removable black cloth grille. FR 14-22,000 Hz ±1.5 dB; crossovers 90, 1k, 3k, 7k, Hz; sens 90 dB/W/m; power range 45-150 W; imp 8 ohms; 60"H x 20"D x 16"W. Mirror-matched pairs..... \$3,998/pr

**Labyrinth Speaker System**

Floor-standing 4-way speaker with 12" polypropylene woofer, 6 1/2" polystyrene midrange, 2" midtweeter, 1 1/4" dome supertweeter. Features FR 18-25,000 Hz ±2 dB; crossovers 90, 1k, 3.5k Hz; sens 91 dB SPL/W/m; power range 15-150 W continuous; imp 8 ohms; midrange, tweeter level controls; combined or separate electronic and passive crossovers; walnut veneer finish; 50"H x 18"D x 16"W.. \$2,598/pr

**Trapezoid Speaker System**

Floor-standing 4-way speaker with 12" woofer, 6.5" polystyrene midrange, 1 1/4" dome tweeter, 3/4" dome supertweeter. Features midrange, tweeter, super-tweeter controls. FR 18-22,000 Hz ±1.5 dB; crossovers 175, 2k, 7.5k Hz; sens 91-dB SPL/W/m; imp 8 ohms; 25-200 W; 40"H x 16"W x 14"D \$1,398/pr

**Impulse/CRM Speaker System**

Floor-standing 3-way monitor speaker with 12" woofer, 6.5" polystyrene midrange, 1 1/4" dome super-tweeter. Features midrange, tweeter level controls; walnut veneer. FR 18-22,000 Hz, ±3 dB; crossovers 180 and 2k Hz; sens 90 dB SPL/W/m; power range 15-150 W continuous; imp 8 ohms; 26"H x 14 1/2"W x 14"D..... \$898/pr

**Micro Monitor Speaker System**

Miniature 2-way speaker with 6 1/2" woofer, 1 1/2"

dome tweeter. Features tweeter level control; oiled-walnut veneer cabinet; black cloth grille. FR 38-22,000 Hz ±2.5 dB; crossover 1.8 kHz; recommended power 15 W; sens 91 dB SPL/W/m; imp 8 ohms; 15 1/2"H x 9"W x 9"D; 30 lb..... \$598/pr

**Trapezoid**

Subwoofer with 12" long-excursion woofer. Features tapered acoustical trapezoidal line labyrinth; 4 sets input terminals; biamp capability with, without electronic crossover. FR 18-2,000 Hz ±2 dB; crossovers 40, 90, 175 Hz or none internally; recommended power 20 W; sens 91 dB SPL/W/m; imp 8 ohms; 40"H x 16"D x 14"W..... \$299/ea

**Impulse Subwoofer.** Similar to Trapezoid except sens 90 dB and recommended power 25 W. 26"H x 14 1/2"W x 14"D..... \$229/ea

**KLH**

**Series 600 Speaker Systems**

All speakers in this series have tuned ported cabinet walnut-grain vinyl finish; removable grilles.

**620.** 3-way system with 2 10" woofers, 5" midrange, 3" tweeter. FR 65-20,000 Hz; crossovers 2,500 and 5,000 Hz; power range 10-140 W; sens 90 dB SPL/W/m; imp 8 ohms; 13"W x 35 3/4"H x 12 1/2"D..... \$400/pr

**612.** Similar to 620 except has 12" woofer. Power range 10-110 W; sens 92 dB; 15"W x 25 1/2"H x 13 3/8"D..... \$300/pr

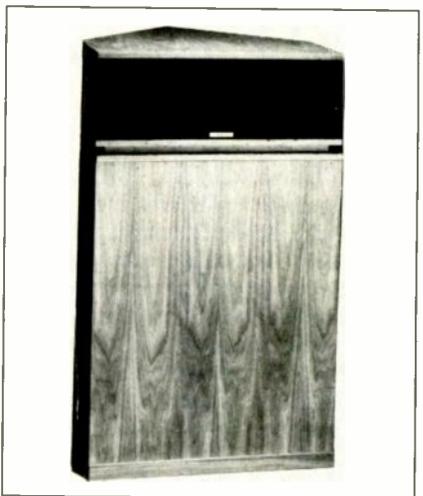
**610.** Similar to 620 except has 10" woofer. Power range 10-90 W; 12 1/2"W x 22 1/2"H x 11"D..... \$220/pr

**608.** Similar to 620 except has 8" woofer, no mid-range driver. Power range 10-70 W; 12"W x 21"H x 9 3/4"D..... \$150/pr

**KLIPSCH**

**Klipschorn**

Floor-standing speaker with trihedral fold in woofer horn with driver and compression drivers in the mid-



range and tweeter designed for corner placement. Sens 106 dB W/m; power handling 100 W; FR 35-17,000 Hz ±5 dB; 52" H x 31 1/4"W x 28 1/2"D. Priced according to finish..... \$1,972-2,776/pr

**Belle Klipsch.** Same components and technical design as Klipschorn but folded twice for more versatile placement. Sens 106 dB W/m; power handling 100 W; FR 35-17,000 Hz ±5 dB; 35 3/4" H x 30 3/4" W x 18 3/4"D. Available in wide range of custom finishes and grille cloths..... \$2,238/pr

**The Klipsch La Scala.** Similar to the Belle Klipsch but available only in natural birch, black or stained lacquer. 35 1/2" H x 23 3/4" W x 24 1/2"D. Priced according to finish..... \$1,498-1,594/pr

**Cornwall.** Same tweeter and midrange drivers as the Klipschorn in 15" ported enclosure. Sens 100 dB W/m; power handling 100 W; FR 38-17,000 Hz;

# For Audiophiles With More Savvy Than Money

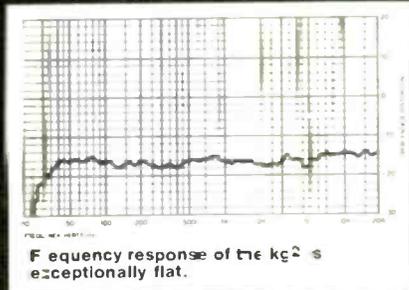
At about \$420\* a pair, the new KLIPSCH kg<sup>2</sup> is hardly an expensive loudspeaker. Yet it offers discriminating listeners the quality and features normally associated with much larger, more expensive models.

The first thing you'll note about the kg<sup>2</sup> is its exceptional clean, well-balanced sound. Silky smooth, yet still delivering the lustre and gusto of even the most subtle dynamics. That's a tough combination to achieve in a speaker small enough to be used on a bookshelf.

Also uncommon to other speakers of its size and price range, the kg<sup>2</sup> provides an abundance of well-defined bass without sacrificing the delicate harmonics of mid-range.

The kg<sup>2</sup> has two active drivers plus the

addition of a passive radiator to handle the lowest octave. The woofer utilizes an 8" special polymer cone coupled to a uniquely wound voice coil for exceptionally low modulation distortion and a lusty richness to vocals. The tweeter is a hybrid of the horn and dome designs providing generous efficiency along with a stable, well-focused stereo image.



Frequency response of the kg<sup>2</sup> is exceptionally flat.

meter) and uniform 100° x 100° dispersion.

As a finishing touch, the kg<sup>2</sup> is meticulously crafted of real wood - solid lumber-core panels with your choice of oak or walnut veneer, hand-oiled

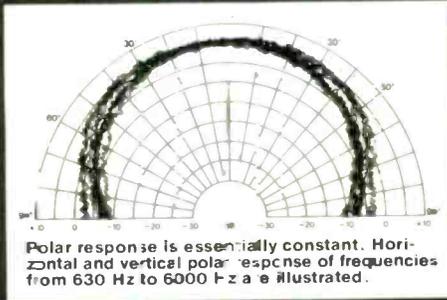
to a rich lustre. And finally, it bears the KLIPSCH name - a company with a 40 year history of quality and integrity.

See and hear the new KLIPSCH kg<sup>2</sup> at your authorized KLIPSCH dealer. He's in the Yellow Pages.

\* \$420 per pair is suggested retail. Actual price may vary in different regions of the country.

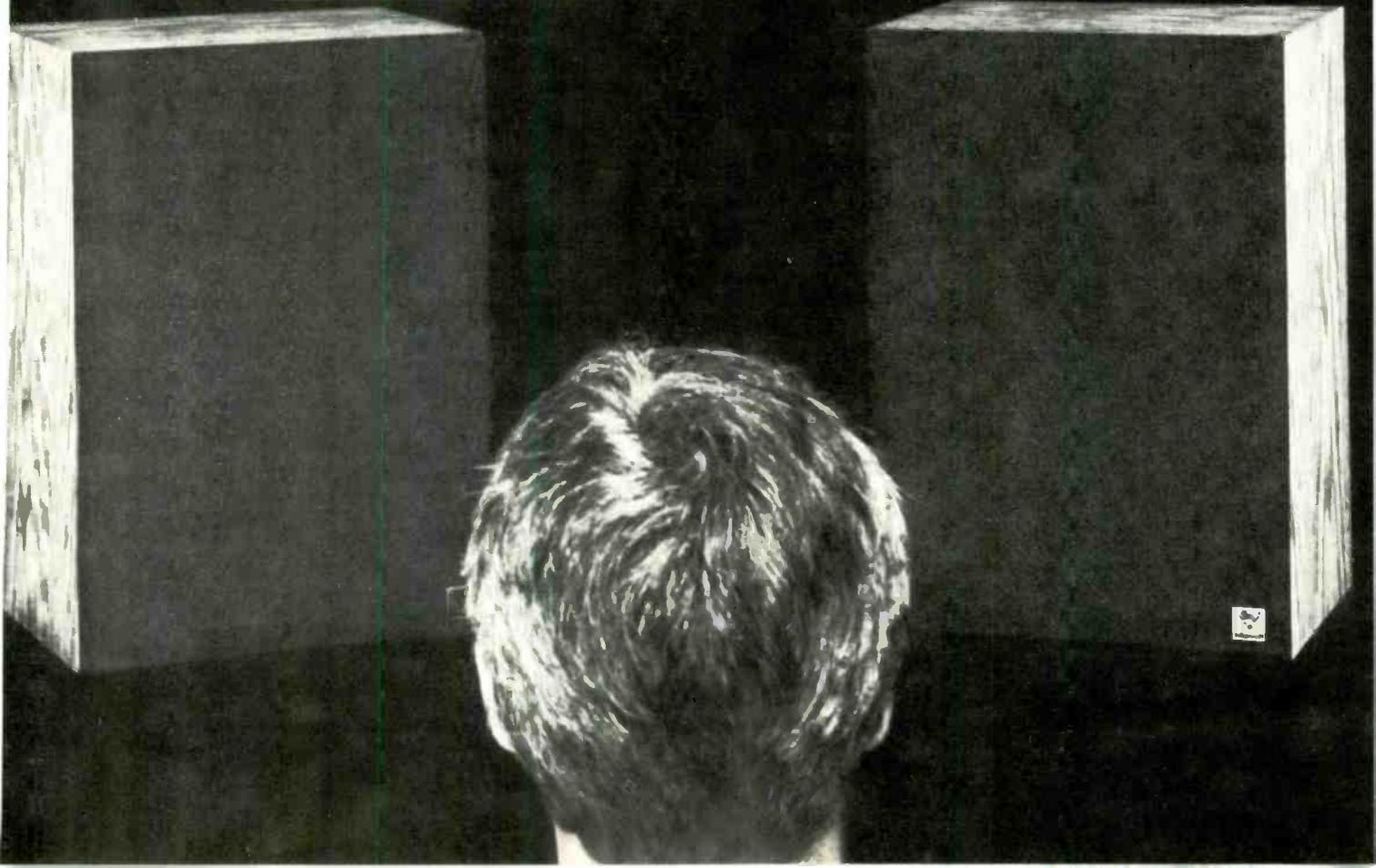
**klipsch**  
A Legend In Sound.

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Polar response is essentially constant. Horizontal and vertical polar response of frequencies from 630 Hz to 6000 Hz are illustrated.

All of this results in a speaker system with high-power handling capability (65 watts maximum continuous), generous sensitivity (90.5 dB SFL one watt one



35 $\frac{1}{4}$ "H x 25 $\frac{1}{2}$ "W x 15 $\frac{1}{2}$ "D; priced according to finish..... \$1,148-1,428/pr  
**Heresy.** Same tweeter and midrange as the Klipschorn with a 12" woofer in a sealed enclosure. FR 35-20,000 Hz  $\pm$  3 dB; 100 W max handling power; 98 dB SPL W/m; 21 $\frac{1}{2}$ "H x 15 $\frac{1}{2}$ "W x 13 $\frac{1}{4}$ "D; priced according to finish..... \$672-760/pr

#### kg<sup>2</sup> Speaker

Two-way speaker with rear-mounted passive radiator with crossover frequency at 1,800 Hz. FR 35-20,000 Hz  $\pm$  3 dB; sens 90 dB SPL/W/m; 120 W; 18 $\frac{1}{4}$ "H x 11 $\frac{1}{2}$ "W x 13 $\frac{1}{4}$ "D..... \$420/pr

### KOSS

#### CM 1030 Speaker

Dual-port, 4-way, 4-bandpass floor-standing speaker with 10" woofer, 2 4" midranges, 1" dome treble tweeter, 1" dome tweeter. Features  $\pm$ 3-dB midrange, treble, tweeter spectrum-shaped controls. Bandpass 29-19,000 Hz -3 dB; crossovers 300, 2.5k, 7k Hz; efficiency 94 dB SPL/W/m; power range 15-200 W/ch; imp 5 ohms; 38 $\frac{1}{4}$ "H x 16 $\frac{1}{2}$ "W x 14 $\frac{1}{2}$ "D..... \$777/pr

#### CM 1020 Speaker

Vented 3-way, 3-bandpass floor-standing speaker with 10" woofer, 4 $\frac{1}{2}$ " midrange, 1" dome tweeter. Features midrange, tweeter controls. Bandpass 31-18,500 Hz -3 dB; crossovers 300 and 3.5k Hz; efficiency 92 dB SPL/W/m; power range 15-150 W/ch; imp 5 ohms; 33"H x 15 $\frac{1}{2}$ "W x 13 $\frac{1}{4}$ "D \$597/pr

#### CM 1010 Speaker

Vented 2-way, 2-bandpass floor-standing speaker with 8" woofer, 10" passive radiator, 1" dome tweeter. Features  $\pm$ 3-dB tweeter spectrum-shaped control. Bandpass 35-17,000 -3 dB; crossover 3.5k Hz; efficiency 90 dB SPL/W/m; power range 15-100 W/ch; imp 6 ohms; 28"H x 15 $\frac{1}{2}$ "W x 11"D .. \$417/pr

#### Kossfire 210 Speaker

Vertically aligned 4-driver, 3-bandpass speaker with 12" woofer, 5" midrange, 2 1" tweeters. Features midrange, tweeter level controls; linear-phase, constant-voltage crossover network; pecan veneer over particle-board cabinet; molded rigid grille. FR 30-20,000 Hz; power range 10-100 W/ch; sens 92 dB SPL/W/m; imp 8 ohms; 32 $\frac{1}{2}$ "H 15 $\frac{1}{2}$ "W x 13 $\frac{1}{2}$ "D..... \$420/pr

#### Kossfire 110 Speaker

Speaker with 10" woofer, 1 $\frac{1}{4}$ " magnetic-fluid damped midtweeter, 2 1 $\frac{1}{4}$ " tweeters. Features  $\pm$ 5-dB tweeter level control; 3-bandpass, 4-driver design; automatic-reset circuit-breaker protection; scratch-resistant vinyl-laminate finish; cloth/rigid-foam grille. FR 30-20,000 Hz; power range 10-100 W/ch; imp 8 ohms; 32"H x 13 $\frac{1}{4}$ "W x 10 $\frac{3}{4}$ "D ..... \$220/pr

#### Dynamite M-80 Speaker

Speaker with 2 4 $\frac{1}{4}$ " woofers, 1" dome tweeter. Features hand-rubbed walnut-veneer finish. FR 50-30,000 Hz; power range 10-30 W/ch; sens 87 dB SPL/W/m; imp 6 ohms; 12 $\frac{1}{4}$ "H x 5 $\frac{1}{4}$ "D x 5 $\frac{1}{4}$ "W ..... \$200/pr

### LINN SONDEK by AUDIOPHILE SYSTEMS

#### DM5 Isobarik Speaker System

Isobarik-loading 3-way floor-standing speaker with 12" x 9" woofers, 5" midranges, 2 1" dome tweeters. FR 25-20,000 Hz  $\pm$  1.5 dB; crossovers 375 and 3k Hz; instantaneous dynamic range 54 dB; imp 4 ohms; power range 50-500 W; 30"H x 15"W x 16 $\frac{1}{2}$ "D..... \$3,740/pr

#### S.A.R.A. Isobarik Speaker System

Isobarik-loading 2-way bookshelf speaker with 2 8" woofers, 1" dome tweeter. Features cast structural foam housing. FR 36-20,000 Hz  $\pm$  2 dB; imp 4 ohms; 17"H x 13"W x 10"D ..... \$1,590/pr

#### K.A.N. Speaker System

Acoustic-suspension 2-way bookshelf speaker with 5" woofer, 1" dome tweeter. FR 70-20,000 Hz  $\pm$  3 dB; imp 8 ohms; 12"H x 7 $\frac{1}{2}$ "W x 6 $\frac{1}{2}$ "D ... \$625/pr

### MAGNEPAN

#### Magneplanar Tympni-IV

Radiator-ribbon speaker with reduced-mass midrange driver. Features 5-ft long, 2.5-micron thick transformerless and bipolar aluminum ribbon tweeter; 2 bass panels. Tweeter FR 2,000-50,000 Hz ..... \$2,950/pr

#### MG-IB Speaker

Floor-standing 2-way speaker with Magneplanar<sup>®</sup> woofer, Magneplanar<sup>®</sup> tweeter. Features oak side rails; brown fabric grille. FR 40-18,000 Hz  $\pm$  3 dB; crossover 400-1,600 Hz at 6 dB/octave; power range 25-200 W; imp 5 ohms purely resistive; 71"H x 22"W x 2"D ..... \$1,025/pr

#### MG-I (Improved) Speaker

Floor-standing 2-way speaker with Magneplanar<sup>®</sup> woofer, Magneplanar<sup>®</sup> tweeter. Features oak side rails; off-white fabric grille. FR 45-18,000 Hz  $\pm$  4 dB; crossover 1.6 kHz; sens 82-dB SPL/W/3 ft; power range 40-200 W rms; imp 5 ohms purely resistive; 60"H x 22"W x 2"D..... \$675/pr

#### SMG Magneplanar Speaker

Full-range 2-way speaker with 0.5-mil diaphragm driven by Magneplanar<sup>®</sup> magnetic field. Features oak side rails; brown fabric grille. FR 50-16,000 Hz  $\pm$  4 dB; power range 20-100 W rms; imp 4 ohms purely resistive; crossover 2.4 kHz; 48 $\frac{1}{8}$ "H x 24 $\frac{1}{4}$ "W x 1 $\frac{1}{4}$ "D; 70 lb..... \$450/pr

### MARANTZ

#### SP 1230 Speaker System

Ported 3-way speaker with 12" Linear T Drive woofer, 5" midrange, 1" dome tweeter. Features automatic overdrive protection with LED indicator; midrange, tweeter level controls; simulated walnut vinyl finish; removable grille. FR 35-22,000 Hz  $\pm$  3 dB; crossovers 1.5k and 7.5k Hz; power range 10-200 W; sens 90 dB SPL/W/m; imp 4 ohms; 30"H x 16"W x 13 $\frac{1}{4}$ "D..... \$540/pr

#### DR 120 Digital Reference Speaker System

Three-way speaker with 12" dynamic woofer with LNP cone and 4 layer copper voice coil; 3" dynamic midrange with ferrofluid; 1" soft dome tweeter with barium ferrite magnet; imp-compensated crossovers; level controls for midrange and tweeter; continuously active dynamic overload protection; recommended amp power 10-100 W/ch; imp 6 ohms; FR 32-20,000 Hz; efficiency 89 dB/W/m;  $\frac{3}{4}$ " high density nonresonant particle board cabinet; bartonwood hickory vinyl finish; 15 $\frac{1}{2}$ "W x 29 $\frac{1}{2}$ "H x 10 $\frac{1}{4}$ "D ..... \$520/pr

SP 1030. Similar to SP 1230 except has 10" woofer. Low-end response 40 Hz; power range 12-150 W; 26"H x 13 $\frac{1}{2}$ "W x 10 $\frac{3}{4}$ "D ..... \$440/pr

#### DR 100 3-Way Digital Reference Speaker System

Features 10" dynamic woofer with LNP cone and 4-layer copper voice coil; 3" dynamic midrange with ferrofluid; 1" soft dome tweeter with barium ferrite magnet; imp compensated crossovers; continuously active dynamic overload protection; recommended amp power 10-100 W/ch; imp 7 ohms; FR 35-20,000 Hz; efficiency 90 dB/W/1M;  $\frac{3}{4}$ " high-density nonresonant particle board cabinet; bartonwood hickory vinyl finish; 15 $\frac{1}{2}$ "W x 26 $\frac{1}{2}$ "H x 10 $\frac{1}{4}$ "D ..... \$430/pr

#### HE 12 High Energy Speaker System

Three-way speaker features 10" dynamic woofer; 5" airsealed midrange; 3" cone tweeter; imp 4 ohms; efficiency 95 dB/W/M; FR 25-20,000 Hz; max power 250 W; walnut vinyl veneer finish; 15"W x 31 $\frac{1}{2}$ "H x 10 $\frac{1}{4}$ " D ..... \$396/pr

#### DR 80 Digital Reference Speaker System

Two-way speaker features 8" dynamic woofer with LNP cone and 4 layer copper voice coil; 1" soft dome tweeter with barium ferrite magnet; imp compensated crossover; continuously active dynamic overload protection; recommended amp power 10-100 W/ch max; imp 7 ohms; FR 35-20,000 Hz; efficiency 90 dB/W/1M;  $\frac{3}{4}$ " high-density nonresonant particle-board cabinet; bartonwood hickory vinyl finish; 12 $\frac{1}{2}$ "W x 23" H x 8 $\frac{1}{4}$ "D ..... \$300/pr

#### HE 10 High Energy Speaker System

Three-way speaker features 10" dynamic woofer; 5" air-sealed midrange; high frequency 3" cone tweeter; imp 4 ohms; efficiency 94 dB/W/M; FR 35-20,000 Hz; power handling capacity 150 W; walnut vinyl veneer finish; 15 $\frac{1}{2}$ "W x 29  $\frac{1}{2}$ "H x 10 $\frac{3}{4}$ "D ..... \$280/pr

#### HLM 308 3-Way High Level Monitor Speaker System

Features 8" dynamic woofer; 4" air-sealed midrange; high frequency 3" cone tweeter; imp 4 ohms; efficiency 93 dB/1W/1M; FR 50-20,000 Hz; power handling capacity 50 W; walnut vinyl veneer finish; 13W x 27 $\frac{1}{8}$ "H x 9 $\frac{1}{4}$ "D ..... \$196/pr

### MCINTOSH

#### XRT 20 Loudspeaker

Speaker with 24 1" dome tweeters in vertical line in the same plane, with a total of 27 drivers built into each XRT 20. FR 20-20,000 Hz; sens 87 dB SPL/W/m; imp 8 ohms nominal; crossover frequencies 100, 250, 1.5 kHz; woofers, two 12"; midrange, one 8"; bass section 39 $\frac{1}{16}$ "W x 25 $\frac{1}{4}$ "H x 12 $\frac{1}{8}$ "D; high-frequency section 7 $\frac{1}{8}$ "W x 10 $\frac{3}{4}$ "H x 11 $\frac{1}{8}$ "D; 170 lbs ..... \$6,200/pr

#### XR 19 Loudspeakers

15-driver speaker with low- and mid-frequency drivers mounted on the same plane surface combined with elliptical tweeter array. Features overload protection system; indicator lights. FR 20-20,000 Hz; sens 86 dB SPL/W/m; power range 30-250 W; imp 8 ohms nominal; crossover frequencies 100, 250, 1.5k Hz; 45 $\frac{1}{4}$ "W x 25 $\frac{1}{4}$ "H x 12 $\frac{1}{4}$ "D; 151 lbs ..... \$5,298/pr

#### XR 16 Isoplanar Speakers

Isoplanar speaker system produces a widely dispersed energy field; individual radiators are mounted in a vertical line; crossover frequencies 250 Hz, 1.4 kHz and 7 kHz; imp 8 ohms; can be driven by up to 150 W; overload protection system; 89 dB SPL/W referred to 8 ohms; 12" woofer; 8" low midrange; 1 $\frac{1}{2}$ " upper midrange; 1" tweeter; 35 $\frac{1}{8}$ "W x 17 $\frac{1}{2}$ "H x 11 $\frac{1}{4}$ "D; 75 lbs ..... \$1,798/pr

#### XR 14 Isoplanar Speakers

Speaker system produces equal intensity at  $\pm$ 90° to the perpendicular from the plane of the radiators; crossover frequencies 700 Hz, 1.4 kHz and 7 kHz; imp 8 ohms; can be driven up to 100 W; overload protection system; sens 89 dB SPL/W referred to 8 ohms; woofer 10", low midrange 5", midrange radiator 3 $\frac{1}{2}$ ", upper midrange radiator 1 $\frac{1}{2}$ ", tweeter radiator 1"; 30 $\frac{1}{4}$ "W x 14 $\frac{1}{4}$ "H x 10"D; 52 lbs ..... \$1,398/pr

#### XL 10 Loudspeaker

3-way loudspeaker system having one passive and two active drivers. FR 45-20,000 Hz; max power woofer 100 W program noise, tweeter 60 W program noise; min power as little as 30 W; imp 8 ohms nominal; tweeter protected by 0.6-ampere fast-acting fuse; reference output level -89 dB/W/m; speaker sizes one 10" (25.4 cm) lower bass, one 8" (20.3 cm) bass driver, and one 1" (2.54 cm) dome tweeter; 24 $\frac{1}{8}$ "W x 14 $\frac{1}{8}$ "H x 7 $\frac{1}{2}$ "D; 27.5 lbs \$780/pr

### MCS by JC PENNEY

#### MCS 8290 Tower Speaker System

Ported 3-way tower speaker with 9" Honeycomb Disc woofer, 2" Honeycomb Disc midrange, 1 $\frac{1}{4}$ " Honey-

comb Disc tweeter. Features tweeter level control; thermal relay protection; LED overload indicator; removable cloth grille. FR 40-35,000 Hz -10 dB; crossovers 1.8 and 3.5 kHz; power range 10-120 W; imp 8 ohms; 33"H x 11 1/4"W x 10"D; 30 lb ... \$500/pr

#### MCS 8332 Speaker System

Honeycomb disc 3-way speakers with 12" woofer, 3 1/4" midrange, and 1 1/4" tweeter. Features linear phase port; LED overload indicator; thermal relay protector; push speaker terminals; power capabilities up to 90 W ..... \$600/pr

#### MCS 8232 Speaker System

Bass-reflex 3-way speaker with 12" woofer, 1 1/2" soft-dome midrange, 2" tweeter. Features midrange, tweeter controls; driver protection; reset buttons; woodgrain-vinyl finish; removable cloth grille. Power range 10-100 W; imp 8 ohms; 27"H x 15"W x 10 1/2"D ..... \$400/pr

**MCS 8229.** Similar to 8232 except has 10" woofer, only tweeter level control. Power range 10-60 W; 24 1/2"H x 13"W x 10 1/2"D ..... \$300/pr

**MCS 8231.** Similar to 8229 except has 8" woofer, 3 1/2" cone midrange, no level controls. Power range 10-30 W; 23"H x 13"W x 9"D ..... \$150/pr

### MERIDIAN

#### M10 Speaker System

Inter-Active design incorporating 4 power amps, 3 with 70 w/ch, 1 with 35 w/ch, driving 2 5" woofers, 2 5" midrange, 1 2" dome tweeter, 3/4" birch cabinet of low resonance with rear-loaded passive radiator. FR 33-24,000 Hz; 39"H x 16"W x 18"D cabinet; 70 lb each; walnut or mahogany ..... \$4,995/pr  
Rosewood finish ..... \$5,595/pr

#### M2 Speaker System

Ported 2-way integrated speaker with 2 5" woofers, 2" tweeter, power supply, 2 power amps in low-resonance cabinet. Features Inter-Active technology; 3/4" A-quality birch plywood cabinet construction; all metal stand with resonance damping available. FR 38-20,000 Hz  $\pm 3$  dB; max output 105 dB; 20"H x 15"D x 7"W. Walnut or mahogany finish; with amps ..... \$1,995/pr  
Rosewood finish; with amps ..... \$2,200/pr

#### M3 Speaker System

Compact Inter-Active 2-way speaker with 5" woofer, 1 1/4" tweeter. Features time-delay correction; power supply; power amps. FR 38-20,000 Hz  $\pm 3$  dB; max output 100 dB free-standing, up to 103 dB on shelf; 14 1/2"H x 12"D x 7"W. Walnut or mahogany finish; with amps ..... \$1,395/pr  
Rosewood finish; with amps ..... \$1,560/pr

### MIRAGE ACOUSTICS

#### The Subwoofer

Stereo subwoofer containing separate crossovers matched to the Mirage SM-4, SM-5 and SM-1 speakers. Two 10" woofers utilizing progressive suspensions mounted in individual chambers of a braced, floor-standing, acoustic suspension enclosure. System power range (with SM-4) is 20-200 W. Crossover at 300 Hz. Sensitivity is 91 dB SPL/W/m; 19 1/4"H x 24 3/4"W x 15 1/4"D ..... \$399/ea

#### SM-3 Speaker System

Ported floor-standing speaker with 25-cm woofer, 2.5-cm softdome tweeter. Features adjustable integral stand; internal Live Wire™ wiring; first-order crossover. FR 37-19,000 Hz  $\pm 1.5$  dB; crossover 2.5 kHz; max power 250 W rms; sens 91 dB SPL/W/m; 37"H x 15 1/2"W x 11 1/4"D ..... \$778/pr

#### SM-2.5 Speaker System

Mirror-Imaged 3-way acoustic suspension floor-standing speaker with 25-cm woofer, 12-cm midrange, 1/4" soft-dome tweeter. Features first-order crossover. FR 59-18,000 Hz  $\pm 3$  dB; crossover 2.5 kHz; power range 10-90 W rms; sens 92 dB SPL/W/m; 18"H x 11 1/4"W x 8 3/4"D ..... \$298/pr

#### SM 4 Speaker System

Heavily braced acoustic-suspension 2-way speaker with 16.5-cm woofer, 1/4" soft-dome tweeter mounted inside felt ring on flush low-diffraction baffle. Features



first-order crossover. Crossover 3.5 kHz; power range 10-50 W rms; sens 92 dB SPL/W/m; 15 1/4"H x 10"W x 7 1/2"D ..... \$238/pr  
**T-4.** Speaker stand dedicated to the SM-4 or SM-5 speakers ..... \$50

### MISSION ELECTRONICS

#### 770S Speaker System

Two-way bass-reflex speaker with oil-cooled and damped dome tweeter and special sound wave dispersive membrane. 25mm Polymer Dome tweeter; 225mm reinforced homopolymer cone woofer; crossover frequency 2,000 Hz. FR 40-20,000 Hz  $\pm 3$  dB; nominal imp 8 ohms; recommended amps 20-150 W/ch; sens 91 dB SPL/W/m; 610H x 270W x 300mm D; 25.5 kg/pr; finish black/walnut \$999/pr

#### 737 Speaker System

Two-way speaker features 214 mm polypropylene cone woofer, 25mm fabric dome tweeter; crossover frequency 2,700 Hz. FR 50-20,000 Hz; nominal imp 8 ohms; recommended amps 20-125 W/ch; sens 87 dB SPL/W/m; 540H x 250 W x 270mmD; 19.5 kg/pr; finish black/walnut ..... \$699/pr

#### 700S Loudspeaker

Features equal path lengths to the ear with radiation lobe directed up towards the listener. Walnut or black finish. Tweeter 19mm Polymer Dome; woofer 210mm carbon fibre-based cone; crossover frequency 3,200 Hz. FR 60-20,000 Hz  $\pm 3$  dB; nominal imp 8 ohms; recommended amps 20-100 W/ch; sens 90 dB SPL/W/m; 470H x 250W x 270mmD; 16 kgs/pr ..... \$399/pr

#### 700 Speaker System

Bass-reflex 2-way speaker with 205-mm woofer, 19-mm ferrofluid tweeter. Features walnut or black finish. FR 60-20,000 Hz  $\pm 3$  dB; power range 15-80 W; imp 8 ohms; 460 mmH x 260 mmW x 255 mmD; 6.5 kg ..... \$299/pr

#### 70 Loudspeaker

Features crossover network of full multi-component design, cabinet of medium density fibreboard. 25 mm soft-dome tweeter, 175mm carbon-fibre-based cone woofer; crossover frequency 3,400 Hz; walnut/black finish. FR 70-20,000 Hz  $\pm 3$  dB; nominal imp 8 ohms; recommended power 20-75W/ch; sens 89 dB SPL/W/m; 350H x 210W x 210mmD; 8 kgs/pr ..... \$199/pr

### MITCHELL SPEAKER CO.

#### E.F.T. Spa Speaker

Full-range Energy Field Transducer spa speaker, designed to reproduce sound through any solid mass when mounted underwater. Usable in spas, swimming pools, jacuzzis, etc... and suitable for mounting in boat hulls. Power handling 100 W rms; 8 lbs ... \$220/pr

Willie Nelson,  
Issac Stern  
and  
50,000  
music lovers  
have  
something  
in common.



They own  
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speakers.

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White Bear Lake, MN 55110

## MITSUBISHI

## DS-505 Digital Reference Monitor

Mirror-image 4-way system features honeycomb woofer midwoofer construction; edgewound voice coils and ferro nickel rings for reduced distortion; vapor deposition; boron domes for midrange and tweeter; oiled walnut cabinet; output acoustic pressure 90 dB/W/m; woofer 12<sup>3</sup>/<sub>4</sub>" cone; mid-bass 16<sup>1</sup>/<sub>4</sub>" cone; mid-high 1<sup>3</sup>/<sub>4</sub>" dome; tweeter 7<sup>1</sup>/<sub>8</sub>" dome; attenuators mid-range, four-level 1.5-5,000 Hz; high frequency, four level 5-40,000 Hz; nominal imp 6 ohms; FR 28-40,000 Hz; 16<sup>1</sup>/<sub>2</sub>" × 28<sup>1</sup>/<sub>4</sub>" × 16<sup>3</sup>/<sub>4</sub>" \$2,600/pr

## DS-32BMKII Speaker System

Bass-reflex 3-way bookshelf speaker with 10" woofer, 4" midrange, 1<sup>1</sup>/<sub>8</sub>" semidome tweeter. Features all drivers mounted in die-cast aluminum frames in mirror-image alignment; simulated walnut finish; removable fabric grille. FR 38-30,000 Hz; crossovers 700 and 5k Hz; max power 120 W; sens 91 dB SPL/W/m; imp 6 ohms; 24"H × 12<sup>1</sup>/<sub>2</sub>"W × 12<sup>1</sup>/<sub>8</sub>"D \$530/pr

## DS-181 W Speaker System

Bass-reflex 3-way bookshelf speaker with 8" woofer, 2" midrange, 7/8" dome tweeter. Features mirror-image driver alignment; crossover switch; simulated walnut finish; removable grille. FR 45-30,000 Hz; crossovers 2k and 10k Hz; max power 100 W; sens 90 dB SPL/W/m; imp 6 ohms; 18<sup>1</sup>/<sub>8</sub>"H × 10<sup>1</sup>/<sub>4</sub>"W × 9<sup>1</sup>/<sub>8</sub>"D \$340/pr

## DS-141 Speaker System

2-Way bass-reflex bookshelf woofer; 16cm (6<sup>1</sup>/<sub>2</sub>") cone tweeter; 5cm (2") cone; imp 6 ohms; FR 55-20,000 Hz; sens 90 dB/W/m; 7<sup>1</sup>/<sub>8</sub>" × 14" × 8<sup>1</sup>/<sub>4</sub>"; 4 kg (8 lb 13 oz) \$160/pr

## M&amp;K

## Satellite 1B Speaker System

Acoustic-suspension 2-way speaker with 2.5" polypropylene woofers, 2 1" soft-dome tweeters. Features 36 tonal-balance selector; midrange, tweeter character switches; walnut or oak finish; black grille. FR 70-22,000 Hz ±3 dB; 7.5-400 W; 4 ohms; 21"H × 7<sup>1</sup>/<sub>2</sub>"W × 7<sup>1</sup>/<sub>8</sub>"D; 19 lb \$645/pr

## Satellite 2B Speaker System

Acoustic-suspension 2-way speaker with 6<sup>1</sup>/<sub>2</sub>" polypropylene woofer, 1" soft-dome tweeter. Features selector for 36 tonal balances; midrange, treble character switches; walnut or oak finish; black grille. FR 65-20,000 Hz ±3 dB; power range 15-100 W; 10<sup>1</sup>/<sub>2</sub>"H × 7"D × 6<sup>1</sup>/<sub>2</sub>"W; 9 lb \$495/pr

## Satellite 3B Speaker System

Acoustic suspension 2-way speaker with 5" polypropylene woofer; 1" soft-dome tweeter. Features selector for 14 tonal balances via multiple inputs; black finish; black grille; FR 100-20,000 Hz ±3 dB; power range 15-100 W; 10<sup>1</sup>/<sub>2</sub>"H × 7"D × 6<sup>1</sup>/<sub>2</sub>"W; 9 lb \$350/pr

## Volkwoofer 1B Subwoofer

Internally amplified subwoofer with 12" polypropylene driver. Features preamp, power amp inputs; active filtering at 24 dB/octave; with additional rolloff point. Walnut or oak finish; black grille. FR 18-125 Hz ±3 dB; amp power 400 W; 18<sup>3</sup>/<sub>4</sub>"W × 17<sup>3</sup>/<sub>4</sub>"H × 15<sup>1</sup>/<sub>4</sub>"D; 50 lb \$750

**Volkwoofer 2B.** Similar to Volkwoofer 1B except amp power 200 W; 43 lb \$600

**Volkwoofer 3B.** Similar to Volkwoofer 2B except amp power 100 W; 17<sup>1</sup>/<sub>2</sub>"H × 17<sup>1</sup>/<sub>2</sub>"W × 14<sup>1</sup>/<sub>2</sub>"D; 43 lb \$500

**LP-1 Special Version.** Passive electronic crossover for B-model Volkwoofers only. 8.5" front panel or 19" rack mount. With bypass switch \$245/ea Without bypass switch \$225/ea

## Goliath 3B Subwoofer

Acoustic-suspension passive subwoofer with 12" driver, internal crossover network. Black painted fin-

ish. FR 35-150 Hz; power range 30-150 W; imp 4 ohms; 17<sup>1</sup>/<sub>2</sub>"H × 17<sup>1</sup>/<sub>2</sub>"W × 14<sup>1</sup>/<sub>2</sub>"D; 40 lb \$250/ea

## RC-1 Satellite/Subwoofer Remote Control

Allows adjustment of all available tonal conditions remotely. Features midrange, treble character switches; 100-Hz filter or full-range satellite operation; satellite/subwoofer phase correction; Volkwoofer level control; 8<sup>1</sup>/<sub>4</sub>"W × 7<sup>1</sup>/<sub>4</sub>"D × 2<sup>1</sup>/<sub>4</sub>"H; 3 lb \$185

## OHM ACOUSTICS

## Model F Speaker System

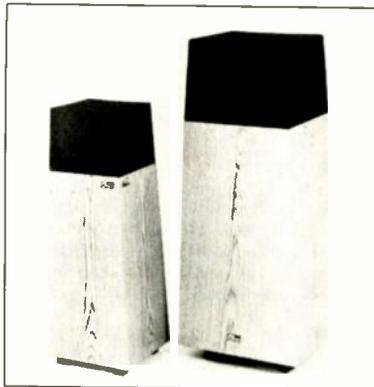
Floor-standing speaker with 12" Walsh radiator, 16" tweeter. Features oiled-walnut cabinet. FR 37-19,000 Hz ±4 dB; power range 75-250 W; imp 4 ohms; 44"H × 17<sup>1</sup>/<sub>4</sub>"W × 17<sup>1</sup>/<sub>4</sub>"D (tapers to 13"W × 13"D at top) \$4,000/pr

## Model I Speaker System

Vented floor-standing 4-way speaker with 12" subwoofer, 1<sup>1</sup>/<sub>2</sub>" soft-dome tweeter, 2 1" soft-dome supertweeters. Features walnut veneer on 7/8" particle-board cabinet. FR 32-21,000 Hz ±3.5 dB; crossovers 100, 2k, 10k Hz; power range 10-1,000 W continuous; imp 4 ohms; 33<sup>1</sup>/<sub>4</sub>"H × 15<sup>1</sup>/<sub>2</sub>"W × 15<sup>1</sup>/<sub>2</sub>"D at bottom, tapers to 13<sup>1</sup>/<sub>8</sub>"W × 13<sup>1</sup>/<sub>8</sub>"D at top \$1,550/pr

## Walsh 4 Speaker

Features 10" Walsh driver; 3 controls, for low, perspective (midrange), and high, each with 3 positions; press-connector inputs accept banana plugs and up to 12-gauge wire; casters; standard finish walnut and



oak, available in Scandinavian rosewood, black or white lacquer. FR 32-17,000 Hz ±4 dB; efficiency 87 dB SPL/m/2.83 V; rec power 50-500 W/ch; 40"H, 12.5" × 12.5" at top, 15.5" × 15.5" at base; 63 lbs \$1,500/pr

## Walsh 2 Speaker

Floor-standing vented speaker designed for excellent imaging and reliability. Features inverted conical surface; sub-bass activator; tufflex transmission block; ferrofluid ferrous lube; protection circuits; acoustic insulation; acoustical attenuator; acoustically transparent circular metal grille; high-frequency balance control. FR 45-16,000 Hz ±4 dB; efficiency 89 dB SPL/W/m; recommended max power 120 W rms; imp nominal/minimal 4/4 ohms; 32<sup>1</sup>/<sub>2</sub>"H × 11<sup>1</sup>/<sub>2</sub>" × 11<sup>1</sup>/<sub>2</sub>" at bottom tapering to 9<sup>1</sup>/<sub>4</sub>" × 9<sup>1</sup>/<sub>4</sub>" at top 29; lbs \$750/pr

Ohm C<sub>3</sub> Speaker

Features 10" polypropylene unit; 38-oz ferrite magnet 1<sup>1</sup>/<sub>2</sub>" liquid-cooled voice coil; penta-vented liquid-cooled tweeter; 1" soft dome, 10-oz ferrite magnet; 2,400 Hz/14,000 Hz sub-bass activator; vented (quasi-third order Butterworth filter); press connectors; 7/8" flakeboard stock-oiled walnut finish; oak on special order. FR 37-21,000 Hz ±4 dB; imp 4 ohms; 26<sup>1</sup>/<sub>8</sub>"H × 15"W × 11<sup>1</sup>/<sub>4</sub>"D \$650/pr

Ohm K<sub>2</sub> Speaker

Speaker with 9" low-frequency unit with 1" liquid-

cooled voice coil; 1" soft dome tweeter. Features 10-oz ferrite magnet of 9,400 gauss flux density; 2,700 Hz Sub-Bass Activator; vented (fourth-order Butterworth filter); dealer-replaceable press connectors; 7/8" flakeboard stock vinyl covered-oiled walnut finish or oak on special order; 23"H × 13"W × 10<sup>1</sup>/<sub>4</sub>"D; FR 42-20,000 Hz ±4 dB; \$450/pr

## Model L Speaker System

Speaker with 8" woofer, 2" tweeter, 2" supertweeter. Features tweeter level control; oiled-walnut finish. FR 42-20,000 Hz ±4 dB; crossovers 1.7 and 10 kHz; power range 8-100 W; efficiency 100-dB SPL at 3 ft; 20"H × 12"W × 9<sup>1</sup>/<sub>4</sub>"D \$440/pr

## Model N2 Subwoofer

Dual-vented subwoofer with 2 8" woofers. Features walnut-veneer finish. FR 32-140 Hz; power range 10-100 W; imp 8 ohms; 15"H × 16"W × 15"D \$385/ea

Model E<sub>2</sub> Speaker System

Two-way vented speaker with 8" woofer with 5-oz ferrite magnet and 1" liquid-cooled voice coil. Features liquid-cooled Penta-Vented™ tweeter; 3-position control for tweeter; 2,700 Hz-Sub-Bass Activator™; vented enclosure (quasi-third order Butterworth filter); press connectors; 7/8" flakeboard stock, oiled-walnut finish; 21<sup>1</sup>/<sub>2</sub>" × 11<sup>1</sup>/<sub>2</sub>" × 7<sup>1</sup>/<sub>8</sub>" deep; imp nominal/minimum 8/4 ohms; 48-17,000 Hz ±4 dB, efficiency 0.73%; recommended power 7-75 W rms on music \$300/pr

## Model M Speaker System

Vented 2-way speaker with 4" woofer, 1" dome tweeter. Features cast-aluminum cabinet. FR 120-20,000 Hz ±4 dB; crossover 3.5 kHz; power range 5-100 W imp 4 ohms; 7<sup>1</sup>/<sub>8</sub>"H × 4<sup>1</sup>/<sub>2</sub>"W × 4<sup>1</sup>/<sub>2</sub>"D \$300/pr

## ONKYO

## F-5000 Speaker System

Air-suspension floor-standing 3-way speaker with 12.2" woofer; 4" midrange; 1.95" direct-drive membrane tweeter in phase-aligned array. Features mid-range tweeter level controls; matched stereo pairing; African rosewood veneer finish. FR 28-20,000 Hz; crossover at 1.2 and 5,000 Hz; power range 200 W peak program \$1,000/pr

## PS-45 Radian Series Speakers

Two way air-suspension speaker. Features 8" Delta Olefin woofer; 2" ceramic horn-loaded tweeter, max input power 60 W; FR 45-40,000 Hz; sens 90 dB/W/m; silver vinyl enclosure \$270/pr

## HS-20 Midi Speaker System

Mirror-imaged 2-way speaker with 6.5" woofer, 2" tweeter; FR 60-20,000 Hz; max power 50 W; silver finish \$200/pr

## PHASE TECHNOLOGY

## Phase Coherent Series

## PC 100 Speaker System

Air-suspension 5-way phase-coherent speaker with 2 10" solid-piston woofers, 3" soft-dome upper-mid-range driver, 1" soft-dome tweeter. Features speaker protection; all sides finished in genuine walnut solids and veneers; removable grille. FR 24-20,000 Hz; power range 50-200 W; 42<sup>1</sup>/<sub>2</sub>"H × 14"W × 8"D; 80 lb \$1,300/pr

## PC 70 Speaker System

Air-suspension 3-way phase-coherent speaker with 10" solid-piston woofer, 2" soft-dome midrange, 1" soft-dome tweeter. Features speaker protection; genuine walnut solid and veneer finish; removable grille. FR 25-20,000 Hz; power range 25-125 W; 26"H × 14<sup>1</sup>/<sub>4</sub>"W × 10<sup>1</sup>/<sub>2</sub>"D; 50 lb \$750/pr

## PC 65 Speaker System

Air-suspension 2-way phase-coherent speaker with 8" solid-piston woofer, 1" soft-dome tweeter. Features speaker protection; genuine walnut solids and veneer

# One Step Closer to Perfection

The Ohm Walsh 2 is the "Speaker of the Year."  
The new Ohm Walsh 4 is even better.

Over 4,000 acknowledged experts chose the Ohm Walsh 2 as "The Speaker of the Year" in Audio Video International's 1982 Hi-Fi Grand Prix Competition. How could anyone make a better speaker than one that is "among the best speakers we have ever heard, regardless of price" (The Complete Buyers Guide to Speaker/Hifi Equipment), or that has received more rave reviews than any new speaker in the last 10 years? That question is answered by the new Ohm Walsh 4.

## Here's What We Did

**1** We reproduced the sound quality the New York Times described as "a spacious acoustic ambience with precise stereo imaging creating a 'reach-out-and-touch-it' realism that this listener has rarely experienced. . . ."

**2** We gave it the ability to play louder. The new Ohm Walsh 4 can handle 500 watts rms of music. It can reproduce a full orchestra at live levels in a normal listening room, flawlessly. It also can handle the new digital audio discs, effortlessly.

**3** We made it play deeper. The Ohm Walsh 4 can reproduce over half an octave deeper bass. At 30 Hz the 4's put out 10 times as much volume as the superb 2's. Maybe only one record out of a hundred demands this—but the 4's are ready whenever you are. They let you physically *feel* the impact of a bass drum or timpani. An unusual luxury, but it's there.

**4** We gave it more control range, so you can better match your own listening room to your musical taste. While most high-end speakers do have a high frequency control, the Ohm Walsh 2 has both a high frequency control and an additional Sub Bass Activator control to balance bass output—something no other speaker has ever had.



The new Ohm Walsh 4 goes one better. We added a truly exciting and unique control called "perspective." This allows you to change your "seat" in the audience from up front to in the rear—matching your taste, your music, your room and your state of mind.

**5** We made the Ohm Walsh 4 even more convenient to live with. They come built with casters for easy placement or movement. Moreover, our three ambience controls are placed within easy reach on the rear. The speakers are tall enough (40") not to be blocked by most chairs and sofas but small enough (only 12½" square at the top) to be inconspicuous in most rooms. They come in five finishes (all genuine wood veneer) to match your furniture.

## Here's How We Did It

We used the same unique, patented technology as in the Ohm Walsh 2. The main transducer is in the shape of a conical pyramid, inverted like an upside down ice cream cone. This driver is driven full range and by its very nature gives perfect dispersion, so you can still sit anywhere in your room and

hear everything correctly. Our patented design mates this driver to a tiny super-tweeter supplementing the highest octave. They are in time and phase alignment at all listening positions. This perfect alignment is what prompted The Washingtonian to say ". . . the Walsh 2s are among the best 'imaging' speakers at any price, which means they create the original setting in which the music was recorded—evoking the broad expanse of an orchestra or the compact spacing of a jazz combo, for example." The inverted driver and cabinet of the Ohm Walsh 4 are much bigger, which allows it to handle more power and go deeper.

## Now You Have A Choice

Either the Ohm Walsh 2 speakers which ". . . certainly must be rated a 'best buy'" (Audio), or the more expensive new Ohm Walsh 4, with both the luxury of extended bass and the ability to be played louder. In either case, you will get the sound Popular Mechanics has said, ". . . meets the ultimate audio test: It makes you unaware of its presence. You feel there's nothing between you and the music." One step closer to perfection.

### Ohm Walsh 4 Specifications

Frequency Response	32 Hz - 17 KHz ± 4 dB
Size	40" tall x 12½" x 12½" at top. 15½ x 15½ at bottom
Weight	63 lbs
Efficiency	87 dB at 1 meter with a 2.83 volt input with all controls at maximum
Finish	Genuine wood veneer, walnut and oak standard. Black or white lacquer on oak and Scandinavian Rosewood finish available on special order.
Inputs	Press connectors accepting "banana plugs" or bare wire up to 12 gauge.
Controls	3 - low, high and perspective each has three positions
Power requirement on Music	50 watts minimum/500 watts maximum
Impedance	4/4 ohms

Ohm Acoustics Corp.  
241 Tassie Place, Brooklyn, New York 11205

# Ohm

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finish; removable grille. FR 35-20,000 Hz; sens 86 dB SPL/W/m; power range 25-100 W; 21"H x 12"W x 10 1/2"D; 29 lb. \$500/pr

**PC 60 Speaker System**

Air-suspension 2-way phase-coherent speaker with 6" solid-piston woofer, 1" soft-dome tweeter. Features speaker protection; genuine walnut solids and veneer finish; removable grille. FR 40-20,000 Hz; power range 25-80 W; 13 1/4"H x 8"W x 8"D; 30 lb \$400/pr

**PC 50 Subwoofer**

Air-suspension subwoofer with 10" solid-piston woofer. Features genuine walnut solids and veneer finish. FR 30-150 Hz; sens 85 dB SPL/W/m; power range 25-200 W; 15"D x 14"H x 13"W; 33 lb. \$250/ea

**High Transparency Series**

**HT 42 Speaker System**

Bass-reflex 3-way high-technology speaker with 12" woofer, 1 1/2" soft-dome midrange, 1" soft-dome tweeter. Features midrange and tweeter level controls; speaker protection; walnut-grain vinyl finish; removable grille. FR 30-20,000 Hz; sens 91 dB SPL/W/m; power range 25-125 W; 27"H x 15 1/4"W x 11 1/2"D; 52 lb. \$500/pr

**HT 32 Speaker System**

Bass-reflex high-technology 3-way speaker with 10" woofer, 1 1/2" soft-dome midrange, 2" cone tweeter. Features speaker protection; walnut-grain vinyl finish; removable grille. FR 40-20,000 Hz; sens 89 dB SPL/W/m; power range 10-60 W; 23"H x 13"W x 10 1/4"D; 35 lb. \$340/pr

**HT 28 Speaker System**

Bass-reflex high-technology 2-way speaker with 8" woofer, 2" cone tweeter. Features walnut-grain vinyl finish; removable front grille. FR 50-20,000 Hz; sens 90 dB SPL/W/m; power range 5-50 W; 20"H x 10 3/4"W x 9 1/4"D; 37 lb. \$180/pr

**PIONEER**

**S-1010 Speakers**

Pair of mirror-image 3-way speakers with 14" passive radiator, 10" PG cone woofer, 2 1/2" PG cone midrange, beryllium ribbon tweeter. Genuine hand-rubbed walnut veneer cabinets. Impedance 6.3 ohms; frequency range 28-50,000 Hz; 80 watts rated power, 240 watts music power; sensitivity 92.5 dB SPL at 1 meter with 1 watt; 18 1/4" W x 13 1/2" D x 36 1/2" H; 90 lbs. 4 oz. \$1,360/pr

**S-910 Speakers**

Mirror image 3-way, ported speaker system with 12" cone woofer, 4" PG cone midrange, beryllium tweeter. Impedance 6.3 ohms; frequency range 30 Hz-50 kHz; 80 W rated power, 240 W music power, sensitivity 92.5 dB SPL at 1 w/m watt; 15 1/2" W x 13 1/2" D x 26 1/4" H; 60 lbs. 4 oz. \$600/pr

**S-710 Speakers**

Mirror-image 3-way, ported speaker with 12" PG cone woofer, 4" PG cone midrange, aluminum ribbon tweeter. Imp 6.3 ohms; FR 33 Hz-50 kHz; 60 W rated power, 180 W music power; sens 91.5 dB SPL at 1 meter with 1 W; 14 1/2" W x 11 1/2" D x 25 1/2" H; 53 lbs. 9 oz. \$500/pr

**S-510 Speakers**

Mirror-image 3-way, ported speaker with 10" PG cone woofer, 2" PG cone midrange, aluminum ribbon tweeter. Imp 6.3 ohms; FR 35 Hz-50 kHz; 40 W rated power, 120 W music power; sens 91 dB SPL at 1 meter with 1 W; 12 1/4" W x 11 1/2" D x 22 1/2" H; 31 lbs. 3 oz. \$360/pr

**S-77X Speakers**

Shelf-sized 3-way, ported speaker with 9" woofer, 2" tweeter, 90° rotatable ribbon super tweeter. FR 48-50,000 Hz; 100 W music power; sens 93 dB SPL/W/m; 17 1/4" H x 10" W x 8 1/4" D; 20 lb. \$340/pr

**S-33X Speakers**

Shelf-sized 2-way, ported speaker with 7" woofer, 2 1/2" cone tweeter. FR 60-20,000 Hz; 90 W music power; sens 91 dB SPL at 1 meter with 1 W; 14" H x 8 1/2" W x 8 1/4" D; 8 lb. \$180/pr

**POLK AUDIO**

**SDA-1 Speaker System**

Speaker with 4 MW 6600x trilaminate polymer bass-midrange drivers; Stereo/Dimensional isophase crossover system for blending all 12 active drivers of 2 SDA-1s; SL 1000 L/P high-frequency radiator incorporating an exclusive litz wire voice coil for FR beyond 25,000 Hz and a hyperbolic section polyamide diaphragm for quicker, better transient response and 1 sub-bass radiator. Recommended amplification 10-500 W/ch; FR 15-26,000 Hz; imp 4 ohms; crossover frequencies 50 Hz, 100 Hz, 2,500 Hz; system resonance 15 Hz; efficiency 95 dB/W/m; cabinet finish natural real walnut veneer (sealed to protect finish); 43 1/2"H x 16"W x 12"D; 85 lbs. \$1,700/pr

**SDA-2 Speaker System**

Similar to SDA-1 except 3 6600X bass-midrange drivers and crossover frequencies at 50 and 2,500 Hz. FR 16-26,000 Hz; system resonance 16 Hz; efficiency 92 dB/W/m; cabinet finish furniture-grade walnut or rosewood woodgrain vinyl; or real walnut veneer; 39 1/2"H x 16"W x 12"D; 80 lbs. \$1,200/pr

**SubSat 4/14 Speaker System**

System contains 2 Monitor 4s, one LF 14 subwoofer (see specs below). LF 14 features 12" planar fluid-coupled subwoofer, 2 6 1/2" trilaminate-polymer bass/midrange drivers. Crossover 120 Hz; max output 108 dB SPL; power range 10-150 W; imp 4 ohms; 28"H x 16"W x 11 1/2"D \$530/3-piece system

**R.T.A. 12C Monitor Speaker System**

Real-time-array 3-way floor-standing speaker with 12" low-resonance molded-foam subwoofer, 2 6 1/2" polymer laminated bass-midrange drivers, 1" open-mounted, moving-coil soft-dome tweeter. FR 17-25,000 Hz; crossovers 40 and 2k Hz; power range 10-500 W; imp 4 ohms; walnut or rosewood grain finish (genuine walnut veneer available at extra cost); 39"H x 16"W x 12"D. \$920/pr

**LF 14 Low-Frequency System**

Modular bass reference monitor low-frequency speaker with 2 6.5-WI trilaminate polymer drivers fluid coupled to low-resonance 12" foam-laminated planar sub-bass radiator. Features low-pass filter (can be added as single dual-ch woofer unit or as one of stereo pair of bass modules); crossover bypassing for connection to bi/tri/amplified systems. Power range 20-250 W; walnut or rosewood grain vinyl cabinet. \$330/ea

**Ten B Speaker System**

Sub-bass radiator/sealed 3-way floor-standing speaker with 10" fluid-coupled subwoofer, 2 6 1/2" bass/midrange drivers, 1" soft-dome tweeter. FR 22-25,000 Hz; crossovers 60 and 3k Hz; power range 10-200 W/ch; imp 6 ohms; walnut or rosewood grain finish (genuine walnut veneer available at extra cost); 28"H x 16"W x 11 1/2"D. \$640/pr

**Seven B Speaker System**

Sub-bass radiator/sealed 3-way bookshelf speaker with 10" subwoofer, 6 1/2" plasticized bass/midrange, 1" soft-dome tweeter. FR 26-25,000 Hz; crossovers 60 and 3k Hz; power range 10-100 W; imp 8 ohms; walnut or rosewood grain finish; 24"H x 14"W x 9 1/4"D. \$480/pr

**Five A. Similar to Seven B but 8" subwoofer; FR 31-25,000 Hz; power range 10-60 W; 21 1/2"H x 10 1/2"W x 8 1/2"D. \$350/pr**

**Monitor Four Speaker System**

Satellite speaker with trilaminate-polymer 6500 woofer, SL 1000 moving-coil tweeter, isophase crossover network. Features cabinet, grille designed to eliminate diffraction effects, smooth FR; terminated

transmission duct that loads bass/midrange driver into deep-bass range. FR 55-21,000 Hz ±3 dB; power range 10-80 W; max output 108 dB SPL; crossover 4.5 kHz; imp 8 ohms; 14 1/2"H x 8 1/2"W x 7 1/4"D. \$220/pr

**POTTED SOUND by MITCHELL SPEAKER CO.**

**Hanging Potted Sound Speakers**

Indoor/outdoor speaker/planter with solid ceramic construction and 360° sound dispersion. Piezo tweeter mounted in top ceramic bell and 8" woofer in 13" diameter pots, woven into 4.5-ft macrame hanger. Features hand-crafted glazes; 16-oz magnet in woofer; 1.5" woofer voice coil. Comes in Cocoa Brown, Almond Tan, Mustard, Sky Blue, Buttercup Yellow, Orange, Brick Red. Woofer FR 50-4,000 Hz. 175 W, 16 lbs. \$400/pr  
75 W, 13 lbs. \$300/pr

**Table Potted Sound Speakers**

Similar to above except designed for table placement instead of hanging. 175 W, 16 lbs. \$370/pr  
75 W, 13 lbs. \$272/pr

**QUAD**

**ESL-63 Electrostatic Loudspeaker**

Full-range electrostatic double speaker with dipole source. Features 2 protection circuits. Power range 100-190 W; sens 86 dB/2.83 V rms; imp 8 ohms; axis band limits -6 dB at 35 Hz, third-order, -6 dB at 20 kHz; 92.5 x 66 x 27 cm; 23 kg. \$3,310/pr

**Quad ESLs**

Full-range electrostatic loudspeaker incorporates closely coupled moving elements 200 times lighter than diaphragms of moving-coil speakers; bandwidth 45-18,000 Hz; horizontal/vertical dispersion 70°/15°; sens 93 dB at 2 meters on-axis, free space; imp 15-30 ohms; expanded aluminum, bronze or black metal grille with polished wood end frames, feet; 880mm x 790mm x 270mm. \$1,780/pr

**REALISTIC**

**Optimus Speaker Systems**

**T-300.** Floor-standing acoustic-suspension 3-way speaker with 10" woofer, 10" passive radiator, 5" midrange, 1" tweeter. Feature ferrofluid damping; midrange, tweeter level controls; oiled-walnut veneer finish. FR 44-20,000 Hz; crossover 800 and 7.6 kHz; max power 150 W; sens 91 dB SPL/W/m; imp 8 ohms; 34"H x 14"D x 12 1/4"W. \$520/pr

**T-120.** High-efficiency 3-way tower speaker in genuine walnut veneer. Features 10" long-throw woofer; 5" midrange driver; 1" liquid-cooled tweeter; sealed acoustic suspension enclosure; ferrofluid-cooled dome tweeter; removable cloth grille; level controls for midrange and tweeter frequency response. FR 50-20,000 Hz; power handling capacity 80 W; sens 91 dB SPL/W/m; imp 8 ohms; 35 1/2" x 12 1/2" x 11 1/2". \$360/pr

**50.** Three-way system with open-back midrange and tuned port. Features 12" high-compliance woofer; 4" midrange; 2 1/2" liquid-cooled tweeter; walnut veneer; front and rear projecting midrange speaker; tuned port; midrange and treble controls. FR 50-20,000 Hz; power handling capacity 75 W; system sens 90 dB SPL/W/m; imp 8 ohms; 25 x 14 x 10" \$320/pr

**40.** Time-aligned 2-way speaker with 8" long-throw woofer, 10" passive radiator, 2" tweeter. Features ferrofluid-cooled tweeter; tweeter level control; oiled-walnut veneer finish. FR 38-20,000 Hz; max power 75W; sens 87 dB SPL/W/m; imp 8 ohms; 26"H x 14 1/2"W x 10"D. \$260/pr

**30.** Tuned-port 2-way speaker with 10" woofer; 2 1/2" tweeter. Features color-coded spring terminals; FR 55-20,000 Hz; max power 70 W; 22 1/4"H x 12 1/4"W x 3 1/4"D. \$200/pr

**Mach One LC Speaker System**

Floor-standing acoustic-suspension 3-way speaker with 15" woofer, multi-cell midrange horn, high-compliance tweeter horn. Features liquid-cooled heavy-duty "bullet" tweeter; midrange, tweeter controls; LC crossover network; walnut-veneer finish cabinet; grille cloth. FR 20-20,000 Hz; max power 160 W; sens 90 dB SPL/W/m; imp 8 ohms; 28 3/8" x 17 3/4" W x 12" D. \$480/pr

**Nova Speaker Systems**

**500.** Acoustic-suspension 3-way speaker with 12" woofer, 5" midrange; 3" tweeter. Features midrange tweeter level controls; walnut-grain vinyl finish. FR 55-20,000 Hz; max power 50 W; 24"H x 15"W x 10 1/4"D. \$200/pr

**4.** Bass-reflex 2-way system with decorator grille. Features 8" woofer; tuned-port design; 2 1/2" extended-range tweeter; genuine oiled walnut veneer; spring terminals. Response 60-20,000 Hz; power handling capacity 50 W; 19 x 10 3/4 x 7 1/2. \$160/pr

**Minimus Speaker Systems**

**50.** Time-aligned 2-way tuned-port speaker with 6" woofer, 2" tweeter. Features push terminals, nonresonant high-density molded cabinet; metal grille. FR 50-20,000 Hz; max power 55 W; 15 1/4"H x 9"D x 8 7/8"W. \$180/pr

**11.** Similar to Minimus-50 except has time-aligned 5 1/2" woofer, 2 1/2" horn-loaded tweeter. Maximum power 50 W; 10 1/2"H x 6 1/8"W x 6 1/8"D. \$160/pr

**12.** Acoustically aligned speakers with 5" woofer, 2" horn-loaded cone tweeter, spring terminals. FR 60-20,000 Hz; power-handling capacity 50 W; 10 1/4" x 6 1/8" x 6 1/8". \$160/pr

**7W.** Walnut veneer mini-speaker. Features 4" woofer; 1" soft dome tweeter; removable cloth grille; spring

terminals. Power handling capacity 40 W; 8 x 5 x 4" \$120/pr

**7.** Features long-excursion 4" woofer; 1" soft-dome tweeter; die-cast metal enclosure; deluxe crossover for smooth response without artificial "peaks"; hanger slots and recessed spring terminal connectors for easy wall mounting. Power handling capacity 40 W; 7 1/8" x 4 7/16" x 4 7/16". \$100/pr

**19.** 2-way ported extension speakers in walnut or vinyl. Features 8" woofer, 3" tweeter; 22" x 12" x 6 1/2". \$60/pr

**17.** Sealed walnut veneer enclosure with a 5" full-range driver; wire mesh grille; 6 1/2" x 6 1/2" x 6". \$44/pr

**3.5.** Features 3" driver; removable steel grille; high-density molded enclosure; spring terminals; 5 3/8" x 3 3/8" x 3 3/8". \$40

**8.** 4" driver in walnut vinyl veneer; 9 3/4" x 5 1/2" x 4 3/8". \$40/pr

**0.5.** Metal frame, walnut vinyl veneer; 6 3/8" x 4 3/8" x 4 3/8". \$30/pr

**3.** Mini-extension speakers. Features 5" driver in walnut vinyl veneer; 10" x 8 1/2" x 5 1/2". \$26/pr

**0.3.** Walnut veneer cube speakers. Features extension for pocket stereos; 3" driver; 4" x 4" x 3 3/4". \$24/pr

**MC Speaker Systems**

**1600.** Bass-reflex system with polypropylene woofer. Features 8" woofer; tuned port; 2 1/2" dynamic tweeter; genuine walnut veneer; removable cloth grille; spring terminals. Response 60-20,000 Hz; power handling capacity 55 W; 18 x 11 1/2 x 6 3/4". \$140/pr

**MC-1201.** Acoustic-suspension 2-way speaker with 8" woofer, 2 1/2" tweeter. Features phono jack, screw connectors; removable decorator grille. FR 85-17,000 Hz; max power 50 W; 17 3/4"H x 10 3/8"W x 7 1/2"D. \$120/pr

**MC-600.** 2-way bookshelf-sized speaker. Features efficient long-throw 6 1/2" woofer; 2 1/2" wide-dispersion tweeter; genuine walnut veneer finish; removable cloth grille; recessed phono jack and screw terminals. Power handling capacity 40W; response 100-18,000 Hz. \$80/pr

**Supertweeters**

**Dynamic;** extends response to 40,000 Hz; mounts in or outside speaker cabinet; max power 50W; 4"H \$18  
**Piezo.** Extends response to 27,000 Hz. Maximum power 75W; sens 96 dB SPL/W/m. \$13

**REVOX**

**Revox Triton Speaker System**

Speaker consisting of floor-standing subwoofer module, two 3-way bookshelf satellites. Subwoofer has two 9.7" spring-supported drivers; each satellite has 6.9" low/midrange, 1.2" dome midrange, 0.75" dome tweeter. FR 30-25,000 Hz; crossovers 150, 1.3k, 3.2k Hz; power range 20-110 W; imp 4 ohms; subwoofer 42"W x 18"D x 13"H; satellites 19"W x 12"H x 7.5"D. \$1,899 for 3-piece system

**Revox Symbol B Speaker System**

Highly efficient 3-way speaker with bass reinforcement between 33 and 70 Hz via passive radiator. Woofer made of rigid die-cast basket, glass fiber-reinforced, highly damped cone; dome-type midrange with 2" soft-plastic diaphragm, compensating magnet; dome-type tweeter with 17,500-Gauss field intensity, acoustic diffraction lens for optimum dispersion above "presence" range; tweeter thermal protector reduces power level by 30 dB when overload occurs; 2 level controls (6 dB each in 3 steps). Power range 20-180 W; crossovers 730 and 2.8k Hz; imp 4 ohms; 43 1/2"H x 18"W x 15 1/2"D. \$2,198/pr



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**Plenum B Speaker System**

Bass-reflex 3-way speaker with new woofer featuring extended voice coil/magnet assembly, dome midrange, dome tweeter. Features custom crossover network to prevent tweeter overload; handcrafting with premium wood veneers. Sens 90 dB SPL/W/m; distortion 0.4%; max power 120 W ..... \$1,198/pr  
**Forum B.** Similar to Plenum B except max power 90 W ..... \$798/pr

**RTR INDUSTRIES****G-350B Speaker System**

Passive-radiator, tuned-column 3-way speaker with 10" woofer with 1½" high-temperature voice coil, gravity-dispersal dampener impregnation of cone apex; 12" passive radiator; 1½" carbon-fluid damped soft-dome midrange; 1" ferro-fluid soft-dome tweeter. Features midrange, tweeter level controls; auto-reset circuit-breaker protection; color-coded pushbutton connectors; walnut-veneer finish. FR 22-25,000 Hz; crossovers 9 kHz, 15 kHz; power range 10-150 W; sens 91 dB SPL/W/m; imp 8 ohms; 38"H × 18"W × 11"D ..... \$800/pr  
**G200B.** Similar to G-350B except no 1½" midrange driver. Low-end response 42 Hz; crossover 2.5 kHz; power range 10-120 W; no midrange level control; 36"H × 14½"W × 12½"D ..... \$600/pr

**G-80B Speaker System**

Passive-radiator 2-way tuned speaker with 8" woofer with 1½" voice coil, gravity dispersal damper impregnation, 10" passive radiator, 1" ferro-fluid soft-dome tweeter. Features tweeter level control; auto-reset circuit-breaker protection; walnut vinyl finish. FR 32-25,000 Hz; crossover 2.5 kHz; power range 10-100 W continuous; sens 90 dB SPL/W/m; imp 8 ohms; 25½"H × 14½"W × 11"D ..... \$400/pr  
**G-40B.** Similar to G-80B except has 8" passive radiator. Low-end response 60 Hz; 23"H × 12"W × 9½"D ..... \$320/pr

**SANSUI****PM-C200 Speaker System**

Bass reflex, 4-way, 4-driver floor model speaker with 15-inch polypropylene, crystalline mica, carbon cone woofer, 5" midrange, 1½" planar diaphragm tweeter, and planar direct radiator supertweeter. FR 25-40,000 Hz; efficiency 94 dB/W/m; power handling 320 W. 3-step balance control ..... \$1,000/pr

**PM-C100 Speaker System**

Bass-reflex 4-way bookshelf speaker with 13½" woofer, 5½" midrange, 1" tweeter, 1" supertweeter. Features new polypropylene, mica, carbon woofer, midrange; walnut-veneer finish. FR 30-35,000 Hz; max power 260 W; sens 92 dB SPL/W/m; imp 8 ohms; 26½"H × 15"W × 12½"D; 40.1 lb \$800/pr  
**PM-C70.** Similar to PM-C100 with 10" woofer and 160 W max power handling capacity. FR 40-30,000 Hz ..... \$600/pr

**S-1130 Speaker System**

3-way, 3-speaker tower speaker with 12" woofer and passive radiator. FR 28-22,000 Hz; max power 110 W; sens 92 dB/W/m SPL; imp 8 ohms ... \$640/pr

**S-930 Speaker System**

Acoustic-suspension 3-way speaker with 12" woofer, 4" midrange, ¾" dome tweeter. Features tweeter level control. FR 30-22,000 Hz; max power 110 W ..... \$400/pr

**S-730.** Similar to S-903 except has 10" woofer, no midrange driver, 2" tweeter; max power 80 W; sens 91 dB SPL/W/m ..... \$300/pr

**S-530.** Similar to S-730 except has 8" woofer; max power 60 W; sens 90 dB ..... \$180/pr

**H. H. SCOTT****Pro-100BII Speaker System**

Bidirectional 3-way air-suspension floor-standing monitor speaker with 15" woofer, 2 4½" midranges; 3 1" dome tweeters. Features tweeter, midrange level

controls; bidirectional control; tweeter burn out protection; oiled-walnut finish; 2 removable grilles. FR 36-20,000 Hz ±4 dB; crossovers 700 and 3.5k Hz; efficiency 90 dB SPL/W/m; power range 20-300 W; imp 4 ohms; 29½"H × 19"W × 14½"D \$1,590/pr

**197BII Speaker System**

Floor-standing 3-way air-suspension speaker with 15" woofer, 4½" midrange, 1 dome tweeter. Features tweeter, midrange level controls; hickory vinyl finish; removable grille. FR 38-20,000 Hz ±4 dB; crossovers 750 and 3.5k Hz; efficiency 92 dB SPL/W/m; power range 15-150 W; imp 6-8 ohms; 32"H × 17"W × 10½"D ..... \$820/pr  
**196B.** Similar to 197B except has 12" woofer. Efficiency 96-dB SPL/W/m; crossovers 800 and 3.5k Hz; power range 15-120 W; 25½"H × 15"W × 10½"D ..... \$560/pr

**311DC Three-Way 10" Loudspeaker**

Features 1½" wide-dispersion tweeter; 5" acoustically isolated midrange; 10" high-compliance woofer; variable midrange/tweeter high-frequency control; power handling 10-70 W; mountain walnut finish; 8 ohm; 23"H × 13"W × 9½"D; 25 lb ..... \$500/pr  
**311D.** Without high frequency control .... \$460/pr

**312D Three-Way 12" Loudspeaker**

Features 1½" wide-dispersion tweeter; 5" acoustically isolated midrange; 12" high-power-construction woofer; variable midrange/tweeter high-frequency control; imp 8 ohms; power handling 10-90 W; mountain walnut finish; 26"H × 15½"W × 11½"D; 35 lb ..... \$600/pr

**312 Speaker System**

Air-suspension 3-way bookshelf speaker with 12" woofer, 5½" midrange, 1½" tweeter. Features midrange, tweeter level controls; tweeter burnout protection; walnut vinyl finish. FR 45-18,000 Hz ±4 dB; power range 10-90 W; imp 6-8 ohms; 24½"H × 14½"H × 11½"D ..... \$600/pr

**188T Speaker System**

Air-suspension floor-standing 3-way speaker with 10" woofer, 4½" midrange, 1" dome tweeter. Features midrange, tweeter level controls; tweeter burnout protection; hickory vinyl finish; removable grille. FR 38-20,000 Hz ±4 dB; crossovers 900 and 3.5k Hz; efficiency 95.4 dB SPL/W/m; power range 10-100 W; imp 6-8 ohms; 33½"H × 13½"W × 10½"D ..... \$500/pr

**177BL Speaker System**

Air-suspension 3-way speaker with 8" woofer, 5" midrange, 1½" tweeter. Features tweeter burnout protection; hickory vinyl finish; removable grille. FR 50-18,000 Hz ±4 dB; crossovers 1.2 and 3.5 kHz; power range 7-70 W; efficiency 92.5 dB SPL; imp 6-8 ohms; 21"H × 11"W × 9½"D ..... \$300/pr

**166B Speaker System**

Air-suspension 2-way speaker with 16.5cm (6½") woofers; 2.5cm (1") dome tweeter. Contemporary finish of mountain walnut vinyl laminated over particle board with removable knit grille. Features high power construction woofer, textile dome tweeter protected against burnout. FR 55-20,000Hz ±4dB; sens 89.5 dB SPL/W/m pink noise; imp 8 ohms; nominal power handling capacity 70 W; crossover frequency 2,200 Hz; recommended amp damping factor 10 mi; enclosure volume 8.19 liter (0.29 cu ft.); power range 10-100 W; 13"H × 7½"W × 6½"D; 11 lb. \$290/pr

**166 Speaker System**

Air-suspension 2-way bookshelf speaker with 6½" woofer, 1" dome tweeter. Features tweeter burnout protection; walnut vinyl cabinet finish; removable knit grille. FR 55-20,000 Hz ±4dB; crossover 2.2 kHz; power range 10-100 W; sens 92.5 dB SPL/W/m; imp 7-8 ohms; 13"H × 7½"W × 6½"D .... \$290/pr

**206D Bookshelf Speaker**

Two-way 6" speaker features 1½" wide-dispersion tweeter; 6½" high-compliance woofer; power han-

dling 5-40 W; mountain walnut finish; 8 ohms; 13½"H × 8½"W × 7½"D; 11 lb ..... \$200/pr

**208D Bookshelf Speaker**

Two-way 8" speaker features 1½" wide-dispersion tweeter; 8" high-compliance woofer; power handling 5-50 W; mountain walnut finish; 8 ohms; 21½"H × 11½"W × 8½"D; 15.5 lb ..... \$240/pr

**315D Speaker System**

Features 38cm (15") woofer; 12.7cm (5") midrange; 2.5cm (1") tweeter dome; 45-20,000 Hz ±4dB; 90.5 dB SPL/W/m; imp 8 ohms; nominal power handling capacity 50 W; crossover frequencies 1,100 Hz and 3,500 Hz; air-suspension; enclosure volume 73.43 liter (2.6 cu. ft.); midrange/tweeter level control ..... \$760/pr

**SHAHINIAN ACOUSTICS****Obelisk Speaker System**

Folded double-prism 3-way 48" hybrid transmission line speaker with 8" asymmetrically-placed shallow-cone woofer, 10" mass-loaded-membrane, viscous-damped passive radiator, 1" Mylar dome tweeters. FR 32-21,000 Hz +2/-3 dB; crossover 2 kHz; imp 6 ohms; max power 150 W average music program; walnut or oak finish (other finishes available); 27"H × 14"W × 12"D ..... \$1,500/pr

**Eagle Speaker System**

Floor-standing 3-way speaker with 8" polypropylene woofer, viscous-damped passive radiator, 28-mm dome midrange, W-shaped polyamide dome supertweeter. Features fast-blow fuse protection. FR 28-22,000 Hz -3 dB; imp 4 ohms; 28½"H × 13"D × 12"W; 40 lb. Birch finish ..... \$600/pr  
 Walnut finish ..... \$700/pr

**The Box Speaker System**

Speaker with 8" polypropylene woofer, same passive radiator as Eagle and Obelisk; 1" polyamide dome tweeter. Features fast-blow fuse protection; Frequency response 30-18,000 Hz ±3 dB; imp 8 ohms; 23½"H × 11½"W × 11½"D; 34 lb; birch or walnut finish ..... \$650/pr

**The Slant Speaker System**

Speaker with 6" polypropylene driver with 1" coil, stacked ceramic magnet and 1" polyamide dome tweeter. Features polypropylene viscous-damped passive radiator; ¾" fibreboard enclosure, oak veneer finish; FR 30-18,000 Hz-3dB; imp 6 ohms; 23½" × 11½" × 11½"; 26 lb ..... \$450/pr

**The Lark Speaker System**

Speaker with 4½" woofer/midrange, with shaped dome tweeter (10 mm coil). Features ½" veneer on fibre-board finish; FR 60-22,000 Hz; imp 4 ohms; 13" × 8½" × 5½"; 19 lb ..... \$350/pr

**Contra Bombarde Subwoofer**

Twin conical slot-loaded-horn stereo subwoofer. Can be bridged for single-ch operation. Features 2 8" drivers. Total horn path 20 ft from throat to mouth; FR 16-200 Hz; max power 150 W continuous; 35"H × 27½"W × 18½"D; 165 lb ..... \$1,500/ea

**SHERWOOD****S-51 3-Way Speaker System**

Features 12" laminated polymer woofer; 5" laminated polymer midrange and phenolic ring tweeter damped with ferro-fluid; crossovers at 1,000 and 4,000 Hz; FR 33-20,000 Hz; power handling 120 W; sens 90 dB/W/m; imp 8 ohms; 26"H × 15½"W × 13"D ..... \$500/pr

**S-31 3-Way Speaker System**

Encloses 10" laminated polymer woofer; 5" laminated polymer midrange; 2" phenolic tweeter damped with ferro-fluid; crossovers at 1,000 and 4,000 Hz; FR 40-20,000 Hz; power handling 80 W; sens 90 dB/W/m; imp 8 ohms; 24"H × 14"W × 11"D ..... \$360/pr

**S-11 3-Way Speaker System**

Speaker with laminated high polymer 6" midrange/woofer; 8" fluid coupled sub-woofer; 2" phenolic rign tweeter damped with ferro-fluid; crossovers at 3,000 Hz and 70 Hz; FR 50-20,000 Hz; power handling 50 W; sens 90 dB/W/m; imp 8 ohms; 23" × 12" × 10 1/4" ..... \$240/pr

**SNELL ACOUSTICS****Type A/III Speaker System**

Floor-standing 4-way speaker designed to produce sound energy that is an exact analog of applied electrical input. Features 10" fused woofer in its own cabinet, 4" fused midrange, 1" fused tweeter mounted in separate cabinet on special curved enclosure to minimize diffraction effects, provide uniform dispersion into listening environment. Can be bi-amplified with exclusive Snell electronic crossover specific to Type A/III. FR 34-24,000 Hz ± 1.25 dB on axis, up to 25° off-axis; crossovers 275, 2,500 Hz, 15,000 Hz; min power 80 W/ch; imp 4 ohms; 47"H × 24"W × 13"D. Hand-sanded hand-rubbed white oak cabinet ..... \$2,600/pr  
American walnut ..... \$2,485/pr

**Type C Speaker System**

Floor-standing mirror-imaged speaker utilizing front-loaded 10" long-throw woofer, 4" midrange, 3/4" ultra-low-mass soft-dome tweeter, rear-firing super-tweeter; drivers are crossed over at 375 Hz, 3,500 Hz and 15,000 Hz for rear-firing tweeter; crossovers individually adjusted; individual inputs to low-and high-frequency drivers allow speakers to be optionally bi-wired; hand-sanded hand-rubbed oak or American walnut. FR from 35-22,000 Hz ± 1.25 dB; sens 90 dB SPL/2.8 V/ pink noise; nominal imp 4 ohms; power range 80-400 W/ch; 44"H × 15"W × 13"D ..... \$1,570/pr

**Type E Speaker System**

Floor-standing speaker with 8" woofer, 1" dome tweeter, and ultra-low-mass 3/4" rear-firing super-tweeter designed for accuracy of early-arrival sound and accuracy of listening room response. Features individual inputs for woofer and high frequency drivers for optional bi-wiring of speakers; individually adjusted crossovers; hand-sanded, hand-rubbed oak or American walnut. Frequency response 39-22,000 Hz ± 1.75 dB; crossover frequencies 2,300 Hz and 15,000 Hz for rear-mounted supertweeter; nominal imp 8 ohms; sens 93 dB SPL/2.8 V pink noise with unit-to-unit efficiency variation less than 1/2 dB; maximum power handling 150 W/ch; 33"H × 14"W × 11"D ..... \$800/pr

**Type J Speaker System**

Bookshelf speaker with polymer-treated curvilinear cone for midrange clarity and natural tonal balance; system maximizes accuracy of early arrival sound and accuracy of listening room response; individually adjusted. Features individual inputs for woofer and tweeter for optional bi-wiring of system; hand-sanded; hand-rubbed oak or American walnut. Sens 91 dB SPL/m/2.8V pink noise with unit-to-unit efficiency variation less than 0.5 dB; max power 150 W/ch; FR 50-22,000 Hz ± 2 dB; crossover 2,300 Hz; imp 8 ohms; 23"H × 13"W × 10"D; 38 lbs ... \$579/pr

**Type K Speaker System**

Bookshelf acoustic-suspension speaker using 8" woofer and 3/4" tweeter; crossover at 2,300 Hz; system designed for accuracy of early arrival sound and accuracy of listening room response; woofer incorporates polymer edge-treated curvilinear cone for accurate midrange clarity and natural tonal balance; soft-dome tweeter features unique polyamide vacuum-formed diaphragm for fast transient response and wide dispersion; individually adjusted crossovers; individual inputs to low- and high-frequency drivers for bi-wiring; hand-sanded and hand-rubbed oak or American walnut. Nominal imp of 8 ohms; sens 90 dB SPL/2.8 V/m pink noise with unit-to-unit efficiency variation less than .5 dB; max power 100 W/ch; 18"H × 13"W × 9"D ..... \$375/pr

**SONAB by AUDIOSOURCE****OA-51 Loudspeaker**

Rosewood-finished speaker sold in mirror-imaged pairs with matched veneers. FR 32-20,000 Hz DIN, 300-17,000 Hz ± 2 dB, measured in free sound field, response below 300 Hz attenuated to counter-balance sound reflected from wall behind speaker; THD < 0.4% 300-7,000 Hz with 5 W input (94 dB SPL/m); sens 87 dB SPL/W/m; imp 8 ohms nominal, < 8 ohms above 5 kHz, phase angle < ± 28°; power handling 100 W. 430mmW × 296mmH × 248mmD; 11 kg ..... \$900/pr

**SONY****SS-U80 Speaker System**

Acoustic-suspension speaker with 12" woofer, 4" low-midrange driver, 2 1/2" high-midrange driver, direct-drive ribbon tweeter. Features 1" thick particle-board cabinet, fiber-board baffle; genuine walnut-veneer finish. 39 3/8"H × 16 1/8"W × 14 3/8"D; 78 lb 11 oz ..... \$760/pr

**SS-U70 Speaker System**

Acoustic-suspension speaker with 10" woofer, 4" midrange driver, direct-radiator ribbon tweeter. Features 1" thick particle-board cabinet, fiber-board baffle; genuine walnut-veneer finish. 32 1/2"H × 15"W × 14"D; 63 lb 6 oz ..... \$600/pr

**APM-700 Speaker System**

Accurate Pistonic Motion bookshelf loudspeakers. Bass-reflex design; removable grille cloth; one-touch input connectors; tweeter adjustment control. APM woofer equivalent area of a 6 1/2" round driver; APM tweeter equivalent of 2" round driver; FR 45-20,000 Hz; imp 6 ohms; sens 89 dB SPL (at 1 W, 1 meter); input power 160 W music; 8 3/8"W × 15 3/8"H × 8 3/8"; 13 lbs, 4 oz ..... \$500/pr

**SS-U660A Bass Reflex Speakers**

3-way system with 12" woofer, 4" midrange, Balanced Drive tweeter. FR 36-20,000 Hz; imp 8 ohms; sens 93 dB SPL (at 1 W, 1 meter); input power 160 W music; simulated walnut veneer finish; 14 3/8"W × 31"H × 12 1/4"; 37 lbs, 8 oz ..... \$360/pr

**SS-U560A Bass Reflex Speakers**

3-way system with 10" woofer, 4" midrange, Balanced Drive tweeter. FR 36-20,000 Hz; imp 8 ohms; sens 93 dB SPL/W/m; input power 100 W music; simulated walnut veneer finish; 13 3/8"W × 25 1/2"H × 10 3/8"; 37 lbs 8 oz ..... \$290/pr

**SS-U500 Bass Reflex Speakers**

3-way system with 10" woofer, 4" midrange, 2" tweeter. FR 40-20,000 Hz; imp 8 ohms; sens 92 dB SPL/W/m; input power 80 W music; simulated walnut veneer finish; 14 3/8"W × 28 3/4"H × 10 3/8"; 30 lbs ..... \$220/pr

**SS-U400 Bass Reflex Speakers**

3-way system with 8" woofer, 2" midrange, 1 3/4" tweeter. FR 50-20,000 Hz; 8 ohms; sens 91 dB SPL/W/m; power 60 W; simulated walnut veneer finish; 13 3/8"W × 25 3/8"H × 10 3/8"; 23 lbs ... \$160/pr

**SS-X150 Bass Reflex Speakers**

Bookshelf 2-way system with 6 1/2" woofer, 2" tweeter. FR 80-20,000 Hz; imp 8 ohms; sens 90 dB SPL/W/m; input power 50 W music; simulated dark wood finish; 3 1/2"W × 14 1/4"H × 9 3/8"; 8 lbs 6 oz ..... \$180/pr

**SES-320 Rear Speakers**

Changes apparent size of listening room with rear speakers producing signal slightly after main speakers. Stadium/Concert/Club/Off dimension selector; level control; rear level display meter; built-in power amp. 7 W/ch; 30-3,000 Hz; < 3% THD; 14"W × 2 1/4" × 9 3/4"; 6 lbs, 2 oz. Speakers 5" driver; 8 ohms; sens 90 dB SPL/W/m; 10 W max; 10 3/8" × 6 3/4" × 4 3/4"; 2 lbs, 14 oz ..... \$320/set

**SA-W30 Active Subwoofer**

12" woofer/power amp system is used with compact speakers to enhance nondirectional bass frequencies. Automatic standby circuit turns system on/off when



musical signal is in/out. Adjustable crossover at 60, 90, and 140 Hz; amp power 50 W into 6 ohms from 20 to 140 Hz with no more than 5% THD; 19" W × 19 1/2" × 15 1/8"; 40 lb 13 oz ..... \$295

**SYMDEX****Symdex Sigma**

A 2-way acoustic suspension design using 6 1/4" bextrene cone and 1" soft cambric dome tweeter. Features include physically time-aligned drivers; linear phase crossover network; cut-away cabinetry for min diffraction; 2 sets of input terminals for bi-wiring. FR 60-20,000 Hz; 10"W × 22"H × 6"D; black lacquer formica finishes with brown or black grilles ..... \$795/pr

**Symdex Omega Woofer**

Specially designed add-on woofer system with 10" bextrene driver for use with Symdex Sigma to form an integrated 3-way system; contains a passive crossover network for interfacing with the Sigma as well as provision for biamping; gold pin and socket interconnect; FR 40 Hz; 13 1/2"W × 31"H × 13 3/8"D; sold in computer matched pairs with same finish options as Sigma ..... \$1,095/pr

**TECHNICS****SE-8 Speaker System**

Linear-phase bass-reflex 3-way disc speaker with 13" woofer, 3 3/4" honeycomb disc midrange, 1 1/8" honeycomb disc tweeter. Features midrange, tweeter controls; thermal relay protection with reset button, LED indicator; FR 36-35,000 Hz; crossovers 1.2 and 3.5 kHz; max power 150 W music; sens 94 dB SPL/W/m; imp 8 ohms; 28"H × 15 3/8"W × 14 3/8"D; 59.5 lb ..... \$1,300/pr

**SB-6.** Similar to SB-8 except has 10" woofer, 3 1/8" midrange driver. Low-end response 38 Hz; crossovers 800 and 4k Hz; max power 120 W music; sens 93 dB SPL/W/m; 23 3/8"H × 13 3/8"W × 12 3/8"D; 37.4 lb ..... \$800/pr

**SB-4.** Similar to SB-6 except has 9" woofer, 2" midrange driver. Low-end response 45 Hz; crossovers 1.8 and 3.5 kHz; max power 90 W music; sens 91 dB SPL/W, m; 21 3/8"H × 11 1/4"W × 10 3/8"D; 24 lb ..... \$600/pr

**SB-L301 Speaker System**

Linear-phase bass-reflex 3-way speaker with 12" woofer, 4" midrange, radial horn tweeter. Features midrange, tweeter controls; thermal relay protection with reset button, LED indicator. FR 39-22,000 Hz; crossovers 1.5 and 4 kHz; max power 130 W music; sens 90 dB SPL/W/m imp 8 ohms; 28 3/8"H × 14 1/8"W × 13 3/8"D; 34.2 lb ..... \$500/pr

**SB-L201.** Similar to SB-L301 except has 10" woofer. Low-end response 41 Hz; crossovers 1.8 and 4 kHz; max power 100 W music; 26 3/8"H × 13 1/8"W × 13 3/8"D; 28.7 lb ..... \$400/pr

**SB-L101.** Similar to BL-L201 except 2-way system with 10" woofer, radial-horn tweeter; no level controls, low-end response 43 Hz; crossover 2.6 kHz; max power 90 W music; 24 1/2"H × 12 3/8"W × 11"D; 22 lb ..... \$300/pr

**SB-X700 Honeycomb Disc Speaker System**

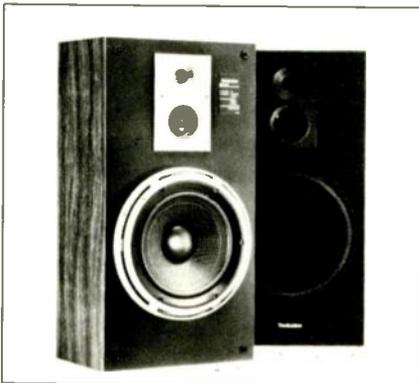
2-way speaker with 12" woofer, 3 1/8" midrange, and 1 1/8" tweeter; honeycomb disc drivers; features thermal relay protection with reset button; walnut grain finish; removable grille; bass-reflex design; attenuators for tweeter and midrange; low-distortion crossover networks; easy-to-use speaker cable connector terminals; imp 8 ohms, input power 180 W music, 90 W DIN; output level 90 dB W/m; FR 30-33,000 Hz; crossover frequencies 1 kHz, 4 kHz; 14 3/32" x 26 3/4" x 12 7/8"; 36.4 lb. .... \$500/pr

**SB-X500.** Similar to SB-X700 except no midrange or tweeter attenuator and 10" woofer; input power 130W, music, 65W, DIN; output level 90dB/W (1.0m); FR 33-33,000 Hz; crossover frequencies 1.5kHz, 4kHz; dimensions 13 3/32", 23 7/32", H; 12 7/8" W; 30.9 lb ..... \$400/pr

**SB-X300.** Similar to SB-X500 except 9" woofer, 2" midrange and 110 W, music; 55 W, DIN input power; FR 38-33,000 Hz; crossover frequencies 1.8 kHz, 3.5 kHz; 11 3/2" W x 21 1/4" H x 10 3/2" D; 26.5 lb ..... \$300/pr

**SB-L71 Speaker System**

Bass-reflex 3-way speaker with 10 3/4" woofer, 2 1/2" midrange, horn tweeter. Features ring-type reflex port; linear-phase configuration. FR 38-30,000 Hz;



crossovers 4 and 8 kHz; max power 90 W music; sens 92 dB SPL/W/m; imp 8 ohms; 27 3/32" H x 14 7/16" W x 10 3/4" D; 20.5 lb ..... \$250/pr

**SB-L51.** Similar to SB-L71 except has 8 3/8" woofer. Low-end response 43 Hz; crossovers 3.5 and 8 kHz; max power 75 W music; 23 3/8" H x 12 3/32" W x 8 7/16" D; 16.1 lb ..... \$200/pr

**SB-L31.** Similar to SB-L51 except 2-way system with 8 3/8" woofer, 2 1/2" cone tweeter. FR 45-22,000 Hz; crossover 4 kHz; max power 60 W music; sens 91 dB SPL/W/m; imp 8 ohms; 22 7/32" H x 11 7/16" W x 8 7/16" D; 15.4 lb ..... \$140/pr

**SB-F5 Speaker System**

Compact 2-way linear-phase bass-reflex speaker with 7 1/2" woofer, sectoral radial-horn tweeter. Features slit reflex port; antiresonant cabinet; metal grille. FR 70-20,000 Hz - 10 dB; crossover 6 kHz; max power 70 W music; sens 90 dB SPL/W/m; imp 8 ohms; 12 3/8" H x 7 3/32" D x 7 7/8" W; 6.8lb ..... \$180/pr

**Micro Series**

**SB-F3.** Micro-size 2-way bookshelf speaker with 6.3" woofer, horn tweeter. Features diecast aluminum cabinet. Imp 8 ohms; max power 90 W music; sens 89 dB SPL/W/m; 12.6" H x 7.5" D x 7" W .. \$370/pr

**SB-F2.** Similar to SB-F3 except has 4.7" woofer. Maximum power 60 W music; sens 88 dB SPL/W/m; 10" H x 6.2" D x 5.4" W ..... \$310/pr

**SB-F1.** Similar to SB-F2 except has 4" woofer. Sens 86 dB SPL/W/m; 8.3" H x 5" D x 4.6" W \$240/pr

**SB-F40 3-Way Honeycomb Disc Speaker System**

Speaker with 5 1/2" woofer; 2" midrange, 1 1/8" honeycomb disc drivers; thermal relay protection; handle/guard; optional wall mounting brackets; car mounting fixtures; can be used at 8 ohms for 60 W (music), 30 W (DIN) with 87 dB W/m or at 4 ohms for 100 W

(music), 50 W (DIN) with 88 dB W/m; 1,500 Hz, 5,000 Hz (8 ohms); 2,000 Hz, 4,000 Hz (4 ohm); at 8 ohms closed mode, bass reflexed; at 4 ohms, 85 Hz-35 kHz, 75 Hz-35 kHz bass-reflex mode; at 8 ohms, closed mode: 12 1/32" x 6 1/32" x 7 7/8", bass-reflex mode: 14.9 x 31.5 x 17.0 cm; at 4 ohms, closed mode 31.5 x 15.3 x 18.7 cm; bass-reflex mode: 14.9 x 31.5 x 17.0 cm; 7.7 lb .. \$360/pr

**SB-F30 3-Way Honeycomb Disc Speaker System**

12cm (4 3/8") honeycomb disc woofer; honeycomb disc midrange; honeycomb disc tweeter; similar to SB-F40 except no handle/guard. Has 4 3/4" woofer, 1 1/8" midrange, and 1 1/8" tweeter in honeycomb driver format. Impedance 8 ohms or 4 ohms; input power at 4 ohms 60 W music, 30 W DIN; at 4 ohms 40 W music, 20 W DIN; output level at 8 ohms: 86 dB/W/m; at 8 ohms 85 dB/W/m; crossover frequencies 1.6 kHz, 4.5 kHz. .... \$340/pr

**SB-F20 3-Way Speaker System**

3-way system with large 14 cm (5 1/2") cone woofer, 6 cm (2 3/8") cone midrange; 1.4 cm (9/16") dome tweeter; heavy duty enclosure; thermal relay protection. Similar to SB-F40 except 2 3/4" midrange and 3/8" tweeters; can be used at 8 ohms for 60 W music, 30 W DIN with 87 dB W/m or at 4 ohms for 100 W music, 50 W DIN with 88 dB W/m; crossover frequencies 2,000 Hz, 5,000 Hz; at 8 ohms: 80 Hz-20 kHz closed mode; 75 Hz-20 kHz bass reflex; at 4 ohms 85 Hz-20 kHz closed mode; 80 Hz -20kHz bass reflex mode; 12 1/32" x 6 1/32" x 7 7/8"; 5.5 lb \$240/pr

**SB-F10.** Similar to SB-F30 except 3/8" tweeter; imp 4 ohms; crossover frequencies 4 kHz, 15 kHz \$220/pr

**Accessories**

**SH-S1.** Tripod stand for SB-F1, SB-F2 speakers \$50

**SH-S2.** Angle mount for SB-F1, SB-F2 ..... \$40

**SH-S3.** Suspension chain, bracket for SB-F2. .... \$30

**THIEL**

**CS-3 Coherent Source Loudspeaker**

3-way loudspeaker with 28 mm soft dome tweeter, 11 cm midrange unit, and 25 cm woofer. Drivers positioned along a sloping baffle, crossover network drivers complement the characteristics of the drivers in their enclosures. Features electronic bass equalizer; die-cast magnesium driver baskets; polypropylene crossover network capacitors; cabinets finished with genuine teak veneer and a natural lacquer finish; FR 22-18,000 Hz ± 1/2 dB; imp 4 ohms, min; sens 89 dB W/m; input power 40-250 W; 13" x 13" x 41"; 75 lbs. .... \$1,500/pr

**Model 03a Speaker System**

Coherent-source 3-way speaker with 10" woofer, 5" midrange, 1" soft-dome tweeter. FR 30-20,000 Hz ± 2 dB; crossovers 400 and 4 kHz; sens 90 dB/W/m; power range 20-250 W; imp 4 ohms; teak finish; also available, on special order, walnut, oak, rosewood, black; 38" H x 12" W x 12" D \$1,120/pr

**Model 04a Speaker System**

Coherent-source floor-standing 2-way system with 6 1/2" woofer/midrange, 1" soft-dome tweeter. FR 50-15,000 Hz ± 2 dB; crossover 2.5 kHz; sens 87 dB/W/m; power range 20-150 W; imp 8 ohms; teak finish; also available, on special order, walnut, oak, rosewood, black; 36" H x 10" W x 10" D. \$640/pr

**Model 02 Speaker System**

Ported 2-way bookshelf speaker with 6 1/2" woofer, 1" cloth dome tweeter. FR 45-20,000 Hz ± 2 dB; crossover 2.5 kHz; sens 90 dB/W/m; power range 10-100 W; teak finish; also available, on special order, walnut oak, rosewood, black; knit black grille; 19" H x 11" W x 9.5" D ..... \$350/pr

**3D ACOUSTICS**

**3D Speaker System**

Three-piece speaker system with 2 acoustic-suspension bookshelf satellite systems with 6" midrange, 1"

cloth dome tweeters and resistively loaded/tuned-port floor-standing bass module with 10" high-compliance, low-resonance woofer. System frequency range 32-20,000 Hz; crossovers 100 and 2 kHz; power range 30-150 W/ch continuous; imp 8 ohms; oiled walnut veneer cabinet; satellites 14" H x 8 1/2" D x 7 1/4" W; woofer 24" H x 16" W x 13 3/4" D ..... \$495/system

Stands for satellite system. .... \$65/pr

**3D Decade Speaker System**

Floor-standing 3-way speaker with 6" controlled-output woofer, 10" passive radiator, 3/8" polycarbonate dome tweeter. Features resistively loaded passive radiator; oiled-walnut veneer cabinet; 3-sided black cloth grille. FR 40-25,000 Hz ± 2 dB; crossover 2.4 kHz; power range 25-150 W rms; imp 9 ohms; 31" H x 12 1/4" W x 9 1/4" D ..... \$395/pr

**3D Cube Speaker System**

Bookshelf speaker with 6" controlled-output woofer, 3" polycarbonate dome tweeter. Features oil-walnut veneer cabinet; 3-sided black cloth grille. FR 70-25,000 Hz ± 2 dB; crossover 2.5 kHz; power range 15-150 W; imp 8 ohms; 9 3/4" H x 9 3/4" W x 9 3/4" D ..... \$195/pr

**VISONIK**

**David 9000 Speaker System**

Three-way speaker with 7" woofer, 1 1/2" midrange, 3/8" tweeter. FR 35-25,000 Hz + 4/-8 dB; crossovers 900 and 4.5 kHz; power range 20-120 W; imp 4 ohms; nextel gray or simulated walnut finish; 14 3/4" H x 9 1/4" W x 9 1/4" D ..... \$660/pr

**David 8000 Speaker System**

Three-way speaker with 5" woofer, 2" dome midrange, 1" dome tweeter. Features gray nextel, brown extel, or metallic silver finish. FR 38-25,000 Hz; crossovers 1k and 5k Hz; power range 20-100 W; imp 4 ohms; 9 3/4" H x 6 3/4" W x 6 1/4" D .. \$460/pr

**David 7000 Speaker System**

Two-way speaker with 5" woofer, 1" tweeter. FR 40-25,000 Hz; crossover 2.5 kHz; power range 15-70 W; imp 4 ohms; nextel gray or simulated walnut finish; 9 3/4" H x 6 1/4" W x 6 3/4" D ..... \$290/pr

**David 6000 Speaker System**

Two-way speaker with 4" woofer, 1" dome tweeter. Features brown or gray nextel finish. FR 45-25,000 Hz; crossover 2.8 kHz; power range 10-60 W; imp 4-8 ohms; 7 3/4" H x 5 1/4" W x 5" D ..... \$330/pr

**David 5000 Speaker System**

Two-way speaker with 4" woofer, 1" tweeter. FR 45-25,000 Hz; crossover 2.5 kHz; power range 10-60 W; imp 4 ohms; nextel gray or brown finish; 7 3/4" H x 5" W x 5 1/4" D ..... \$280/pr

**Ambassador Series**

**A150 WN Speaker System**

Three-way speaker with 12" woofer, 2" dome midrange, 1" dome tweeter. Features walnut-veneer finish with solid walnut corners. FR 20-22,000 Hz; crossovers 600 and 4k Hz; power range 20-150 W; imp 4-8 ohms; 23 3/8" H x 14 7/8" W x 11" D \$930/pr

**A120 WN.** Similar to A150 WN except has 10" woofer, 1 1/2" midrange, 3/4" tweeter. FR 25-25,000 Hz; crossovers 800 and 5k Hz; max power 120 W; 23 3/8" H x 12 3/8" W x 10 1/2" D ..... 770/pr

**A100 WN.** Similar to A120 WN except has 8" woofer, 1 1/2" dome midrange, 3/4" tweeter. Low-end response 28 Hz; max power 100 W; 16 3/8" H x 12 3/8" W x 8 1/4" D ..... \$670/pr

**A80 WN.** Similar to A100 WN except has 7" woofer, 1 1/2" midrange, 3/4" tweeter. Low-end response 35 Hz; crossovers 1k and 5k Hz; power range 15-80 W; 13 3/8" H x 9 3/8" W x 8 1/4" D ..... \$590/pr

**A60 WN.** Two-way system with 5" woofer, 1" dome tweeter. FR 40-25,000 Hz; crossover 2.8 kHz; power range 10-60 W; imp 4-8 ohms; 9 3/4" H x 6 1/4" W x 6 3/4" D ..... \$300/pr

**Sub-1S Subwoofer**

Floor-standing subwoofer with 12" woofer, matrix crossover at 160 Hz. FR 16-200 Hz; imp 6 ohms; power range 50-300 W continuous; walnut finish with brown knit grille; designed for use with David speakers; 23 1/4"H x 17"W x 13 1/4"D ..... \$430/ea

**Sub-2S Subwoofer**

Floor-standing subwoofer with 10" woofer with dual voice coil. Features walnut-finished cabinet, brown knit grille. FR 20-200 Hz; imp 4 ohms; power range 50-250 W/ch; crossover 160 Hz. Can be used with David 6000, 8000 speakers. 19"H x 14 1/4"W x 12 1/4"D; 37 lb ..... \$300/ea  
**Sub-2G.** Similar to Sub-2S only available in optional nextel gray or black walnut ..... \$400/ea

**WHARFEDALE**

**W Series Speaker Systems**

**W10.** High-sensitivity 2-way acoustic suspension design with 2" tweeter and 6" woofer. Bass/midrange unit has vented aluminium voice coil former; cone treble unit has center dome to extend treble response. Nominal imp 8 ohms; power requirement 15-50 W; FR 75-20,000 Hz; sens 90 dB/W/m; 10 1/2"W x 7 1/4"D x 16 1/4"H; weight 20 lb (9 kg) for 1 carton (2 speakers) ..... \$79-\$99/ea

**W20.** A 2-way order Butterworth design with a 6" Auxiliary Bass Radiator (ABR). The W20 uses a 7" bass/midrange unit with a special air-dried cone treated with high hysteresis damping material. The treble unit is a 2" paper cone with integral dome. Nominal imp 8 ohms; power range 15-75 W; FR 48-20,000 Hz; sens 90 dB/W/m; 9 1/2"W x 7 1/2"D x 22"H; weight 31 lb (14 kg) for 1 carton (2 speakers) ..... \$240-\$260/pr

**W30.** A 2-way high-sensitivity 3rd-order Butterworth design with twin 7" bass/midrange units and 2" integral-dome tweeter. Nominal imp 8 ohms; power range 15-100 W; FR 52-20,000 Hz; sens 94 dB/W/m; 2" x 7" bass drive units; 12"W x 9"D x 22 1/4"H; weight 45 lb (20.5 kg) for 1 carton (2 speakers) ..... \$340-\$380/pr

**W40.** 3-way reflex design with twin ports to reduce turbulence. Specially strengthened 10" paper unit with 2" voice coils in woofer. 4" midrange with ultralight cone and vented aluminium voice coil former to increase power handling. Treble unit as in the W30 and W50. Nominal imp 8 ohms; power range 15-125 W; FR 40-20,000 Hz; sens 93 dB/W/m; 13 1/2"W x 11 1/4"D x 26"H; weight 46 lb (21 kg) for 1 carton (1 speaker) ..... \$600-\$700/pr

**W50.** 4-driver 3-way system with light moving components and large magnets. Drive unit complement is a 10" woofer, two 4" midranges and tweeter of the W30 and W40. Nominal imp 8 ohms; power range 15-150 W; FR 43-20,000 Hz; sens 95 dB/W/m; 10" woofer; 5" midrange; 2" treble; 13 1/2"W x 11 1/4"D x 32"H; weight 53 lb (24 kg) ..... \$700-800/pr

**Laser Series**

**LASER 50.** Two-way speaker with 170mm doped-fiber-cone bass unit and highly damped plyamide 19mm soft-dome tweeter designed with small volume and baffle area to avoid serious diffraction effects. Power range 15-60 W; sens 88 dB/W/m in anechoic chamber; nominal imp 8 ohms; FR 58-25,000 Hz, 65-20,000 Hz ±3 dB; 12 dB/6 dB octave 3-element crossover; 4,000 Hz crossover point; acoustic suspension bass loading; 11.5 litres internal volume; 370cmH x 230cmW x 190cmD ..... \$180/pr

**LASER 90.** Two-way speaker with 200mm bass unit of doped paper, with p.v.c./rubber suspension ring and tweeter from Laser 50. 20 litres capacity, bass performance down to 40Hz. drive units are positioned on baffles to minimize diffraction. Power range 15-75 W; sens 88 dB/W/m; nominal imp 8 ohms; FR 40-25,000 Hz, 50-20,000 Hz FR ±3 dB; 12 dB/18 dB/6 dB octave 7-element crossover; 4,000 Hz crossover points; Butterworth 3rd-order; acoustic suspension bass loading; 20.5 litres internal volume; 476cmH x 264cmW x 225cmD ..... \$250/pr

**LASER 130.** 3 way system incorporating 19mm soft-dome tweeter. 50mm mid-range unit, 200mm paper bass unit ..... \$350/pr  
**LASER 150.** 3-way system utilizing the same tweeter and midrange as Laser 130. 250mm bass unit uses mineral-filled homopolymer of propylene diaphragm. Second-order Butterworth crossover has switch to compensate for placement ..... \$440/pr

compensate for placement ..... \$440/pr

**Time Delay Compensated Series**

**TSR112.2.** Time-delay compensated 4-way speaker system with 2 7/8" acoustic-suspension woofers and 7 1/4" midrange, 3 1/4" ferrofluid damped dome tweeter. Features ambience control; walnut-veneer cabinet. FR 39-25,000 Hz ±3 dB; crossovers 100, 800, 3.5k Hz; max power 200 W programs; sens 87 dB SPL/W/m; imp 8 ohms; 36 1/4"H x 15"D x 14"W ..... \$1,700/pr

(continued on page 177.)

# Wharfedale introduces The Mach 9

## Their Latest Award Winning System

The Mach 9 is the top-of-the-line new award winning Wharfedale system imported from England and now available in the United States. The extraordinary engineering achievement lies in the rare combination of power, high sensitivity (94 dB SPL 1W/1M) and accurate sound reproduction in practical cabinet sizes. Requiring minimal amplification for room filling sounds (just a few watts will do) the system is also capable of shattering but clear reproduction with greater power. The front "modular baffle" design is unique and includes upper and lower attenuation controls, LED power displays, automatic resettable overload protection and



attachments for a grille cover that can be raised or lowered to cover or expose the top control module as desired. All Mach systems are road finished in matched walnut veneer joins including the other models in this Series Mach 7 (57 litres internal volume), Mach 5 (42 litres) and Mach 3 (32 litres).

... electrifying ... enlightening ...  
 For information on available Wharfedale Loudspeakers or authorized Wharfedale dealers, please use the Readers Service Card or write to:  
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 Wharfedale Loudspeakers  
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 405 Broad Hollow Road  
 Melville, New York 11747.

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**NEED MORE INFORMATION?**

Write directly to the manufacturer or distributor. A list of names and addresses starts on page 25.

# 10

# Headphones

## AIWA

### HP-T10 Stereo Headphones

Deluxe ultra-lightweight mini stereo headphones. Features 3-way Acoustic Super Loudness left/right con-



trols; 2 extra ear covers; headphone jack converter .....\$65

### HM-7Y Mini Stereo Headphones with Microphones

Mini ultra-lightweight stereo headphones with binaural microphones. Perfect for concert recording. Features built-in unidirectional condenser mics; mic on/off switch; windscreens .....\$45

### HP-A50Y Stereo Headphones

Ultra-lightweight miniature stereo headphones. Features 2 extra ear covers; headphone jack converter .....\$35

### HP-V2 In-Ear Type Stereo Earphones

In-ear stereo headphones with stereo/mono switch. Features rotary volume adjuster. FR 20-20,000 Hz. > 0.2 oz without cord .....\$20

## AKG

### K-340 Stereo Headphones

Two-way electrostatic/dynamic headphone with fixed-charge electrostatic transducer/dynamic moving-coil transducer and passive diaphragms in each earcup. Connects directly to headphone jack of receiver or amp or across speaker output terminals. FR 15-25,000 Hz; SPL 117 dB at 0.1% THD; nominal imp 400 ohms; max continuous input 200 mW/ch at 117 dB SPL; includes 10-ft 4-conductor cables with 3-conductor 1/4" stereo phone plug; 13.5 oz less cable .....\$195

### K-4 Mini Stereo Headphones

Two-way electrostatic/dynamic headphones weighing 2.3 oz. Features 2 fixed-charge electrostatic high-frequency, 2 dynamic moving-coil low-frequency transducers in each supra-aural earcup; adapter plug that fits home and portable equipment; unique self-adjusting headband. FR 20-25,000 Hz; SPL 119 dB at 0.5% THD; imp 400 ohms; 10-ft cable with stereo phone plug .....\$99

### K-240 Free-Field Headphones

Free-field stereo headphones; dynamic moving-coil transducer and 6 passive radiators in each circumaural cup. FR 15-20,000 Hz; imp 600 ohms; max SPL 119 dB at 0.3% THD; supplied with 10-ft 4-conductor cable and 1/4" phone plug; 7.9 oz .....\$99

### K-3 Mini-Free-Field Headphones

Free-field mini stereo headphones weighing 2 oz., dynamic MC transducer and passive diaphragms in each supra-aural earcup. FR 20-20,000 Hz. Max SPL 119 dB at 0.5%, imp 400 ohms. 10-ft cable with stereo phone plug .....\$79

### K-141 Monitor Headphones

Semi-open stereo dynamic professional monitoring headphones with MC transducers. FR 20-20,000 Hz; max SPL 120 dB at 0.5% THD, imp matches 4-600 ohms; 10-ft 4-conductor cable and standard 3-conductor stereo phone plug; 6.9 oz .....\$80

### K-130 Stereo Headphones

Supra-aural stereo headphones with dynamic MC transducers. FR 20-20,000 Hz; max SPL 119 dB; imp 200 ohms at 0.7% THD; 10-ft 4-conductor cable with 3-conductor stereo phone plug; 4 oz .....\$55

### K-40 Stereo Headphones

Ultra-lightweight supra-aural stereo headphones with dynamic MC transducers. FR 30-18,000 Hz; max SPL 117 dB at 0.9% THD; matches 4-200 ohm outputs; 10-ft 4-conductor cable; 3-conductor stereo phone plug; 2.7 oz .....\$35  
**K-40M.** Same as K-40 except with 4-ft cable and mini stereo phone plug .....\$35

### K-1 Folding Mini Stereo Headphone

Folding mini stereo headphone with unique scissor-type headband. Fits into carrying case that hangs on belt. FR 30-18,000 Hz; nominal SPL 98 dB at < 1% THD. With 1.4m (about 4 ft 8") cable and mini stereo plug. Includes mini plug-to-phone plug adapter; 1.6 oz .....\$29

## AUDIO-TECHNICA U.S.

### ATH Point 1 Stereophones

MC dynamic stereophones. FR 35-20,000 Hz; sens 100 dB at 1 kHz, 1 mW; matching imp 4-16 ohms; acoustical foam ear-cushions; 1.5-m cord; 1/8" plug; 1.8 oz without cord; black .....\$30

**ATH Point 2.** FR 35-20,000 Hz; sens 105 dB SPL at 1 kHz; imp 4-16 ohms; 5-ft cord; 1 oz without cord .....\$35

**ATH Point 2F.** Same as ATH Point 2 but foldable and supplied with carrying case .....\$40

**ATH Point 4.** Super-lightweight (1.6 oz) stereo headphones. FR 25-20,000 Hz; 2.5-m cord with mini stereo plug and adapter .....\$60

**ATH Point 6.** Same weight as ATH Point 4 but frequency range 20-20,000 Hz; 4-16 ohms matching imp .....\$90

### Eskimo\* Stereophone Earmuffs

For cold-weather listening; quickly convert lightweight, portable stereophones to musical earmuffs or

to improve fit and increase comfort indoors; fit models with 35- or 45-mm elements; nonallergenic material .....\$8

## BANG & OLUFSEN

### U-70 Headphones

Orthodynamic stereo headphones. FR 16-20,000 Hz; sens 8 mW for 94-dB SPL; continuous load 2 W; distortion 1% max; imp 140 ohms; 10-ft straight cord with 3-conductor phone jack; 10.6 oz .....\$100

## BEYER DYNAMIC, INC.

### DT-48 Dynamic Headphones

MC dynamic headphones. FR 16-20,000 Hz  $\pm$  2 dB; supplied with 10-ft straight cord .....\$210

### DT-880 Dynamic Headphones

Stereo headphones utilize rare-earth magnet and vibrationless membrane. Semi-open design permits close coupling for full bass response with hear-through external access. FR 15-25,000 Hz; sens 94 dB SPL with < 1% harmonic distortion; nominal imp 600 ohms; 6-ft coiled cord .....\$135  
**DT-550.** Similar to DT-88, except FR 10-22,000 Hz; sens 95 dB SPL .....\$93  
**DT-330 MKII.** Similar to DT-550, except FR 15-18,000 Hz; sens 90 dB SPL; nominal imp 40 ohms .....\$60

### DT-109 Moving-Coil Mic/Headphone

Lightweight MC stereo headphones with cardioid broadcast-quality MC microphone; SPL 120 dB; left and right channels can be independently wired; removable ear cushions; high-impact plastic and stainless steel construction; field serviceable .....\$145

### DT-660 MKII Bass-Reflex Stereo Headphones

Stereo headphones with an enclosed bass-reflex system incorporates ducted-port and specially designed venting system to improve bass response. Frequency range 15-25,000 Hz; max continuous power level approximately 113 dB at 1 kHz; imp 600 ohms; SPL 96 dB at 1 kHz; ambient isolation greater than -16 dB; 6-ft flat cord, extends to 12 ft .....\$123

### DT-108 Moving-Coil Mic/Headphone

MC stereo headphones with noise-canceling microphone. FR 40-12,000 Hz; SPL 120 dB; mic rotates 180°; foam-filled ear cushions and padded headband; field serviceable .....\$125

### DT-100 Dynamic Headphones

MC dynamic headphones. FR 30-18,000 Hz; sens 1 mW at 400 Hz for 110-dB SPL; imp 5, 100, 400, 2,000 ohms; max input 1 W/phone .....\$110

### DT-96A Dynamic Headphones

MC dynamic headphones. FR 30-17,000 Hz; sens mW at 400 Hz for 110-dB SPL; imp 5-200 ohms; max input 100 mW/phone; 5-ft cord; 8 oz .....\$98

### DT-220 Dynamic Headphones

Closed-ear dynamic headphones. FR 20-20,000 Hz;

sens 1 mW for 100 dB SPL; 600-ohm imp; max input 42 mW (for 116-dB SPL); 260 g (without cable) \$75

#### DT-302 Lightweight Headphones

Open-air high-velocity dynamic headphones connect directly to high- or low-imp outputs. Frequency range 20-20,000 Hz; rated power 7 mW (2.1 V) for 600 ohms; sponge ear cushions; stereo phone plug; 2.3 oz without cord .....\$38  
**DT303.** Same as DT302 but designed for TV listening; has volume control built into its 22.5-ft cable \$45

#### DT-301 Single Headphone

Single earphone for use with portable cassette recorders, transistor radios, dictating machines, TV receivers. Supplied with 5-ft cord and miniature phone plug .....\$20

### DENON

#### AH-P1 "Micro" Earphones

In-ear type portable stereo phones with miniplug plus adapter for home use. Microcassette-size carry case with cord storage. 109 dB/mW; 100 mW max; 18 ohm imp; 20-22,000 Hz; 4.9 g not including cord .....\$17

#### AH-P5 Folding Portable Headphones

Double fold stores these stereo headphones in cassette-size case. 100 dB/mw; 32 ohm imp; with cord 27 g .....\$40

#### AH-55 "Docking" Headphones

Connect cord either side or connect multiple sets in series. 100 dB/mW; imp 32 ohm; 100 mW max input; FR 20-22,000 Hz; less cord 38 g; with mini plug and adapter for home use .....\$35  
**AH-P33** Similar to AH-5 .....\$25

#### AH-99 Adjustable Cord Stereo Headphones

Large-diaphragm open headset with roll-up cord housed in earpiece. Accepts second headset through extra output jack. Miniplug plus adapter for home use. 2 m cord plus 1 m adapter cord length. 102 dB/mW, max 100 mW input. 80 ohm imp; FR 20-22,000 Hz; less cord 110 g .....\$85  
**AH-77** Similar to AH-99. 100 dB/mw, 50 ohm. \$55

### EMPIRE

#### LW2 Stereo Headphones

Lightweight open-air stereo headphones with leatherette inner band, foam ear cushions, mini-plug adapter .....\$35

#### LW1 Stereo Headphones

Ultra-lightweight stereo headphones with samarium-cobalt magnets, foam ear cushions, and mini-plug adapter .....\$20

#### LW3 Stereo Headphones

In-the-ear type headphones with added foam ear cushions and mini-plug adapter .....\$20

### GC ELECTRONICS

#### 90-112 Stereo Headphones

High-velocity stereo headphones with 10-ft coiled cord terminated in 1/4" phone plug. FR 20-20,000 Hz; max input 100 mW; sens 100 dB SPL at 1 V; imp 4-16 ohms; 6 oz without cord .....\$16.95

#### 90-107 Stereo Headphones

Ultra-lightweight stereo headphones with samarium-cobalt drive elements. Features soft foam ear pads; 3.5-mm stereo plug; 1/4" phone plug adapter; 5.5-ft Y cord. FR 20-20,000 Hz; max input 100 mW; imp 4-100 ohms; 1.5 oz without cord .....\$12

#### 90-102 Stereo Headphones

Stereo headphones with left, right volume controls. 10-ft coiled cord with 1/4" phone plug and stereo/mono switch. FR 30-18,000 Hz; max input 550 mW; imp 4-8 ohms; 11.75 oz without cord .....\$12

#### 90-116 Collapsible Headphones

Super lightweight dynamic headphones fold up to fit inside cassette-size storage case. Features 3-ft cord; 1/4" phone adapter. FR 20-20,000 Hz; imp 32 ohms; max input 100 mW. 1.02 oz without cord .....\$11

#### 90-115 Micro Stereo Earphones

Micro stereo earphones that fit inside the ear with no headband. Features 3.5-ft Y cord with extra foam ear pads; 3.5 mm stereo plug fits all pocket stereos; comes in cassette-size carrying case. FR 20-20,000 Hz; imp 32 ohms; max input 50 mW/ch 0.17 oz without cord .....\$10

#### 90-114 Featherweight Headphones

Ultra-lightweight dynamic stereo headphones with samarium cobalt transducers. Features adjustable metal headband; soft foam ear pads; 4.5-ft Y-spiral straight cord; 3.5 mm plug for all pocket stereos. Includes adapter for 1/4" stereo headphones jacks. FR 20-20,000 Hz; imp 32 ohms; max input 300 mW. 0.88 oz without cord .....\$8.95

#### 90-100 Stereo Headphones

Stereo headphones with padded ear pads, 10-ft coiled cord with 1/4" phone plug. FR 20-15,000 Hz; max input 500 mW; imp 4-16 ohms; 8 oz without cord .....\$8.95

### INDUCED MAGNET SYSTEMS

#### P-10 "Button-Ears" Earphones

Close-coupled earphones (no headband--drivers fit directly in ears) with aluminum pocket holder, extra ear pads, 1/4" phone-plug adapter for use with home stereos, adapter for use with second pair of phones, 6-ft extension cord. Features polyethylene tetraphthalate film diaphragms (9 microns thick). FR 20-20,000 Hz; sens 103 dB/mW; Max input 58 mW 4.9 g with cord and mini plug .....\$30

#### HG 102 Micro Headphones

Miniature headphone driver units in a lightweight headbandless head phone system. Features Y-type cord plug; adapter for phono to mini plug format; replacement ear pads. Imp 32 ohms; FR 20-20,000 Hz; sens 102 dB/mW; max input power 50 mW \$20

### JVC

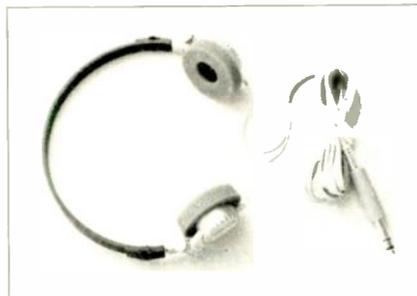
#### H-707 Moving-Coil Headphones

MC design weighs only 5.64 oz and features 46-mm diameter by 38-micron thick diaphragms; open-back design; double headband for added comfort. FR 20-20,000 Hz; imp 63 ohms; sens 104 dB/mW at 1 kHz; max input 100 mW; 9.75-ft cord .....\$60  
**H-505.** Similar to H-707 except 8-ohm imp; 106-dB sens; 4.58 oz .....\$40  
**H-404.** Similar to H-505 except 16-ohm imp; 102-dB sens; 3.7 oz .....\$30

### KENWOOD

#### KH-7L Stereo Headphones

Dynamic stereo headphones with 1" polyester film drivers. Features extra pair of earpads; 8.2 ft Y-type



cord with standard 1/4" plug. FR 20-20,000 Hz; sens 100 dB/mW; max input 100 mW/ch; imp 30 ohms; 1.8 oz minus cord .....\$75

#### KH-5L Stereo Headphones

Dynamic stereo headphones with 1 1/4" polyester film drivers. Features extra pair of earpads; 8.2 ft Y-type cord with standard 1/4" phone plug. FR 25-20,000 Hz; sens 100 dB/mW; max input 100 mW/ch; imp 30 ohms; 1.8 oz minus cord .....\$55

#### KH-3L Stereo Headphones

Dynamic stereo headphones with 1" polyester film drivers. Features extra pair of earpads; 4.9 ft Y-type cord with standard 1/4" phone plug. FR 35-20,000 Hz; sens 95 dB/mW; max input 250 mW/channel; imp 40 ohms; 5.3 oz with cord .....\$33

#### KH-M5 Stereo Headphones

Dynamic stereo headphones with 1 1/2" high polymer film drivers. Features 4.7 ft Y-type cord with standard 1/4" phone plug; extra earpads. FR 20-20,000 Hz; sens 102 dB/mW; max input 50 mW/ch; imp 32 ohms; 5 g without cord, 15 g with cord .....\$20

### KOSS

#### ESP/10 Electrostatic Stereophones

Electrostatic circumaural stereo headphones with energizer. Headset bandpass response 20-22,000 Hz  $\pm$  2 dB; sens for 1.9 V rms at 1 kHz into E/10 energizer. 2.0 V rms pink noise 100-dB SPL; THD 0.38% at 1 kHz, 100 dB SPL; radiating surface area of electrostatic element 25 cm<sup>2</sup>/ch; black with silver accents; 10 ft cord. Energizer bandpass response -3 dB at 15 Hz and 24 kHz; hum and noise 75 dB below sens reference level (100 dB SPL); phase response at +30° at 20 Hz. -30° at 15 kHz; input imp 2 ohms min at 20 and 20 kHz, 180 ohms max at 800 Hz; min recommended amp power 35 W/ch; overload voltage (for relay cutout) 5.3 V rms pink noise into energizer. semi-peak-indicating VU meters; LED overload indicators; automatic overload detector; wood-grain trim .....\$300

#### PRO/4X Stereo Headphones

Dual-element stereo headphones combine rare-earth MC element with piezoelectric element in each earcup to provide a 10-40,000 Hz FR. Closed-design head-



phones weigh only 10 oz, come with coiled cord; labeled left/right earcups; adjustable headband ..\$85

#### HV/XLC Stereophones

Lightweight high-velocity stereophones. FR 15-35,000 Hz; sens for 100 dB SPL 1.0 V rms at 1 kHz. Features volume, balance controls/cup; variable-density contoured circumaural ear-cushions; with twist-lock mechanism for easy removal; 10-ft coiled cord; 8.4 oz less cord .....\$80  
**HV/X.** Same as HV/XLC without volume, balance controls; imp 90 ohms; 7.7 oz less cord .....\$70

#### HV/1A Stereophones

High-velocity stereophones with low-mass Decilite drivers for 15-30,000 Hz FR; operates from outputs of 3.2 to 600 ohms; distortion 0.5% at 100 dB SPL; sens 0.9 V rms for 100 dB SPL, handles 5 V rms continuous with provisions for 14-dB SPL transient peaks; 157-ohm imp; acoustical sponge ear cushions; extendable headband with self-adjusting pivoting yokes, soft padded vinyl cover; 3-conductor coiled cord (10-ft extended); 10.1 oz .....\$50  
**HV 1LC.** Same as HV/1A except volume/balance control per earcup; sens 1.1 V rms for 100 dB SPL; imp 132.5 ohms; 10.8 oz .....\$60

**K/6XLC Dynamic Stereophones**

Dynamic stereo headphones with low-profile (57-mm) element with Mylar diaphragm and separate volume controls. FR 10-22,000 Hz; <1% THD at 1 kHz, 100 dB SPL; sens 1.0 V rms at 100 dB SPL; 10 oz without cord .....\$40  
**K/6X.** Same as K/6XLC, except lacking volume controls .....\$30

**KSP Sound Partner Stereophones**

Featherweight stereophone for pocket stereo use. Folds to compact size to fit into denim tote bag (supplied). FR 20-17,000 Hz; sens 100 dB SPL pink noise at 1 V; imp 43 ohms; total weight 3.5 oz, including 9-ft cord. Comes with accessory adapters to fit almost any sound system .....\$30

**K/20 High-Velocity Stereophones**

High-velocity headphones with low-profile element. Features 8-ft Y cord; cushioned washable foam ear pads. FR 18-20,000 Hz; sens 0.8 V rms .....\$20

**P/19 Portable Stereophones**

For listening to pocket stereos, portable radios, cassette players, TV home receivers, amps with included 6.36-mm adapter. FR 20-17,000 Hz; imp 43 ohms (ideal for battery-powered products for low power drain); 6-ft cord with 3.5-mm mini stereo plug . \$20

**MURA****HV-190 Stereo Headphones**

Stereo headphones with ferrite-magnet speaker system. FR 20-20,000 Hz; imp matching 8-70 ohms; max input 250 mW; lightweight 12-ft coiled cord with 1/4" stereo plug; 8 oz less cord .....\$30

**SB-60 Stereo Buds Eerphones**

Stereo speakers that fit directly into ears. Features 4-



ft cord with 3.5-mm stereo plug .....\$20

**HV-100 Stereo Headphones**

Lightweight vented high-velocity stereo headphones with thin Mylar diaphragms; voltage control; stereo/mono switch. FR 30-15,000 Hz; 10-ft coiled cord with plug .....\$20

**SP-504 Headphones**

Stereo headphones with 3" dynamic drivers. Features separate volume, tone controls on each earcup, stereo/mono switch. FR 30-18,000 Hz; imp 8 ohms; adjustable padded headband; 10-ft coiled cord with plug .....\$22  
**SP-503.** Similar to SP-504 minus tone controls. \$17  
**SP-502.** Similar to SP-503 minus stereo/mono switch; has 2 1/4" dynamic drivers .....\$15  
**SP-500.** Similar to SP-502 minus volume controls; FR 35-15,000 Hz; 8-ft cord .....\$12

**SP-294 Stereo Headphones**

Stereo headphones with 2 1/4" dynamic drivers; individual volume controls; stereo/mono switch. FR 40-15,000 Hz; adjustable soft leatherette padded headband and earcups; 10-ft cord .....\$14

**SP-94 Stereo Headphones**

Lightweight dynamic stereo headphones with 2 1/4" drivers. FR 40-15,000 Hz; imp 8 ohms; oversize earcups for greater comfort; 8-ft cord with plug . \$9

**Red Set Series****Red Set VII**

Deluxe ultra-lightweight (1.6 oz, less cord) stereo headphones with rare-earth drivers. FR 20-20,000 Hz; sens 98 dB at 1 kHz; max input 0.2 W; matching imp 4-25 ohms; 4-ft cord with mini plug; 8-ft extension cord with 1/4" stereo plug included .....\$30

**Red Set III Stereo Headphones**

High-velocity stereo headphones with Mylar diaphragms and miniature ultra-lightweight samarium-cobalt magnets and anoxic copper wire designed to reduce signal attenuation. FR 20-20,000 Hz; sens 98 dB at 1 kHz; max input 0.2 W; matching imp 4-25 ohms; 6.6-ft cord with 1/4" 3-conductor stereo plug; 1.6 oz less cord .....\$20

**Red Set II Stereo Headphones**

Ultra-lightweight stereo headphones with folding headband, cable terminated in 3.5-mm mini plug, comes with 1/4" plug adapter. FR 20-20,000 Hz; sens 100 dB at 1 mW; max input 0.1 W; matching imp 4-35 ohms; samarium-cobalt magnets with high-velocity Mylar diaphragms; 6.6-ft cord with 0.138" 3-conductor stereo plug .....\$16  
**Red Set I.** Similar to Red Set II except no folding headband; matching imp 4-30 ohms; 1/4" stereo plug \$15

**Red Set hs2 Headphones**

Ultra-lightweight (1.8 oz less cord) stereo headphones with samarium-cobalt rare-earth drivers. Features 4-ft cord with mini plug; folding headband . \$9

**NAD****Lightweight Headphones**

Lightweight headphones suitable for pocket stereos. Features low-impedance, high-sensitivity drivers; cable antenna; bass response designed to extend a full octave deeper than that of any other lightweight model; supplied with coiled extension cord with full size 1/4" phone plug; 39mm diaphragm with very low suspension frequency; FR 15-25,000 Hz; THD 0.5% max (1,000 Hz and 100 dB SPL) sens 100 dB SPL output for 0.5 V input using pink noise; 16-micron polyester film diaphragm; vacuum-formed high-temperature copper-clad aluminum voice coil with self-supporting winding; high-energy planar samarium-co-

balt, using focused-gap for low flux leakage; 1.75 oz/50 gr without cord .....\$55

**NAGAOKA by MICROFIDELITY****P-10 Stereo Micro Headphones**

Dynamic micro-type headphones weighting 15 g including card and mini plug. FR 20-20,000 Hz, imp 32 ohms. Supplied with replacement ear pads, mini 1/4" phone plug adapter, and convenient pocket holder with clasp .....\$25

**NAKAMICHI****SP-7 Stereo Headphones**

Lightweight stereo headphone provides broad, flat frequency response, extended dynamic range, and minimal distortion; utilizes 25-micron thick polyester



film with 40.5mm diameter and 18.3mm voice coil; FR 20-20,000 Hz; imp 45 ohms; max 100 mW; 3-m cable; standard 1/4" phone plug .....\$70

**NUMARK ELECTRONICS****FLS200 Stereo Headphones**

Stereo headphones with film diaphragm/samarium cobalt magnet transducers. Features separate L/R volume controls on cable; adapters for 1/4" stereo phone plug to 3.5-mm stereo mini plug and 1/4" phone plug to 3.5-mm mono plug adapters; extra ear pads. FR 20-25,000 Hz; sens 100 dB; imp 20 ohms; max power 100 mW; 10-ft cord with 1/4" stereo phone plug; 1.5 oz .....\$30

**FLS75 Stereo Headphones**

Stereo headphones with film diaphragm/samarium cobalt magnet transducers. Features 7-ft cord with 1/4" stereo phone plug; 3.5-mm stereo plug adapter. FR 20-20,000 Hz; sens 96 dB; imp 35 ohms; max power 100 mW; 1.5 oz .....\$25

**FLS150 Stereo Headphones**

Stereo headphones with film diaphragm/samarium cobalt magnet drivers; 7-ft cord with 3.5-mm mini stereo plug; 1/4" stereo phone plug adapter; folding headband. FR 20-20,000 Hz; sens 96 dB; imp 35 ohms; max power 100 mW; 1.5 oz .....\$20

**HV100 Dynamic Stereo Headphones**

Ultra-lightweight dynamic stereo headphones with super-thin Mylar diaphragm drivers; 8-ft cord with stereo phone plug. FR 20-20,000 Hz; imp 32 ohms; 6 oz .....\$18

**FLS310 Featherlite Stereo Headphones**

Stereoscope-style stereo headphones with film diaphragm/samarium-cobalt magnet drivers; 4 1/4-ft cord with 3.5-mm mini stereo plug. FR 20-22,000 Hz; sens 100 dB; imp 20 ohms; max power 100 mW; 1.4 oz .....\$17

**FLS300 Stereo Headphones**

Ear-clip-style featherlite stereo headphones with film diaphragm/samarium-cobalt magnet drivers; 4 1/4-ft

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# STEREO REVIEW

## \$3000 JBL Speakers

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cord with 3.5-mm mini stereo plug. FR 20-22,000 Hz; sens 100 dB; imp 20 ohms; max power 100 mW; 0.7 oz.....\$17

#### FLS25 Stereo Headphones

Stereo headphones with film diaphragm/samarium cobalt magnet drivers; 7-ft cord with 3.5-mm stereo plug; ¼" stereo phone plug adapter. FR 80-20,000 Hz; sens 92 dB; imp 30 ohms; max power 100 mW; 1 oz.....\$15

### PHILIPS

#### 6301 Mini Stereo Headphones

Dynamic MC compact stereo headphones with samarium-cobalt magnets for portable use. Supplied with 10-ft cable with mini-plug; ¼" phone plug adapter for home use. FR 20-20,000 Hz; imp 32 ohms; sens -97 dB SPL at 1 mW; 2 oz.....\$48

#### 6211 Mini Stereo Headphones

Dynamic MC compact stereo headphones with samarium-cobalt magnets for portable use. Supplied with 10-ft cable with mini-plug; ¼" phone plug adapter for home use. FR 20-20,000 Hz; imp 32 ohms; sens -92 dB SPL at 1 mW; 2 oz.....\$24

### PICKERING

#### OA-7 Stereo Headphones

Lightweight open-audio design; REE used in permanent-magnet compound; foam-cushioned headband; earpiece yokes incorporate pivoting system enabling snug fit. Nominal imp 100 ohms; FR 20-22,000 Hz ±5 dB; sens 110-dB SPL at 0.2 V; max input 0.1 W continuous; distortion 0.5% at 110-dB SPL; supplied with flat 10-ft cord; 6 oz.....\$70

#### OA-5A Stereo Headphones

Lightweight open-audio stereo headphones with 1.5" samarium-cobalt dynamic drivers. Imp 100 ohms 10% at 1 kHz; max input 0.25 W/ch continuous; sens 110 dB SPL at 0.2 V input, 1 kHz/ch; FR 20-22,000 Hz; distortion 0.25% at 110-dB SPL; adjust-

for stereo/mono used; adjustable lightweight headband; earcushions with multidensity polyurethane; 7-ft Y-type straight cord with plug adapters for mono and stereo. Designed for all portable applications. FR 10-20,000 Hz; imp 40 ohms at 1 kHz; max input power 0.5 W; 2 oz.....\$35

#### OA-202 Stereo Headphones

Open-audio stereo headphones with dynamic high-velocity drivers with 1" polyester diaphragms. FR 10-20,000 Hz; distortion 0.5% at 110-dB SPL, 1 kHz; sens 100 dB SPL at 0.25 V input, 1 kHz/ch; input imp 50 ohms at 1 kHz; max input 0.2 W/ch continuous; adjustable padded vinyl headband with soft vinyl-covered foam earcushions; includes 7-ft Y-type straight cord with plug and special adapter plug for use with portable radios, TV sets, tape recorders; 6 oz or less cord.....\$30

#### OA-101 Featherfone™ Stereo Headphones

Lightweight open-air stereo headphones. Feature lightweight headband; acoustically engineered polyurethane foam cushions; 5-ft Y-type straight cord with plug. FR 20-18,000 Hz; distortion less than 0.5% at 100 dB SPL, 1 kHz; sens 100 dB min SPL, 0.25 V input at 1 kHz/ch; imp 40 ohms ±20% at 1 kHz; max input power 0.05 W; 2 oz.....\$25

#### OA-303 Stereo Headphone

Open audio design; spring steel headband with brown leather cushion; imp 70 ohms; FR 20 Hz-20,000 Hz; sens 101 dB SPL at 0.1 volt input; max input 0.1 W rms; weight exc. cord and plug 4.5 oz; comes with ¼" stereo female to mini stereo male adapter.....\$40

### PIONEER

#### SEL-90 Stereo Headphones

Dynamic open-air ultra-lightweight headphones with miniplug and standard phone plug. Features 90°-rotatable earpieces; double leather headband; 10-ft straight cord. FR 10-22,000 Hz; sens 103 dB SPL at 1 mW. 2.5 oz.....\$80

#### SEL-70 Stereo Headphones

Dynamic open-air ultra-lightweight stereo headphones with miniplug and standard phone plug. Features 90°-rotatable earpieces; double headband; 10-ft Y-type straight cord. FR 10-22,000 Hz; sens 103 dB SPL at 1 mW. 2.5 oz.....\$60

#### SEL-50 Stereo Headphones

Dynamic open-air ultra-lightweight stereo headphones with miniplug and standard phone plug. Features 90°-rotatable earpieces; double headband; 10-ft Y-type straight cord. FR 12-22,000 Hz; sens 103 dB SPL at 1 mW. 2.1 oz.....\$50

#### SEL-30 Stereo Headphones

Dynamic open-air ultra-lightweight stereo headphones with miniplug and standard phone plug. Features 90°-rotatable earpieces; double headband; 8-ft Y-type straight cord. FR 12-22,000 Hz; sens 103 dB SPL at 1 mW. 2.1 oz.....\$40

#### SE-450 Stereo Headphones

Lightweight enclosed stereo headphones with independent L/R volume controls. Features adjustable headband; 9-ft cord. Black or chrome finish. FR 20-20,000 Hz; sens 105 dB/mW. 11 oz.....\$40

#### SE-4 Stereo Headphones

Open-type stereo headphones with polyester dome drivers. Features 9-ft 5" Y-type cord; adjustable headband. FR 20-20,000 Hz; max power 200 mW; sens 96 dB/mW; 7½ oz.....\$35

#### SE-205 Stereo Headphones

Dynamic stereo headphones with adjustable headband and 8-ft 2" cord. FR 20-20,000 Hz. 15 oz without cord.....\$25

#### SEL-10 Stereo Headphones

Dynamic open-air ultra-lightweight stereo headphones with miniplug and standard phone plug. Features 90°-

rotatable earpieces; double headband; 8-ft Y-type straight cord. FR 18-22,000 Hz; sens 101 dB SPL at 1 mW. 1.3 oz.....\$25

#### SE-2 Stereo Headphones

Open-air stereo headphones with polyester dome drivers. Features adjustable headband; 9-ft 5" Y-type cord. FR 20-20,000 Hz; max power 200 mW; sens 99 dB/mW; 7½ oz.....\$25

### PML BY ERCONA

#### D-42 Stereo Headphones

Dynamic stereo/mono headphones; supplied with detachable, washable soft rubber ear cushions. FR 30-20,000 Hz; output imp 200 ohms stereo, 100 or 400 ohms mono; power/voltage at normal listening 0.3 mW/0.25V; 100 dB SPL with 0.3 mW input; 5 mW max power with 2% distortion; supplied with 6-ft unterminated cable; 9.5 oz.....\$45

#### RDF-224 Dynamic Headphones

Dynamic stereo/mono headphones; removable soft-foam-padded vinyl ear cushions; supplied with 8-ft coiled cable, 3-conductor phone plug. FR 20-18,000 Hz; output imp 8 ohms ±20% at 1 kHz; output level 100 dB at 1 kHz; max input 100 mW; 12 oz...\$30

### QUASAR

#### SV400TQ Lightweight Headphones

Lightweight stereo headphones for portable or home use, with mini- and ¼" plugs. Features fully adjustable headband; 1.5 meter cord. FR 20-20,000 Hz; imp 16 ohms; sens 0.126 V for 98 dB SPL at 1 kHz. 40 g with cord.....\$25

### REALISTIC

#### PRO-60 Stereo Headphones

Headphones with variable-density earcushions, "acoustic resistance," 10-ft coiled cord with ¼" phone plug. FR 15-30,000 Hz; THD <0.5%; <8 oz.....\$50

#### LV-10 Stereo Headphones

High-velocity vented-back headphones with 2" dynamic elements. FR 20-20,000 Hz; distortion 0.5%; 4-16 ohm imp; acoustic foam earpieces; soft vinyl-covered headband with self-adjusting yokes; 10-ft coiled cord, ¼" plug.....\$40

#### PRO-30 Stereo Headphones

Lightweight uniform-phase stereo headphones with low-mass planar driver; rare-earth magnets; lightweight coiled cord, ¼" plug.....\$30

#### NOVA-PRO Stereo Headphones

High acoustic isolation stereo headphones with low-mass polyester drivers; volume control on each earcup. FR 20-20,000 Hz; imp 4-16 ohms; cushioned headband; 10-ft coiled cord.....\$32

#### NOVA-40 Stereo Headphones

Stereo headphones with ¾" dynamic drivers. FR 30-18,000 Hz; imp 4-16 ohms; soft cushion earcups; padded adjustable headband; 10-ft coiled cord, ¼" plug.....\$25

#### NOVA-51 Stereo Headphones

Fold up stereo headphones with rare-earth magnets, 6½-ft cord with ¼" phone plug. FR 50-20,000 Hz; 3 oz.....\$20

NOVA-52. Same as Nova-51 except with ¼" plug \$20

#### NOVA-50 Stereo Headphones

Micro stereo headphones with rare-earth magnets, Mylar diaphragms, foam earcushions, 6½-ft cord with ¼" phone plug. FR 50-20,000 Hz; 2.8 oz.....\$18

#### NOVA-10 Stereo Headphones

Stereo headphones with high-efficiency 2" speakers; adjustable vinyl headband with cushioned earpads. FR 50-15,000 Hz; has 6½-ft cord, ¼" plug.....\$15

NOVA-16. Similar to Nova-10 except has separate Glide Path\* level controls.....\$20



able padded vinyl headband with pivot yokes and nylon-tricot-covered foam ear cushions; 10-ft 4-conductor cord with no-break connector; includes adapter plug for use with portable radios, TVs, tape recorders; 5 oz less cord.....\$60

#### OA-4 Stereo Headphones

Lightweight stereo headphones with ¾" dynamic high-velocity drivers with synthetic film diaphragms and samarium cobalt magnets. FR 10-20,000 Hz; distortion 0.5% at 100-dB SPL, 1,000 Hz; sens 105 dB at 1 kHz/ch; input imp 40 ohms at 1 kHz; adjustable lightweight headband with silver-dollar-sized multi-density polyurethane foam earpieces; includes adapter and 7-ft Y-type straight cord with plug; 2 oz less cord.....\$50

#### OA-2 Featherfone™ Stereo Headphones

Open-audio stereo headphones. Feature adapter plug

**NOVA-35 Stereo Headphones**

Micro stereo headphones with foam earpads, adjustable headband. 5-ft cord with  $\frac{1}{4}$ " plug. Frequency range 50-20,000 Hz; 3 oz ..... \$14

**Micro-in-Ear Stereo Earphones**

Stereo earphones designed to slip into outer ear. FR 50-20,000 Hz; 0.6 oz ..... \$13

**Nova-33 Stereo Headphones**

Lightweight portable headphones.  $\frac{1}{4}$  oz; 20-20,000 Hz response; foam earcushions;  $\frac{1}{4}$ " plug; 4-ft cord ..... \$10

**Stereo/Mono Headset**

Underchin design headset. Features lightweight design;  $\frac{1}{4}$ " plug; 8 ohms ..... \$10

**RECOTON****ST-88 High-Velocity Stereo Phones**

Stereo headphones with volume controls. Features lightweight high-velocity samarium-cobalt magnets; stereo/mono switch; volume, tone controls. FR 15-20,000 Hz; sens 102 dB at 1 kHz; imp 30 ohms; max input power 0.5 W; 10-ft cable with stereo phone plug ..... \$43

**ST-66 Ultra-lightweight Headphones**

Designed for all mini recorders, players, stereo headphones weight only 2.47 oz exclusive of cable. Sens 98 dB at 1 kHz; FR 20-25,000 Hz; input imp 25 ohms; max input power 0.4 W; 10-ft cable with mini plug,  $\frac{1}{4}$ " stereo adapter ..... \$43

**ST-77 Ultralightweight Stereo Phones**

Designed for all mini recorders, players; includes an adapter for standard receivers. Weighs 1.65 oz, less cable. Sens 98 dB at 1 kHz; FR 20-25,000 Hz; imp 25 ohms; max power input 0.3 W; 10-ft cable with mini plug,  $\frac{1}{4}$ " stereo adapter ..... \$38

**ST-22 Stereo Headphones**

Dynamic stereo headphones; all-aluminum earcups; leathery-soft ear cushions, headband; volume control for each ch. FR 20-22,000 Hz; imp 8 ohms; matching imp 4-16 ohms; sens 110 dB at 1 kHz with 1 mW; max input 0.5 W; 3" dynamic speakers; 10-ft coiled cord ..... \$30

**ST-91 Stereo Headphones**

Lightweight stereo headphones with samarium-cobalt magnets. Includes adapter to allow use with mini, home tape players. FR 20-25,000 Hz; imp 200 ohms; sens 100 dB at 1 mW; 1.23 oz minus cable ..... \$28

**ST-11 Stereo Headphones**

Lightweight stereo headphones with volume controls, stereo mono switch, foam-filled earcushions. FR 20-20,000 Hz; imp 8 ohms; sens 100 dB at 1 mW, 1 kHz; 10-ft coiled cord with phone plug ..... \$20

**ST-16 Stereo Headphones**

Stereo headphones with volume control for each ch; stereo/mono switch. FR 20-18,000 Hz; imp 8 ohms; soft adjustable padded headband; soft ear cushions; 10-ft coiled cord with stereo phone plug ..... \$20

**ST-93 Stereo Headphones**

Fold-away lightweight stereo headphones packaged in cassette box. Include 5-ft cord and  $\frac{1}{4}$ " stereo phone adapter for home use. FR 20-22,000 Hz; imp 32 ohms; sens 100 dB at 1kHz; 1.02 oz without cord ..... \$17

**ST-98 Stereo Headphones**

Lightweight stereo headphones with samarium-cobalt magnets. Includes 2 extra ear pads. Packed in cassette-sized storage box. FR 50-22,000 Hz; imp 32 ohms; sens 102 dB at 1kHz; .18 oz without cord \$17

**ST-90 Stereo Headphones**

Fold-away lightweight stereo headphones with samarium-cobalt transducers, superthin polymer film dia-

phragms. Designed for use with mini, home players. FR 20-20,000 Hz; imp 32 ohms; sens 96 dB at 1 mW; 0.83 oz minus cable ..... \$18

**ST-99 Miniature Stereo Headphones**

Miniature stereo headphones consisting of a pair of earpieces the approximate size of a quarter. Earpieces slip into place over ears without headband. Includes lightweight 7-ft cord and mini plug ..... \$17

**REVOX****RH 310 Stereo Headphones**

Open lightweight headphones designed for amps rated for 4-to-600-ohm load imp; FR 20-20,000 Hz ..... \$100

**SANSUI****SS-L5 Dynamic Stereo Headphones**

Isolation-free dynamic stereo headphones in around-the-ear design and  $1\frac{1}{4}$ " drivers. Imp 100 ohms at 1 kHz; FR 20-20,000 Hz; max input power 500 mW; sens 104 dB/mW at 500 Hz; 2-m cord; 4.8 oz without cord ..... \$50

**MS-7 Dynamic Stereo Headphones**

Lightweight on-the-ear mini-sized dynamic stereo headphones with adapter plug that permits mini stereo phone plug to be used with standard home audio equipment. Imp 40 ohms; FR 30-20,000 Hz; max input power 250 mW; sens 100 dB/mW; 2.5-m cord; 1.1 oz without cord ..... \$40

**SS-L3 Dynamic Stereo Headphones**

Isolation-free, around-the-ear stereo headphones with  $1\frac{1}{4}$ " drivers. Imp 60 ohms; FR 20-20,000 Hz; max input power 500 mW; sens 104 dB/mW; 2-m cord; 4.4 oz without cord ..... \$30

**MS-3 Dynamic Stereo Headphones**

Lightweight on-the-ear mini dynamic stereo headphones fitted with mini stereo plug, with adapter for use with home audio equipment. Imp 30 ohms; FR 35-20,000 Hz; max input power 100 mW; sens 97 dB/mW; 2.5-m cord; 1.8 without cord ..... \$20

**SENNHEISER****HD 224 Stereo Headphones**

Dynamic stereo headphones with double-walled circumaural foam earpads covering entire ear; includes steel-stranded detachable 3000-mm cable. FR 16-20,000 Hz; SPL 94 dB at 1 mW; THD 1.0%; nominal imp 200 ohms, 252 g ..... \$153

**HD 430 Stereo Headphones**

Open dynamic headphones. FR 16-20,000 Hz; sens 94 dB with 1 mW input, nominal SPL at 1 kHz; HD 0.5%; imp 600 ohms; padded earpad rims and adjustable suspension strap; 10-ft cable, 7 oz .. \$134

**HD 222 Closed-Earcup Headphones**

Stereo headphones with ultra-lightweight diaphragms with powerful cobalt-samarium magnets in closed-earcup design. Wide-range response extremely flat from 16-10,000 Hz; imp 600 ohms. 8.8 oz . \$128

**HD 424 Stereo Headphones**

Deluxe open-air dynamic headphones. FR 15-20,000 Hz; sens 17.7  $\mu$ bar/V, 1 mW (1.41 V)/ch for SPL of 102 dB; distortion 1% at 22 V, 1 kHz; imp 2,000 ohms; removable head and ear cushions; 10-ft cable, 6.5 oz without cable ..... \$122

**HD 420 Stereo Headphones**

Open-air dynamic headphones. FR 18-20,000 Hz; sens 94 dB with 1 mW input, nomina. SPL at 1 kHz; HD 1.0%; imp 600 ohms; adjustable suspension strap and cushioned earpads; 10-ft cable, 4 oz . \$94

**MS 100 Lightweight Headphones**

"The Inside-Out" headphone, designed for portable and home use. Supplied with replaceable 4' stranded-steel cable with stereo mini-plug and 6' extension ca-

ble with stereo mini jack and standard  $\frac{1}{4}$ " stereo phone plug. Extra set of ear cushions included. FR 20-20,000 Hz; sens 96 dB with 1 mW input. 1.4 oz \$85

**HD 414 Stereo Headphones**

Open-air dynamic headphones. FR 20-20,000 Hz; sens 17.7  $\mu$ bar/V, 1 mW (1.41 V) for SPL of 102 dB; distortion 1% at 22 V, 1 kHz; imp 2,000 ohms; 10-ft cable, 5  $\mu$ z without cable ..... \$84

**HD 400 Stereo Headphones**

Open-air dynamic headphones. FR 20-18,000 Hz; sens 1 mW for SPL of 88 dB; imp 600 ohms; 10-ft cable, 3 oz without cable ..... \$49

**HD 40 Lightweight Headphones**

Open stereo headphones. FR 22-18,000 Hz; sens 90 dB with 1 mW input; distortion <1%. 2 oz without cable ..... \$37

**SIGNET DIVISION, A.T.U.S., INC.****TK33 Stereophones**

Dipolar electret condenser stereophones with power adapter feature high-compliance film moving diaphragm, 45 mm diameter, 2 microns thick. Features suede-finish inner headband and pivotal porous vinyl ear pads. Passive imp-matching transformer adapter features stereophone/speaker operation, hi/lo stereophone sens switches; 2 dual-color LED arrays in groups of 6, first 4 indicating medium-to-loud normal reproduction and last 2 indicating high-level peaks; no external power required; can accommodate 2 headsets. FR 20-22,000 Hz  $\pm$  2 dB; sens 100 dB at 1 V, 1 kHz; THD 0.1% at 110-dB SPL; matching imp 4-16 ohms; includes 8.2-ft cord with special plug, 3.9-ft adapter cable with 4-conductor plug. Stereophone 9.7 oz with cord; adapter 4 lbs; adapter 8.7"D 5.5"H 2.4"W ..... \$325-350  
TS33S. Additional stereophone for TK33 .... \$135

**TK22 Stereophones**

MC dynamic stereophones feature high-compliance polyester dome diaphragm, 20 microns thick, 45 mm diameter with 40-micron self-supporting silver/copper voice coil, FXD magnet. Features full-swivel foam earpieces, soft suede-finish inner headband. FR 20-20,000 Hz; sens 96 dB at 1 mW, 1 kHz; THD 0.4% at 110-dB SPL; matching imp 4-16 ohms; 11 $\frac{1}{2}$ -ft cord with plug; 9.2 oz with cord . \$100-120

**Miniature Stereo Headphones**

TK20. Features fully rotating yoke-and-pivot suspension system; can be compactly folded, fitted into belt pouch (supplied). FR 25-20,000 Hz; 1.5 oz \$60-80  
TK11. Features unique ball-joint pivot on each earcup, 4.9-ft cord with mini plug, mini-to-standard phone plug adapter. FR 30-20,000 Hz, slightly less than 2 oz ..... \$40-60

**SONY****MDR Series Headphones**

Ultra-lightweight open stereo headphones with samarium-cobalt magnets, high-excursion driver elements, oxygen-free litz wire cables, and minimal headband pressure.

MDR-80T. Top-of-the-line headphones with 30-mm drivers, one-sided cable; FR 16-24,000 Hz; sens 101 dB/mW; 2.2 oz less cable ..... \$85

MDR-70T. Headphones with 30-mm drivers; FR 16-22,000 Hz; sens 100 dB/mW; 1.8 oz less cable, \$65

MDR-50T. Headphones with 30-mm drivers; FR range 18-22,000 Hz; sens 100 dB/mW; 1.8 oz less cable ..... \$50

MDR-E33. Consists of 2 MDR-type drivers designed to harg comfortably from each ear; has no headband to add bulk, interfere with hair styles; especially suited for pocket stereos; FR 40-18,000 Hz; < 1 oz less cable. Supplied with mini stereo plug only ..... \$35

MDR-A30L. Lightweight open stereo headphones fold for storage; FR 18-20,000 Hz; mono and stereo switchable ..... \$35

MDR-E255. Water-resistant Fontopia headphones fit

snugly and comfortably inside ear; stereo miniplug fits pocket stereos ..... \$35  
**MDR-E252.** Fontopia earphones in both black and white; earplugs fit snugly and comfortably inside ear; special 16 mm drivers; stereo mini-plugs fits pocket stereos ..... \$30  
**MDR-E222.** Consists of 2 MDR-type drivers designed to hang comfortably from each ear; no headband to add bulk or interfere with hair styles; especially suited to pocket stereos ..... \$25

**MDR-20T.** Headphones with 23mm drivers; Unimatch plug fits all types of equipment; FR 20-22,000 Hz ..... \$20

## STANTON

### Stereowater® Eighty Headphones

Open headphones with samarium cobalt drivers. Features black vinyl-covered foam ear cushions; spring steel headband with black vinyl covering; silver ex-



tendable and adjustable pivot yokes. FR 20-20,000 Hz; sens 110 dB SPL at 0.20 V input; imp 100 ohms  $\pm 10\%$  at 1 kHz; max input 0.1 W rms/ch; distortion  $< 1/2\%$  at 110 dB SPL at 1 kHz ..... \$70

### Dynaphase 55/600 $\Omega$ Headphones

Specially designed for recording professionally, resulting in flat response and superior acoustical behavior of driver elements. Feature  $1\frac{1}{2}$ " dynamic high-velocity elements with specially formulated synthetic film diaphragms and samarium-cobalt magnets; adjustable headband with pivot yokes and glove-soft padded vinyl cover; soft nylon tricot-covered foam earcushions; 10-ft 4-conductor cord with double molded no-break connector. FR 20-22,000 Hz; distortion  $< 0.25\%$  at 110 dB SPL, 1 kHz; sens 110 dB min SPL at 0.2 V, 1 kHz; imp 600 ohms  $\pm 10\%$  at 1 kHz; maximum input power 0.25 W rms/ch; 5.5 oz less cord ..... \$70

### Stereo/Wafers XXI Headphones

Ultra-lightweight professional-standard headphone; FR 20-22,000 Hz  $\pm 4$  dB; sens 2 V for 100 dB SPL; max power input 0.1 W continuous; distortion 0.5% at 200-dB SPL; 100-ohm imp at 1 kHz; brushed blue denim finish; 10-ft flat cord with heavy-duty plug; 5.9 oz ..... \$70

### Micro/Wafer XII Stereo Headphones

Super-lightweight open-audio stereo headphones with  $\frac{3}{4}$ " dynamic high-velocity drivers with synthetic film diaphragms and samarium-cobalt magnets. FR range 10-20,000 Hz; distortion 0.5% at 100 dB SPL/mV at 1000 Hz; sens 105 dB SPL/mV at 1 kHz/ch; input imp 40 ohms at 1 kHz; max input 0.15 W/ch continuous; adjustable lightweight headband with multi-density polyurethane foam earcushions; includes adapter plug for use with portable radios, TV sets, and tape recorders; 7-ft Y-type straight cord with plug; 2 oz less cord ..... \$50

### Model 45 Open Audio Stereo Headphone

Comes with spring steel headband with black leather

cushion; FR 20-20,000 Hz  $\pm 5$  dB; distortion 0.5% at 105 dB SPL; max power input 0.1 W RMS; imp 100 ohms; weight 3.3 ozs; 7 ft Y cord with  $\frac{1}{4}$ " stereo female to mini stereo male adapter ..... \$45

### Dynaphase 25 Stereo Headphones

Lightweight open stereo headphones with dynamic high-velocity drivers with 1" polyester diaphragms. FR 10-20,000 Hz; distortion 0.5% at 110 dB SPL, 1 kHz; sens 100 dB SPL at 0.25 V input, 100 Hz; input imp 50 ohms at 1 kHz; max input power 0.2 W/ch continuous; adjustable padded vinyl headband with soft vinyl-covered foam ear cushions; includes adapter plug for use with portable radios, TV sets, and tape recorders; 7-ft Y-type straight cord with plug ... \$30

### Model V Micro Wafer-F Headphones

Super-lightweight stereo headphones with adjustable folding headband. Feature acoustically engineered polyurethane foam cushions; 5-ft Y-type straight cord with plug. FR 20-18,000 Hz; distortion less than 0.5% at 100 dB SPL, 1 kHz; sens 100 dB min SPL, 0.25 V input at 1 kHz/ch; imp 40 ohms  $\pm 20\%$  at 1 kHz; max input 0.1 W; 2 oz less cord ..... \$30

## TEAC

### THD-101 Stereo Headphones

Open-air dynamic MC stereo headphones. Features foam earpads; stereo phone plug with 3.5-mm to  $\frac{1}{4}$ " adapter. FR 20-20,000 Hz; sens 95 dB/mW  $\pm 2$  dB at 1 kHz; max input 100 mW; imp 30 ohms; 9.8-ft cable; 4 oz ..... \$40

## TECHNICS

### EAH-830 Linear-Drive Headphones

Low-distortion high-power-handling-capacity stereo headphones. FR 15-35,000 Hz; max input 3000 mW; 125-ohm imp; 0.3% distortion; 3-meter coiled cord; Supra-Aural ear pads; precise-fit, soft leather head pads; 450 g ..... \$75

### EAH-820 Linear-Drive Headphones

Headphones designed to handle high power inputs. FR 15-30,000 Hz; max input 3000 mW; 125-ohm imp; 0.3% distortion; 3-meter coiled cord; Supra-Aural ear pads; precise fit, soft, wide-contact leather head pads; 430 g ..... \$55

### EAH-810 Linear-Drive Headphones

Open stereo headphones with wide waveform response at eardrum. FR 20-25,000 Hz; max input power 1000 mW; imp 63 ohms; distortion 0.5% at 100 dB; 3-meter cord; Supra-Aural ear pads; precise-fit, soft, wide-contact leather head pads; 230 g. \$35

### EAH-T805 Stereo Headphones

FR 20-20,000 Hz; max input 200 mW; SPL 100 dB/mW; imp 125 ohms ..... \$30

### EAH-T5 Compact Headphones

Compact lightweight stereo headphone comes with stereo mini plug and standard stereo headphone adapter ..... \$30

### EAH-05 Compact Headphones

Compact lightweight headphones fold into carrying case; FR 20-20,000 Hz; imp 32 ohms; weight 1.06 oz ..... \$50

## UHER by WALTER ODEMER

### W 775 Stereo Headphones

Dynamic stereo headphones with one active, 6 auxiliary membranes per system; half-open design. FR 16-

20,000 Hz; SPL 94 dB; imp 600 ohms; nominal loading capacity 200 mW; distortion 1.0%; automatic strap adjustment; gimbal earcups; 3-m cable; 330 g ..... \$184

### W 675 Featherweight Headphones

Lightweight (2.2 oz) mono/stereo headphones with 8-ft coiled cord. FR 20-20,000 Hz; imp 200 ohms at 1 kHz; has lightweight adjustable headband, yellow foam-cushioned earpieces. With 5-pin plug for Uher cassette recorders ..... \$84

## VIDAIRE

### 983 Deluxe Stereo Headphones

Stereo headphones feature stereo/mono switch, volume controls, and padded headband. FR 20-18,000 Hz; imp 8-16 ohms; max input 0.5 W; 10-ft coiled cord with  $\frac{1}{4}$ " stereo plug ..... \$28

### 617 High-Velocity Stereo Headphones

Features snap-lock pivot in headstrap for compact storage in pocket. FR 20-20,000 Hz; imp 4-32 ohms; 5-ft shielded mini cord with 3.5-mm stereo mini plug and strain relief; optional adapter converts to standard  $\frac{1}{4}$ " stereo phone plug ..... \$18

### 960C Dynamic Stereo Headphones

Dynamic Stereo headphones. FR 20-18,000 Hz; imp 8-16 ohms; max input 0.5 W; 6-ft cord with  $\frac{1}{4}$ " stereo plug ..... \$15

## YAMAHA

### YH-100 Stereo Headphones

Orthodynamic stereo headphones with lightweight polyester film diaphragms in dual-support drive unit with mutually opposed anisotropic ferrite magnets. FR



20-20,000 Hz; output 98 dB/mW SPL at 106 dB/V; rated/max input 3/10 W; HD 0.3% at 90 dB SPL; imp 150 ohms; double padded headband with supra-aural earcups; includes 8-ft straight cord; 340 g less cord ..... \$95

### YH-1 Stereo Headphones

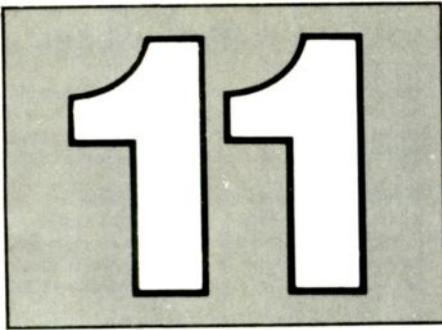
Lightweight orthodynamic design featuring sintered ferrite disc magnets with combination voice-coil diaphragm between. FR 20-20,000 Hz; output 94 dB/mW SPL; 3/10 W; 4D 0.3% at 120 dB SPL; rated/max input imp 150 ohms; soft leather strap distributes weight over entire head; supra-aural pads; 8-ft straight cord; weight 10.2 oz with cord ..... \$70  
**YH-2.** Same as YH-1 except output 93 dB/mW SPL; weight 8.1 oz with cord ..... \$50  
**YH-3.** Similar to YH-2 except 1/3 W rated/max input; 7.4 oz with cord ..... \$40

### YHL-005 Lightweight Stereo Headphones

Natural-sound stereo headphones for casual music anywhere use. Feature fatigue-reducing human-engineered design; rare-earth samarium-cobalt magnets; mini plug adapter. Imp 45 ohms; FR 20-20,000 Hz; output SPL 102 dB/mW at 1 kHz; max input 100 mW; output SPL 122 dB; 8-ft cord; weight with/without cord 2.8/1.8 oz ..... \$40  
**HL-007.** Similar to YHL-005 except smaller drivers, lighter weight (2.5/1.4 oz with/without cord), 119-dB SPL output ..... \$30

### NEED MORE INFORMATION?

Write directly to the manufacturer or distributor. A list of names and addresses starts on page 25.



# Microphones

## AIWA

### CM-Z7 Electret Microphone

One-point stereo-wide-zoom position back-electret condenser mic with 2 unidirectional, 1 bidirectional mic capsules. Features metal-vaporized polyester film diaphragm; cord with duo-fit plugs; mic stand, holder; wind screen; battery. Weighs 6 oz ..... \$150

### DM-D6 Dynamic Microphone

Unidirectional dynamic recording mic with double dome diaphragm. Features solid diecast housing; talk switch; mic holder; Cannon 3-pin XLR-type connector; cable ..... \$50

### DM-D3

Similar to DM-D6 except has duo-fit plugs instead of Cannon connector ..... \$30

### CM-Z3 Microphone

Variable directivity mono zoom mic. Can be used with microcassette recorders, attaches to most VCRs \$39

### CM-30Y Microphone

Miniature 1-point stereo mic ..... \$39

### CM-60 Microphone

Remote-control tie-clip mic ..... \$30

### DM-501 Microphone

Dynamic unidirectional MC mic with on/off switch ..... \$20

## AKAI

### ACM-100 Condenser Microphone

High-imp electret-condenser type general-purpose mic ..... \$58

### ACM-80 Condenser Microphone

Medium-imp electret-condenser type general-purpose mic ..... \$35

## AKG ACOUSTICS

### Condenser Stereo Microphones

**C422.** Large-diaphragm stereo condenser mic with FET preamplifier. Features 9 polar patterns/channel selected via remote control with M-S or Y-Y recording techniques; 0/-10/-20-dB preattenuator; 9-52 V phantom powered; LED aiming indicator; S-42E remote controller; MK-42/20 66-ft cable; W-42 windscreen; H-15/9 suspension mount/stand adaptor; foam-lined carrying case. FR 20-20,000 Hz; sens -42 dBm; imp 200 ohms; 9 1/2" L x 1 1/2" dia; 15.5 oz ..... \$2500

**C-34.** Small-diaphragm stereo condenser mic similar to C-422 except sens -43.5 dBm; W-34 windscreen; H-15/6 suspension mount/stand adaptor; 7 1/4" L; 9.75 oz ..... \$1649

**C-33.** Same as C-34 except for selectable polar patterns; cardioid capsules for X-Y stereo recording with one capsule fixed to main housing, the other rotatable through 0°-180° angle; MK-32/20 66-ft cable \$950

### C-414EB Polydirectional Condenser Microphone

FET condenser mic with large-diaphragm capsule.

Features selectable omni, cardioid, hypercardioid, or figure-8 pattern; flat/75/150-Hz) bass roll-off switch; 0/-10/-20 dB attenuator switch. FR 20-20,000 Hz (all patterns); sens -43.5 dBm; max SPL 138 dB with 0.4% THD; imp 200 ohms; 12/48 V phantom powered; supplied with SA-18/3 stand adapter, W-26 windscreen, case; 1.75" diameter x 5.5" L; 12 oz ..... \$795

### C-535EB Pre-Polarized Condenser Microphone

Professional cardioid condenser mic designed for demanding high-performance field use. Features special 4-position output switch for adjustable padding and bass rolloff to prevent possible overload and enable



user to tailor response; removable windscreen; field-replaceable shock-mounted transducer; integral FET preamp; satin-black finish. FR 20-20,000 Hz; sens -61 dBV; SPL 130 dB; imp 200 ohms; power required 9-52 V; supplied with SA-31 stand adapter and case; satin-black finish; 10 oz ..... \$295

### D-12E Cardioid Dynamic Microphone

Large-diaphragm cardioid dynamic mic with high proximity effect. For bass drums and other low-pitched instruments and vocal applications. Features shock-suspended transducer and fixed wire-mesh windscreen. Integral XLR-type connector in shaft. FR 40-15,000 Hz; sens -73 dBV; SPL 128 dB; imp 290 ohms. Includes SA-30 stand adapter and case \$295

### C-460 Modular Condenser Microphone System

Modular system consists of 2 interchangeable preamps, 9 interchangeable small-diaphragm capsules, and associated accessories. All C-460 FET preamps have 5-30,000 Hz FR, 200-ohm source imp, 500-ohm load imp; 48 V power; 3-position bass rolloff and 2 position attenuation. All capsules are condenser-designed and have FR of 20-20,000 Hz. Capsules available are CK-1 cardioid, CK-1S cardioid with rising response, CK-1X Remote Cardioid, CK-2X Remote Omnidirectional, CK-3 Hypercardioid, CK-4 figure-8, CK-5 cardioid with shock-suspended transducer and integrated windscreen/pop filter, CK-8 short shotgun, CK-9 long shotgun and CK-22 omnidirectional with built-in pop filter. Preamps and capsules available either separately or in combinations.

**CK-1.** Cardioid ..... \$127  
**CK-1S.** Cardioid ..... \$127  
**CK-1X.** Remote Cardioid ..... \$300  
**CK-2X.** Remote Cardioid ..... \$300  
**CK-3.** Hypercardioid ..... \$127  
**CK-5.** Cardioid ..... \$237

**CK-8.** Short shotgun ..... \$227  
**CK-9.** Long shotgun ..... \$275  
**CK-22.** Omnidirectional ..... \$127  
**C-451EB.** Preamp ..... \$275  
**C-460-B.** Preamp ..... \$330

### C-567E Pre-Polarized Condenser Microphone

Professional miniature wide-range omnidirectional lavalier condenser mic with FET preamplifier. Features durable metal construction with shock/noise-resistant system and easy field-serviceable capsule. Frequency response 20-20,000 Hz; sensitivity -43.5 dBm; SPL 132 dB with 0.5% THD; imp 500 ohms; power required 9-52 V; supplied with H-20 tie tack, H-21 tie bar, W-37 wire-mesh windscreen, H-16 belt clip, case; 3.5 oz ..... \$235

### D-330BT Hypercardioid Microphone

Hypercardioid dynamic mic with elastomer shock-suspended plug-in field-replaceable transducer system; designed for the professional vocalist. Features dual-band, 3-position equalizer switches and hum- and noise-rejection systems. FR 50-20,000 Hz; dual windscreen/pop filter; nickel-plated zinc alloy die-cast housing; includes SA-31 stand adapter case; 2" dia. x 7.25" L; 12 oz ..... \$210

### D-320B Hypercardioid Microphone

Hypercardioid dynamic mic with elastomer shock-suspended field-replaceable transducer; designed for professional entertainer. Features 3-position EQ switch and hum rejecter. FR 80-18,000 Hz; sens -57 dBm; imp 200 ohms; dual windscreen/pop filter; nickel-plated zinc alloy diecast housing; includes SA-31 stand adapter and case; 2" diameter x 7.5" L; 10.5 oz ..... \$170

### D-310S Cardioid Microphone

Cardioid dynamic mic with elastomer shock-suspended transducer; designed for vocal music coverage in the home, studio, or on stage. FR 80-18,000 Hz; sens -58 dBm; imp 200 ohms. Features integral on/off switch, windscreen/pop filter, and hum rejecter; nickel-plated zinc alloy diecast housing; includes SA-30 stand adapter and case; 1.75" diameter x 7.5" L; 8.5 oz ..... \$150

**D-310.** Similar to D-310S but without integral on/off switch ..... \$135

### D-190E Cardioid Microphone

Cardioid dynamic microphone for speech or music performing and recording. Frequency response 30-15,000 Hz; sensitivity -52 dBm; 200-ohm imp; sintered bronze windscreen; nickel-plated housing; supplied with SA-11 stand adapter and case; 1.5" diameter x 6.25" L; 6.5 oz ..... \$115

**D-190ES.** Same as D-109E but with integral on/off switch ..... \$130

### D-125E Cardioid Microphone

Cardioid dynamic mic with shock-suspended transducer; for general-purpose applications; hum rejecter and heavy-duty wire-mesh windscreen. FR 100-18,000 Hz; sens -53.5 dBm; 200-ohm imp; supplied with SA-30 stand adapter and case; 1.75" diameter x 7" L; 8 oz ..... \$110

**D-130E Omnidirectional Microphone**

Omnidirectional dynamic mic with shock-suspended transducer; designed for field applications. FR 50-15,000 Hz; sens -54.5 dBm; imp 200 ohms; hum rejecter and sintered bronze windscreens; nickel-plated zinc-alloy diecast housing; includes SA-30 stand adapter and case; 1.75" diameter x 7"; 9 oz \$105

**D-40 Stereo-Pair Microphones**

Package contains 2 D-40 low-imp cardioid dynamic mics, stand adapters, cable .....\$99

**AUDIO-TECHNICA U.S.****AT815a Line/Gradient Microphone**

Electret condenser shotgun mic with permanently polarized element. FR 40-20,000 Hz; sens -50 dB; nominal imp 600 ohms; max input SPL 120 dB; S/N 50 dB at 1 kHz, 1 µbar; 1.5-V AA cell powered; 16.5-ft cable with professional XLR/A3F connector at mic end, ¼" phone plug at equipment end; slip-in stand clamp; carrying case; windscreens; battery .... \$205  
**AT815a/XLR.** Same as AT815a except with XLR/A3M connector at output end of cable ..... \$210

**AT814a Unidirectional Microphone**

MC dynamic cardioid mic designed for professional recording and broadcasting studios. FR 50-16,000 Hz; sens -56 dB (0 dB = 1 mW/10 dynes/cm<sup>2</sup>); EIA sens -150 dB; 250-ohm nominal imp. Features high-efficiency windscreens and balanced low-imp output and includes 16.5-ft cable with XLR/A3F professional connector with ¼" phone plug, tapered slip-in stand clamp, and carrying case ..... \$135  
**AT814a/XLR.** AT814a with XLR/A3M connector on output end of cable ..... \$140

**AT813 Unidirectional Microphone**

Incorporates electret condenser permanently polarized element with 4-micron polymer diaphragm. FR 20-20,000 Hz; sens -55 dB; 600-ohm nominal imp; input SPL 125 dB; S/N 50 dB at 1 kHz, 1 µbar; AA penlight battery powered. Includes 16.5-ft cable with professional XLR/A3F connector and ¼" phone plug, slip-in stand clamp, carrying case, battery .... \$115  
**AT813/XLR.** AT813 with XLR/A3M connector on output end of cable ..... \$120  
**AT813R.** Phantom-power version of AT813. External power only (9-65 V dc). Sens -49 dB; imp 200 ohms; maximum SPL 141 dB. Supplied with A3F/A3M connectors on cable ..... \$165

**AT831 Miniature Unidirectional Mic**

Electret condenser permanently polarized element. FR 50-18,000 Hz; sens -58 dB; nominal imp 600 ohms; maximum input SPL 130 dB; S/N 45 dB at 1 kHz, 1 µbar; 1.5-V N-type battery powered; balanced output via battery holder/belt clip with recessed on/off switch. Includes clothing clip, musical instrument adapter for acoustic guitar, saxophone, etc.; windscreens; battery; carrying case; 0.3" diameter x 0.9"L ..... \$115

**AT812 Unidirectional Microphone**

Incorporates MC dynamic element. FR 50-18,000 Hz; sens -60 dB; 600-ohm nominal imp. Supplied with 16.5-ft cable with professional XLR/A3M connector on output end of cable ..... \$105  
**AT812/XLR.** AT812 with XLR/A3M connector on output end of cable ..... \$110

**AT811 Unidirectional Microphone**

Incorporates electret condenser permanently polarized element. FR 50-20,000 Hz; sens -56 dB; 600-ohm nominal imp; maximum input SPL 130 dB; S/N 50 dB at 1 kHz, 1 µbar; battery powered. Supplied with 16.5-ft cable with professional XLR/A3F connector with ¼" phone plug, slip-in stand clamp, carrying case, battery ..... \$100  
**AT811/XLR.** AT811 with XLR/A3M connector on output end of cable ..... \$105

**AT803S Subminiature Microphone**

Electret condenser permanently charged element; omnidirectional pattern; 5-micron polymer diaphragm. FR 50-15,000 Hz; sens -57 dB; 600-ohm imp; balanced output; battery holder/belt clip with on/off switch; uses 1.5-V N-type penlight cell. Includes clothing clip, windscreens, battery, carrying case; 16.5-ft cable; mic 0.4" diameter x 0.8"L \$100

ragm. FR 50-15,000 Hz; sens -57 dB; 600-ohm imp; balanced output; battery holder/belt clip with on/off switch; uses 1.5-V N-type penlight cell. Includes clothing clip, windscreens, battery, carrying case; 16.5-ft cable; mic 0.4" diameter x 0.8"L \$100

**AT801 Omnidirectional Microphone**

Incorporates electret condenser permanently polarized element. FR 40-18,000 Hz; sens -48 dB; 600-ohm nominal imp; maximum input SPL 125 dB; S/N 50 dB at 1 kHz, 1 µbar; AA penlight battery powered. Supplied with 16.5-ft cable with professional XLR/A3F connector, slip-in stand clamp, carrying case \$90  
**AT801/XLR.** AT801 with XLR/A3F connector on output end of cable ..... \$95

**AT802 Omnidirectional Microphone**

Mic with MC dynamic element. FR 50-16,000 Hz; sens -56 dB; imp 600 ohms. Supplied with 16.5-ft cable with professional XLR/A3F connector; slip-in stand clamp; carrying case ..... \$85  
**AT802/XLR.** AT802 with XLR/A3M connector on output end of cable ..... \$90

**AT805S Miniature Microphone**

Electret condenser with permanently charged element; omnidirectional pattern. FR 50-15,000 Hz; sens -57 dB; 600-ohm imp; unbalanced output; built-in switch. Uses E675 battery. Includes clothing clip, lavalier cord, windscreens, belt clip, battery, carrying case, 16.5-ft cable with ¼" phone plug; mic 0.6" diameter x 2"L ..... \$60

**BEYER DYNAMIC, INC.****M-130 Bidirectional Ribbon Microphone**

Figure-8 bidirectional ribbon mic incorporating two 0.012" aluminum ribbons that move one above the other with 0.020" separation; designed for studio broadcasting or recording. FR 40-18,000 Hz; polar pattern provides 3-dB attenuation at 90°; ribbon design protects from overload or mechanical shock; supplied with standard 3-pin Switchcraft connector; 5.04"L ..... \$420

**M-160 Super Cardioid Ribbon Microphone**

Super-cardioid dynamic double-mic. FR 40-18,000 Hz ±2.5 dB; sens -152 dBm (EIA); 200-ohm imp; low sensitivity at 120° to axis; suitable for stereo recording; Cannon XLR termination ..... \$360

**M-88 Super Cardioid Moving-Coil Microphone**

Super-cardioid dynamic type. FR 30-20,000 Hz ±2.5 dB; sens -144 dBm (EIA); special transducer mounting eliminates body noise; withstands rough handling, humidity, temperature changes; for studio work, recording artists, instruments ..... \$320

**M600 Unidirectional Dynamic Microphone**

True hypercardioid characteristic dynamic mic with built-in presence boost; hum-bucking coil; pop filter; lockable on/off switch; adjustable 3-position bass attenuator. FR 40-16,000 Hz; side attenuation > 24 dB at 120°; 1 kHz; output level -56 dBm; EIA sens -149 dB; imp 250 ohms; load imp > 1k ohms; bass attenuation -8/-12/-16 dB; aluminum case with steel mesh grille, black anodized finish; XLR or equivalent male connector ..... \$270  
**M600S.** Same as M600, except that it has an on/off switch ..... \$280

**M-500 Unidirectional Ribbon Microphone**

Hypercardioid dynamic ribbon mic with professional-application tailored presence boost. FR 40-18,000 Hz; integral 4-stage blast filter for high-level sound sources; sens -152 dBm (EIA), -60 dBm (1mW/-

Pa); 20-dB side attenuation at 120°; matte black aluminum case; 16½-ft, 2-conductor cable with XLR-type connector; leatherette carrying case; 7.4"L \$240  
**M-500S.** Same as M-500S with on/off switch \$250

**M-260-S Super Cardioid Ribbon Microphone**

Super cardioid dynamic design. FR 50-18,000 Hz ±2.5 dB; sens -153 dBm (EIA); high-energy ribbon; 200-ohm imp. Suitable for speech, music, or vocals; has on/off switch and Cannon XLR termination \$200

**M-101 Omnidirectional Moving-Coil Microphone**

Omnidirectional type. FR 40-20,000 Hz; sens -150 dBm (EIA); 200-ohm imp. Withstands pressures associated with modern music (modulated voltages up to 2 V); low handling noise; 4½" x ¾"; Cannon XLR termination ..... \$210

**M-201 Hypercardioid Dynamic Microphone**

Professional-application unidirectional dynamic microphone with hum-bucking coil construction. Frequency range 40-18,000 Hz; sens -149 dBm (EIA), -56 dBm (1mW/Pa); imp 200 ohms electrical, 1k ohm or more load; > 20 dB side attenuation at 120°; 16½-ft, 2-conductor cable and Switchcraft A3F connector; matte-black brass case with windscreens, clamp, case. 6.3" long ..... \$189

**M-111 Omnidirectional Lavalier Microphone**

Miniature omnidirectional dynamic lavalier microphone with filter providing flat FR when suspended over chest; designed for TV broadcasting. FR 60-15,000 Hz (decreases 6 dB between 700-800 Hz and rises to 8 dB from 1000 to 10,000 Hz); output -62 dBm; 200-ohm imp; spring-mounted inner casing suspended within outer housing; available with standard Cannon 3-pin connector or 1-m cable and 6-pin connector for use with company's TS 73 or TS 83 wireless pocket transmitter; clamp and cord in black leatherette case; black matte finish; 3.35"L .. \$200

**MCE-5 Omnidirectional Tie-Clip Mic**

Broadcast-quality clip-on omnidirectional electret condenser mic for on-camera applications. FR 20-20,000 Hz; S/N 62 dB; max SPL 116 dB at 1 kHz; EIA sens 141 dBm; electrical imp 700 ohms; load imp 2500 ohms; supplied with detachable windscreens and 1-m cable with 6-pin male connector to interface with MESSVNC pocket power supply .. \$160

**M-69 Cardioid Moving-Coil Microphone**

Dynamic cardioid design. FR 50-16,000 Hz ±3 dB; sens -144 dBm (EIA); 200-ohm imp; for indoor/outdoor applications; unaffected by temperature, humidity ..... \$160  
**M-69-SM.** Same as M-69 but with on/off and bass-cut switch ..... \$180

**M-400 Moving-Coil Cardioid Microphone**

MC dynamic super-cardioid type. FR 50-15,000 Hz; sens -146 dB (EIA); 200-ohm imp; on-off switch; 3-pin XLR termination; blast filter; 24.6-ft cable; black anodized aluminum case and clamp ..... \$160  
**M-400S.** Same as M-400 except with on/off switch ..... \$170

**M-818 Matched-Pair Microphone**

Cardioid dynamic matched-pair mics. FR 150-16,000 Hz; output level -55.8 dBm; 500-ohm imp; front-to-back separation 18 dB; comes with attached 6.5-ft cables with ¼" phone plug, 2 table stands, mic clamps, stereo adaptor cable, mounting bar, presentation case; 5.47"L ..... \$150/pr

**M-300 Unidirectional Microphone**

Hypercardioid MC mic with pop filter; 3-pin XLR connector; mic stand clamp; black anodized aluminum case. FR 50-15,000 Hz; sens -150 dBm (EIA); imp 200 ohms; 24.6-ft cable ..... \$125

**CERWIN-VEGA****UE-1 Cardioid Microphone**

Uni-electret cardioid mic designed for stage instruments. Features pop filter; on/off and tone imp

**Audio terms are defined  
in the glossary on page 19.**

**For an explanation of abbreviations,  
turn to the list on page 22.**

switches. FR 80-20,000 Hz; imp switchable 600/-10,000 ohms; sens -70 dB into 600 ohms (0 dB = 1  $\mu$ /bar); 16-ft cable with  $\frac{1}{4}$ " 3-conductor phone plug and Cannon XLR-3-11C equivalent connector; 7.914" L  $\times$  1.930" dia. .... \$125

#### UD-1 Cardioid Microphone

Unidirectional cardioid dynamic mic designed for live vocal applications or studio use. Features built-in pop filter and on/off switch. FR 70-15,000 Hz; sens -73 dB 3 dB (0 dB = 1  $\mu$ /bar); imp 600 ohms; 16-ft cable with  $\frac{1}{4}$ " 3-conductor phone plug and Cannon XLR-3-11C equivalent connector; 7.323" L  $\times$  1.575" diameter. .... \$100

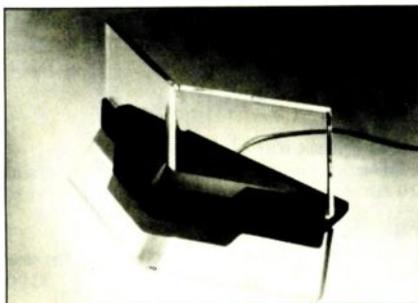
### CROWN

#### Pressure Zone<sup>®</sup> Microphones<sup>™</sup>

Hemispherically patterned electret mics engineered to respond to coherent wavefront at surface of acoustic boundary to eliminate comb filtering. Designed for television, theater, concert and PA applications. Features reduced pressure-calibrated electret modules mounted within a few millimeters of rigid surface and facing a boundary; need for fewer channels; simplified design for easier set up; handles 150-dB SPL. Equipped with battery and phantom power supply arranged in cylindrical metal tube with XLR connectors; available in gold or black.

#### PZM<sup>®</sup> 2.5 Microphone

Low-profile, minimum-visibility Pressure Zone Microphone<sup>®</sup> designed to improve directional pickup. Fea-



tures a nearly invisible corner boundary; transformer-balanced low-imp output; permanently attached 15-ft multidirectional cable. Plugs directly into a 12-48 V phantom power supply.

**PZM<sup>®</sup> 2.5 BR4.** Brass base 4", clear boundary \$399  
**PZM<sup>®</sup> 2.5 B4C.** Black base 4", clear boundary \$359  
**PZM<sup>®</sup> 2.5 B8C.** Black base 8", clear boundary \$359  
**PZM<sup>®</sup> 2.5 B4D.** Black base 4", dark boundary \$359

#### General Purpose (PZM<sup>®</sup>-30GP)

XLR connector, electret capsule, and mike cantilever mounted on  $\frac{1}{8}$ " aluminum plate 5"  $\times$  6"; wall or floor positioning or suspension above choir or orchestra ..... \$350

#### Low Profile (PZM<sup>®</sup>-6LP)

Cantilever holding electret capsule, mounted on 2"  $\times$  3" aluminum plate; XLR connector at end of several feet of cable; suitable for conference rooms or TV programming ..... \$350

#### Flush Mount (PZM<sup>®</sup>-20RMG)

All connections at section of mic extending below level of capsule, ensuring invisibility of mic; suitable for mounting into podium, lectern, or pulpit; cantilever capsule protected from objects or papers by 3 small metal pegs ..... \$350

#### NEED MORE INFORMATION?

Write directly to the manufacturer or distributor. A list of names and addresses starts on page 25.

#### Lavalier (PZM<sup>®</sup>-2LG)

Designed to be worn on tie, scarf, or coat .... \$350

#### Tie Bar (PZM<sup>®</sup>-3LV)

Smallest PZM<sup>®</sup> microphone ..... \$350

#### PZM<sup>®</sup>-31S Pressure Zone Microphone

Designed to complement the PZM 30GP to provide a FR with a deeper low end. Active element is an electret capsule mounted on a 6"  $\times$  5" plate so that it faces boundary defined by plate and surface on which plate rests. Sound pickup pattern is hemispheric. Mic is usable with either PX-18 transformer or PA-18 active power supply. FR 20-20,000 Hz; sens -76 dB open circuit (0 dB = 1V/ $\mu$ bar); normal loading imp 1k ohms; THD 3% at 150 dB SPL; S/N < 125 dB SPL; electrical imp 150 ohms with PA-18 and PX-18; cable length 5.5 ft ..... \$350  
**PZM<sup>®</sup>6S.** Similar to PZM<sup>®</sup> 31S, smaller size. . . \$350

#### The Sound Grabber

Consumer version of Crown's Pressure Zone Microphone. Designed for use with video and audio cassette recorders. Features 10-ft cord with  $\frac{1}{4}$ " microphone plug; isolated output signal that records on standard cassette recorders and effectively eliminates motor noise, muffled sounds and room reverberations; powered with an alkaline 1.5V battery; includes electret condenser with open circuit voltage. 1-year full warranty ..... \$100



**PZM<sup>®</sup> 180** Similar to Sound Grabber except wider dynamic range ..... \$170

### ELECTRO-VOICE

#### PL80 Dynamic Supercardioid Microphone

Supercardioid mic designed for real-life use. Features professional low imp, integral blast filter, snow-gray finish, contrasting charcoal Memraflex grille. FR 50-20,000 Hz ..... \$216

#### PL77B Condenser Cardioid Microphone

Designed for phantom or battery powering. Has recessed on/off switch that controls battery power only. Features 2-position bass-contour switch; blast filter; nonreflecting snow-gray finish, Memraflex grille. FR 50-20,000 Hz ..... \$210

#### PL11 Dynamic Supercardioid Microphone

Instrument mic that can double for vocal applications. Features variable-D directionality that virtually eliminates boost at bass frequencies when used up close; blast filter; low imp; steel case finished in non-reflecting gray. FR 50-15,000 Hz; output level -56 dB ..... \$204

#### PL76B Condenser Cardioid Microphone

Condenser mic designed for vocal applications. Features nonreflecting snow-gray-finished die-cast case. FR 50-20,000 Hz; distortion < 1% at 136 dB SPL; power source 1.5-V AA cell ..... \$177

#### PL95A Dynamic Cardioid Microphone

Special-element and 2-piece diaphragm dynamic cardioid mic designed for wide-range linear frequency response. Features rugged steel case; pop filter; Memraflex steel grille; nonreflecting snow-gray finish. FR 70-20,000 Hz; output level 60 dB ..... \$180

#### PL9 Dynamic Omnidirectional Microphone

Omnidirectional instrument mic with professional low-imp, high-output characteristics. Features turned-steel case; Memraflex steel grille; nonreflecting gray finish. Frequency response 50-20,000 Hz; output level -58 dB ..... \$169

#### PL91A Dynamic Cardioid Microphone

Vocal mic with strong bass boost when held close. Features directional, antifeedback performance; locking on/off switch; diecast case; snow-gray finish, charcoal Memraflex grille. FR 50-15,000 Hz; low-imp output; output level -60 dB ..... \$132

#### PL6 Dynamic Supercardioid Microphone

Continuously Variable-D directional mic without up-close bass boost. Features extra-tight supercardioid directional pattern that minimizes feedback; rugged die-cast case; Memraflex grille; nonreflecting gray finish. FR 50-17,000 Hz; low-imp output; output level -56 dB ..... \$119

#### PL5 Dynamic Omnidirectional Microphone

Professional instrument mic designed for high sound-pressure levels (SPLs). Features pop filter; low-imp input/high output level; rugged steel case; Memraflex steel grille; nonreflecting gray finish. FR 40-15,000 Hz; output level -55 dB; SPL-handling range up to 160 dB ..... \$110

#### PL88L Dynamic Cardioid Microphone

Vocal mic with on/off switch. Offered in 2 versions: <sup>2</sup>PL88L low-imp and PL88H high-imp. Features snow-



gray finish, contrasting charcoal grille. FR 50-14,000 Hz ..... \$84

### GC ELECTRONICS

#### 30-2372 Dynamic Microphone

Low-imp unidirectional dynamic MC mic with professional 3-pin connector, 20-ft 2-conductor cable with  $\frac{1}{4}$ " phone plug. FR 60-15,000 Hz; output -75 dB at 1 kHz ..... \$70

#### 30-2382 Stereo Microphone

Stereo electret mic with matched unidirectional elements, 9.9-ft cable with two  $\frac{1}{4}$ " phone plugs. FR 50-16,000 Hz; output level 68 dB at 1 kHz; imp 600 ohms ..... \$43

#### 30-2373 Cardioid Microphone

Cardioid unidirectional dynamic mic with 2-pin screw connector and 16.5-ft cord with  $\frac{1}{4}$ " phone plug. FR 50-17,000 Hz ..... \$40

#### 30-2388 Omnidirectional Microphone

Dynamic omnidirectional mic with dual imps, 4-pin screw connector, and 15-ft cord with  $\frac{1}{4}$ " phone plug. FR 100-10,000 Hz; output level/imp -78 dB/250 ohms, -60 dB/50,000 ohms ..... \$38

#### 30-2376 Dynamic Microphone

Low-imp unidirectional MC mic with 2-pin screw connector, 15-ft low-noise cord with  $\frac{1}{4}$ " phone plug. FR 100-13,000 Hz; output -85 dB at 1 kHz ..... \$38

#### 30-2378 Unidirectional Microphone

Electret condenser mic with fixed 20-ft heavy-duty cable with  $\frac{1}{4}$ " phone plug. FR 30-16,000 Hz; output level -68 dB at 1 kHz; imp 600 ohms ..... \$31

**30-2374 Unidirectional Microphone**

High/low imp dynamic MC mic with 4-pin screw connector, 20-ft 2-conductor shielded cable with 1/4" phone plug. FR 80-15,000 Hz; output level/imp -2 dB/500 ohms, -52 dB/50,000 ohms .....\$28

**30 Series Microphones**

**30-2398.** Electret mic with 20-ft heavy-duty cord and 1/4" phone plug .....\$24  
**30-2308.** Matched-pair omni MC mics with 4.3-ft cords .....\$22/pr  
**30-2393.** Lavalier dynamic MC mic with 16.5-ft cord .....\$17  
**30-2302.** Omnidirectional MC mic with 4.5-ft cord .....\$11

**JVC****M-201 Electret Condenser Microphone**

FR 40-18,000 Hz; sens -71 dB; S/N ratio > 47 dB at 1 kHz; output imp 600 ohms .....\$60

**MURA****DX-242 Stereo Microphones**

Type F matched-paired stereo mics for stereo recorders. Supplied with adapters to convert from mini to standard 1/4" phone plug; 5-ft cable. Imp 500 ohms; sens -70 dB at 1 kHz; FR 60-12,000 Hz .....\$20

**EX-279 Lapel Microphone**

Omnidirectional electret condenser mic with clothing clip, 10-ft cable, mini plug, battery. FR 30-16,000 Hz; imp 600 ohms .....\$20

**DX-118 Cassette Microphone**

Type B mic designed to fit most cassette recorders and supplied with dual plugs for audio, remote control. Imp 500 ohms; sens -70 dB at 1 kHz; FR 60-12,000 Hz; remote switch; 5-ft cable .....\$6

**DX-211 Microphone**

Type E single-plug mic designed for tape recorders requiring high-quality mic with single miniature plug. Supplied with adapter to convert from mini to standard 1/4" phone plug; on/off switch; 5-ft cable. Imp 500 ohms; sens -70 dB at 1 kHz; FR 60-12,000 Hz .....\$6

**NAKAMICHI****CM-300T Electret Tri Microphone**

Tri-mic system with 3 CM-300 mic recording system; supplied with carrying case with space for headphones, cables, accessories .....\$465  
**CM-300S.** Similar to CM-300T except single-mic version .....\$170

**DM-1000 Dynamic Cardioid Microphone**

Cardioid MC mic with low-mass diaphragm, voice coil for extended high-end response; designed for vocals. Features triple metal screen pop, blast, wind filter; double casing, foam suspension for reduced sensitivity to vibration; immunity to hum and magnetic fields. FR 30-20,000 Hz  $\pm$  3.5 dB; sens -76 dB at 1 kHz (0 dB = 1V/ $\mu$ bar); imp 250 ohms; supplied with Cannon-type XLR-3 connector; anodized black matte finish; 10.4 oz .....\$300

**CM-300 Electret Condenser Microphone**

Studio-type system with interchangeable capsules. Basic set comes with CP-1 cardioid and CP-2 omnidirectional capsules, windscreens, 15-ft cable, XLR connector, battery, stand adapter. Features 10-dB attenuator pad; low-cut proximity effect compensator. FR  $\pm$  3.5 dB 30-18,000 Hz (CP-3); 30-20,000 Hz (CP-4)  $\pm$  3.5 dB; imp 200 ohms balanced; sens  $\pm$  2.5 dB -76 dB (CP-1, CP-2, CP-4), -74 dB (CP-3); 138-dB SPL maximum (CP-1, CP-2); 136 dB SPL maximum (CP-3); 118-dB SPL maximum (CP-4) at 3% distortion; dynamic range 114 dB (CP-1, CP-2), 107 dB (CP-3), 94 dB (CP-4) .....\$170  
**CP-2.** Omni capsule for CM-100 (included with CM-300) .....\$20

**CP-3.** Optional small-diameter, super-omnidirectional capsule .....\$40  
**CP-4.** Super-directional (shotgun) capsule .....\$60  
**CM-100.** Similar to CM-300 but powered by 1.5-V cell; maximum SPL 118 dB at 3% distortion; dynamic range 94 dB; supplied with CP-1 cardioid capsule, accepts CP-2, CP-3, CP-4 .....\$110

**DM-500 Super Cardioid Microphone**

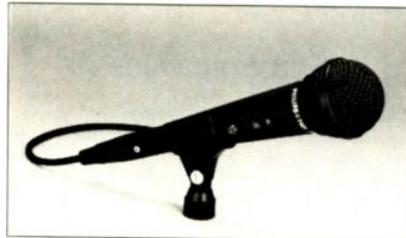
Dynamic MC mic with windscreens, super-cardioid polar pattern. FR 50-15,000 Hz  $\pm$  5 dB; imp 250 ohms; sens -73 dB  $\pm$  2.5 dB .....\$100

**NEUMANN****fet 80 Condenser Microphones**

Line of studio mics that come in many configurations (omnidirectional, figure-8, cardioid, multiple pattern, multiple pattern stereo); can be battery or phantom (separate power supplies) powered except U 87 (which contains a switchable battery compartment).  
**KM 83.** Omnidirectional .....\$349  
**KM 84.** Cardioid .....\$349  
**KM 85.** Cardioid, low-frequency rolloff .....\$349  
**KMS 84.** Pop-proof cardioid .....\$835  
**U 47fet.** Cardioid .....\$969  
**KMR 81.** Hyper/supercardioid short shotgun .....\$695  
**KMR 82.** Shotgun .....\$755  
**KM 88.** Switchable 3-pattern .....\$1,000  
**KM 86.** Switchable 3-pattern .....\$915  
**KMF 4.** Cardioid system .....\$655  
**KMA.** Omni tie-clasp .....\$300  
**KU 81.** Binaural artificial head .....\$2,570  
**U 87.** 3-pattern .....\$1,047  
**U 89.** 5-pattern .....\$1,098  
**SM 69 fet.** Multipattern stereo .....\$2,850  
**USM 69.** Multipattern stereo .....\$2,590  
**N80G2.** 117-V ac portable power supply for powering 1 or 2 fet 80 mics .....\$89

**PHILIPS****7401 Series Cardioid Microphones**

Cardioid dynamic mics for professional vocal recording and live applications. Features ball-head wire-



mesh windscreen; on/off switch; detachable 15-ft cable; stand adapter; black matte finish. FR 50-18,000 Hz; sens -73 dBm; imp 600 ohms; 9.5 oz.  
**7401 P.** With XLR-XLR connector cable .....\$135  
**7401 E.** With XLR-phone plug cable .....\$135  
**7401 T.** With XLR-high-imp phone plug cable .....\$160

**7300 Series Cardioid Microphones**

Cardioid dynamic mics for vocal and instrumental recording and sound reinforcement. Ball-head wire-mesh windscreen; on/off switch; detachable 15-ft cable; stand adapter; silver/grey finish. FR 50-16,000 Hz; sens -57 dBm; imp 6 ohms; 8.5 oz.

**7300 P.** With XLR-XLR connector cable .....\$95  
**7300 E.** With XLR-phone plug cable .....\$95  
**7300 T.** With XLR-high-imp phone plug cable .....\$160  
**7301 P.** Same as 7300 P except black matte finish .....\$110  
**7301 E.** Same as 7300 E except black matte finish .....\$110  
**7301 T.** Same as 7300 T except black matte finish .....\$135  
**7302 P.** Same as 7300 P except white finish, matte black windscreen .....\$110  
**7302 E.** Same as 7300 P except white finish, matte black windscreen .....\$110  
**7302 T.** Same as 7300 P except white finish, matte black windscreen .....\$135

**7200 Stereo Cardioid Microphone**

Cardioid dynamic mic with 2 MC elements for 1-point stereo micing. Features fixed 9-ft cable with dual color-coded phone plugs; stand adapter. FR 80-15,000 Hz; sens -63 dBm; imp 8 ohms; 6 oz .....\$70

**7100 Cardioid Microphone**

Cardioid dynamic mic for vocal and general-purpose recording and PA use. Features wire-mesh windscreen; fixed 18-ft cable with phone plug; stand adapter. FR 80-15,000 Hz; sens -59 dBm; imp 600 ohms; 6.5 oz .....\$66

**8200 Lavalier Electret Condenser Microphone**

Battery-powered electret condenser mic with alligator clip for broadcast, public address, and instrumental amplification and recording. Battery and windscreen included. Battery module includes belt clip. 9-ft cable ends in XLR. FR 50-12,000 Hz; imp 200 ohms (balanced); sens -54 dBm; mic 1 1/8" x 1/2", battery module 3" x 3/4"; 3 oz complete weight; .....\$66

**PIONEER****DM-61 Dynamic Microphone**

Unidirectional dynamic mic. FR 80-12,000 Hz; sens 75 dB/ $\mu$ bar at 1 kHz; imp 600 ohms .....\$130

**DM-51 Dynamic Microphone**

Unidirectional dynamic mic. FR 80-12,000 Hz; sens 75 dB/ $\mu$ bar at 1 kHz; imp 600 ohms .....\$100

**DM-21 Dynamic Microphone**

Unidirectional dynamic mic. FR 100-15,000 Hz; sens 75 dB/ $\mu$ bar; imp 500 ohms .....\$30

**DM-51-Dynamic Microphone**

Unidirectional dynamic mic. FR 80-12,000 Hz; sens 75 dB/ $\mu$ bar at 1 kHz; imp 600 ohms .....\$100

**DM-21 Dynamic Microphone**

Unidirectional dynamic mic. FR 100-15,000 Hz; sens 75 dB/ $\mu$ bar; imp 500 ohms .....\$30

**PML by ERCONA****DC-63 Condenser Microphone**

Condenser mic with adjustable direction permitting the mic to be used in cardioid, bidirectional and omnidirectional patterns. With the use of 2 ring switches built around 4 reed switches and the directional potentiometer, 44 distinct combinations are possible. In cardioid A pattern: directivity index 18-20 dB; FR 30-20,000 Hz; sens -48 dB/Pa (over 200 ohms at 1 V); output 4.0 mV/Pa (over 200 ohms at 1 V); dynamic range 126 dB. For the cardioid B patterns: di-

**NOTICE TO READERS**

Prices of items described are manufacturers' suggested prices only and are subject to change without notice. Actual selling prices are determined by the dealers.

rectivity index 18-20 dB; FR 30-20,000 Hz; sens -52 dB/Pa (over 200 ohms at 1 V); output 2.5 mV/Pa (over 200 ohms at 1 V); dynamic range 130 dB. Bidirectional: directivity index 22-25 dB; FR 30-20,000 Hz; sens -52 dB/Pa (over 200 ohms at 1 V); output 2.5 mV/Pa (over 200 ohms at 1 V); dynamic range 130 dB. Omnidirectional: FR 30-20,000 Hz; sens -52 dB/Pa (over 200 ohms at 1 V); output 2.5 mV/Pa (over 200 ohms at 1 V); dynamic range 130 dB. Output imp (balanced) 200 ohms. 158 × 31 mm; 325 grams; blasted chrome finish ..... \$890

#### DC96/12 Condenser Microphone

Cardioid mic which reproduces equal sound quality within an area coverage of 180°. SYMSI power supply. Directivity index 18-20 dB; FR 30-20,000 Hz ±2 dB; sens -42 dB/Pa (over 200 ohms at 1 V); output 8.0 mV/Pa (over 200 ohms at 1 V); dynamic range 120 dB; output imp balanced 200 ohms; 5/8" × 1"; 7.5 oz; satin-chrome finish ..... \$600

**DC-96.** Similar to DC-96/12 except with SYMSI 48; sens -44 dB/Pa (over 200 ohms at 1 V); output 6.3 mV/Pa (over 200 ohms at 1 V); dynamic range 122 dB; 5" × 1"; 7 oz ..... \$520

#### VM-40 Condenser Microphone

Omnidirectional mic with choice of 2 power supplies, voice/music switch, integral attenuator for close-mic voice technique, and 4-position ring switch that allows 10 dB attenuation and/or low frequency roll-off. The mic can be powered by the SYMSI 12 (providing +10 V up to +48 V) or the SYMSI 48 (a +48 power supply). With the SYMSI 12: FR 30-20,000 Hz; sens -42 dB/Pa (over 200 ohms at 1 V); output 8.0 mV/Pa (over 200 ohms at 1 V); dynamic range 118 dB; output imp balanced 200 ohms; 135mm × 19mm; 120 gr. With the SYMSI 48: FR 30-20,000 Hz; sens -48 dB/Pa (over 200 ohms at 1 V); output 4.0 mV/Pa (over 200 ohms at 1 V); dynamic range 124 dB; output imp balanced 200 ohms; 110mm × 19mm; 95 gr; satin-chrome finish. With the SYMSI 12 ..... \$380

**VM-40 with SYMSI 48** ..... \$300

**VM-41.** Similar to the VM-40 except with a cardioid pattern and a directivity index of 12-15 dB. With SYMSI 12 ..... \$405

**VM-41 with SYMSI 48** ..... \$325

#### FP-92CO Condenser Microphone

Cardioid condenser mic with internal 15 V power supply that allows equipment connection as in any dynamic mic. Power supply shuts off when Cannon XLR3-12 connector is detached. Directivity index 10-12 dB; FR 30-20,000 Hz ±3 dB; sens -38 dB/Pa (over 200 ohms at 1 V) and -18 dB/Pa (over 10 kilohms at 1 V); output 12.6 mV/Pa (over 200 ohms at 1 V) and 126 mV/Pa (over 10 kilohms at 1 V); dynamic range 116 dB; output impedance unbalanced 200 ohms and 10 kilohms; 6 3/4" × 3/4"; 4 oz; satin-chrome finish ..... \$380

**FP-92KO.** Similar to FP-92CO except omnidirectional pattern. Sens -42 dB/Pa (over 200 ohms at 1 V) and -22 dB/Pa (over 10 kilohms at 1 V); output 8.0 mV/Pa (over 200 ohms at 1 V) and 80.0 mV/Pa (over 10 kilohms at one V) ..... \$365

### REALISTIC

#### 33-984 Highball Cardioid Microphone

Unidirectional dynamic mic with on/off switch, ball-type screen pop/blast filter, rubber antishock ring. FR 80-13,000 Hz; switchable imp 600 ohms low, 10k ohms high (low imp balanced option); XLR-type connector; 16.5-ft cable with plug ..... \$50

#### 33-1090 PZM Microphone

Pressure-zone mic with element mounted on a metal plate. 20-18,000 Hz response; 600 ohms; 5 1/2 × 4 1/4"; 18-ft cord with 1/4" plug; power supply box near plug has on/standby/off switch; requires AA battery ..... \$40

#### 33-1070 Super Omni Dynamic Microphone

Omnidirectional dynamic mic with all-metal body, rubber shock ring, windscreen/blast filter. FR 40-17,000 Hz ±3 dB; imp 500 ohms. unbalanced with

balanced option; XLR-type connector; 16 4-ft cable with plug ..... \$40

#### 33-919 Dual Pattern Microphone

Stereo electret condenser mic with 2 internal capsules. Features switchable wide/normal pickup pattern. FR 30-15,000 Hz. Requires AA cell ..... \$40

#### 33-1071 Cardioid Microphone

Cardioid mic with pop filter. Features wire-mesh grille; heavy-duty die-cast body; on/off switch; balanced low-imp capacity; 12-ft cable with 1/4" phone plug; stand adapter. FR 50-15,000 Hz ..... \$30

#### 33-1066 Compact Stereo Microphone

Cardioid back-electret mic with one-point placement to simplify stereo recording. Designed for excellent transient response. FR 50-18,000 Hz; imp 600 ohms. Includes built-in desk stand; standard 3/4"-27 mounting threads; 8.2-ft cable with 2 1/4" (3.5mm) plugs; foam windscreen; on/off switch ..... \$30

#### 33-992B Supercardioid Microphone

Tight directional pattern mic designed for PA/recording use. Features windscreen; all-metal body; on/off switch; 6-ft cable with 1/4" plug; stand adapter. FR 80-14,000 Hz ..... \$25

#### 33-1091 Pocket Binaural Amplified Listener

Features 2 directional mics with dual-channel separate volume controls for each channel; high boost switch; 3/4 × 2 1/2 × 3/4"; requires stereo headphones with 1/8" plug or adapter and 2 AA batteries ..... \$20

#### 33-1056 Electret Tie-Clip Microphone

Omnidirectional mic comes with 10-ft cord (1/4" plug); 1/8" mini plug adaptor; long life mercury battery; metal case; clip and tie pin. FR 30-12,000 Hz; 600 ohms; 1/8" long ..... \$20

#### 33-985C Omnidirectional Microphone

High-ball omnidirectional mic with wire-mesh windscreen. Features pop filter; chromed body; on/off switch; 6-ft cable with 1/4" plug; stand adapter. FR 50-13,000 Hz ..... \$20

#### 33-1065 Microphone

Dual-head electret condenser mic adjusts up to 90° for optimum stereo separation. Features built-in table-top stand; 6 1/2-ft cord with 2 mini plugs; 2 foam windscreens. FR 50-15,000 Hz; Requires AA cell \$20

#### 33-1050 Electret Microphone

Lightweight electret mic with windscreen, adjustable stand, on/off switch, 9-ft cable with 1/4" plug. Supplied with battery. FR 20-13,000 Hz ..... \$18

#### 33-990 MC-1000

150-10,000 Hz response; imp 10,000 ohms; 5/4" long; 6-ft cable; 1/4" plug ..... \$16

#### 33-1060 Electret Condenser Omnidirectional

20-13,000 Hz response; 6 1/2-ft cord; comes with stand, windscreen, battery ..... \$13

#### 33-1040 Dynamic Omnidirectional

Features mini-plug for audio, submini for remote on/off; FR 100-11,000 Hz; low imp; includes 6 1/2-ft cord, slip-on desk stand ..... \$13

#### 33-1058 Electret Tie-Clip Microphone

Fastens to tie or lapel; 30-12,000 Hz response; 600 ohms; metal case; 1/2" long; includes clip, 6-ft cord with 1/4" mini-plug and long-life mercury battery ..... \$10

#### 33-1034 "Pencil" Dynamic

Features mini-plug for mike; submini plug for remote control jack on recorders; desk stand 6-ft cord; FR 150-10,000 Hz ..... \$7

#### 33-1054 Low-Cost Dynamic

Features mini-plug for mike; submini plug for remote control; 3-ft cord; slip-on stand ..... \$5

### RECOTON

#### MM-670 Unidirectional Dynamic Microphone

Unidirectional dynamic mic with on/off, hi/low imp switches, black satin finish, wind filter. FR 30-18,000 Hz; 20-ft cable with standard phone plug ..... \$70

#### MM-3000 Unidirectional Dynamic Microphone

Unidirectional dynamic mic with on/off switch, wind filter, aluminum finish. FR 30-18,000 Hz; 20-ft cable with standard phone plug ..... \$65

#### MM-660 Cardioid Microphone

Unidirectional electret condenser stereo mic for outdoor use; 1.5-V battery-powered; sens -68 dB at 1 kHz; FR 30-16,000 Hz; imp 600 ohms. Includes windscreen, 3-m cord; aluminum casing; 295 g. \$60

#### MM-620 Cardioid Microphone

Unidirectional cardioid electret mic designed for performing, broadcasting, PA, home recording. Sens -68 dB; FR 30-16,000 Hz; imp matches 200-600 ohms; operates on 1.5-V AA battery. Supplied with 18-ft shielded cable with standard phone plug, swivel mic adapter, vinyl case; satin gold finish ..... \$50

#### MM-770 Miniature Stereo Microphone

Ultraminiature stereo electret condenser mic with 2 pickup elements. Features matrix circuit to provide superior stereo separation; color-coded on/off switch; 2 color-coded 3.5-mm plugs; 2 standard phone-plug adapters; foam windscreen; vinyl storage case. FR 48-18,000 Hz; imp 600 ohms; sens -80 dB at 1 kHz; dc power source 1.35-V mercury cell; 76 mm L × 22 mm W × 22 mm D (including stand); <3 oz; 1-m cord. \$50

#### MM-610 Unidirectional Microphone

Sensitive slimline unidirectional cardioid electret mic with brushed satin gold aluminum finish, shielded cable, windscreen, swivel mic adapter, vinyl carrying case. FR 40-15,000 Hz; sens -66 dB; imp matches 200-600 ohms; dc power 1.5-V AA cell; 18-ft cable with standard phone plug ..... \$41

#### MM-330 Cardioid Microphone

Unidirectional dynamic cardioid mic designed for performers. Features hi/lo and on/off switches; ball-head design; triple-mesh construction; 18-ft shielded cable with standard phone plug; swivel mic adapter; vinyl case; silver finish ..... \$38

#### MM-680 Omnidirectional Microphone

Electret condenser omnidirectional mic with on/off switch, wind filter, black aluminum finish. FR 50-16,000 Hz; low imp 20-ft cable with standard phone plug ..... \$35

#### MM-600 Unidirectional Microphone

Unidirectional cardioid electret mic with on/off switch, swivel stand adapter, satin gold aluminum finish. FR 50-13,000 Hz; imp 200-600 ohms; power source 1.5-V AA cell; 9-ft cable with standard phone plug ..... \$32

#### MM-760 Ultraminiature Electret Microphone

Omnidirectional tie clip electret mic. Output level 65 dB, FR 30-16,000 Hz; powered by 1.5-V AA battery (in plug assembly); 15-ft shielded cable; standard phone plug; vinyl case; brush gold finish; 3/8" diameter × 3/8" L ..... \$32

#### MM400 Stereo Microphone Set

Matched pair of mics with universal plugs and adapters. Feature on/off switches, 500-ohm imp, 3-ft cords ..... \$29

#### MM-750 Miniature Microphone

Ultra-small lavalier mic. FR 50-12,000 Hz; imp 600 ohms; sens -72 dB; power source 1.5-V cell; 1 1/4" L × 3/8" diameter; 20-ft cable with 3.5-mm mini plug. \$26

#### DM150 Dynamic Microphone

Replacement mic designed for voice, music. Features on/off switch, desk stand, 3.5-mm phone plug, 2.5-

mm remote-control plug. Imp 500 ohms; 3-ft cord .....\$17

#### MM100 High-Impedance Microphone

Replacement for crystal or other high-imp mic. Features on/off switch; desk stand; phone plug; 5-ft cord .....\$16

#### DM100 Dynamic Microphone

Features desk stand, 5-ft cord, 3.5-mm phone plug, 2.5-mm remote-control plug. Imp 500 ohms ....\$9  
**DM120.** Same as DM100 except imp 50k ohms \$15  
**DM130.** Same as DM100 except imp 200 ohms \$9

#### DM133 Budget Cassette Microphone

Inexpensive mic with desk stand, 3-ft cord, 3.5-mm phone plug, 2.5-mm remote-control plug. Imp 200 ohms .....\$7

### REVOX

#### M3500 Dynamic Cardioid Microphone

Dynamic unidirectional hypercardioid moving-coil microphone. FR 40-18,000 Hz; imp 600 ohms. Comes with windscreen, clamp, table stand, case; Cannon XLR connector. Supplied with FR cover. All-metal construction with matte-black finish .....\$200

### SANSUI

#### EM-5 Electret Condenser Microphone

Unidirectional single-point electret condenser mic. FR 70-15,000 Hz; imp 1k ohms balanced; frontal sens -72 dB; power source 1.5-V R-1 cell .....\$77

#### DM-3 Dynamic Microphone

Unidirectional dynamic mic. Imp 500 ohms unbalanced; FR 100-10,000 Hz; frontal sens -77 dB; 3-m cord with 6.3-mm phone plug .....\$20

### SHURE

#### Unisphere® I Series Microphones

Dynamic cardioid mic for high-quality recording, reproduction. Has built-in pop filter; dual imp. FR 50-15,000 Hz; power level -57 dB low imp; 15-ft cable  
**565D.** .....\$130  
**565SD.** Same as 565D plus on/off switch in handle. ....\$133  
**565SD-CN.** Same as 565D plus on/off switch, 20-ft cable with 3-pin professional connector. ....\$139  
**565SD-LC.** Same as 565SD-CN less cable ... \$118

#### 516EQ E-Qualidyne® Microphone

Unidirectional cardioid dynamic equalizer mic for tape recording. Features equalization, response-shaping control; 4 switches on handle provide 16 different combinations of special effects to eliminate undesirable effects or enhance various instruments. FR 50-15,000 Hz; imp 150 ohms. Comes with foam windscreen; swivel adapter; cable; mini-plug adapter cable; carrying case .....\$124  
**516EQ-PR.** Pair of 516EQ mics .....\$220

#### Unidyne® III Series Microphones

Dynamic cardioid mic for high-quality music, voice recording, reproduction. Dual imp. FR 50-15,000 Hz; power level -58.5 dB in low imp. Supplied with 15-ft cable.  
**545D.** .....\$118  
**545SD.** Same as 545D plus on/off switch in handle. ....\$121  
**545SH.** Same as 545D but with on/off switch in permanently attached stand mount .....\$126  
**545SD-CN.** Same as 545D plus on/off switch, 20-ft cable with 3-pin professional connectors .....\$128  
**545L.** Same as 545D but low imp. Supplied with lavalier cord, clip, permanently attached 20-ft cable .....\$97

#### 578 Omnidyne® Omnidirectional Microphone

Omnidirectional hand-held mic for music, speech. Power level -60 dB; FR 50-15,000 Hz; dual imp; 15-ft cable; accessory swivel bracket; chrome finish .....\$110

#### 579SB "Vocal Sphere" Omnidirectional Microphone

Omnidirectional mic with snap-in stand attachment, on/off switch, pop/blast filter. Designed for speech, rock vocal, music use. Power level -57 dB; FR 50-14,000 Hz; low imp; 20-ft cable and connector; chrome finish .....\$96

#### Unisphere® A Cardioid Microphones

Hand-held cardioid mics with slip-in stand attachment, pop/blast filter, on/off switch. Designed for speech, rock vocal, music use. Power level -59 dB; FR 50-13,000 Hz; 15-ft cable with connectors, chrome finish.

**586SA-C.** High imp with 1/4" plug .....\$106  
**586SA-LC.** Less cable .....\$92  
**586SB-CN.** Low imp with 3-pin plug .....\$113  
**586SB-LC.** Less cable .....\$91

#### Unisphere® B Cardioid Microphones

High-imp cardioid mics. Power level -60.5 dB; FR 80-13,000 Hz. Handheld with slip-in stand attachment; use for speech, rock vocal, music; has pop/blast filter; on/off switch; comes with 15-ft cable and connector; chrome finish.

**588SA.** High imp .....\$77  
**588SB.** Low imp .....\$77  
**588SAC.** 588SA with 1/4" plug .....\$80  
**588SB-CN.** 588SB with 3-pin plug .....\$84

#### 515SAC Unidyne® B Microphone

Dynamic cardioid mic for good-quality sound systems, tape recordings. Has locking on/off switch. Power level -61 dB; FR 80-13,000 Hz; high imp. Comes with 15-ft cable with 1/4" phone plug, built-in shock mount .....\$57  
**560.** Similar to 515SAC .....\$61

#### 575S Omnidirectional Microphone

Dynamic mic designed for wall/panel mount, on desk or floor stand, or lavalier or handheld use. Features slide-to-talk on/off switch; high imp. FR 40-15,000 Hz; output -58 dB; black ARMO-DUR® finish with satin anodized cap, stainless-steel grille; 7 3/4 oz. Includes stand adapter, lavalier assembly; 7-ft single-conductor shielded cable .....\$37  
**575SB.** Similar to 575S but low imp .....\$37

### Professional Microphones

#### SM59-CN Dynamic Cardioid Microphone

Unidirectional mic with mechano-pneumatic shock-mount design, pop filter. Power level -61 dB; FR 50-15,000 Hz; imp 150 ohms; aluminum, zinc, stainless-steel construction; champagne enamel finish .....\$205  
**SM59-LC.** Same as SM59-CN but less cable ..\$184

#### SM63-CN Dynamic Omnidirectional Microphone

Miniature lightweight omnidirectional mic with hump-bucking coil, shock mount, breath/pop filter. Output power -56.5 dB; FR 50-20,000 Hz; imp 150 ohms; Veraflex® grille damage resistant to drops and impact, rust, moisture, corrosion; champagne finish aluminum case .....\$126  
**SM63-LC.** Same as SM63-CN except no cable \$105

#### SM11-CN Miniature Lavalier Microphone

Dynamic omnidirectional mic with lavalier, tie-bar, tie-tack mounting options. FR 50-15,000 Hz; power level -64 dB; low imp. Weighs 0.28 oz. Comes with 48" cable, mounting accessories .....\$95  
**SM17-CN.** Similar to SM11-CN but includes musical instrument mounting accessories, 10-ft. cable \$100

#### SM57-CN Unidirectional Microphone

Dynamic mic with cardioid polar pattern, suitable for instrument pickup. FR 40-15,000 Hz; output -56.5 dB; dual low imp. Comes with 20-ft cable with 3-pin professional connectors .....\$145

#### SM58-CN Unidirectional Microphone

Dynamic mic with cardioid polar pattern, suitable for vocal pickup. FR 50-15,000 Hz; output power level -56 dB; dual low imp; pop filter. Comes with 20-ft cable with 3-pin professional connectors .....\$181

### A15 Series In-Line Adapters

Modifies mic response. Has 3-pin male output, female input connectors

**A15AS.** Switchable mic attenuator .....\$35  
**A15PRS.** Switchable phase reverser .....\$31  
**A15HP.** High-pass filter .....\$31  
**A15LP.** Low-pass filter .....\$31  
**A15PA.** Presence adapter .....\$31  
**A15RS.** Response shaper .....\$31  
**A15LA.** Line input adapter .....\$31  
**A15BT.** Bridging transformer .....\$31  
**A15TG.** Tone generator .....\$41  
**A27M.** Stereo mic mount .....\$35  
**A53M.** Shock mount for 578, 579, SM59, SM63, SM81 mics .....\$30  
**A55M.** Shock mount for 515, 516, 545, 565, 585, 588, SM77, SM78 mics .....\$30

### A95 Series Line-Matching Transformers.

Connect low-imp mics to high-imp inputs or vice-versa. Designed for use with most mics, input jacks.

**A95U.** Low-Z, 3-pin; high-Z, 1/4" plug, jack .....\$24  
**A95UF.** Low-Z, 3-pin; high-Z, 1/4" plug, jack ....\$29

### SP19 "Sound Bridge" Unidirectional Microphones

Lightweight mics with cardioid pickup pattern. Features on/off switch; integral shock mount; 15-ft cable



and plug; swivel adapter; silver Armo-Dur® case with steel-mesh grille. Power level -62.5 dB; FR 80-13,000 Hz.

**SP19H-C.** High imp with 1/4" phone plug .....\$48  
**SP19L-CN.** Low imp with pro 3-pin connector ..\$48

### SONY

#### ECM-23F Cardioid Microphone

Unidirectional back electret mic. Features FET imp translator; battery power, low-cut switch; pad switch; windscreen; carrying case; cable; mic holder; XLR-3 microphone connector. FR 20-20,000 Hz; imp 250 ohms; S/N ratio 44 dB; SPL 126 dB maximum; dynamic range 96 dB; output for both balanced, unbalanced circuits; 20-ft cable; 7/8" L x 1 1/8" diameter .....\$115

#### ECM-939LT Microphone

Stereo-pickup mic designed to mate with Sony TCS-310, M-1000, M-1000B stereo cassette, microcassette recorders. Comes with mini plug; PC-61 Unimatch plug adapter; mic stand; windscreen; carrying case. Offers easy adaptability to remote-control operation when used with Sony MRU-60 remote-control unit. FR 60-20,000 Hz; dynamic range > 96 dB; coverage angle 0°-150°; 4 1/4" L x 2 3/4" W. \$115

#### ECM-929T "Sound Crew" Electret Microphone

Bidirectional back electret cardioid-capsule microphone with stereo characteristics. FR 50-15,000 Hz; output level -57.6 dBm. Comes with stand; windscreen; carrying case; left, right Unimatch plugs (threaded mini plugs with 1/4" phone-plug sleeves). Compatible with all consumer tape recorders. 5" L x 5/8" diameter .....\$85

**ECM-150 Omnidirectional Microphone**

Miniature omnidirectional electret condenser microphone. FR 40-13,000 Hz; output impedance 250 ohms; S/N ratio 60 dB; maximum SPL 117 dB; dynamic range 83 dB; plug adapter for miniphone connections; on/off switch; includes windscreen, case with mic stand, tie clip, battery; fixed mic connector; 6-ft 5-in cable; 1/2" diameter × 1 1/2" L ..... \$65

**F-V7ET Dynamic Cardioid Microphone**

Dynamic cardioid vocal mic with active circuitry that produces vibrato, echo effects. Comes with Unimatch plug that allows compatibility with all consumer tape recorders and mic stand. Features on/off switch, normal/echo switch, speed effect switch. FR 100-12,000 Hz; high imp; 8 3/4" L × 1 1/4" diameter; 6.7 oz ..... \$60

**ECM-220T "The Instrument Mic"**

Back electret condenser cardioid mic for micing instruments, with unimatch plug to fit all home recorders. FR 50-14,000 Hz; imp 200 ohms ..... \$50

**Fv-50T Cardioid Microphone**

"True reproduction" cardioid mic; FR 90-13,000 Hz; 2 built-in windscreens; convenient on/off switch; low imp; mic holder ..... \$45

**ECM-16T "The Tie Tac Mic"**

Omnidirectional electret condenser mic for lavalier applications, with unimatch plug to fit all home tape recorders. FR 50-13,000 Hz; imp 250 ohms ..... \$40

**ECM-101 Condenser Microphone**

Stereo back electret condenser T-shaped mic with mini-plug; FR 100-15,000 Hz ..... \$39

**F-99T "The Stereo Mic"**

Stereo dynamic mic for recording purposes, with left and right unimatch plug to fit all home tape recorders. FR 80-12,000 Hz; imp 200 ohms ..... \$40

**PBR-330 Parabolic Sound Reflector**

Concentrates sound for greater reach when used with Sony ECM-170A, ECM-150 omnidirectional microphones. Features hand-held or stand mount ..... \$70

**SUPERSCOPE by MARANTZ****EC-9P Cardioid Microphone**

Pressure gradient electret condenser cardioid mic. FR 30-17,000 Hz; output -50 dB; S/N > 59 dB; maximum SPL 126 dB; output imp 250 ohms balanced; 7.7" L × 1.18" dia; 13.8 oz mic and cable; 10-ft 2-conductor shielded cable with female Cannon connector, pigtailed at other end ..... \$110

**EC-15P Tie-Clasp Microphone**

Omnidirectional electret condenser tie-clasp mic. FR 70-16,000 Hz; output -52 dB; S/N > 60 dB; max SPL 123 dB; output imp 250 ohms balanced; 1.5" L × 0.37" dia; 1.2 oz mic only; 15-ft shielded cable with Cannon connector ..... \$100

**EC-33S Microphone**

Pressure gradient electret condenser 3-in-1 mic can be separated into 2 unidirectional mics, put together to make single bidirectional stereo mic. FR 50-15,000 Hz; output -46 dB; max SPL 118 dB; S/N > 55 dB; output imp 1k ohm unbalanced; 7.4" L × 1" dia each mic; 6.24 oz mic only; 10-ft shielded cable with 2 mini, 1 submini plugs ..... \$66

**EC-7 Cardioid Microphone**

Pressure gradient electret condenser mic. FR 40-16,000 Hz; output -52 dB; max SPL 123 dB; S/N > 55 dB; output imp 250 ohms balanced; 7.44" L × 1.5" dia; 10.4 oz mic and cable; 10-ft shielded cord with phone plug ..... \$64

**EC-12B Omnidirectional Microphone**

Electret condenser mic. FR 100-15,000 Hz; output -52 dB; max SPL 120 dB; S/N > 50 dB; imp 250 ohms balanced; 10.12" L × 0.55" dia; 2.3 oz mic

only; 10-ft 2-conductor shielded cable with mini plug ..... \$54

**EC-5 Cardioid Microphone**

Pressure gradient electret condenser mic. FR 40-15,000 Hz; output -52 dB; S/N > 51 dB; max SPL 119 dB; output imp 2.2k ohms unbalanced; 6.97" L × 0.87" dia; 4.1 oz mic and cable; 10-ft shielded cable with mini/mini phone plug ..... \$42

**EC-3 Cardioid Microphone**

Pressure gradient electret condenser mic. FR 50-15,000 Hz; output -52 dB; S/N > 50 dB; max SPL 118 dB; imp 1.5k ohms unbalanced; 7.05" L × 0.89" dia; 8.8 oz mic and cable; 10-ft shielded cable with mini/mini phone plug ..... \$28

**EC-1 Omnidirectional Microphone**

Pressure-type electret condenser mic. FR 60-13,000 Hz; output -52 dB; S/N > 50 dB; maximum SPL 116 dB; imp 2k ohms unbalanced; 4.02" L × 0.69" dia; 3.5 oz mic and cable; 10-ft shielded cable with mini/mini plug ..... \$18

**TASCAM by TEAC****PE-250 Moving-Coil Microphone**

Professional MC mic designed for PA/recording applications. Features cardioid MC design with 4-position low-frequency rolloff selector; 250-ohm balanced output with XLR connector; built-in threaded stand mount ..... \$250

**PE-150 Electret Condenser Microphone**

Professional PA/recording cardioid electret condenser mic operates on 1.5-V AA cell, accepts 48-V phantom power with no switching or battery removal. Features -10-dB pad; off/flat/low-frequency rolloff switch; 200-ohm balanced output with XLR connector; stand adapter; 20-ft cable; 1.5-V AA cell. \$150

**PE-120 Electret Condenser Microphone**

Professional PA/recording cardioid/omnidirectional condenser mic with 200-ohm balanced output and XLR connector ..... \$100

**PE-80.** Identical to PE-120 except no accessory omnidirectional capsule ..... \$90

**PE-50.** Similar to PE-120 except cardioid capsule is non-interchangeable ..... \$50

**TEAC****ME-120 Microphone**

Cardioid or omnidirectional electret condenser mic with 2-position response switch (40-18,000 Hz cardioid, 30-16,000 Hz omni). Supplied with stand adapter, 2 windscreens, 15-ft cable ..... \$120

**ME-80.** Same as ME-120 except cardioid only, 50-16,000 Hz range ..... \$90

**ME-50.** Similar to ME-80 except unbalanced/balanced 10k/200-ohm imp; range 50-14,000 Hz. Supplied with foam windscreen and 1/4" plug ... \$50

**TECHNICS****RP-3545E Cardioid Electret Microphone**

Wide-response cardioid electret condenser mic; 40-14,000 Hz FR; excellent "detail" mic for complex instrument ensembles; stand adapter included ... \$70

**RP-3215E Stereo Cardioid Microphone**

Stereo cardioid electret-condenser mic; two mic elements physically aligned for easy stereo perspective; 50-10,000 Hz FR ..... \$60

**RP-3500E Cardioid Microphone**

Cardioid electret-condenser mic; 50-12,000 Hz FR; high signal-handling ability for excellent dynamic range for recording music; tripod desk stand included ..... \$60

**RP-V370 Unidirectional Microphone**

Unidirectional dynamic mic; 40-12,000 Hz FR; wide range makes this excellent for recording anything

from vocals to musical instruments, mic holder (3/4"); adaptor included ..... \$40

**RP-V340 Cardioid Microphone**

Dynamic cardioid mic with 100-10,000 Hz FR; built-in wind screen reduces wind, noise and overload from



close-up voice sounds; excellent for voice recording; mic holder (3/4") adapter included ..... \$26

**UHER by WALTER ODEMER****M 646 Cardioid Microphone**

Electret condenser cardioid mic. FR 30-20,000 Hz; sens 3.5 mV/pA; imp 280 ohms. Supplied with table stand and windscreen; powered by internal primary battery or from recorder's mic cable with 8-pole plug ..... \$203

**M 634 Stereo Microphones**

Stereo-pair dynamic shotgun cardioid mics with stereo bar. All-metal design. FR 50-16,000 Hz; sens 2.3 mV/pA; low resistive imp. Includes collapsible table stand and storage case ..... \$194

**M 534.** Similar to M 634, but is single mic for desk use ..... \$98

**VIDAIRE ELECTRONICS****620 Unidirectional Ultradynamic Microphone**

Professional mic features hi/lo dual imp; on/off switch; unidirectional pattern to eliminate unwanted noise; 2-position cable plug to change imp; mic holder; satin gold finish. Imp 600/50k ohms; FR 30-18,000 Hz; sens at 600/50k ohms -78/-60 dB; 20-ft cable with 1/4" phone plug ..... \$53

**942C Unidirectional Ball Microphone**

Dynamic ball mic with dual imp; on/off switch; unidirectional pickup pattern to eliminate unwanted noise; mic holder. Imp 600/50k ohms; FR 80-15,000 Hz; sens at 600/50k ohms -72/-52 dB; 20-ft shielded cable with 1/4" phone plug ..... \$48

**619 Unidirectional Microphone**

Dynamic contoured mic with dual imp; on/off switch; unidirectional pickup pattern to eliminate unwanted noise; mic holder; satin gold finish. Imp 600/50k ohms. FR 80-15,000 Hz; sens at 600/50k ohms -72/-52 dB; 20-ft cable with 1/4" phone plug \$47

**729 Tie-Clasp Electret Microphone**

Highly sensitive omnidirectional tie-clasp electret condenser mic. Comes with vinyl carrying case. Imp 600 ohms; FR 50-16,000 Hz; sens -65 dB at 1 kHz; current drain 160 microamperes; 1.3-V mercury cell included; 1" diameter × 1 1/2" L; 13-ft cable with 1/4" phone plug ..... \$40

**618 Omnidirectional Dynamic Microphones**

Matched-pair mics designed for all types of home and portable stereo tape recorders. Imp 500 ohms; FR 80-10,000 Hz; 5-ft cord with 3.5-mm mini-plug; includes mic stands; optional adapter converts to standard 1/4" plug ..... \$28/pr

# 12

# Signal Processors

## ACE AUDIO

### 6000-6 Transient-Perfect Electronic Crossover

Designed for optimum transient performance at the crossover frequency (any frequency available); passes perfect square waves. With 1 frequency module (interchangeable), 6 dB/octave slope, dual level controls, ultra-low distortion and noise; .002%  $\pm$  -95 dB. 2 1/4" H x 6 W x 4 3/4" D ..... \$175

### 6500-DSB Electronic Crossover

Designed to operate with any pair of stereo subwoofers to provide extra bass below 100 Hz; twin level controls; Bessel filters provide optimum slope and improved group delay; any frequency available from 40-200 Hz; slope 12 dB/octave, distortion typically 0.002% at 2 V output; includes 1 plug-in frequency module ..... \$142

### 5000-6 Subwoofer Electronic Crossover

For mono subwoofers; crossover frequency 100 Hz (other frequency optional; extra charge \$16). Provides 18 dB/octave slope on the subwoofer; 6



dB/octave on satellites for smoothest overall response. More than 1 subwoofer can be connected; built-in bridging amp; 1% precision components ..... \$161

### 5000 Subwoofer Electronic Crossover

Designed to operate with subwoofers or mini speaker systems. Features level control, defeat switch. Crossover 18 dB/octave at 100 Hz; noise -90 dB; distortion 0.025% at 2 V out, 0.01% typically; 2 1/4" H x 6" W x 4 3/4" D ..... \$161  
Kit ..... \$106

### 6000 Electronic Crossover

Designed for bi- or tri- (with 2 6000s) amplifying. Features plug-in frequency module; built-in power supply; 15 crossover frequencies, 200-10,000 Hz at 12-dB/octave; 2 tweeter level controls. THD/IM distortion .002%; input imp 220k ohms; output imp 100 ohms; hum and noise -90 dB; 6" W x 4 3/4" D x 2 1/4" H ..... \$142

## ADC

### Sound Shaper Thirty Equalizer

Ten-band stereo graphic equalizer with LED in each slide control knob for quick visualization of response curves and built-in spectrum analyzer/display. Features tape dub, monitor, line/record, bypass/equalize, infrasonic-filter, mic/line switches; display

controls. Center frequencies 31, 62, 125, 250, 500, 1k, 2k, 4k, 8k, 16k Hz; boost/cut range  $\pm$  12 dB; FR 5-100,000 Hz + 0.5/-1.0 dB; dynamic range 10 V rms into 10k ohms; gain 0 dB  $\pm$  1 dB; harmonic/IM distortion 0.015%/0.018% at 1 V output; hum and noise 95 dB below 1 V output; input/output imp 75k/100 ohms; load imp 10k ohms; inputs and outputs: 2 main, 4 tape monitor; infrasonic filter slope 18 dB/octave; power consumption 23 W; 16 1/8" W x 8 3/8" D x 4 1/2" H; 11.8 lb. Accessories included: 2 pair audio cables; electret condenser mic calibrated to built-in analyzer; 1.5-V (UM-5) cell for mic ... \$400

### Sound Shaper Twenty Equalizer

Twelve-band stereo graphic equalizer with LED in each slide control and built-in spectrum analyzer/display. Features LED level displays; tape-monitor, dub, line/record, bypass/equalize, mic/line, infrasonic filter switches; meter controls. Center frequencies 32, 56, 100, 180, 320, 560, 1k, 1.8k, 3.2k, 5.6k, 10k, 18k Hz; boost/cut range  $\pm$  12 dB; dynamic range 10 V rms at 10k ohms; FR 5-100,000 Hz + 0.5/-1.0 dB; gain 0 dB  $\pm$  1 dB; harmonic and IM distortion 0.015% at 1 V output; hum and noise 98 dB below 1 V output; input/output imp 75k/100 ohms at 1 kHz; load imp 10k ohms; inputs/outputs: 2 main, 4 tape monitor; infrasonic filter slope 18 dB/octave; 16 1/8" W x 8 3/8" D x 4 1/2" H; 11.8 lb. Comes with 2 pair cables ..... \$330

### Sound Shaper Ten

Similar to Sound Shaper Twenty except 10-band equalization, no tape dub or monitor switches; no output-level control. Center frequencies 31, 62, 125, 250, 500, 1k, 2k, 4k, 8k, 16k Hz; harmonic/IM distortion 0.018%; power consumption 17 W; 16 1/8" W x 6 1/2" D x 4 1/2" H; 8 lb ..... \$250

### Sound Shaper Five Equalizer

Five-band stereo graphic equalizer with LED in each slide control knob. Center frequencies 60, 240, 1k, 3.5k, 10k Hz; boost/cut range; dynamic range 5 V rms into 10k ohms; FR 5-100,000 Hz + 0.5/-1.0 dB, gain 0 dB  $\pm$  1 dB; harmonic/IM distortion 0.018%/0.035% at 1 V output; hum and noise 95 dB below 1 V output; input/output imp 75k/100 ohms; load imp 100 ohms; inputs/outputs: 2 main, 2 tape monitor; power consumption 17 W; 16 1/8" W x 6 1/2" D x 4 1/2" H; 8 lb. Accessories supplied: 2 audio cables ..... \$130

### SS-315 Sound Shaper Graphic Equalizer

Graphic equalizer with 2-way tape dubbing and LED displays. Features a built-in real-time spectrum analyzer; pink-noise generator; a infrasonic filter; external NR and sound processor loops; two tape monitors; fluorescent display featuring 10 bands, average band, in/out display, L and R "peak" hold, level and range; 20 frequency controls with  $\pm$  15 dB range; calibrated electret condenser mic ..... \$400

### SS-215 Graphic Equalizer

12-band graphic equalizer with 24 frequency controls each with a  $\pm$  15 dB range. Features LED output level meters; two tape monitors; infrasonic filter; external NR and sound processor loops ..... \$330

### SS-115 Graphic Equalizer

10-band graphic equalizer. Features LED output level meters; two tape monitors; 20 frequency controls each with a range of  $\pm$  50 dB ..... \$250

## ADS

### C2000 Biamplifier System Control

Electronic crossover/equalizer designed to provide correct crossover characteristics for ADS L2030, L1530, L1230 Professional Monitor Series speaker systems. Features system level and bass level controls; crossover selector switch; dynamic bass equalizer with signal-controlled boost at 22 or 37 Hz with sharp-cutoff infrasonic filter; rear panel crossover program switches that provide 4 frequencies and 4 Qs for use with nonADS speaker systems; satin black finish. THD < 0.01%; S/N > 90 dB A-wtd; input sens 530 mV; output imp 600 ohms; high-pass/low-pass gain 0/ +3 dB; crossover slope -12 dB/octave; 17" W x 10" D x 2" H ..... \$549

## AIWA

### GE-80 Graphic Equalizer

Seven-band stereo graphic equalizer with electronic illuminated cursors, defeat and line/tape switches. Center frequencies 40, 125, 330, 1k, 2.5k, 6.3k, 15k Hz; boost/cut range  $\pm$  10 dB; max output 5 V; harmonic distortion 0.0025% at 1 V, 1 kHz . \$120

## ALLISON

### The Electronic Subwoofer

Stereo bottom-octave equalizer/bandpass filter for use in tape-monitor or external-processor loop of preamp, amplifier, receiver. Has FILTER ONLY switch. Roll-off 24 dB/octave below 20 Hz, 18 dB/octave beyond 20 kHz; turnover frequencies +3 dB at 41, 35.5, 48 Hz (extends Allison speakers flat to 20 Hz); S/N 100 dB min A-wtd; 14 1/4" W x 4 3/4" D x 2" H \$290

## AUDIO CONTROL

### C-101 Series Two Equalizer/LED Spectrum Analyzer

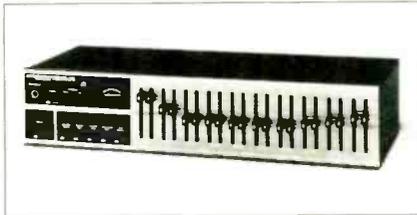
Stereo graphic equalizer features 101-LED spectrum analyzer display that operates on various levels; shows controllable peak-reading modes (fast/slow); horizontal LEDs indicate SPL with external mic of VU meter readings; switchable calibration levels from 2/dB/LED (analyzes pink noise and mic) to 4 dB/LED (displays wider dynamic range). Center frequencies set 32, 60, 120, 480, 960, 1,920, 3,840, 7,680, and 15,500 Hz; boost/cut range  $\pm$  15 dB; -1 dB infrasonic rolloff at 25 Hz, -3 dB rolloff at 20 Hz, -21 dB rolloff at 10 Hz; variable input level sens with calibration; automatic mic/line input switching; pink noise generator; stereo paired equalizer sliders; EQ tape button; 18 dB/octave infrasonic filter; phase correlation rumble reducer circuit. FR 3-100,000 Hz  $\pm$  0.75 dB; distortion .009%; hum and noise -116 dB; 10,000 Hz bandwidth; input/output imp 100k/150 ohms; 19" W x 6.5" H x 3.5" D.. \$429

### Ten Plus Series Two Equalizer

Stereo 10-band equalizer with LED indicators in slide

## Signal Processors 12

controls. Features video sound input; 18 dB/octave infrasonic filter; tape EQ with flashing LED warning indicator; calibrated mic with response curve; sound



pressure meter with 0 dB LED. FR 3-100,000 Hz  $\pm 1$  dB; THD 0.07%; S/N 99 dB. . . . . \$329

### Richter Scale™

Unit combines five-band half-octave bass equalizer, warble tone analyzer, electronic crossover, measurement mic; designed to enhance bass response. Features center frequency slide controls at 31.5, 45, 63, 90 and 125 Hz,  $\pm 12$  dB; stereo warble tone source adjustable to each center band via rotary switch; -20 to +3 dB lighted meter registering mic input; 18 dB/octave infrasonic filter, source/tape monitoring; equalize program; low-frequency (12 dB/octave at 200 Hz) summing circuit for rumble reduction; ultra-low-boost (+15 dB at 36 Hz) switch; 100/1,000 Hz (12 dB/octave) electronic crossover circuit for subwoofer and biampification modes. FR 3-100,000 Hz  $\pm 1$  dB; THD .008%; input imp 100,000 ohms; output imp 150 ohms, S/N 116 dB, ebony face-plate with oak end panels. . . . . \$259

### Octave Plus Equalizer

Unit combines 10-band octave graphic equalizer, warble tone generator/analyzer, measurement mic. Features center frequencies 31.5, 63, 125, 250, 500, 1k, 2k, 4k, 8k, 17k Hz  $\pm 12$  dB boost or cut; stereo warble tone source adjustable to each band center via rotary switch. 2-position range buttons; -20 to +3 dB lighted meter registering mic input; 18 dB/octave infrasonic filter, source/tape monitoring. FR 3-100,000 Hz  $\pm 1$  dB; THD .008%; input imp 100k ohms; output imp 150 ohms; S/N 116 dB, charcoal faceplate. . . . . \$229

### Ten Series Two Equalizer

Stereo graphic equalizer with video/sound input, 18 dB/octave infrasonic filter. Features LEDs in slide controls; flashing LED to indicate when in tape EQ mode. Center frequencies 31.5, 63, 125, 250, 500, 1k, 2k, 4k, 8k, 16k Hz; boost/cut range  $\pm 12$  dB; FR 3-100,000 Hz  $\pm 1$  dB; THD .005%; S/N 120 dB. . . . . \$229

## AUDIO RESEARCH

### EC-21 Electronic Crossover

Vacuum-tube low-frequency, passive high-frequency electronic crossover; features Individual low-high-ch level controls; 9-dB max gain automatic warmup muting; fixed frequency capacitor kits available. Input imp 100k ohms; THD 0.003%; outputs match Audio Research power amplifiers; 19" W x 6" D x 5 1/2" D \$695

## AUDIOSOURCE

### EQ-1 Graphic Equalizer/Analyzer

Rack-mount, professional-type stereo graphic equalizer with built-in real-time analyzer, pink-noise generator, omnidirectional electret condenser mic. Features LED display consisting of 80 red, 10 green, 2 red LEDs that constantly give accurate music readings, infrasonic filter. Center frequencies 31.5, 63, 125, 250, 500, 1k, 2k, 4k, 8k, 16k Hz; boost/cut range  $\pm 12$  dB; FR 3-100,000 Hz  $\pm 0.75$  dB; distortion 0.2%. 20-50,000 Hz; hum and noise -90 dB at 1 V; max input/output 5 V; input/output imp 100k/68 ohms; Infrasonic filter slope -18 dB/octave; analyzer display range -8 to +16 dB; pink-noise output

# The leader in equalizers still stacks up best with improved specs, more features and a new look.

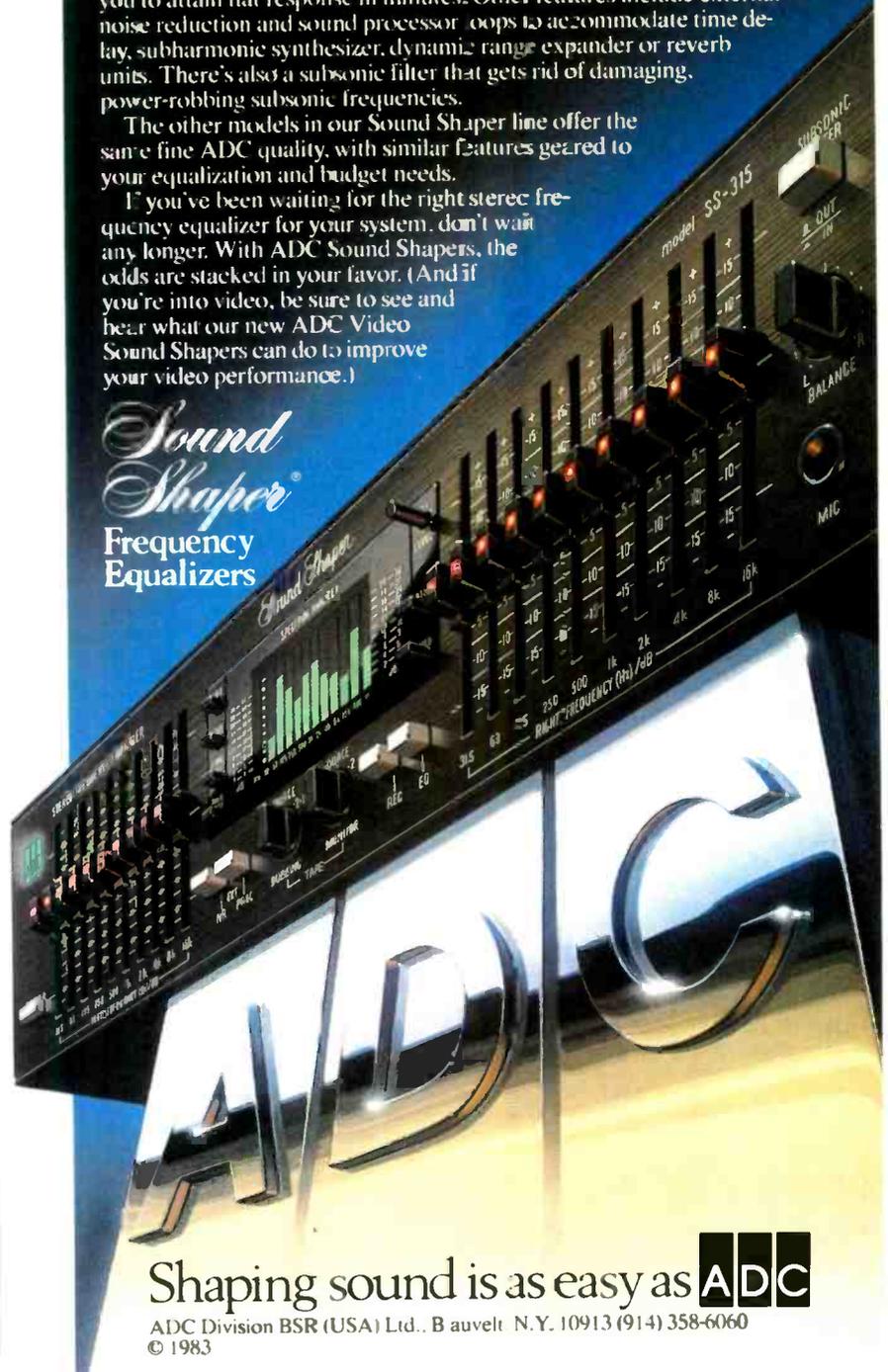
ADC's new line of Sound Shapers® prove that the best just got better. Again. Our stereo frequency equalizers incorporate the superb electronics, reliability, and high performance technology that have made ADC famous. Plus we've improved them with new refinements that offer you more control and a new design that makes them look as good as they function.

Our top-of-the-line SS-315 offers a unity gain  $0^{\circ} \pm 1$  dB and the best signal-to-noise ratio in the industry. For the utmost in versatility, the range of each frequency control is an extra wide  $\pm 15$  dB, far more than the 12 dB of lesser equalizers. Tape monitoring and two-way dubbing capabilities for two decks are available. LED indicators for each control let you see the selected frequency curve at a glance. The SS-315 includes a built-in real-time spectrum analyzer, pink noise generator and calibrated electret microphone enabling you to attain flat response in minutes. Other features include external noise reduction and sound processor loops to accommodate time delay, subharmonic synthesizer, dynamic range expander or reverb units. There's also a subsonic filter that gets rid of damaging, power-robbing subsonic frequencies.

The other models in our Sound Shaper line offer the same fine ADC quality, with similar features geared to your equalization and budget needs.

If you've been waiting for the right stereo frequency equalizer for your system, don't wait any longer. With ADC Sound Shapers, the odds are stacked in your favor. (And if you're into video, be sure to see and hear what our new ADC Video Sound Shapers can do to improve your video performance.)

*Sound Shaper*  
Frequency Equalizers



Shaping sound is as easy as **ADC**

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level/imp 100 mV/6k ohms; mic sens -66 dB at 1 kHz; mic imp 600 ohms; mic FR 30-16,000 Hz; 19"W x 8.36"D x 5.22"H; 8.4 lb ..... \$400

#### EQ-Four Graphic Equalizer

10-band equalization; attenuation control for accurate output level matching; FR 5-100,000 Hz ( $\pm 3$  dB); distortion 0.01%, THD 20-20,000 Hz; S/N 85 dB; control center points 32, 64, 125, 250, 500, 1,000, 2,000, 4,000, 8,000, 16,000 Hz; control range  $\pm 12$  dB; 17 1/16"W x 3 1/4"H x 9 1/8"D; 12 dB; 6 lb ..... \$180

#### EQ-TWO Graphic Equalizer

Five-band stereo compact graphic equalizer with center frequencies at 60, 250, 1k, 4k, and 10k Hz. 12 dB boost or cut for each ch. Features tape-monitor switch and jacks; unity gain control. Brushed black finish ..... \$100

### CARVER

#### C-1 Sonic Hologram Generator

Patented outboard unit employs Sonic Holography, attaching to any conventional hi-fi system to restore lifelike space and dimension to music. Sonic Hologram Generator precisely locates instruments and vocals in 3-dimensional space by using otherwise inaudible phase and time information to recreate the original vector sound field. Requires no special source material or additional speakers. Specifications and performance are identical to Sonic Holography section of C-4000 preamplifier. 19"W x 1 1/4"H x 4 3/4"D ..... \$229

#### TX1-11 Asymmetrical Charge-Coupled Decoder

Asymmetrical charge-coupled FM decoder designed to be added to any component system for use in the stereo mode of any FM tuner or receiver. Features the asymmetrical charge coupled FM decoder circuitry to improve existing tuner or receiver stereo quieting by 20 dB, (10 times quieter); will improve multipath rejection by 10 dB; FR 5-60,000 Hz -3 dB; THD 20-20,000 Hz 0.05%; intermodulation distortion SMPTE 0.05%, CCIF 0.05%; sep, better than 30 dB; stereo quieting 50 dB; 17 1/4"W x 1 1/4"H x 5"D ..... \$250

### CERWIN-VEGA

#### GE-3 Graphic Equalizer

Stereo 13-band graphic equalizer combining octave and one-half-octave filter bands to provide precision equalization of one-half-octave filter bands below 250 Hz. Bands are set on octave centers above 250 Hz. Balanced inputs have standard XLR jacks and unbalanced inputs have 1/4" phone jacks. Features dual-voltage power supply; monolithic amps; active filter network; aviation-grade circuit boards. Center frequencies 31.5, 45, 63, 90, 125, 180, 250, 500, 1k, 2k, 4k, 8k, 16k Hz; boost/cut 12 dB; frequency accuracy within 2%; FR 20-20,000 Hz  $\pm 0.15$  dB; THD < 0.005% at rated output with all band controls flat; S/N -98 dB unwt'd, -100 dB wtd; gain control +6 dB (ref to unbalanced output). Rack mountable. 19"W x 10.25"D x 3.5"H; 13 lbs ..... \$625

#### CX-2 Electronic Crossover

Passive electronic crossover designed for home subwoofer systems. Requires no external power supply. Available crossover frequencies 100, 150, 250, Hz fixed; 12 dB/octave slope; distortion unmeasurable at or below 2.5 V out; insertion loss 1 dB max; input imp 3.3 kilohms; recommended output imp 5 kilohms; crosstalk -70 dB at 20 kHz; max input 11 V; 7"W x 2 3/4"D x 1 1/4"H ..... \$110

Audio terms are defined  
in the glossary on page 19.

For an explanation of abbreviations,  
turn to the list on page 22.

#### DB-10 Bass Turbocharger

Incorporates 18 dB/octave infrasonic filter to eliminate infrasonic noise below 20 Hz. FR  $\pm 0.25$  dB; rated output 2 V rms; max output 8 V rms; HD or IM distortion 0.025% ..... \$50

### CROWN

#### EQ-2 Synergistic Equalizer

Stereo 11-band 1/2-octave equalizer with center frequencies at 20, 40, 80, 160, 320, 640, 1250, 2500, 5000, 10,000, 20,000 Hz.  $\pm 15$  dB boost/cut; each ch features octave frequency adjust controls;  $\pm 20$  dB tone controls with bass hinge points adjustable 180-1,800 Hz, treble hinge points adjustable 1-10 kHz; equalizer, tone cancel master controls; overload indicators. Rear panel has unbalanced inputs, balanced inputs with switchable unity/+10 dB gain selection, screwdriver-adjusted attenuation controls, normal/inverted outputs. FR 10-100,000 Hz  $\pm 0.3$  dB, 20-20,000 Hz  $\pm 0.1$  dB, controls flat; hum and noise 90 dB below rated output, 20-20,000 Hz bandpass; IM distortion 0.01% at rated output; rated output 2.5 V rms; input imp 25k ohms unbalanced, 20k ohms balanced (transformerless); output imp 300 ohms (normal), 600 ohms (balanced); satinized aluminum front panel with grey Lexan inlay; 7 1/2"H x 19"W x 14 1/2"D x 7 1/2"H ..... \$299

#### VFX-2A Crossover

Solid-state filters used for crossover or bandpass functions; 2-ch, 2 filters/ch (high pass, low pass at 18 dB each) 20-20,000 Hz  $\pm 0.1$  dB; filter rolloff 18 dB/octave. Stereo: 0-15.5 dB variable gain bridging input/ch along with unbalanced unity gain input; output imp 300 ohms (inverted and noninverted), 6 V max output into 600 ohms; IM distortion 0.01% at rated output with 0 dB gain. Mono: functions as combined bandpass/2-way crossover, or as 3-way crossover (tri-amping); mono jack combines 2 input signals to form mono output; mono bass output combines low pass section of 2 filters to feed output jack. Satinized aluminum front panel with plexiglass cover; 19"W x 5 1/4"D x 3 1/2"H ..... \$429

### DAHLQUIST

#### DQ-LP 1 Stereo Variable Low-Pass Filter

For bi-amplified bass speaker/subwoofer applications. Electronic crossover with low-distortion passive high-pass filter, active low-pass section. Features each ch independently variable 40-400 Hz; 18 dB/octave low pass cutoff slope; separate bass EQ control adjustable 0-5 dB boost at 20 Hz; choice or combination of stereo and L+R center ch bass outputs; separate bass controls; up to 15 dB gain; black satin brushed panel; walnut endblocks; 12 1/4"W x 5 1/4"H x 2 1/4"D ..... \$350

### DB SYSTEMS

#### DB-3-24 In-Phase Crossover

Has 24-dB/octave characteristic to minimize irregularity in radiation pattern through crossover region. Features in-phase high- and low-pass outputs that are 6 dB down at crossover frequency. Requires DB-2A power supply or DPB-1 cable ..... \$445

DB-3-24-100. Similar to DB-3-24 except set at 100 Hz with additional common bass ..... \$370

#### DB-3 Active Crossover

Designed for bi- and tri-amplified speaker systems. Features asymptotic slope 12 dB/octave Gaussian or 18 dB/octave Butterworth; fixed crossover frequencies (specify on order); available 2- or 3-way (for common bass ch, designate 1/2 or 2/2-way, respectively); individual ch gains screwdriver adjustable. THD 0.0008%. 20-20,000 Hz; noise -95 dB; summed-output FR within 1 dB 5-50,000 Hz; requires DB-2A power supply or DPB-1 auxiliary cable.

3-way Butterworth crossover ..... \$490  
2-way Butterworth crossover ..... \$349  
3-way Gaussian crossover ..... \$317  
2-way Gaussian crossover ..... \$265

Additional common base ..... \$18  
DB-3-18-100. Similar to DB-3 except 2-way electronic subwoofer crossover with 18 dB/octave Butterworth crossover at 100 Hz and additional common bass; requires DB-2 power supply ..... \$292  
DB-2A. Power supply for DB-3 and DB-3-100 .. \$70  
DBP-1. Auxiliary cable ..... \$16.50

#### DB-3-24 In-Phase Crossover

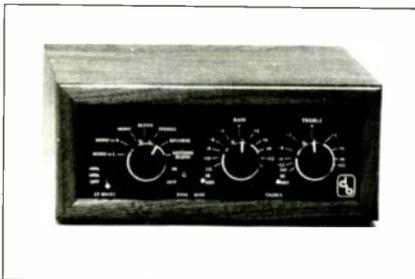
Twenty-four-dB/octave crossover minimizes irregularity in radiation pattern through crossover region. High-, low-pass outputs always in-phase with each other, 6 dB down at crossover frequency. Noise performance improved by 10 dB over 18-dB DB-3. Requires DB-2A power supply or DPB-1 cable. User specifies frequency. Available in 2-way only .. \$445  
DB-3-24-100. Standard version of above, set at 100 Hz, with additional common bass ..... \$370

#### DB-7 Phase Inverter/Bandpass Filter

Increase power output of stereo power amp by 4 times through bridging into mono amp, affects 20-20,000 Hz FR to < 0.3 dB. Features buffered inputs and outputs; switchable positive/negative phase for either or both channels; stereo bridging outputs; 18-dB/octave infrasonic and Bessel 18-dB/octave super-sonic filters; gain in inverted mode 0.05 dB of noninverted gain; requires DB-2A power supply or DPB-1 auxiliary cable ..... \$185  
DB-2A. Power supply for DB-7 ..... \$78

#### DB-5 Tone Control

Low-noise, low-distortion tone control unit with three switch selectable break frequencies for treble and



bass. Separate outputs are included for mono (L&R) and difference or ambience (L-R) signals. Requires DB-2A power supply or DPB-1 aux cable ..... \$348

### dbx

#### Type II Tape Noise-Reduction Systems

Type II units reduce noise by more than 30 dB across entire audio-frequency spectrum and (except for NX40) add 10 dB recording headroom when used with any good-quality tape recorder. In addition, they decode dbx discs.

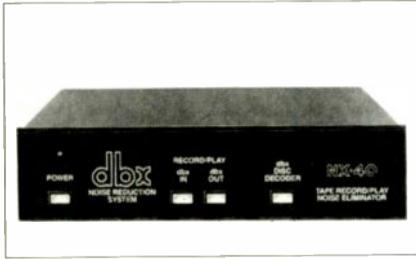
Model 224. Linear decibel compander offers simultaneous encode/decode (record/play) for full monitoring capability with 3-head decks. Also works with 2-head decks. Effective NR 30 dB; dynamic range 105 dB (max rms signal to A-wtd background noise); FR 40-20,000 Hz  $\pm 0.5$  dB, -1 dB at 35 Hz; slew rate > 10 V/ $\mu$ sec; equivalent input noise -88 dBV A-wtd; THD < 0.15% 100-20,000 Hz, < 0.5% 30-100 Hz; IM distortion (SMPTE) < 0.2%; 17 1/16"W x 7 1/2"D x 1 1/4"H ..... \$259

Model 228. Tape NR system/dynamic-range expander that combines functions, specifications of Model 224 NR unit and Model 1BX Series Two dynamic-range expander (see below) except for pre-tape expansion ..... \$499

Model 222. Similar to Model 224 but designed for 2-head recorders including PCM/VCR systems. Has separate encode (record) and decode (playback) functions, no monitoring capability. Specifications are the same as for Model 224 ..... \$219

Model NX40. Economical version of linear decibel compander with simultaneous encode/decode (record/play) for full monitoring with 3-head decks; also works with 2-head decks. Effective NR > 30 dB;

dynamic range >88 dB (max rms signal to A-wtd noise); FR > +1.5 dB 50-15,000 Hz (pink noise or music); equivalent input noise -85 dBV A-wtd; THD



<0.5% 100-15,000 Hz; 1 1/8" H x 7" W x 9 1/2" D ..... \$129

**Model 21.** Decoder for dbx discs, tapes designed to reproduce full dynamic range of master recording, virtually eliminate record pop, ticks, surface noise. Dynamic range 100 dB (max rms signal to A-wtd noise); response 40-20,000 Hz  $\pm 1$  dB; THD <0.3% at 1kHz; 8 3/4" W x 6 3/8" D x 2 3/4" H; 2.5 lb ..... \$109

#### Dynamic Range Expanders

Expanders designed to increase dynamic range of records, tapes, FM broadcasts by as much as 50%, reduce noise by as much as 20 dB.

**Model 4BX.** Advanced expander processes bass, mid, and treble frequencies separately to make loud passages louder and soft passages quieter; also includes Impact Restoration circuit to restore "punch" to musical attacks. Wireless remote Logiccontrol for all nonswitching functions, including On/Mute, Off, Volume, and Bypass. LEDs monitor expansion in each frequency range plus degree of impact restoration. Expansion variable from none to 50% in each band. Impact-restoration gain variable from 0 to +12 dB in each band. Features transition-level control; expansion-level control; tape-monitor loop. Attack rates program-dependent, optimized for each band; release rates for linear expander are program-dependent and optimized (and are adjustable for impact restorer); high-frequency transition adjustable; volume control range -40 to +10 dB; dynamic range >105 dB (max rms signal to A-wtd noise); frequency response 20-20,000 Hz  $\pm 0.5$  dB at no expansion (pink noise or music); THD <0.15% at no expansion; IM distortion (SMPTTE) <0.1% at any setting; equivalent input noise -90 dBV A-wtd; power consumption 30 W. 3 1/2" H x 17 15/16" W x 12 1/4" D ..... \$799

**Model 3BX Series Two.** Expander makes loud passages louder, soft passages quieter; bass, midrange, treble frequencies processed individually. Features 3 rows of LEDs that monitor degree of expansion in each range; expansion-level control; transition-level control; tape-monitor loop. Attack and release times program-dependent, optimized for each band. Expansion ratio variable from none (1:1) to 50% (1:1.5) in each band; dynamic range >105 (max rms signal to A-wtd noise); FR 20-20,000 Hz  $\pm 0.5$  dB at no expansion (pink noise or music); equivalent input noise -88 dBV A-wtd; THD <0.15% at no expansion; IM distortion <0.1%; power consumption 30 W; 17 15/16" W x 7 1/2" D x 1 3/4" H ..... \$549

**Model 1BX Series Two.** Similar to Model 3BX Series Two except has infrasonic filter in its rms-level detector to prevent mistracking caused by turntable rumble, record warp; 10 LEDs to monitor upward and downward expansion; power consumption 10 W; 17 15/16" W x 7 1/2" D x 1 3/4" H ..... \$249

#### Model 20/20 Computerized Equalizer/Analyzer

Automatic microprocessor-controlled 10-band graphic equalizer, real-time analyzer, pink-noise generator, SPL indicator. Includes calibrated 20-20,000-Hz  $\pm 1$  dB electret condenser microphone with 20-ft cable. Center frequencies 31.5, 63, 125, 250, 500, 1k, 2k, 4k, 8k, 16k Hz; boost/cut range +14/-15 dB; accuracy  $\pm 1$  dB at full boost/cut,  $\pm 0.1$  dB/step; gain 0 dB; THD 0.01%, 20-20,000 Hz. Dynamic range: equalizer 95 dB, SPL indicator 95 dB; real-time ana-

lyzer 30 dB shown on screen with center reference selectable in 10-dB steps from 60 to 110 dB (same for SPL indicator); display 30 LEDs x 10 band; meter bandwidth at 90 dB SPL input 15-20,000 Hz; pink-noise generator accuracy  $\pm 0.5$  dB. 19" W x 12 1/2" D x 5 1/4" H ..... \$1,700

#### Model 10/20 Automatic Equalizer

Rack-mountable computerized 10-band stereo octave equalizer automatically equalizes speaker system to room in 30 seconds or less. Features digitally controlled stereo graphic equalizer ( $\pm 12$  dB) with single-band accuracy within 1 dB at any setting; real-time analyzer (RTA); stereo uncorrelated pink-noise generator; SPL meter (64-112 dB, unwt'd,  $\pm 3$  dB); calibrated mic; microcomputer has 10 memories for storing EQ settings; settings may be averaged as well; L and R EQs also may be averaged; will automatically equalize speakers separately or as stereo pair; THD and IMD each <0.03%; equivalent input noise -95 dBV A-wtd; dynamic >105 dB; readout 25 LEDs x 11-band display; auto-ranging RTA maintains display in center of screen; "peak" hold; high-frequency rolloff (to approach hall acoustics) 1 dB/octave above 1,000 Hz (-4 dB at 16,000 Hz); "Set Flat" returns equalizer to no-EQ condition with accuracy of  $\pm 0.5$  dB 20-20,000 Hz; 18 dB octave infrasonic filter; pre/post tape equalization switch; 3 1/2" H x 17 1/8" W x 12 1/4" D ..... \$1,000

#### dbx Subharmonic Synthesizer

Model 120. Rack-mountable unit creates signals between 27-55 Hz by sampling 55-110 Hz program input; restores bottom octave commonly lost during record manufacture and broadcasting. Has sliders to control subharmonic synthesis as well as low-frequency boost; LEDs show frequencies. FR (main signal channel)  $\pm 1$  dB 25-20,000 Hz; THD (main signal channel) <0.05% 30-20,000 Hz; output noise (main signal channel) -83 dBV A-wtd (input shorted, controls at max); 1 3/4" H x 17 1/8" W x 7 1/2" D ..... \$249

## DENON

#### DE-70 Dynamic Equalizer

Dynamic equalizer has four levels input/output switching, EQ, and expansion with LED-indicated block diagram on front panel. Features full switching and connections for line in/out and two tape decks; standard EQ 12 dB boost/cut for 12 bands, plus dynamic threshold control for EQ on signal only; full-range expansion switch; peak-level indicators; dubbing with or without EQ. Gain 0 dB  $\pm 0.2$  dB; dynamic range 113 dB; THD >0.003%; 20-20,000 Hz at 2 V output, dynamic expander off; input sens 1 V; input imp 40k ohms; output imp 600 ohms. power consumption 20W, 17.4" W x 5.3" H x 12" D .. \$425

## EMPIRE

#### GX200 Graphic Equalizer

Stereo 10-band graphic equalizer with 20-push-button frequency controls, LED display for each band. Features reverse switch for NR applications; attenuator switch; EQ bypass switch; EQ record, tape-monitor controls. Center frequencies 32, 64, 125, 250, 500, 1k, 4k, 8k, 16k Hz; boost/cut range  $\pm 10$  dB; FR 10-35,000 Hz; S/N 110 dB at 1 V; THD 0.003% at 1 V; input and output level/imp 150 mV/47k ohms; max output 6 V ..... \$250

#### GX100 Graphic Equalizer

Stereo 10-band graphic equalizer with slide controls. Features attenuator switch; EQ bypass switch; EQ record, tape-monitor controls. Technical specifications same as for GX200 except THD 0.005% \$190

## FISHER

#### EQ550 Graphic Equalizer

Stereo 12-band equalizer. Features EQ on/record/bypass switch; tape-monitor switch; LED indicators in control knobs for quick indication of EQ curves. Center frequencies 16, 31.5, 63, 125, 250, 500, 1k, 2k, 4k, 8k, 16k, 32k Hz; boost/cut range  $\pm 12$  dB; FR

+0/-0.5 dB; input/output imp 50k/2k ohms; THD 0.01% at 1 V output, 0.06% at 5 V; max output at 1% THD 7 V; S/N at 100/1k/10k Hz referred to 1 V; power consumption 8 W; 17 1/2" W x 11 3/4" D x 4 1/4" H; 10 lb ..... \$350

#### EQ350 Graphic Equalizer

Stereo 10-band graphic equalizer. Features detented slide controls; tape-monitor, line/source, and record switch. Center frequencies 31.5, 63, 125, 250, 500, 1k, 2k, 4k, 8k, 16k Hz; boost/cut range  $\pm 12$  dB; input/output imp 50k/2k ohms; THD 0.01% at 1 V output, 0.06% at 5 V; max output at 1% THD 7 V; FR 20-20,000 Hz +0/-0.3 dB; S/N at 100/1k/10k Hz referred to 1 V; power consumption 6 W; 17 1/2" W x 11 1/4" D x 3 3/8" H; 9.2 lb ..... \$200

**EQ2322.** Similar to EQ350 except black front panel and cabinet, different knobs; all specs same as above ..... \$200

#### NR500 Noise-Reduction System

Super D dual-process NR system with declinear compression/expansion system to expand dynamic range up to 40 dB. Features phase-compensated band-splitting system that minimizes breathing while reducing hiss, clipping; declinear system that eliminates level-matching problems for record, play; response speed matched to bandwidth requirements for optimum transient characteristics with min distortion. Dynamic range 100 dB; THD 0.08% at 1 kHz, rated level; FR 20-30,000 Hz; NR 40 dB max; record/play input level 350 mV, imp 330 ohms; power consumption 7 W; 17 1/8" W x 10 3/8" D x 1 3/4" H; 8 lb 3 oz \$190

#### EQ100 Graphic Equalizer

Graphic equalizer with 7 detented boost/cut controls. Features tape monitor switch. Center frequencies 65, 160, 400, 1k, 2.5k, 6k, 15k Hz; boost/cut range  $\pm 10$  dB input/output imp 50k/2k ohms; THD at 1/5 V output 0.01%/0.06% controls set flat; FR 20-20,000 Hz +0.1/-0.3 dB; max output 7 V; S/N 100 dB; power consumption 6W; 15 3/4" W x 8 3/4" D x 3 3/8" H; 5 lb ..... \$130

## GLI

#### EQ-1500 BI-FET Graphic Equalizer

Stereo 10-band graphic equalizer with high-speed biFET IC circuitry. Features center detent on slide controls; defeat switch; main, aux, tape-monitor input switches. Center frequencies 30, 60, 120, 240, 500, 1k, 2k, 4k, 8k, 16k Hz; boost/cut range  $\pm 12$  dB; FR 20-20,000 Hz  $\pm 0.5$  dB EQ flat, 0-500,000 Hz  $\pm 0.1$  dB EQ bypassed; distortion 0.05% at 1 V rms out; THD and IM distortion 0.005%, 20-20,000 Hz at 5 V; slew rate 14 V/ $\mu$ sec; S/N 90 dB below 2 V rms; max output 10 V before clipping; 19" rack-mountable ..... \$250

## INFINITY SYSTEMS

#### Burwen DNF 1201A Dynamic Noise Filter

Processes any 2-channel or matrix-encoded material from turntable, tape deck, receiver, tuner. Features push-button controls for selecting NR; sens control with LED display. FR (min bandwidth) -3 dB at 30 Hz, -10 dB at 1 kHz, -20 dB at 2.5 kHz; (max bandwidth) -0.5 dB max 10-20,000 Hz, -3 dB at 30 kHz, -25 dB at 100 kHz; attenuation rate 9 dB/octave; NR levels up to 30 dB beyond 5 kHz, 14 dB beyond 400 Hz; HD 0.2% max; gain 0 dB at 1 kHz, adjustable to 10 dB; internal noise 100  $\mu$ V rms, 20-20,000 Hz; has 8 phono jacks and tape-deck connectors; 17 1/2" W x 8 3/4" D x 2 3/4" H ..... \$350

#### Burwen TNE 7000 Noise Eliminator

Transient (pulse) processor reduces or eliminates medium and small clicks, pops, ticks from turntable or tape deck. Blanking period filled by transition voltage; has defeat, tape-monitor, threshold, sens controls, LED indicators for transient noise elimination, high-frequency calibration. FR 20-20,000 Hz  $\pm 0.5$  dB; distortion 0.1% THD, 0.5% IM; internal noise 40  $\mu$ V rms; 16 3/4" W x 7 3/4" D x 2 3/4" H ..... \$350

## DAVID HAFLER

## 160 Stereo Graphic Equalizer

Stereo graphic equalizer with 10 LED -20 to +3 dB level displays, equalize/bypass switch, center- (flat position) detented slide controls, bifET/bipolar transistor design, class-A operation. Equalizer range at octave intervals from 32 to 16,000 Hz; boost/cut range  $\pm 12$  dB; level control 8 dB; max output level 8 V rms; FR 4-80,000 Hz +0/-3 dB, 20-20,000 Hz +0/-0.3 dB; THD >88 dB below 3 V rms (0.004%); IM distortion >90 dB below 8 V rms (0.003%); input/output imp 68k ohms bypassed with 300 pF/<600 ohms to 25 kHz; hum and noise 115 dB below 8 V rms A-wtd; separation >88 dB at 1 kHz, >55 dB at 20 kHz; mic input FR 20-20,000 Hz +0/-0.5 dB; mic input sens 1.8 mV for 0-dB meter indication, mic gain control at max; line monitor sens adjustable 80 mV to beyond 8 V for 0-dB meter indication.

Kit ..... \$300  
Assembled ..... \$400

## HARMAN/KARDON

## EQ8 Graphic Equalizer

Stereo 10-band graphic equalizer with continuously variable infrasonic filter (from 5 to 30 Hz). Features separate left and right input controls with overload LEDs; tape monitor; tape EQ. Center frequencies 31.5, 63, 125, 250, 500, 1k, 2k, 4k, 8k, 16k Hz; boost/cut range  $\pm 12$  dB; FR 5-140,000 Hz +0, -3 dB (all controls at zero); THD 0.02% at 2 V output, 20-20,000 Hz.  $17\frac{1}{2}'' \times 12\frac{1}{2}'' \times 4''$  H \$225

## HITACHI

## HGE-2100 Graphic Equalizer

Nine-band graphic equalizer with built-in delay line, mic mixer. Features mixing diagram display; reverb and mic mixing. Center frequencies 63, 125, 250, 500, 1k, 2k, 4k, 8k, 16k Hz; boost/cut range  $\pm 10$  dB; FR 5-30,000 Hz +0/-0.5 dB; gain 0 dB; S/N 70 dB; input sens/imp 150 mV/47k ohms input and tape play, 1 mV/8k ohms mic; output level/imp 150 mV/4k ohms; max output 5 V;  $17\frac{1}{2}'' \times 8\frac{1}{2}'' \times 3\frac{1}{4}''$  H; 6 lb 10 oz ..... \$240

## HGE-1100 Graphic Equalizer

Stereo 10-band graphic equalizer with tape monitor, record EQ capability. Center frequencies 31.5, 63, 125, 250, 500, 1k, 2k, 4k, 8k, 16k Hz; boost/cut range  $\pm 10$  dB; FR 5-30,000 Hz +0/-0.5 dB; gain 0 dB; S/N 70 dB; input sens/imp 150 mV/47k ohms input and tape play, 1 mV/8k ohms mic; output level/imp 150 mV/4k ohms; max output 5 V;  $17\frac{1}{2}'' \times 8\frac{1}{2}'' \times 3\frac{1}{4}''$  H; 6 lbs 10 oz ..... \$190

## INTEGREX

## Dolby B Noise Reducer Kit

Stereo unit with 4 Dolby channels for simultaneous encoding/decoding for 3-head tape machines; designed to reduce hiss in magnetic tape-recording machines; decodes commercially available Dolby B FM radio broadcasts and/or encodes blank tapes from any source; cannot be used for discrete 4-channel encoding or decoding. NR 9 dB wtd (CCIR/ARM); min sens 35 mV rms tape and Dolby FM tuner inputs, 40 mV rms aux input; imp 47k ohms all inputs; 300 ohms variable all outputs; max variable output level 580 mV rms (Dolby level); overload 18 dB above Dolby level 0.3% THD; distortion 0.05% (all outputs at Dolby level); S/N unwt, referred to Dolby level, at monitor output 76 dB from aux in, 80 dB from tape and tuner in, Dolby on, 69 dB from tuner in, at tape output 69 dB from aux and tuner in, 76 dB from tuner in, Dolby FM on. Kit includes fiberglass printed circuit board with component locations, all alignment circuits, solid mahogany cabinet;  $15\frac{1}{2}'' \times 6\frac{1}{4}'' \times 2\frac{1}{2}''$  H. .... \$150  
Dolby Calibration Tapes. Specify reel or cassette. \$9

## DFM Dolby Noise Reducer

Decodes Dolby B-encoded cassette, reel tapes, Dolby-

encoded FM broadcasts. Features front panel on/off and Dolby decoding in/out switches; rear panel input level calibration, output level, 25/75  $\mu$ sec deemphasis input select controls. Noise reduction 9 dB wtd (CCIR/ARM); sens 35 mV rms min, variable output level 580 mV at Dolby level, overload 18 dB above Dolby level for 0.3% THD; distortion 0.05% referred to Dolby level; separation tape input 58 dB at 2 kHz, Dolby on; S/N 79 dB Dolby level (CCIR/ARM); aluminum anodized case;  $8\frac{1}{2}'' \times 4'' \times 2\frac{1}{2}''$  H. \$120

## JVC

## SEA-R7 Stereo Graphic Equalizer

Sound Effect Amplifier stereo graphic equalizer with built-in multi-band delay time equalizer. Features mid-low and low frequencies reverb selectivity at 5 frequencies; time bucket brigade devices for each channel; features 12 controls per channel, from 16 Hz to 32 kHz; control range switch for  $\pm 12$  dB or  $\pm 6$  dB; control buttons for recording, monitoring and dubbing with two decks; 2-color fluorescent character display panel; -6 dB input attenuator switch; SEA Character switch with a normal and reverse position for dynamic companding; THD 0.001% 20-20,000 Hz ..... \$400

## S.E.A. 33 Stereo Graphic Equalizer

Slim-line 10-band per channel graphic equalizer. Features S.E.A. recording and defeat switches; transistor inductors for expanded dynamic range, tape monitor; -6 dB input attenuator switch ..... \$160

## KENWOOD

## GE-1000 Graphic Equalizer

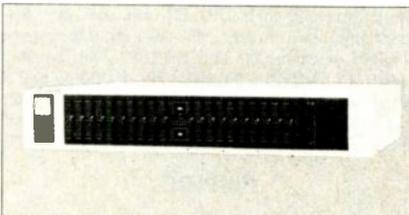
Stereo 12-band graphic equalizer with built-in time delay system. Features LED-illuminated slide controls. Center frequencies 16, 32, 64, 125, 250, 500, 1k, 4k, 8k, 16k, 32k Hz ..... \$440

## GE-X9 Graphic Equalizer

Stereo 10-band graphic equalizer with 2 tape inputs, defeat switch. Center frequencies 16, 32, 64, 125, 250, 500, 1k, 2k, 4k, 8k, 12k, 16k, 20k Hz \$300

## GE-100II Graphic Equalizer

10 bands per channel graphic equalizer. Variable



range  $\pm 10$  dB; FR 10-50,000Hz. 8 lbs ..... \$200  
GE-100IIB. Same as GE-100 II but black ..... \$200

## RA-9011B Reverberation Amplifier

Reverberating time 0-2.5 sec/30 msec-80 msec. FR 20-40,000 Hz; 4 lbs ..... \$200

## RA-9011B Reverberation Amplifier

Reverberation time 0-2.5 sec/30 msec-80 msec. FR 20-40,000 Hz; 4 lbs ..... \$200

## KINETIC AUDIO INT'L

## Three-Point Crossover/Level Control

Monophonic passive crossover/level control system that keeps low frequencies from entering miniature monitor, satellite speaker systems. Features crossover level control and mid-high-pass filter. Crossovers 65, 90, 180 Hz; converts 4- to 8-ohm load. Mono version ..... \$99

## LT SOUND

## ACC-2 Amplitude Control Center

Stereo unit has Allison Research vca with feed-forward circuit design, de-essing with switchable knee, or normal compression. Functions as compressor, limiter, expander, de-esser, on-board oscillator for amplitude-modulated tremolo effects. Each channel has compression ratio, compression attack and release controls; expander threshold expander ratio, attack, release controls; 3-color LED gain-reduction indicators. S/N 90 dB below 1 V; typical distortion 0.001%; compressing/limiting slope variable between 1:1 and infinity;  $19'' \times 3\frac{1}{2}'' \times 7\frac{1}{4}''$  D ..... \$1,250  
CLX-2. Similar to ACC-2 except has no tremolo-effects capability, expander ratio, expander threshold, attack, release controls. Has key function for keyed expansion or noise gating;  $2'' \times 2''$  ..... \$795

## TAD-4 Thompson Analog Delay

Stereo ambience unit for recording use features 2 separate channels each of analog delay and studio reverb. Controls continuously variable for echo EQ, reverb level, reverb EQ, echo repeat, direct level, echo level, reverb level. Delay time continuously variable 20-240 msec; delay time; bandwidth 12 kHz at 20-70 msec, 8.4 kHz at 100 msec; down to 3.5 kHz at 240 msec; dynamic range >90 dB;  $19'' \times 7\frac{1}{4}'' \times 2''$  H ..... \$750

## TC-1 Thompson Vocal Eliminator

Removes most or all of solo vocalist from standard stereo records and leaves most of the background instruments and vocals untouched. Works on tapes and records.  $19'' \times 7\frac{1}{4}'' \times 2''$  H ..... \$595

## ECC Echo Control Center

Single-channel unit functions as preamp for 2 low-impedance mics and 2 low-level low-imp line level aux inputs; band equalizer; echo and reverb controls for mic level, EQ, echo. Features bi-FET op-amp circuitry, relay on/off transient protection, mu-metal shielding for reverb unit. Delay dynamic range 85 dB below 1 V; distortion 0.5% at 1 kHz, 0.775-V out; delay range 20-240 msec; FR of delay  $\pm 1.5$  dB; mic input imp 2,000 ohms for 600-ohm or less mic; aux input imp 47k ohms; output imp 200 ohms for 2k-ohm loads; EQ range  $\pm 18$  dB for bass, midrange, and treble; rack-mountable;  $7'' \times 2''$  H. .... \$695  
RCC. Reverb control center similar to ECC without echo capability; features Microplate® Reverb; FR 10-40,000 Hz  $\pm 0.5$  dB direct, 22-18,000 Hz reverb; dynamic range 80 dB below 1 V; THD, IM distortion 0.05% ..... \$595

## PEQ-2 Parametric Equalizer

Dual 4-band parametric equalizer. Studio quality EQ has rumble filter, selectable peak-dip or shelving response on upper and lower bands, bypass switch, peak indicator, balanced and unbalanced inputs and

## NOTICE TO READERS

Prices of items described are manufacturers' suggested prices only and are subject to change without notice. Actual selling prices are determined by the dealers.

outputs. FR coverage 20-20,000 Hz; bandwidth 0.15-2.0 octaves; max level +22 dBm; max boost/cut  $\pm 15$  dB; input imp 47k ohms; output imp 47 ohms; THD 0.007%; IM distortion 0.002%;  $19'' \times 7\frac{1}{2}'' \times 3\frac{1}{2}''$ ; 8.5 lb ..... \$525  
**PEQ-1.** Same as PEQ-2 but single-channel version and no low-frequency rumble filter; 5 lb ..... \$349

#### RV-2 Stereo Reverb Unit

Reverb unit for line-level inputs only. Features -6-dB and peak amplitude LEDs; 3 EQ controls; direct, reverb, reverb drive controls; send-receive bus. FR 20-20,000 Hz  $\pm 0.5$  dB (direct); reverb 20-5,500 Hz; reverb time 2.5 sec; input imp 47k ohms; output imp 200 ohms for 2k-ohm loads; S/N 90 dBm (direct);  $19'' \times 7'' \times 2''$  ..... \$650

#### NR-2 Noise Reducer/Range Enhancer

Two-channel unit provides 2:1 compander noise reduction system and dynamic range enhancement system; for dual or independent tracking. FR 20-20,000 Hz  $\pm 0.75$  dB; S/N 90 dB; distortion 0.2% at 1 kHz; input imp 47k ohms; output imp 200 ohms for 2k-ohm loads;  $12.75'' \times 6.15'' \times 2.5''$  ..... \$350

#### NR-4 Four-Channel Comander

Can switch 4 channels of NR from record to play mode using 2 inputs simultaneously or 2-channel simultaneous record and tape monitor decode; has bypass switches. FR 20-20,000 Hz  $\pm 0.75$  dB; THD 0.2% (compressed and expanded); slew rate 13 V/ $\mu$ sec; expander noise output -95 dBm; max input level +26 dBm;  $12.75'' \times 6.15'' \times 2.5''$  ..... \$395  
**NR-8.** Same as NR-4 except provides 8 channels of individually switchable record/play and bypass noise reduction or 4-channel simultaneous record and tape monitor decode ..... \$695

#### SL-2 Stereo Limiter

Stereo unit functions independently or in a stereo tracking mode. Provides 3 controls for attack and release. Functions are a hard limiter, average limiter, or automatic level control. S/N 90 dB below 1 V; typical distortion 0.01% (not undergoing limiting);  $19'' \times 7\frac{1}{2}'' \times 2''$  ..... \$295

### LUXMAN

#### GX-101 Graphic Equalizer

Computer-analyzed 7-band graphic equalizer. Features 9-level spectrum analyzer with memory for four frequency curves; pink noise signal generator; cassette deck-to-cassette dubbing; normal and recording switch; monitor switch; tape 1 and 2 selector; FR indicator; record output switch for input or output of graphic equalizer; power switch off which allows signals to pass through even when the unit is off. Spectrum analyzer displays 7 frequency spectrums in real time. Center frequencies 60, 150, 400, 1k, 2.5k, 6k and 15k Hz; THD < 0.01% S/N 80 dB at flat position.  $17\frac{1}{2}'' \times 3\frac{1}{2}'' \times 12''$  ..... \$500

### MCS by JC PENNEY

#### 3035 Graphic Equalizer

Stereo 10-band graphic equalizer with LEDs in slide control handles. Features rotary input attenuator; normal/reverse, tape monitor switches; brushed-aluminum front panel; audio cables. Center frequencies 31, 64, 125, 250, 500, 1k, 2k, 4k, 8k, 16k Hz; boost/cut range  $\pm 12$  or  $\pm 6$  dB; FR 31-16,000 Hz ..... \$200

#### 3032 Graphic Equalizer

Stereo 5-band graphic equalizer with variable range selector. Features EQ position switch for REC out/source; tape monitor switch; brushed-aluminum front panel; audio cables. Center frequencies 63, 240, 1k, 4k, 16k Hz; FR 5-100,000 Hz; THD 0.02%; S/N 95 dB;  $17'' \times 10'' \times 3\frac{1}{2}''$  ..... \$150

### M & K

#### LP-1 Passive Electronic Crossover

Line-level electronic crossover designed for biamping;

available in  $8\frac{1}{2}''$  front panel or  $19''$  rack mount. 75 or 100 Hz crossover point; with bypass switch \$335  
 Without bypass switch ..... \$315

### MARK LEVINSON

#### LNC-2 Electronic Crossover

Modular electronic crossover system for frequency division of line-level audio signals; employs 4 separate active filters; 2 high-pass and 2 low-pass; output connectors for each range for connection to power amps; filters provide 18 dB/octave slopes; optional slopes for 6 dB or 12 dB for 3-way stereo operation; 6 dB/octave slope OCS modules may be added; output level of each FR controlled by a 10-turn locking potentiometer on the front panel. THD 0.002%; wideband noise -102 dBV unweighted; accuracy within 5% of specified crossover point; PLS-151 separate power supply load regulation 0.05%; wideband noise output of 18  $\mu$ V; features on/off switch for each high- and low-pass filter, internal stereo/mono switch and Camac connectors; hand-brushed and black anodized finish. LNC-2;  $2\frac{1}{2}'' \times 19'' \times 7\frac{1}{2}''$ ; PLS-151;  $4\frac{1}{2}'' \times 4'' \times 10\frac{1}{4}''$ ; 12 lbs ..... \$2,700

### NAKAMICHI

#### NR-100 Noise-Reduction System

Dolby-C NR system designed to be used with Nakamichi 700ZX, 700ZXL, 1000ZXL cassette decks. Can be used without recorder recalibration and is selected by setting NR switch on cassette deck to EXT. Provides 4 channels of NR (both stereo channels in record and playback). Noise reduction approximately 10 dB at 1 kHz, 20 dB 2k-8k Hz; power supplied by remote-control socket on cassette deck;  $9\frac{1}{16}'' \times 4\frac{2}{32}'' \times 1\frac{1}{2}''$ . Supplied with  $27\frac{1}{2}''$  cable ..... \$230

### NIKKO

#### ATD-1 Time Delay Synthesizer

Designed to recreate concert hall sound in any acoustical environment. Features pushbuttons for acoustics of small, medium, large halls; push-buttons for hall character; push-buttons for degree of reverberation from 100 msec to 2 sec; stage distance or front to rear balance control; master output control; tape monitor, delay defeat switches; adjustable input level control with LEDs; 4/2 channel switch. Delay time 17-128 msec; reverb decay time 100 msec 2 sec; FR 20-7000 Hz  $\pm 3$  dB delay; 20-20,000 Hz +0/-0.1 dB main; THD 0.5% delay, 0.05% main; S/N 60 dB delay, 80 dB main; input level/imp 100 mV/100k ohms; max output 0.775 V delay, 1.2V main; black;  $19'' \times 11\frac{1}{2}'' \times 2\frac{1}{2}''$  ..... \$370

#### EQ-20 Graphic Equalizer

Stereo 10-band graphic equalizer with detented 5-step slide controls. Features tape monitor; equalizer gain switch (-6 dB, 0 dB, +6 dB); pre/post EQ, tape monitor switch; LED equalizer in/out switch. Center frequencies 31.5, 63, 125, 250, 500, 1k, 2k, 4k, 8k, 16k Hz; boost/cut range  $\pm 12$  dB; FR 10-50,000 Hz  $\pm 1$  dB; THD 0.007%; S/N 105 dB; black;  $19'' \times 9'' \times 3\frac{1}{4}''$  ..... \$325

#### EQ-500 Graphic Equalizer

Stereo graphic equalizer with 6 bands/channel. Features 11 position EQ slide controls; EQ defeat switch; 3 tape monitor function switches that allow source monitoring, pre/post EQ monitoring. Center frequencies 40, 125, 400, 1.25k, 4k, 12.5 k Hz; boost/cut range  $\pm 10$  dB; black and silver ..... \$160

Audio terms are defined  
in the glossary on page 19.

For an explanation of abbreviations,  
turn to the list on page 22.

### NUMARK ELECTRONICS

#### EC2800 Electronic Crossover

Multi-amplification 3-way crossover with gold-plated input, output connectors. Distortion < 0.008%; center ch -24 dB/octave slope; low and high chs -12 dB/octave slope ..... \$469

#### EQ2600 Equalizer/Tone Computer Display

Stereo 10-band graphic equalizer with tone computer display. Features true octave spacing  $\pm 15$ -dB EQ, master-gain controls; fluorescent 10-band display; ability to read left or right or both channel displays; VU mode to read output level; pre/post EQ input; accentuated/reverse mode recording; switchable 0/10-dB meter calibration. Uses binary-coded-decimal notation circuit ..... \$329

#### EQ2500D Graphic Equalizer

Ten-band stereo graphic equalizer with true octave spacing Center frequencies at 30, 60, 120, 240, 480, 960, 1920, 3840, 7680, 15,380 Hz. Boost/cut  $\pm 15$  dB; master gain control for each channel boosts or cuts an additional 15 dB. Features LED display for each channel with peak hold; eq defeat; optional wood side panels and rack-mount adapters. Frequency response 10-100,000 Hz  $\pm 1$  dB (flat setting); harmonic distortion < 0.01% at 1 V output; hum and noise, shorted output, -102 dB at 2 V output IHF-A; output impedance 100 ohms.  $18\frac{1}{2}'' \times 3\frac{1}{2}'' \times 6\frac{1}{2}''$  ..... \$250

#### EQ2310 Graphic Equalizer

Ten-channel stereo graphic equalizer with 20 linear sliding controls at true octave spacing (at 30, 60, 120, 240, 480, 960, 1920, 3840, 7680, 15,380 Hz). Boost/cut  $\pm 15$  dB; master gain control for each channel boosts or cuts an additional 15 dB. Features eq defeat; LED level display; optional wood side panels and rack-mount adapters. Frequency response 10-100,000 Hz  $\pm 1$  dB (flat setting); intermodulation distortion 0.02% at 1 V output; harmonic distortion < 0.0% at 1 V output; hum and noise, shorted output, -96 dB at 2 V output IHF-A; output impedance 100 ohms. Black face plate.  $18\frac{1}{2}'' \times 3\frac{1}{2}'' \times 6\frac{1}{2}''$ ; 10.5 lbs ..... \$250  
**EQ2310S.** Same as EQ2310 except with silver face plate ..... \$250

### OMNISONIX

#### 801 Omnisonic Imager

Designed to reproduce mono or stereo signals to create dimensional or 3-dimensional sound (volume level, stereo separation, surround-sound imagery) respectively; connects to internal tape loop of any system; features tape monitor, in/out buttons. Input imp 200 ohms; FR 10-100,000 Hz  $\pm 0.5$  dB; THD 0.005%, 10-20,000 Hz;  $10'' \times 6'' \times 4.25''$  ..... \$199

### ONKYO

#### EQ-35 Integra Equalizer

Twelve-band graphic equalizer with signal generator. Features individual controls for each channel; LED slide markers; frequency centers 16, 32, 64, 125, 500, 1,000, 2,000, 4,000, 8,000, 16,000, 32,000 Hz; signal generator for all center frequencies except 16 and 32,000 Hz; step or sweep generator mode; level control,  $\pm 12$  dB or  $\pm 6$  dB adjustment range switch; operation mode display Delta power supply. S/N 100 dB, THD 0.01%; also available with black matte finish as EQ-35B ..... \$260

#### PE-33 Graphic Equalizer

Stereo 10-band graphic equalizer with LED slide controls behind door. Features LED EQ flow indicator; EQ routing; center frequencies 32, 64, 125, 250, 500, 1,000, 2,000, 4,000, 8,000, 16,000 Hz; boost/cut range  $\pm 12$  dB; S/N 100 dB; THD 0.01% ..... \$200

#### EQ-08 Audio Equalizer

Ten-band graphic equalizer with LED slide indicators.

Features LED EQ flow indicator; EQ routing; center frequencies 32, 64, 125, 250, 500, 1,000, 2,000, 4,000, 8,000, 16,000 Hz; boost/cut  $\pm 12$  dB; S/N 100 dB; THD 0.01% ..... \$180

### PIONEER

#### SG-90 Graphic Equalizer

Stereo 17-band graphic equalizer. Features inverse EQ; auto-fader; tape monitor; tape/source equalizer selector; center frequencies 16, 25, 40, 63, 100, 160, 250, 400, 630, 1k, 1.6k, 2.5k, 4.0k, 6.3k, 16k, 25k Hz;  $\pm 6$  dB or  $\pm 12$  dB switchable boost/cut range. S/N 114 dB (auto-fader off, equalizer flat);  $16\frac{1}{2}''$  W  $\times$   $14\frac{1}{4}''$  D  $\times$   $5\frac{1}{8}''$  H; 10 lbs 8 oz ..... \$390

#### CA-100 Sound Processor

Sound processor with mic mixer. Features 2 mic inputs with pan pot; echo; 7-band graphic equalizer; (center frequencies 60, 150, 400, 1k, 2.4k, 6k, 15k Hz);  $\pm 10$  dB boost/cut range; auto-fader; adjustable fader cross point; tape monitor. S/N tape source 90 dB; mic 1-2 69 dB;  $16\frac{1}{2}''$  W  $\times$   $8\frac{3}{4}''$  D  $\times$   $6\frac{1}{4}''$  H ..... \$270

#### CA-X7 Sound Processor

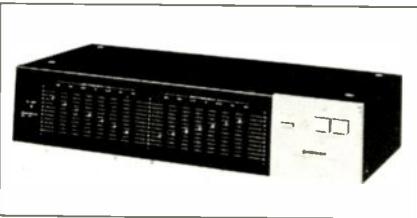
Shelf-sized sound processor with mic mixer. Features 2 mic inputs with pan pots; echo; 7-band equalizer. FR 48-50,000 Hz; 0.008% THD; S/N 84 dB;  $3\frac{3}{8}''$  H  $\times$   $12\frac{1}{2}''$  W  $\times$   $8\frac{3}{4}''$  D; 7 lb 12 oz ..... \$250

#### RG-9 Dynamic Expander

Dynamic expander with fluoroscan meter, displays. Features input level control. Dynamic expansion 4, 7, 10, 13, 16 dB; attack/release time 0.3/120 msec; THD 0.05% at 1 kHz, 16 dB; S/N 100 dB;  $16\frac{1}{4}''$  W  $\times$   $13\frac{1}{4}''$  D  $\times$   $3\frac{3}{4}''$  H; 11 lb 11 oz ..... \$200

#### SG-540 Graphic Equalizer

Stereo 7-band graphic equalizer with LED in each slide control handle. Center frequencies 60, 150,



400, 1k, 2.4k, 6k, 15k Hz; boost/cut range  $\pm 10$  dB; FR 5-70,000 Hz  $\pm 1$  dB; THD 0.005%;  $16\frac{1}{2}''$  W  $\times$   $8\frac{1}{2}''$  D  $\times$   $3\frac{3}{8}''$  H; 8 lb 5 oz ..... \$165

### RG DYNAMICS

#### PRO 20 Dynamic Processor

Stereo dynamic processor designed to reduce noise, restore transient response, eliminate tape hiss, reveal details, enhance FM reception, improve record sound reproduction. Features input-level control; max/min NR, tape monitor on/off, tape and main on/off dynamic processing switches; dual 4-20 dB LED level displays. Total dynamic processing range 20 dB; downward/upward processing range -3 to -8/0 to +12 dB; attack/decay time 0.6 msec/80 msec-3 sec (program controlled); max output level/imp 6.5 V/50k ohms at 1 kHz; min input 80 mV; THD 0.04% at 1 kHz, 1 V, max processing; IM distortion 0.05% at 60 and 2 kHz mixed 1:1; hum and noise max/min 90/100 dB below 1 V output; FR 20-20,000 Hz  $\pm 1$  dB; input/output imp 80k/300 ohms; power consumption 3 W;  $17''$  W  $\times$   $12''$  D  $\times$   $3\frac{1}{2}''$  H (optional rack-mount available) ..... \$449

#### RG X-15 Dynamic Processor

Stereo dynamic signal processor similar to PRO-20 except over narrower control range. Features main output, tape recorder process/bypass, tape monitor in/out switches; 6-15-dB dynamic processing control; dual 6-15 dB LED level displays. Total dynamic pro-

cessing range 15 dB; downward/upward processing range -6/0 to +9 dB; attack/decay time 0.6 msec/80 msec-3 sec (program controlled); max output signal level/imp 6 V/50k ohms at 1 kHz; min input 80 mV; THD 0.12% at 60 and 2k Hz mixed 1:1, 1 V output; hum and noise max/min -90/-100 dB; FR 20-20,000 Hz  $\pm 1$  dB; input/output imp 100k/300 ohms; power consumption 3 W;  $13\frac{1}{2}''$  W  $\times$   $9''$  D  $\times$   $2\frac{3}{4}''$  H ..... \$279

#### VC-1 Videosonic Stereo Phasor

Video audio signal processor combining expander, stereo synthesizer, and three noise/hiss filters. Connects to most TVs and nearly all VCRs. Features 15 dB expansion; 2 types of stereo synthesis; adjustable NR. TV headphone input imp 1 kohm; VCR audio imp 30 kohms. Distortion no more than 0.12%.  $8\frac{3}{8}''$   $\times$   $8\frac{1}{8}''$   $\times$   $2\frac{1}{2}''$  ..... \$199

#### ADO Signature One Dynamic Expander

Stereo dynamic range expander with phase selector switch to correct any reverse phase source. Features precision 1% metal film resistors in critical circuits; 20,000 mfd power supply paralleled with high-speed capacitors; independent channel processing; patented high-speed decision-making circuitry computes correct dynamic response; low distortion; laboratory calibrated;  $19''$  W  $\times$   $3\frac{1}{4}''$  H  $\times$   $12''$  D, black rack mount ..... \$695

### SAE

#### E-101 Parametric Equalizer

Computer direct-line parametric equalizer with digital display, 2 bands with 10 memories/band. Bandwidth adjustable from 0.3-3.5 octaves; boost/cut range  $\pm 16$  dB; rated output 2.5 V rms; THD 0.02%; S/N 95 dB;  $19''$  W  $\times$   $12\frac{1}{2}''$  D  $\times$   $3\frac{1}{2}''$  H ..... \$650

#### 4000 Electronic Crossover

Two-band crossover with independent high-low balance controls for each channel; independent high-pass and low-pass controls; THD and IM distortion 0.02%; S/N 96 dB; FR 20-20,000 Hz  $\pm 0.25$  dB; insertion loss 1 dB; input/output imp 67k/600 ohms; rack mountable;  $19''$  W  $\times$   $3\frac{1}{2}''$  H  $\times$   $3\frac{1}{2}''$  D ..... \$275

#### 5000A Click and Pop Filter

Filter is designed to eliminate or considerably reduce audible effects of scratches, grit, mistracking, static, imperfections, normal wear of records during normal play, tape recording. FR 20-20,000 Hz  $\pm 1\frac{1}{2}$  dB; S/N  $> 96$  dB; THD and IM  $< 0.1\%$ ;  $10\frac{1}{4}''$  W  $\times$   $9\frac{1}{4}''$  H  $\times$   $3''$  H; 8 lb ..... \$199

### SANSUI

#### SE-9 Graphic Equalizer

Microprocessor-controlled stereo graphic equalizer with unique motorized fader-setting system, 4-curve memory storage, spectrum-analyzer display, pink-noise generator, external electret condenser mic. All 16 (8 bands, 2 channels) frequency controls dual slide potentiometers, one section boosting/cutting band by  $\pm 12$  dB, the other producing varying dc voltage for physically positioning sliders. Using auto adjustment procedure, fader-to-fader interaction is minimized. Auto setup procedure requires only 30 secs overall. L/R frequency spectra shown on gas display calibrated in 3-dB increments over 24-dB range. Under/over LEDs warn of out-of-range conditions. Features 2-way dubbing, 2-deck monitoring. Center frequencies 80, 160, 315, 630, 1.25k, 5k, 10k Hz; in/out level 1 V with flat control settings; THD 0.008%; FR 10-100,000 Hz  $\pm 0/-1$  dB; S/N 105 dB; input/output imp 30k/600 ohms  
SE-9S. SE-9 with silver front panel ..... \$700  
SE-9B. SE-9 with black front panel, rack-mounting hardware ..... \$700

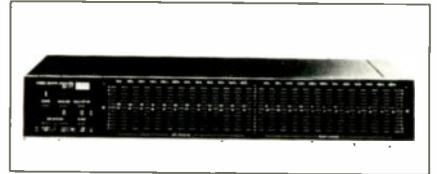
#### SE-8X Graphic Equalizer

Ten-band stereo graphic equalizer with spectrum-analyzer display. Features 2-tape-deck monitoring facilities; analyzer calibration control; silver or rack-mounted matte black finish. EQ center frequencies 32, 63,

125, 250, 500, 1k, 2k, 4k, 8k, 16k Hz; boost/cut range  $\pm 12$  dB; THD 0.005%; S/N 110 dB; FR 10-100,000 Hz  $\pm 0/-1$  dB ..... \$400

#### SE-77 Graphic Equalizer

Twelve-band stereo graphic equalizer in slim-line styling. Features separate tape-dubbing facilities for two decks; controls for left and right channels, each with LED; equalizer recording and bypass switches. Center frequencies 16, 32, 64, 125, 250, 500 Hz, and 1, 2,



4, 8, 16 and 32 kHz; boost/cut in 6 dB or 12 dB increments; FR 10 Hz to 100 kHz, S/N 110 dB; THD 0.005%. In black (SE-77B) or silver (SE-77S) \$280

#### RC-707 Graphic Equalizer

Stereo graphic equalizer combines 7-band line output equalizer with 2 separate 5-band equalizers in one chassis with a built-in Bucket Bridge echo amplifier and display. Ideal for mixing live performances with pre-recorded material. FR 20-20kHz, THD 0.05%. Available in black (RC-707B) or silver (RC-707S) ..... \$260

#### RA-990 Reverberation Amplifier

Combines bucket-brigade time delay, reverberation system with 2-channel panpot mixing circuitry to recreate realistic acoustic ambience, provide special effects for sound reproduction, musical performances. Echo mode has adjustable 0-3 second decay time; Duet mode creates doubling effect with adjustable 30-100 msec time delays. Individual pan pots, balance control provide mixing; special effects added via combination of mic, line, tape inputs. FR 10-80,000 Hz  $\pm 0/-3$  dB; THD  $< 0.025\%$ ; S/N  $> 90$  dB line. Available in black (RA-990B) or silver (RA-990S) finish ..... \$240

### SCOTT

#### 859Z Graphic Stereo Equalizer

Features 10 octave controls per channel with 12-dB boost/cut range; power-on LED; tape monitor switch for equalizing while listening to tape recordings; tape record equalization capability via front panel switch; THD 0.008%; S/N 97 dB; ch sep 65 dB; center frequencies 32, 64, 125, 250 and 500 Hz; 1,000, 2,000, 4,000, 8,000 and 16,000 Hz; input imp 47,000 ohms; input overload 8V ..... \$200

### SHERWOOD

#### EQ-200 Graphic Equalizer

24-band graphic equalizer with 24 LED indicators. Center frequencies 16, 32, 64, 125, 250, 500, 1k, 2k, 4k, 8k, 16k, 32k Hz; boost/cut 12 dB; THD 0.01% from 20-20,000 Hz at 1 V; S/N 95 dB ref 1 V output; FR 5-100,000 Hz at -3 dB;  $17.37''$  W  $\times$   $4.37''$  H  $\times$   $13.75''$  D ..... \$220

### SONY

#### SEQ-11 Graphic Equalizer

11-band stereo graphic equalizer with connections for two tape decks and tape-to-tape possibility. Features LED indication for EQ in and line out; left and right octave adjustment; center frequencies 32, 63, 125, 500, 1k, 2k, 4k, 8k, 16k, 32 Hz; adjustment range switchable  $\pm 6, 12$  dB; S/N 90 dB; THD 0.006%; FR 10-100,000 Hz (all controls flat) \$310

#### SEH-310 Graphic Equalizer

Nine-band graphic equalizer with stereo image enhancer. Features connections for two tape decks; mic mixing; Hybrid echo system. Center frequencies 63, 125, 500, 1k, 2k, 4k, 8k, 16k Hz; adjustment

range  $\pm 10$  dB; S/N 95 (all controls flat) dB; THD 0.01%; FR 15-80,000 Hz  $-3$  dB (all controls flat);  $17'' \times 2\frac{1}{4}'' \times 11\frac{1}{4}''$ ; 7 lb 11 oz ..... \$250

**SEH-V5 Graphic Equalizer**

Nine-band graphic equalizer with stereo image enhancer. Features mic mixing; connections for two tapes; membrane-style keypads; center frequencies 63, 125, 500, 1k, 2k, 4k, 8k, 16k Hz; adjustment range  $\pm 10$  dB; S/N 85 dB; THD 0.05%; FR 20-30,000 Hz,  $-1$  dB (all controls flat);  $14'' \times 2\frac{1}{4}'' \times 9\frac{7}{8}''$ ; 4 lbs 14 oz ..... \$175

**SEH-22 Graphic Equalizer**

Nine-band graphic equalizer with stereo image enhancer and connections for tape deck. Center frequencies 63, 125, 500, 1k, 2k, 4k, 8k, 16k Hz; adjustment range  $\pm 10$  dB; S/N 85 dB; THD 0.01%; FR 10-50,000 Hz (all controls flat);  $8\frac{1}{2}'' \times 2\frac{1}{4}'' \times 11\frac{1}{4}''$ ; 3 lb 12 oz ..... \$120

**SOUND CONCEPTS**

**SD550 Ambience Restoration System**

Stereo audio delay system; continuous delay variation 5-100 msec; continuous reverb variation 0-100%; high-frequency rolloff from  $-3$  to  $+6$  dB; front mix level 0-100%, rear level 0-100%; 50- or 100-msec delay range; rear output delay or quad direct; front output direct or delay mix; input front or quad rear; input imp 60k ohms min; output imp 300 ohms max; FR 20-10,000 Hz  $+1$ ,  $-3$  dB with 5 msec delay, zero dB high-frequency rolloff; dynamic range 90 dB min, S/N 85 dB min, 90 dB wtd; 1% max distortion at 1 kHz, 1 V rms, consisting almost entirely of 2nd harmonic;  $15\frac{1}{2}'' \times 9'' \times 3\frac{1}{2}''$  ..... \$739

**IR2100 Image Restoration System**

Expands stereo image beyond confines of space between speakers to reproduce sonic image presented to recording mics; speaker/listener angle continuously adjustable 20-100°; continuous adjustment of perimeter to central sound level balance; master volume control; connects in tape loop or between preamp and power amp; S/N 80 dB; distortion 0.1% max; handheld with 15-ft remote cable;  $6'' \times 3'' \times 1.5''$  ..... \$249

**IR2200.** Nonremote version of IR2100 with perimeter to central sound level brilliance control; connects in tape loop; has provisions for tape recorder, capability to record expanded image. S/N 80 dB; distortion 0.1% max;  $7'' \times 4'' \times 2''$ .  
Factory assembled ..... \$169  
Kit (KIR-1) ..... \$95

**VSP-1 Stereo Synthesizer**

Provides interface to stereo system, creates spacious, realistic pseudostereo from mono sources; 10-band harmonically related frequency division. S/N 80 dB; distortion 0.2% max;  $7'' \times 4'' \times 2''$ .  
Factory wired ..... \$159  
Kit (KVSP-1) ..... \$90

**SX-80 Peak Expander/CX Decoder**

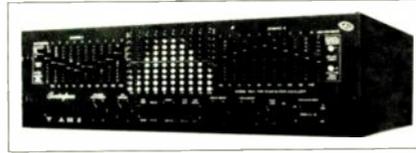
Adds 20 dB of dynamic range to CX-encoded records and videodiscs. 6-9 dB of upward expansion to nonencoded sources; connects into tape loop, provides recorder connections. Features tri-color LED for 0 VU calibration with standard record supplied. S/N 80 dB; distortion 0.1% max;  $7'' \times 4'' \times 2''$ .  
Factory assembled ..... \$119  
Kit (KSX-1) ..... \$76

**SOUNDCRAFTSMEN**

**AE2000 Real Time Analyzer/Equalizer**

Stereo 10-band graphic equalizer with Differential/Comparator\* Analyzer/Equalizer, pink-noise generator. Features 100-LED (10-octave) real-time display with adjustable decay rate; mic preamp; input for analysis of 3-head tape deck, other signal processor; Auto-scan mode; brushed-aluminum front panel; hardwood side panels. Center frequencies 32, 64, 125, 250, 500, 1k, 2k, 4k, 8k, 16k Hz; boost/cut range  $\pm 15$  dB; display accuracy 0.1 dB; Auto-Scan

sweep rate 0.1-10 seconds/octave; THD and IM distortion  $<0.01\%$  at 2 V; S/N 114 dB at max output;



mic preamp input imp 2k ohms; FR 20-20,000 Hz  $\pm 0.1$  dB ..... \$699  
**AS1000.** Similar to AE2000 but without equalizer ..... \$549  
**AE2420.** Similar to AE2000 but without 100-LED display, Auto Scan ..... \$499

**TG 3044 Third Octave Equalizer**

Third-octave stereo equalizer with 21 controls/channel. Center frequencies 40, 50, 63, 80, 100, 125, 160, 200, 250, 315, 400, 500, 630, 800, 1k, 1.6k, 2.5k, 4k, 6.3k, 10k, 16k Hz. Features EQ defeat; infrasonic filter; tape monitor and tape record; Differential/Comparator\* circuitry for unity gain setting to within 0.1 dB accuracy for highest dynamic range capability. THD and IM distortion: 0.01% at 2 V; S/N 114 dB at 10 V output; input imp 47k ohms. Front panel rack mount, black anodized aluminum ..... \$649

**DC 2215 Differential/Comparator\* Equalizer**

Stereo 10-band equalizer with Differential/Comparator\* true-unity-gain circuitry for input to output balancing accuracy to within 0.1 dB. Equalizer filter circuits use precision wire wound passive-coil inductors for high gain, low noise and distortion. Front-panel controls include tape monitor, LED defeat/EQ defeat and EQ tape record. THD and IM distortion  $<0.01\%$  at 2 V; S/N 114 dB at 10 V; boost/cut range  $\pm 15$  dB. Includes frequency spectrum analyzer test record, computone charts, cables. Front panel is rack mount, brushed aluminum with charcoal finish ..... \$399

**DC 2214.** Same as DC 2215 except equalizer filter circuits have op-amp synthesized inductors. THD and IM distortion  $<0.01\%$  at 2 V; S/N 106 dB at 10 V; boost/cut range  $\pm 12$  dB ..... \$299

**SE 450.** Same as DC 2214 without Differential/Comparator\* circuitry. Front panel available in silver or black anodized aluminum with black vinyl cabinet. Not rack mountable ..... \$249

**TASCAM BY TEAC**

**PE-40 Parametric Equalizer**

Fully parametric 4-band 4-channel equalizer with each channel having 4 sets of continuously variable Q gain and frequency controls; bands overlap 40-800, 200-4,000, 500-10,000 and 800-16,000 Hz; two or more channels can be cascaded; switchable 60 Hz; 18 dB/octave and 60 dB/octave low-pass filter on each ch; THD  $<0.015\%$  wtd; S/N 83 dB ..... \$650

**RS-20 Dual Reverb**

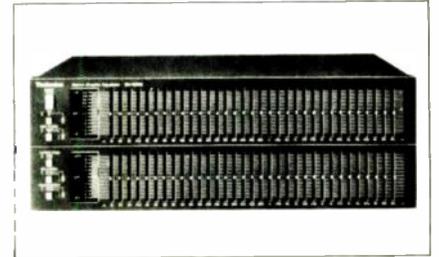
Spring-type 2-channel dual-reverb system using 3 different-sized springs on each channel; limiters ahead of spring drive prevent "twangy" sounds caused by transients, compatible with all sound systems with slide switch to change input sens and output drive level to  $-10$  dB or  $+4$  dBu; LEDs for each channel indicate signal below nominal level (when green) and above (when red); two receive jacks wired in parallel with foldback jacks for looping sound to other signal processors; rack mountable; takes  $3\frac{1}{2}''$  of rack

space ..... \$400  
**PB-64** Rack-mount patch bay ..... \$100

**TECHNICS**

**SH-8065 Graphic Equalizer**

Stereo 32-band graphic equalizer with variable range indicators. Features variable range selector; tape-monitor switch; parallel left, right slide controls (left channel on top, right channel on bottom). Center frequencies 16, 20, 25, 31.5, 40, 50, 63, 80, 100,



125, 160, 200, 250, 315, 400, 500, 630, 800, 1k, 1.25k, 1.6k, 2k, 2.5k, 3.15k, 4k, 5k, 6.3k, 8k, 10k, 12.5k, 16k, 20k, 25k Hz; boost/cut range  $\pm 3/\pm 12$  dB; FR 5-100,000 Hz  $-1$  dB; THD 0.0025%, 20-20,000 Hz; S/N 110 dB; input/output imp 47k/600 ohms; input sens/max output 1/8 V; gain 0-dB; line-level switch 150 mV/1 V; power consumption 28 W;  $16\frac{1}{16}'' \times 13'' \times 6\frac{1}{32}''$ ; 13.2 lb ..... \$500

**SH-8030 Space Dimension Controller**

Space dimension controller designed to provide surround sound from 2 speaker systems. Features 5-band graphic equalizer; dimension/signal-level display; tape monitor; ambience, echo controls; dimension on/off, effector position switches; phono/aux selector; mic jacks with level, echo level control; mic 1 panpot; mixing balance control. FR 7-150,000 Hz  $+0/-3$  dB; S/N 80 dB; THD 0.005% line in; EQ center frequencies 60, 250, 1k, 4k, 16k Hz; boost/cut range  $\pm 12$  dB; echo time 90 msec; sound image locator 30° backward; input sens/imp 150 mV/30k ohms line in, aux, tape, 2.5 mV/47k ohms phono; 1.5 mV/10k ohms mic 1 and 2; output level/imp 150 mV/600 ohms line and rec out; max input at 1 kHz 5 V line in, 120 mV phono, 70 mV mic 1 and 2; max output 5 V; power consumption 25 W;  $16\frac{1}{16}'' \times 11\frac{1}{16}'' \times 4\frac{3}{32}''$ ; 10.6 lb ..... \$420

**SH-8055 Graphic Equalizer**

Stereo 12-band equalizer with real-time spectrum analyzer and FL level indicator. Pink-noise generator built in for use with optional mic. Features L/R channel/peak mode FL display selector; 2 tape monitors; FL volume level display; equalized playback/recording selector; slide pots with LED indicators. Center frequencies 25, 40, 63, 100, 160, 250, 500, 1k, 2k, 4k, 8k, 16k Hz ..... \$340

**SH-8045 Graphic Equalizer**

Stereo 12-band graphic equalizer with variable range display; EQ position switch; tape monitor. Center frequencies 16, 32, 63, 125, 250, 500, 1k, 2k, 4k, 8k, 16k, 32k Hz; boost/cut range  $\pm 12/\pm 3$  dB; FR 5-100,000 Hz  $-3$  dB; S/N 100 dB; THD 0.01%, 20-20,000 Hz; input sens/imp 0.5 V/47k ohms; max input/output 6/6 V; gain 0 dB; power consumption 12 W;  $16\frac{1}{16}'' \times 9\frac{1}{32}'' \times 6\frac{1}{32}''$ ; 13.2 lb \$200

**SH 8040 Space Dimension Controller**

Designed to provide surround sound from 2 speaker systems. Features dimension/signal-level display; source/tape monitor switch; echo position switch; dimension echo, ambience controls; mic level control; FR 20-150,000 Hz  $+0/-3$  dB line in and playback, 30-30,000 Hz mic; THD 0.05% line and playback, 0.06% mic; S/N 101 dB line in and playback, 62 dB mic; input sens/imp 0.5 V/22k ohms line in and playback, 1.6 mV/10k ohms mic; output level 0.5 V line

(Continued on page 181.)

**NEED MORE INFORMATION?**  
Write directly to the manufacturer or distributor. A list of names and addresses starts on page 25.

# 13

# Digital Audio

## AKAI

### CD-D1 Compact Disc Player

Front-loading CD player with all controls on front panel. Features high-speed random access and programmed music selection; programmable playback of up to 24 selections; 1-touch selection; instantaneous change from one selection to start of next; repeat playback; memory skip; index search; time search; pause; indicates elapsed time of each selection and total time from beginning of disc. Quantization rate 16-bit liner/channel; error correction code CIRC; sampling frequency 44.1 kHz; transmission bit rate 4.3218 Mbaud/sec; FR 20-20,000 Hz  $\pm 0.5$  dB; S/N > 90 dB; dynamic range > 90 dB; ch sep > 90 dB; high-frequency distortion < 0.005%; W&F of crystal-oscillator accuracy; output level 2.0 V rms (100% mod); fast forward/backward time approx 4 secs; random-access time average 3 sec; 17.3"W  $\times$  5.7"H  $\times$  12.6"D; 16.3 lbs. .... \$1,000

## DUAL

### CD 120 Compact Disc Player

Front-loading vertical-play Compact Disc player with programmable operation for up to 15 selections. Features electronic index with display of total playing time and number of titles; display of title number and individual playing time; time display of title in progress; indicator display of total amount of program completed; music title selection forward and reverse; cue function in automatic 30-sec steps; adjustable headphone output; adjustable amplifier output; fixed level amplifier output. FR 5-20,000 Hz  $\pm 0.5$  dB; THD 0.03%; S/N 90 dB; crosstalk 85; W&F  $\pm 0.001\%$ ; 12 $\frac{1}{2}$ "  $\times$  5 $\frac{1}{4}$ "H  $\times$  9 $\frac{1}{4}$ "W ..... \$900

## FISHER

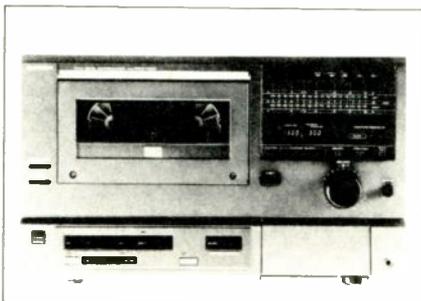
### AD850 Compact Disc Player

Vertical-play Compact Disc player with programmed auto playback, random access, sample scanning, synchronous recording with compatible Fisher products, and soft-touch controls. Dynamic range > 90 dB ..... \$1,000

## HITACHI

### PCM-V300E Digital Audio Recorder

Portable digital audio recorder for recording and playback on VHS format videocassettes. Features low-



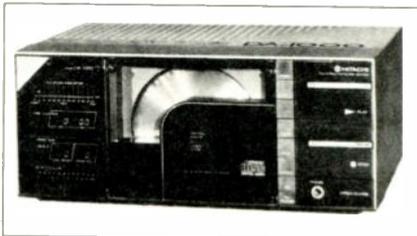
noise sample/hold IC; A/D and D/A converters; VCR servo mechanism controlled by the PCM processor's quartz oscillator; Data Slice Level Control circuit sets optimum data sep level for improved tape interchangeability; digital mute function records "0" digit signals for editing during taping; feather-touch IC logic control; built-in microcomputer provides auto rewind, memory rewind, and timer record and play; tape counter with address search. NTSC system TV signal mode; 2-channel stereo; 44,056 Hz channel sampling; 14-bit linear quantization; FR 20-20,000 Hz; 85 dB dynamic range; < 0.03% distortion at 1 kHz; speed deviation and W&F below measurable range; line input 300 mV rms; line output 1 V rms; power consumption 55 W; 435mmW  $\times$  270H  $\times$  306D; 16 KG ..... \$3,500

### DA-800 Compact Disc Player

Horizontal-playing Compact Disc player with random memory programming for selecting cuts and order of play. Features Self Program Search System to play first few seconds of each cut; forward and backward skip; fast forward and reverse with audible program; index search; pause; repeat of any selection, entire disc, or any segment, any number of times; adjustable output; display of number of cuts on disc and total time; display of elapsed time of cut being played. FR 5-20,000 Hz  $\pm 0.5$  dB; dynamic range 95 dB; S/N 95 dB; THD 0.003% at 1 kHz; W&F of quartz accuracy; crosstalk 94 dB at 1 kHz; quantization 16 bits linear/ch; sampling frequency 44.1 kHz; error-correction code CIRC; channel-modulation code EFM (8 to 14); channel bit rate 4.3218 Mb/sec; output voltage 2.5 V max; power consumption 23 W; 435mmW  $\times$  110mmH  $\times$  264mmD; 5.9 kg ..... \$1,000

### DA-1000 Compact Disc Player

Front-loading vertical play Compact Disc player with semiconductor laser pick up. Features forward and



reverse; cue, repeat and auto search; program playback of up to 15 selections; precise ( $\pm 0.1$  micron) mecha-tronics guidance system to keep the beam accurately centered over correct track. FR 20-20,000 Hz  $\pm 0.5$  dB; dynamic range > 90 dB; THD < 0.03%; W&F quartz accuracy; crosstalk 60 dB; sampling frequency 44.1 kHz; error correction code CIRC; channel modulation code EFM; 320mmW  $\times$  145mmH  $\times$  234mmD; 5.6 kg. .... \$1,000

## JVC

### Compact Disc Player

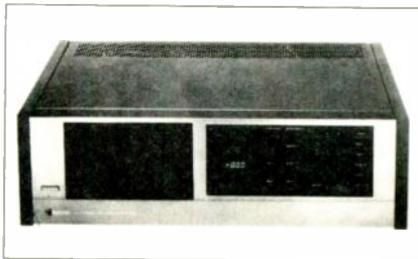
Front-loading Compact Disc player with soft-touch

function controls. Features CIRC error correction; random track selection; CLEAR button; CALL button; quick check play (to play first 2 secs of each 30-sec portion); skip play to next track or return to the beginning of selection; REPEAT button; multi-function fluorescent display shows program number, play time, elapsed time; headphone output with volume control; fixed and variable line outputs; 12 $\frac{1}{16}$ "W  $\times$  5 $\frac{1}{16}$ "H  $\times$  9 $\frac{1}{16}$ "D; 12.3 lbs ..... \$1,000

## KYOCERA

### DA-01 Compact Disc Player

Digital Compact Disc player with digital and analog filtering and random access of up to 24 programs. Features repeat; phrase memory; skip; pause; Index sensor; Track Time Indicator for playing time of each track, elapsed time, memory time; 2-speed search in forward and reverse. FR 20-20,000 Hz  $\pm 0.5$  dB; S/N > 90 dB; dynamic range > 90 dB; ch sep > 90 dB at 1 kHz; harmonic distortion < 0.005% at 1 kHz; W&F relevant to crystal quartz tolerance; audio output 2.0 V rms; quantization 16 bit linear/ch; error correction CIRC; ch modulation code EFM; ch bit ratio

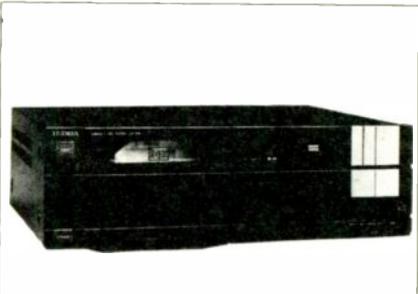


4.3218 Mb/s; power consumption 30 W. 460mmW  $\times$  132mmH  $\times$  320mmD; 18.5 lbs (8.4 kg) \$1,050

## LUXMAN

### DX-104 Compact Disc Player

Digital Compact Disc player human engineered to position all of the unit's controls within easy, logical reach. Features front drop-in loading; computerized random access; 8-program random memory; memory readout; repeat function. Frequency response 5-20,000 Hz ( $\pm 0.3$  dB); 16 $\frac{1}{2}$ "W  $\times$  5 $\frac{1}{16}$ "H  $\times$  13 $\frac{3}{4}$ "D ..... \$1,200



# WHY PUT TWO FILTERS INTO ONE GREAT COMPACT DISC PLAYER?

Kyocera goes to double lengths to make sure there's no distortion in its DA-01 Compact Disc Player. It's got both digital and analog filters—so nobody hears distortion.

## The advantage of digital and analog filtering systems.

Modern technology has made analog filters pretty effective. But there can be a problem—analog filters by themselves render limited performance. By combining an analog filter with a digital filter, and precisely applying both types in just the right way, the limitations found with analog filters are not there anymore. Thanks to the unique use of these filters, and an impressive array of very advanced circuitry, the Kyocera CD Player provides accurate, crystal-clear, life-like sound.

## The awesome specs that only digital can provide.

Needless to say, the Kyocera DA-01 comes through with some specs that are mind-boggling: A full 90 dB dynamic range... flat frequency response from 20-20,000 Hz... quiet 90 dB S/N ratio... and total isolation 90 dB channel separation.

And, just in case you didn't realize it, with the fabulous disc player system, as provided in Kyocera's DA-01 Player, there is no contact between disc and playback head. No tics, clicks, pops, scratches or record wear. And the DA-01 plugs right into your present audio system—Kyocera or others—just like a conventional turntable.

## Easy to use, but total control of every function.

The DA-01 is easier to use than a modern cassette deck—slide the compact disc into the disc compartment, shut the door and hit the play button. With the DA-01's feather-touch controls, you can play the whole thing (60 minutes a side)...repeat a track...scan...pause...skip...advance...index...and program up to 24 different segments with an electronic memory. A functional LED digital panel tells you program running time and just where the optical scanner is on the disc.

Admittedly, our DA-01's are carried only by selected dealers. If you have trouble finding one, contact: Kyocera International, Inc., 7 Powder Horn Drive, Warren, NJ 07060 (201) 560-0060.



**KYOCERA**

CIRCLE NO. 42 ON READER SERVICE CARD

**MAGNAVOX**

**FD3000SL Compact Disc Player**

Front-loading Compact Disc player with 15-track multimode programming. Features auto slide-out drawer for loading; track skip; "go to" for selection of specific track; search; repeat; pause; digital filtering; high-stability digital-to-analog conversion; laser pickup with nonpolarizing interference free beam; single-stage servo tracking; soft muting; low power dissipation for cooler operation; servo-controlled direct-drive motor; long-life ambient-temperature semiconductor laser. FR 20-20,000 Hz  $\pm 0.3$  dB; phase linearity  $\pm 0.5^\circ$ ; S/N (dynamic range)  $> 90$  dB; channel sep  $> 86$  dB; THD  $< 0.005\%$ ; IMD  $< -86$  dB; W&F quartz crystal precision; maximum output level (at MSB) 2 V rms, typical; output imp  $< 100$  ohms; minimum load imp 10 kOhms; material/finish polystyrene, with extruded aluminum profiles;  $16\frac{1}{2}''\text{W} \times 3\frac{1}{2}''\text{H} \times 12\frac{1}{2}''\text{D}$ ;  $13\frac{1}{2}$  lbs ..... \$900



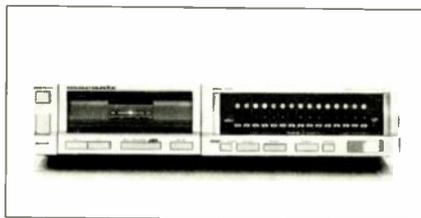
$16\frac{1}{2}''\text{W} \times 3\frac{1}{2}''\text{H} \times 12''\text{D}$  (lid closed),  $16\frac{1}{2}''\text{W} \times 7\frac{1}{2}''\text{H} \times 12''\text{D}$  (lid open), 13 lbs ..... \$800

**FD1000SL.** Similar to FD2000SL except  $12\frac{1}{2}''\text{W} \times 3''\text{H} \times 10\frac{1}{2}''\text{D}$  (lid closed),  $12\frac{1}{2}''\text{W} \times 7''\text{H} \times 10\frac{1}{2}''\text{D}$  (lid open), 11 lbs ..... \$800

**MARANTZ**

**CD-73 Gold Compact Disc Player**

Drawer-loading Compact Disc player with random programming of up to 15 cuts in any order with skip forward to next cut in sequence. Features scan/search; repeat cut or side; cue by cut number; display of present and upcoming cut number; CANCEL function to delete cut from program; gold-plated signal-output connectors; provision for optional remote control. Rumble, none; W&F, none; FR 20-20,000 Hz; dynam-

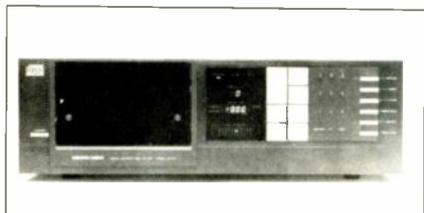


ic range 90 dB; S/N 90 dB; ch sept 90 dB; THD 0.005%;  $16\frac{1}{4}''\text{W} \times 5\frac{1}{4}''\text{H} \times 11\frac{1}{2}''\text{D}$ ; 17.5 lb ..... \$1,000

**MICRO SEIKI by SAE**

**CD-M1 Compact Disc Player**

All touch-controlled Compact Disc player with ten-key control. Features index and time search; repeat and

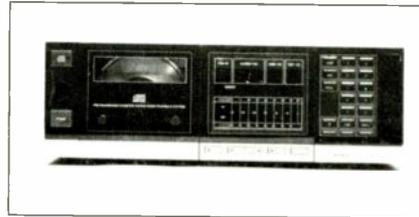


phrase memory; analog and digital filtering; LSI circuitry. FR 20-20,000 Hz; 90 dB S/N; 90 dB channel sep; THD below 0.05% ..... \$1,100

**MITSUBISHI**

**DP-101 Compact Disc Player**

Vertical-play Compact Disc player with full programmability and wireless infrared remote control. Fea-



tures forward and back skip; audible scan/search; repeat functions; cue by cut number, index number, and time; programming of 30 cuts in any order with repeatable sequence and skipping to next or previous cut in sequence; meters showing laser position or signal level; display showing cut number, elapsed time, index number, and next cut; headphone-level adjustment. FR 20-20,000 Hz  $\pm 0.01$ ,  $-0.3$  dB; ch sep 104 dB at 1 kHz, 83 dB at 20 kHz; S/N 97 dB A-wtd, 92 dB unwt; intermodulation distortion 0.014% ref to both 0 and  $-20$  dB; THD 0.0056% ref to 0 dB, 0.008% ref to  $-20$  dB; headphone output 0.57 V into 8 ohms, 7.56 V into 600 ohms; max line output level 1.56 V ..... \$1,100

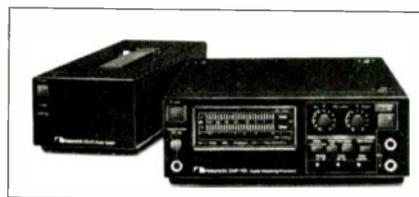
**DP-103 Compact Disc Player**

Front-loading vertical-play Compact Disc player with 3-beam laser pick-up for more precise accuracy and better stability against mechanical shocks or vibrations. Features motor-driven sliding tray for loading discs; control features: play, pause, forward skip, reverse skip, forward scan, reverse scan, repeat, stop fluorescent-meter display and function illumination. FR 5-20,000 Hz  $\pm 0.5$  dB; sampling frequency 44.1 kHz; analog/digital conversion 16-bit, linear; THD  $< 0.004\%$  (at 10 kHz, 0-dB input); dynamic range  $> 90$  dB (at 1,000 Hz); crosstalk  $> 90$  dB (at 1,000 Hz); W&F below measurable limits;  $13.7''\text{W} \times 3.9''\text{H} \times 12.6''\text{D}$  ..... \$695

**NAKAMICHI**

**DMP-100 Digital Mastering Processor**

Digital mastering processor for use with any NTSC-C compatible VCR; (VHS, Beta, U-Matic, or  $\frac{1}{4}$ -inch). Features choice of EIAJ 14-bit of 16-bit encoding; efficient high-frequency (100 kHz) DC-DC converter; special high-performance capacitors to reduce distortion. Nominal specifications: FR 10-20,000 Hz  $\pm 0.5$  dB; dynamic range (re 1 kHz, 0 dB) 14-bit, 88 dB; 16 bit, 92 dB; THD 0.006% 14 bit; channel sep 80 dB; W&F beneath measurable limits. Guaranteed minimum specifications: FR 10-20,000 Hz  $\pm 1$  dB; dy-



amic range, 16-bit, 90 dB; THD, 16-bit, 0.006%;  $4\frac{1}{4}''\text{W} \times 3\frac{3}{4}''\text{H} \times 12\frac{1}{2}''\text{D}$ ; 6 lb 10 oz ... \$1,990

**NEC**

**CD 803E Compact Disc Player**

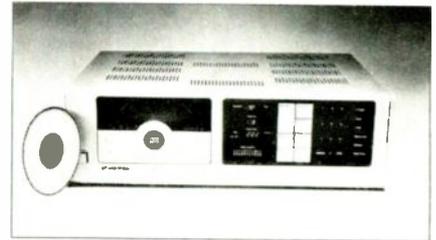
Front-loading Compact Disc player with programmable operation for up to 99 selections, and digital and analog filtering. Features 4-mode playing time indica-

tor; selection repeat; remote control; audible cue and review; time-controlled auto start; semiconductor laser pickup. FR 5-20,000 Hz  $\pm 0.5$  dB; dynamic range 90 dB or more; THD 0.01% or less (5-20,000 Hz); W&F equal to crystal oscillator accuracy; sampling frequency 44.1 kHz; quantization 16 bits linear/ch;  $430\text{mmW} \times 150\text{mmH} \times 360\text{mmD}$ ; 12 kg ..... \$1,300

**PHASE LINEAR**

**9500 Compact Disc Player**

Compact Disc player utilizing 2 separate digital-to-analog converters for improved performance. Programmable for up to 24 selections in any sequence. Also features phrase repeat, index and time programming; repeat function and memory recall; pause, fast scan and skip controls. Dynamic range 92 dB; FR 20-



20,000 Hz; channel sep 92 dB; THD 0.005%; output imp 10 ohms;  $17\frac{1}{2}''\text{W} \times 5\frac{1}{2}''\text{H} \times 12\frac{1}{2}''\text{D}$  . \$995

**SANSUI**

**PC-V1000 Compact Disc Player**

Slim-line design with horizontal front loading and total push-button or push-pad operation. Features wireless remote control for random access to individual tracks; Intro play; repeat between any two points on a disc; other automatic functions; track-number displays; time display; precision servo systems for control of main and feed motors; 3-beam laser pickup system; combination digital-analog filter for minimum analog processing. FR 5-20,000 Hz  $\pm 0.5$  dB; S/N  $> 90$  dB; ch sep  $> 90$  dB; THD  $< 0.004\%$ ; W&F unmeasurable ..... \$1,000

**PC-X1 Tricode PCM Digital Audio Processor**

Permits digital recording and playback at the slow Extended Play (EP) speed on any VCR. Video format NTSC TV; PCM format EIAJ, STC-007 digital-audio-standard; FR 5-20,000 Hz; S/N  $> 85$  dB; dynamic range  $> 85$  dB; THD  $< 0.01\%$ ; W&F unmeasurable; sampling frequency 44.056 kHz; quantization 14 bits linear ..... \$1,000

**SANYO**

**DAD-8 Compact Disc Player**

Front-loading vertical-play Compact Disc player with 10-digit keypad for memory programming or up to 16 selections. Features real-time counter; random access; fast forward and reverse network of micro-switching protected by a durable membrane with



LEDs indicating mode selection. FR 5-20,000 Hz; S/N  $> 90$  dB; ch sep  $> 90$  dB; THD 0.006% (1,000 Hz); quantization 16 bits linear;  $13\frac{3}{4}''\text{W} \times 5\frac{1}{2}''\text{H} \times 10\frac{1}{4}''\text{D}$  ..... \$900

# HITACHI introduces the next generation in sound...



...and gives you  
a choice of styles  
and features.

## A technological breakthrough in audio that delivers finer sound reproduction than ever before possible.

The dream is now reality. Introducing the most perfect sound system in audio history. The Hitachi DA-1000 and DA-800 Compact Disc Players. This revolutionary breakthrough in audiotronics shatters the limitations of even the finest analog stereo system. There is greater dynamic range. Virtually no distortion. No wow and flutter. No acoustic feedback. No record wear. The result is the purest, cleanest sound, absolutely faithful to the original recording.

As a leader in this new frontier of digital



sound, Hitachi gives you a choice — vertical or front load players. With 10 key or two key programmability and visible or hidden disc design. Both offer advanced features like forward and reverse, cue, repeat and auto search for a unique sound experience. Now you can

“be there” for the live performance without ever leaving your living room.

Until you own Hitachi's Compact Disc Player, you've yet to hear the true sound of quality.



**HITACHI**  
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CIRCLE NO. 50 ON READER SERVICE CARD

SHARP

DX-3 Compact Disc Player

Front-loading vertical-play Compact Disc player with programmable operation for up to 20 selections. Features semiconductor laser pickup; program indicator for track and time; forward and backward skip; repeat and pause functions. FR 5-20,000 Hz  $\pm$ 0.5 dB; dynamic range 90 dB; THD immeasurable; W&F immeasurable; level fluctuation below measurable levels; crosstalk 60 dB at 1 kHz, 10 kHz; sampling frequency 44.1 kHz; quantization 16-bit linear; modulation



EFM; error correction CIRC. 7 kg; 330mmW  $\times$  148mmH  $\times$  230mmD..... \$995

SONY

PCM-F1 Digital Audio Processor

Digital audio processor for recording and playback with any VCR. Controls include; headphone volume; rec level; meter adjustment; muting; copy; rec mute. Features Cyclic Redundancy Check Code error correction to detect 99.9985% of dropout errors; word interleaving and linear interpolation systems; copper-finished chassis and copper screws; mic amp; 24-element LED meters reading from -50 to 0 dB; auto peak hold; digital copy out; auto emphasis detector; gold-plated inputs and outputs; 3-way power supply. W&F immeasurable; dynamic range > 90 dB 16-bit, > 86 dB 14-bit; sep > 80 dB; FR 10-20,000 Hz  $\pm$ 0.5 dB; distortion < 0.005% 16-bit, < 0.007% 14-bit; sampling rate 44,056 Hz; quantization 16-bit and 14-bit; power consumption 17 W; 8.5"  $\times$  3.25"  $\times$  12.12"; 8 lb 13 oz ..... \$1,900

PCM-701ES. Similar to PCM-F1, except ac-powered for stationary use, and works with external mixer. Compatible with any VCR usable in the US. Finished in black anodized aluminum. Features digital copy output; 28-segment peak meters. Dynamic range > 90 dB 16-bit, > 86 dB 14-bit; harmonic distortion < 0.005% 16-bit, 0.007% 14-bit; FR 10-20,000 Hz  $\pm$ 0.5 dB; W&F unmeasurable..... \$1,100

CDP-701ES Compact Disc Player

Twin-monaural Compact Disc player designed for audiophiles. Features Random Music Sensor to program up to 8 cuts; Location Search for access by time or index numbers; Music Scan for 10-sec sample of each



cut; Auto Music Sensor for direct access to start of cuts; 2-speed manual search forward and backward with audible monitoring; repeat of passage, track, or disc; wireless remote control (with batteries); digital indication of track number, index number, elapsed time of track, time left on disc; bar graph shows number of tracks, length, total playing time of disc, pickup position; 2 digital-to-analog converters; double-isolated subchassis for laser transport; separate integrators, line amps, buffer amps, high-order low-pass filters; metal-encased analog output amp; shielded power supply; metal-film resistors. Comes with disc-cleaning cloth and connecting cord. Dynamic range 95 dB at 1 kHz; THD < 0.003%; FR 5-20,000 Hz  $\pm$ 0.5 dB; stereo sep > 90 dB at 1 kHz; W&F beneath measurable limits; line output 2 V rms, load imp > 10k ohms; 17"W  $\times$  4.25"H  $\times$  15.25"W; 25 lbs 7 oz (11.5 kg) ..... \$1,500

CDP-101 Compact Disc Player

Compact Disc player with automatic front loading, via a motor-driven horizontal loading platform. Features feather touch controls; Play, Pause and Fast-Scan; Sony RM-101 full function wireless remote control; automatic music sensor (permits access to any selection on the disc at the touch of a button); programmable repeat function multifunction fluorescent display of track number and time of selection; advanced error-correction circuits; reliable servo systems for speed, focus and tracking; polypropylene capacitors; metal film resistors; gold plated output jacks; black, anodized aluminum finish; dynamic range of over 90 dB; signal to noise ratio over 90 dB; channel sep over 90 dB; W&F so low it cannot be measured; flat FR across the entire audible range; negligible distortion; 14"W  $\times$  4 1/4"H  $\times$  12 1/4"D..... \$900

# THE TURNTABLE THAT BEAT THE COMPACT DISC

In a recent test done by **Popular Hi-Fi**, all four reviewers chose the Linn Sondek LP12 Turntable over the Compact Digital Disc.

"The Compact Disc Player sounds impressive at first, probably due to its relative absence of surface noise but once the music starts there is something which tells you immediately that it is wrong." — Chris Thomas

"All the key musical elements were there, but the subtle nuances of the music — delicate cymbal playing, intricate guitar work and so on — were missing which made the overall presentation of the music less convincing and involving than that provided by the analogue front end." — Simon Davies

"... although it was better than we had anticipated, it still was far behind our reference Linn/Ittok/Asak T combination in pure sound quality." — Chris Frankland

"In my view it still has some way to go before it is as good as the best analogue disc playing systems." — Jonathan Kettle

For a complete reprint of the review, and other information on the turntable that beat the compact disc, circle the reader service number listed below.



For further information contact

AUDIOPHILE SYSTEMS LTD., 6842 HAWTHORN PARK DR., INDIANAPOLIS, INDIANA USA 46220  
ALDBURN ELECTRONICS LTD., ONTARIO, CANADA

CIRCLE NO. 44 ON READER SERVICE CARD

TECHNICS

SV-P100 Digital Cassette Deck

Stereo digital cassette deck uses pulse-code modulation to record on, play back from, standard VHS videocassette. Features LSI IC-chip digital signal processing; versatile editing capabilities; liquid-crystal display tape counter, level display meters (includes peak hold); input, output terminals for direct dub from second SV-P100; recessed power switch to prevent accidental power off; headphone, microphone jacks on front panel; fade-in/out control; motor-driven cassette holder; dew lamp; soft-touch transport controls; automatic recording possible with audio timer. FR 2-20,000 Hz  $\pm 0.5$  dB; harmonic distortion  $< 0.01\%$  at 1Hz, 0 dB; dynamic range  $> 86$  dB; input sens/imp 30 mV/10k ohms line, 0.7 mV/600 ohms microphone, 1 V p-p/75 ohms digital; output level/imp 400 mV/600 ohms line, 1 V p-p/75 ohms



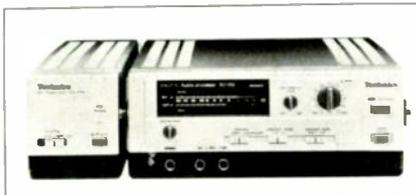
(video format); record/play time 2 hours maximum; power consumption 85 W;  $16\frac{1}{16}''$ W  $\times$   $13\frac{3}{8}''$ H  $\times$   $10\frac{1}{16}''$ D; 46.3 lb ..... \$3,000

SV-110 PCM Digital Audio Processor

Digital audio processor designed for PCM recording and play back in combination with a videocassette recorder; designed to match appearance of home audio system components and video recorders. Features up to 6 hours continuous recording; digital dubbing capability; connections for 2 VCRs; 2-way digital copying; 2-color peak-hold FL meters (-25 dB to +6 dB); headphone level control; built-in microphone amp; playback mute cancel switch for cue and review monitoring ..... \$800

SV-100 Digital Audio Processor

Digital audio processing for digital audio recording and playback. Features semiconductor circuitry for compact size; quick and accurate adjustment; 2-color

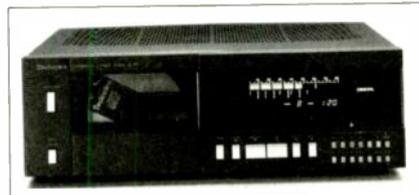


FL meters for accurate indication; two complete sets of video input/output jacks, one set on side and one on rear. PCM standard EIAJ; quantization linear 14-bit; decoding linear 14-bit; FR 2-20,000 Hz  $\pm 0.5$  dB; harmonic distortion  $< 0.01\%$ ; 1kHz, 0 dB; dynamic range  $> 86$  dB; power supply ac/dc/car battery. Main unit  $9\frac{7}{8}''$ W  $\times$   $3\frac{3}{8}''$ H  $\times$   $9\frac{1}{16}''$ D; ac power unit  $3\frac{1}{8}''$ W  $\times$   $3\frac{3}{8}''$ H  $\times$   $9\frac{1}{16}''$ D; main unit 6.4 lb; ac power unit 5.1 lb ..... \$900

SL-P10 Compact Disc Player

Fully programmable Compact Disc player with LSI cir-

cuitry. Features microcomputers for random access system control, FL display drive, digital slicer, and optical pickup position control; multi-function display; random access programming capability for up to 63 selections; intro-skip plays first few seconds of each song; repeat function for entire disc or program contents; pickup position indicator in disc holder section FL display; control key indicators; a. tomatic disc loading; FR 4-20,000 Hz; dynamic range 90 dB or more; S/N 90 dB or more; THD 0.004% or less at 1 kHz, 0 dB; channel sep 90 dB or more; W&F quartz



crystal oscillator precision;  $16\frac{1}{16}''$ W  $\times$   $5\frac{1}{4}''$ H  $\times$   $12\frac{1}{2}''$ D; 22 lb ..... \$1,000

YAMAHA

CD-1 Natural Sound Compact Disc Player

Front-loading, sliding-disc-tray Compact Disc player. Features high-gain phase detector tracking servo; error correction; twin D/A converters; low-pass filters; Yamaha pure-current dam; programmed sequence playback for up to 15 selections; repeat playback; phrase playback. FR 10-20,000 Hz  $\pm 0.5$  dB; THD  $< 0.005\%$ ; dynamic range 90 dB; channel sep 90 dB at 1 kHz; W&F crystal oscillator accuracy; fixed level output 2 V rms maximum; variable level output 0.3-3.6 V rms;  $17\frac{1}{8}''$ W  $\times$   $4\frac{3}{8}''$ H  $\times$   $14''$ D; 29 lb 11 oz ..... \$1,395

Speakers

Speakers

(Continued from page 149.)

TSR110.2. Similar to TSR112.2 except only 1 woofer,  $\frac{3}{4}''$  tweeter; veneer finish on particle board. Low-end response 45 Hz; crossovers 300 and 3.5k Hz; max power 150 W; sens 88 dB;  $27''$  H  $\times$   $13\frac{3}{4}''$ D  $\times$   $13''$ W ..... \$1,100/pr

TSR108.2. Similar to TSR110.2 except no midrange driver or controls. Maximum power 100 W; crossover 3.5 kHz;  $22\frac{3}{4}''$ H  $\times$   $12''$ W  $\times$   $11\frac{1}{4}''$ D ..... \$900/pr

TSR102.2. Similar to TSR108.2 except has  $4\frac{1}{2}''$  woofer. Low-end response 75Hz; max power 60 W; sens 83 dB;  $16''$ H  $\times$   $7\frac{1}{2}''$ D  $\times$   $7\frac{1}{4}''$ W ..... \$650/pr

E Series Speaker System

E 90. Bass-reflex 3-way speaker system 2 10" woofers, 2  $3\frac{1}{16}''$  midranges, 1" horn-loaded compression tweeter. Features midrange, tweeter controls; 4th-order Butterworth crossovers; walnut-veneer finish; matched left, right pairs. FR 30-18,500 Hz; max power 140 W; sens 95 dB SPL/W/m; imp 8 ohms;  $44\frac{1}{2}''$ H  $\times$   $15''$ W  $\times$   $14\frac{3}{4}''$ D ..... \$1,950/pr

Mach Series Speaker Systems

MACH 9. Bass-reflex 3-way speaker system with  $9\frac{7}{8}''$  woofer, 2  $3\frac{1}{16}''$  midranges, 1" horn-loaded compression tweeter. Features automatic-reset thermal overload protection; 6-LED power indicator; midrange, tweeter controls; 4th-order Butterworth crossovers; walnut-veneer finish. FR 50-17,000 Hz; max power 200 W; sens 94 dB SPL/W/m; imp 8 ohms;  $32\frac{1}{2}''$ H  $\times$   $13\frac{3}{8}''$ W  $\times$   $12\frac{1}{16}''$ D ..... \$1,510/pr

MACH 7. Similar to MACH 9 except has single midrange driver. Low-end response 55 Hz; max power 150 W;  $26\frac{1}{16}''$ H ..... \$1,240/pr

MACH 5. Similar to MACH 7 except has no midrange driver or control; has only 2-LED power indicator.

Low-end response 62 Hz; max power 125 W;  $22\frac{3}{16}''$ H  $\times$   $11\frac{1}{16}''$ D ..... \$810/pr

MACH 3. Similar to MACH 5 except low-end response 65 Hz; max power 100 W;  $9\frac{1}{16}''$ D ..... \$530/pr

YAMAHA

NS-2000 Speaker System

3-way acoustic-suspension speaker with 13" woofer of pure carbon fibre. Features rounded baffle-board construction; flush-mounted drivers; offset grille cover; centered in-line array; thick internal baffle boards; hand-selected walnut wood; midrange 8.8 cm ( $3\frac{1}{2}''$  beryllium dome; tweeter 3 cm  $1\frac{1}{16}''$  beryllium dome; max power 125 W; sens 90 dB SPL/W/m; FR 28-20,000 Hz;  $29\frac{3}{4}''$   $\times$   $17\frac{1}{8}''$   $\times$   $15\frac{3}{8}''$  ..... \$3,000/pr

NS-1000M Speaker System

Speaker system with 11.8" woofer, 3.46" midrange, 1.18" tweeter. Features vapor-deposition beryllium-dome drivers; midrange, tweeter level controls; ebony cabinet with semigloss black finish; detachable black grille; sold in mirror-image pairs only. Frequency range 40-20,000 Hz; crossovers 500 and 6,000 Hz;

sens 90dB SPL/W/m; maximum power 100W; imp 8 ohms;  $26\frac{1}{2}''$ W  $\times$   $14\frac{3}{4}''$ H  $\times$   $12\frac{3}{4}''$ D ..... \$950/pr

Natural Sound Series Speaker Systems

NS-70T. Acoustic-suspension 3-way bookshelf speaker system with 25-cm woofer, 6-cm midrange, 3.5-cm tweeter. Features midrange, tweeter level controls; American walnut finish; FR 25-20,000 Hz; crossovers 800 Hz and 5,000 Hz; maximum power 140 W music; sens 88dB SPL/W/m; imp 6 ohms \$375/pr

NS-50T Similar to NS-70T except has no midrange driver, control. Crossover 1.5kHz; maximum power 120 W; artificial walnut finish ..... \$260/pr

NS-30T. Similar to NS-50T except has 20-cm woofer. Low-end response 40 Hz; crossover 1.5 kHz; maximum power 100 W ..... \$190/pr

NS-20T. Similar to NS-30T except has 20-cm woofer. Maximum power 80 W ..... \$145/pr

NS-10M Speaker System

Acoustic-suspension 2-way bookshelf speaker system with 7" woofer,  $1\frac{1}{4}''$  soft-dome tweeter. Features black wood finish. FR 60-20,000 Hz; crossover 2 kHz; efficiency 90 dB/W/m; max power 50 W peak; imp 8 ohms;  $15''$ W  $\times$   $8\frac{1}{2}''$ H  $\times$   $7\frac{3}{8}''$ D ..... \$155/pr

NOTICE TO READERS

Prices of items described are manufacturers' suggested prices only and are subject to change without notice. Actual selling prices are determined by the dealers.

# 14

# Pocket Stereo

## AIWA

### HS-T02 Auto-Reverse Pocket Stereo

AM/FM stereo tuner and cassette player with NR and antiroll mechanism. Features cue and review; metal-tape compatibility; electronic pause; 2 headphone jacks; ac adapter jack. Comes with lightweight headphones and belt hook ..... \$140

### HS-P05 Cassette Pocket Stereo

Pocket cassette player with headbandless earphones. Available in choice of color, measuring 1" thick and weighing 8.1 oz with batteries ..... \$90

### CR-02 AM/FM Pocket Stereo

Card-size AM/FM pocket stereo with headbandless earphones and automatic turn-on. Comes with case and 2 AAA batteries. 0.5" thick  $\times$  < 4"H; 2.3 oz \$70

### HR-S02 Radio Headphones

Wireless folding headphones with built-in AM/FM radio. Jack allows other headphones, cassette recorder, or other audio components to be plugged in. Features samarium cobalt drivers; telescopic whip antenna; sep 40 dB for FM stereo ..... \$70

### Pocket Stereo Micro Speakers

**SC-A2Y.** Dynamic Super Loudness internal amplification speaker systems with independent power supply and internal on/off switching. Designed for use with any pocket stereo system. Comes with connection cord ..... \$80/pr  
**SC-A5Y.** Similar to SC-A2Y ..... \$65/pr

## AKAI

### PM-R1 Pocket Stereo

Portable AM/FM auto-reverse cassette player. Features AM/FM stereo tuner pack with stereo/mono switch; auto stereo indicator; phone jacks; metal tape compatibility; ultra-lightweight headphones; push-button tape transport controls; audio mute; dual power source ac/dc ..... \$150

## ALARON

### RY-82 Pocket Stereo with Powered Speakers

AM/FM-multiplex radio with powered speaker system, stereo cassette player: cassette slides out to play through headphone, and tape stop, operates on 4 AA batteries or 6-V DC adapter; radio/speakers operate on 4 C batteries or 6V dc adapter (batteries and adapters not included); headphone and carrying strap for cassette included; radio/speakers: 15"  $\times$  2"  $\times$  3 1/4"; pocket cassette player ..... \$75

### RY-90 Pocket Stereo

Stereo cassette recorder/player with AM/FM-multiplex radio; "hot line" talk button, 2 condenser mics for stereo recording; auto record level control; auto tape shut-off; operates on 4 AA batteries (not included) or 6-V DC adapter (not included); headphone, carrying case with belt loop and strap included; 6 1/8"  $\times$  3 3/8"  $\times$  1 1/4" ..... \$60

### RY-71 Pocket Stereo

Stereo cassette player and AM/FM-multiplex radio with "hot line" talk button and condenser micro-

phone; auto tape shut-off; two volume controls; belt clip; operates on 4 AA batteries (not included) or 6-V dc adapter (not included); headphones, carrying case and tape pouch included; 6 3/4"  $\times$  3 3/4"  $\times$  1 1/4" ..... \$50

### RY-72 Pocket Stereo

Stereo cassette player and FM-multiplex radio features auto tape shut-off; operates on 4 AA batteries (not included) or 6-V dc adapter (not included); headphones, carrying case and strap included; 6 7/8"  $\times$  3 3/4"  $\times$  1 3/8" ..... \$40

### RY-77 Pocket Stereo

AM/FM-multiplex featherweight headphone radio with adjustable headband that folds up for storage. Features foam-padded earpieces; LED stereo indicator; in-out jack; doubles to connect with other personal or home stereos (connecting cables not included); operates on 2 AA batteries (not included) ..... \$30

### RY-64 Pocket Stereo

AM/FM-multiplex pocket stereo is calculator size; operates on 2 AAA batteries (not included); headphone and carrying pouch with belt loop included; 3 7/8"  $\times$  2 3/8"  $\times$  1/2" ..... \$26

### RY-64/A Pocket Stereo

AM/FM-multiplex pocket stereo is pocket calculator size; 2 volume controls; operates on 2 AAA batteries (not included); folding/collapsible headphone, carrying pouch with belt loop and strap included; 4"  $\times$  2 1/2"  $\times$  1/2" ..... \$22

### RY-62 Pocket Stereo

AM/FM-multiplex pocket stereo operates on 3 AA batteries (not included); belt clip, headphone included; 4 1/8"  $\times$  3 3/8"  $\times$  1 1/8" ..... \$20

### RY-63 Pocket Stereo

FM-multiplex pocket stereo operates on 3 AA batteries (not included); belt clip; headphone included; 5"  $\times$  2 7/8"  $\times$  1" ..... \$16

## AUDIOSOURCE

### EQ-3 Pocket Equalizer

Slimline equalizer for pocket stereos with slide controls offering  $\pm$ 10 dB at 60 Hz, 250 Hz, 1,000 Hz, 3,500 Hz, 10,000 Hz; AA batteries included... \$40

### LS-6 Pocket Stereo Speaker

For use with pocket stereos. Features internal amplification; optional leatherette case ..... \$40/pr

## CLEAR

### SWC-838 Pocket Stereo

Portable stereo cassette player with auto reverse and 2 headphone jacks. Features Powermax Recharging Module that separates from player to plug into ac socket for recharging. Comes with Micro-Lite headphones, soft case with belt loop. 6"  $\times$  3.5"  $\times$  1.25"; 14 oz ..... \$160

### SWC-818 AM/FM Stereo Cassette Player

Pocket cassette player with Powermax recharging system (NiCad battery module that features slide out

110 V ac prongs); overnight recharging. When Powermax reaches full charge, prongs are retracted and module slips in position for up to 10 hours of use. Comes with 2 matched-output Micro-Lite headsets, soft case with belt attachment ..... \$140

### EWR-501 Pocketman

AM/FM pocket stereo features selection of up to 10 preset stations (five AM and five FM), as well as "seek" mode; Powermax recharging system; charge will deliver up to 10 hours; comes with a pair of Micro-Lite stereo headphones and soft case ..... \$90

### SR-301 Pocketman

Shirt-pocket-size AM/FM stereo receiver includes Clear powermax recharging system with built-in NiCad cells. Comes with a pair of Micro-Lite stereo headphones with samarium cobalt drivers, soft foam ear pads, stainless steel adjustable headband, and 6-foot cord with mini stereo jack; built-in 1 1/2"-diameter micro speaker; retractable dipole antenna, stereo indicator, charge indicator, fitted soft case; 2 7/8"  $\times$  5 1/4"  $\times$  3/4" ..... \$60

### SR-303 FM Stereo Receiver

FM pocket stereo features Powermax recharging system that permit NiCad batteries to be recharged from any wall outlet. Includes Micro-Lite stereo headphones, soft case ..... \$50

### AWS-08 Amplified Speaker System

Amplified 2-way free-edge speaker system capable of sound pressure level of 90 dB/W/m. Output power 2.8 W rms; FR 70-20,000 Hz; automatic power shut-off; 4" driver and 1 1/2" dome tweeter; powered by four C-cells or an external 6-volt DC adapter; comes complete with soft carrying case and shoulder strap ..... \$55

### DAC-12 Output Adapter

Features dual-voltage, dual-output adapter. Mini plugs provide 6-V dc output from any 110- or 220-V ac source ..... \$20

## dbx

### PPA-1 Personal Portable Decoder

Lightweight (3.2 oz) adapter decodes dbx-encoded cassettes; "dbx B" position gives good results with Dolby-B cassettes. Connects to headphone jack of personal portable; headphones plug into PPA-1. Dynamic range 90 dB; frequency response (dbx type II) follows decoding curve 50-15,000 Hz  $\pm$ 1.5 dB; THD < 0.3% at 1,000 Hz; output noise -90 dBV; input levels 100 mV nominal; 300 mV maximum for dbx-encoded tapes; 1 V maximum for other encoded and unencoded tapes; maximum output > 25 mW into 32 ohms, both channels, designed to drive typical lightweight headphones; imps: input 180 ohms, output 3.3 ohms, compatible with typical pocket stereo cassette players; powered by two AAA batteries (not included); 3 V dc nominal, will operate down to 1.8 V; 4 3/8"W  $\times$  1 1/4"H  $\times$  1 1/16"D ..... \$49

## FISHER

### PH45 Dolby Pocket Stereo

Dolby stereo cassette player with AM/FM slide-in tun-

er pack. Features auto reverse; metal tape capability, stereo playback; lightweight stereo headphones; built-in speaker for listening without headphones... \$190

### GENERAL ELECTRIC

#### 7-1900 Pocket Stereo

FM/AM/FM stereo headset radio with ETS. Features pushbutton station frequency scanning; memory for 8 stations (4 FM, 4 AM) with recall of programmed stations or the last station played; LCD digital display; top-mounted headphone jack; samarium cobalt headphones; belt clip..... \$70

#### 7-1750 Pocket Stereo

AM/FM/FM stereo headset radio small enough to slip into a shirt pocket. Features built-in AFC on FM, thumbwheel volume and tuning controls, stereo LED indicator; removable belt clip; button-type headphones with samarium cobalt magnets and removable headband; uses 2 AAA batteries (not included); 2 1/4"W x 4 1/8"H x 1/2"D..... \$52

#### 7-1250 Pocket Stereo

AM/FM stereo radio with built-in automatic frequency control and stereo LED indicator. FM antenna in headphone cord; button type headphones with or without removable headband; uses 2 AAA batteries (not included); 2 1/2 oz..... \$31

#### 7-1600 Pocket Stereo

AM/FM headset radio fits into shirt pockets. Features separate left/right volume controls; LED stereo indicator; slide-rule dial scale with thumbwheel tuning control; built in AFC on FM; uses 3 AAA batteries (not included); 2 3/8"W x 5 1/4"H x 1 3/8"D; 10 1/2 oz. \$28

### JVC

#### CQ-F22K Pocket Stereo

Auto-reverse cassette player, AM/FM tuner unit, power pack and system headphones, in pocket format. Features Dolby D decoding; metal-tape capability; folding headphones; anti-roll mechanism; high/low tone switch. FR 30-16,000 Hz, W&F 0.2% wrms (metal); 0.67 lbs with batteries; tuner pack 2.1 oz; power pack 2.3 oz with batteries; includes carrying case..... \$190

#### CQ-11K Stereo Cassette

Auto-reverse cassette player. Features Dolby B decoding; anti-roll mechanism; high/low tone switch; headphones; 0.67 lbs with batteries..... \$120

#### CQ-R10K AM/FM Stereo System

Compact AM/FM headphone radio system. Separate tuner, power packs can be mounted on either side of the headphones, 2.3 oz with batteries. Features mono/stereo mode selection; FM stereo indicator; FM rod antenna; FM AFC; folding headphones..... \$80

#### S-A3 Mini-Speaker System

Acoustic-suspension mini-speaker cubes designed for use with headphone stereo units, with built-in amplifiers and batteries to boost signal level. Also have inputs to be driven by line level signals. Automatic switch off if no signal from headphone stereo unit. Max power handling 3 W; output 84 dB SPL/W/m; FR 100-20,000Hz, 1.3 lbs each (without batteries); 4 C batteries required for each speaker..... \$85

### KENWOOD

#### CP-80 Stereo Cassette Player

Auto-reverse stereo cassette player with Dolby. Features FM/AM tuner pack; micro stereo speaker system; metal tape position; auto reverse on/off switch; microheadphones with removable headband... \$190  
**CP-60.** Same as CP-80 without micro speaker system or FM/AM tuner pack..... \$130

#### CR-50B AM/FM Stereo Cassette Recorder

Pocket stereo recorder with built-in mono microphone and speaker. Features built-in AM/FM stereo tuner; metal tape position; stereo speakers; stereo micro-

phone jack; LED indicators for FM stereo and battery; tape counter; FM mono/stereo selector; operates on 4 AA batteries (not included); black finish..... \$170  
**CR-50R.** Same as CR-50B but red color finish \$170

#### CP-20 Auto-Reverse Stereo Cassette Player

Auto-reverse stereo cassette player with program button. Features anti-rolling, high-inertia tape transport; coreless electronic servo motor; metal tape capability; micro headphones; 2 headphone jacks..... \$130

#### WM-32 AM/FM Pocket Stereo Receiver

AM/FM stereo receiver with LED indicators for AM fine tuning and FM stereo. Features 1-hour power off; FM mono/stereo selector; micro headphones; 20 mW/ch..... \$80

**FM-32.** Similar to WM-32 but FM mono/stereo only. Silver finish..... \$70

**FM-32B.** Same as FM-32 but black finish..... \$70

**FM-32R.** Same as FM-32 but red finish..... \$70

#### SL-A32 AM Solar Receiver

Solar-battery-powered AM receiver with pocket clip and monaural earphone included..... \$35

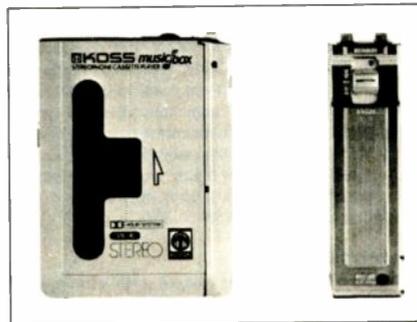
### KOSS

#### A1A Cassette Player/Digital Tuner

Pocket-sized personal stereo with digital tuner. Features LCD readout; station memory; safety LED that lights when SPL reaches or exceeds 95 dB; steady frequency during temperature or battery-V changes; two-stage FM FJET front-end; Auto-Search; Auto-Scan; 2-speed automatic accelerated station scanning; auto interstation mute..... \$110

#### A2B Music Box

Dolby B personal stereo cassette player with safety LED that lights when SPL reaches or exceeds 95 dB.



Features end-of-tape stop; dual stereophone jacks; Koss Sound Partner stereophones..... \$110

#### A1B Music Box

Personal AM/FM stereo receiver with safety LED that lights when SPL reaches or exceeds 95 dB. Features 2-stage J-FET RF amplifier; low V integrated circuits; FM Quadrature detector; phase-locked-loop integrated circuit; power light indicator; tuning indicator; external power jack; FM stereo light; built-in FM and AM antenna system; volume slide controls; tuning thumbwheel; power switch; AM/FM band selector; tone selector; sensitivity selector..... \$80

### PANASONIC

#### RQ-J20X Mini Stereo Cassette with dbx

Stereo mini cassette player with decoding for dbx-encoded tapes and CrO<sub>2</sub> tape selection. Features built-in mic with on/off switch; auto stop; cue and review; lockable pause; LED battery indicator; sliding volume control; jack for DC power when used with optional ac adapter, model RP-34; optional rechargeable battery pack, model RP-009; comes with case; belt to wear on shoulder or waist..... \$150

#### RX-1940 Pocket Stereo

FM/AM/FM stereo cassette player with slim-line design and lightweight headset. Features metal and nor-

mal tape capability; auto stop mechanism; pause function; slide-rule tuning dial; LED indicators display battery power conditions and FM stereo reception..... \$100

#### RQ-AR1 Auto-Reverse Cassette Player

Auto-reverse stereo cassette player with feather-touch controls and remote operations. Features manual fast forward and rewind controls; automatic reverse function; anti-rolling mechanism; metal or normal tape selector; high and low tone selector; LED battery indicator; lightweight stereo headphones; second headphone jack; AM/FM stereo tuner on FM stereo tuner optional..... \$100

#### RX-1955 FM Stereo and Cassette Recorder

FM stereo and cassette recorder with recording through stereo mic-in jack or directly from built-in FM stereo tuner. Features lightweight stereo headphones; carrying holder; shoulder strap; separate left and right volume controls; selector switch for Metal (in playback mode), CrO<sub>2</sub>, and normal; auto stop; runs on 2 AA batteries (not included); optional ac adapter \$99

#### RX-1935 FM Radio and Cassette Player

FM radio and cassette player with slim design. Features lightweight headset; cue; review; 2 LED indicators for battery power and FM stereo reception; metal/normal tape selector; mechanical pause; runs on 4 AA batteries (not included) or with optional ac power cord..... \$90

#### RQ-J70F Cassette Player and FM Tuner

Cassette player with a stereo FM tuner that connects directly into the circuitry of the cassette player. Features metal and normal tape capability; tone control; headphone jacks; auto stop; cue and review; lockable mechanical pause; LED operation indicator; stereo headphones; runs on 2 AA batteries (not included); rechargeable batteries available..... \$70

#### RQ-J2 Ultra-Mini Stereo Cassette Player

Mini stereo cassette player with selector for metal and normal tape. Features auto stop; high/low tone selector; feather-light stereo headset; foam earpieces; second earphone jack; LED battery-strength display \$80

#### RQ-J75 Mini Stereo Cassette Player

Mini stereo cassette player for normal tapes. Features tone selector; cue and review control; lockable pause button; rotary volume output control; LED operation indicator; automatic end of tape shut off; carrying bag; deluxe quality headphones; optional rechargeable battery; 5 1/4"H x 3 1/2"W x 1 1/8"D; 9 oz \$50

#### RQ-J55 Mini Stereo Cassette Player

Mini stereo cassette player with metal/normal tape selector. Features rotary volume output control; auto end of tape stop function; lockable pause button; stereo headphones; shoulder belt; silver finish; 6 1/8"H x 3 1/8"W x 1 1/8"D; 13 oz..... \$35

#### RF-444 Receiver

Lightweight FM/AM/AF stereo headphone receiver with belt clip and ultra-light stereo headphones. Features 2 step hi/low tone control; LED FM stereo indicator; fixed AFC on FM; runs on 2 AAA batteries (not included); 4.2 oz..... \$28

### PIONEER

#### PKF9/SV Pocket Stereo

Pocket stereo features auto-reverse cassette player; built-in AM/FM stereo tuner; Dolby NR; music search; soft-touch controls; dual-flywheel anti-roll mechanism; dual-capstan operation; metal tape capability; tone control; auto shutoff; stereo/mono switch. Accessories: case, shoulder strap, band headphones, batteries. 5.7"H x 3.2"W x 1.3"D; 14.3 oz \$200

#### PKR7AW/RD Pocket Stereo

All-weather pocket stereo with play/record capability and auto-reverse. Features Dolby NR; music search; soft-touch operation; anti-rolling mechanism (dual flywheels); dual capstans; metal tape capability; all-

weather headphones (earphone type); one-point stereo mic (all weather); auto shutoff. Accessories included: belt hanger, shoulder strap, batteries. 4.6"H x 3.4"W x 1.3"D; 15.2 oz ..... \$190

**PK5AW/YL Pocket Stereo**

All-weather pocket stereo with auto-reverse and Dolby NR. Features music search; soft-touch operation; anti-rolling mechanism (dual-flywheel); dual-capstans; metal tape capability; all-weather headphones (earphone type); dual-headphone jacks; auto shutoff. Accessories: belt hanger, shoulder strap, batteries. 4.6"H x 3.4"W x 1.3"D; 15.0 oz ..... \$170

**PK3/SV Pocket Stereo**

Pocket cassette player with auto-reverse operation; soft-touch control; antiroll mechanism; dual-capstan operation; metal tape capability; 2 headphone jacks; tone control; auto shutoff. Accessories: case, shoulder strap, batteries. 4.2"H x 3.0"W x 1.1"D; 10.0 oz ..... \$130

**QUASAR**

**3682 Pocket Stereo**

AM/FM pocket stereo tuner/deck that detaches from main portable cassette recorder features 1-touch recording; metal, CrO<sub>2</sub> tape playback and recording; cue and review controls; lightweight stereo headphones; full auto stop; LED recording, battery level, stereo, and tuning indicators; separate bass, treble, and balance controls; digital tape counter; built-in condenser; auto level control ..... \$290

**GX3683 Pocket Stereo**

Compact FM stereo cassette recorder with lightweight headphones, built-in microphone; input jacks for stereo mic and 1-touch record. Features LED function indicator; cue and review; dc input jack ..... \$120

**SANYO**

**MG110DT Pocket Stereo**

Mini-size cassette player with AM/FM tuner pack, anti-rolling mechanism, auto reverse, Dolby NR, metal tape capability and lightweight stereo headphones. Removable AM/FM tuner pack fits neatly inside cassette compartment; soft-touch transport functions; twin LED indicators show tape direction; operates off 2 AA batteries or external power (with optional ac adaptor); comes with case and shoulder strap, demo tape, owner's manual. W&F 0.15% wrms; S/N 64 dB; FR 40-15,000 Hz; 3/8"W x 4/8"H x 1/8"D ..... \$140

**MG100 Pocket Stereo**

Mini-size stereo cassette player with auto reverse, Dolby NR, mute switch and metal tape capability. Features foam-cushioned, lightweight stereo headphones; plays all tape types; mute switch; soft-touch play control; LED tape-direction indicators; locking fast forward and rewind; operates on batteries or external ac with optional adaptor. W&F 0.15% wrms; S/N 68 dB; FR 40-15,000 Hz; 3/8"W x 4/8"H x 1/8"D ..... \$120

**MG36D Pocket Stereo**

Mini-size AM/FM stereo radio/cassette player with stereo headphones, metal tape capability, anti-rolling mechanism and Dolby NR. Features dual, shock-resistant, counter-rotating flywheel; foam-cushioned, lightweight stereo headphones; auto-stop; locking fast forward and rewind; built-in radio; separate left and right volume controls; high/low tone switch; LED power/battery, FM stereo and Dolby NR indicators; operates on optional dc car adapter, batteries, or optional ac adaptor; comes with shoulder strap and case. W&F 0.3% wrms; S/N 57 dB; FR 40-14,000 Hz; 3/8"W x 5/8"H x 1/8"D ..... \$100

**MG34DT Pocket Stereo**

Mini stereo cassette player with Dolby NR, AM/FM tuner pack, anti-rolling mechanism, metal tape capability and lightweight stereo headphones. Removable AM/FM tuner pack fits neatly inside cassette compartment; LED indicators monitor battery life, tuner

operation and FM stereo reception; comes with case, shoulder strap, instructions; operates off 2 AA batteries or external power with optional ac adaptor. W&F 0.25% wrms; S/N 58 dB; FR 40-14,000 Hz; 3"W x 4 3/8"H x 1 1/8"D ..... \$90

**MG35 Pocket Stereo**

Mini-size AM/FM stereo radio/cassette player with stereo headphones, metal tape capability, and anti-rolling mechanism. Features dual, shock-resistant, counter-rotating flywheels; auto-stop; locking fast forward and rewind; built-in radio; separate left and right volume controls; high/low tone switch; LED power/battery and FM stereo indicators; thumbwheel tuning; operates on batteries or external ac with optional adaptor; comes with foam-cushioned, lightweight stereo headphones, shoulder strap, and case. W&F 0.3% wrms; S/N 57 dB; FR 40-14,000 Hz; 3/8"W x 5 1/2"H x 1 1/8"D ..... \$80

**MG90 Pocket Stereo**

Mini-size stereo cassette player with auto/manual reverse, metal tape capability and lightweight stereo headphones. Features locking fast forward and rewind; operates on 2 AA batteries (not included) or optional ac adaptor; includes case, shoulder strap and owner's manual. W&F 0.3% wrms; S/N 57 dB; FR 40-14,000 Hz; 3/8"W x 4 1/8"H x 1 1/8"D .. \$70

**MG32 Pocket Stereo**

Mini-size AM/FM stereo radio/cassette player with stereo headphones, anti-rolling mechanism and mute switch. Features auto-stop; locking fast forward and rewind; LED FM stereo and battery indicators; tone, volume, and balance controls; AM/FM stereo mode selector; operates on batteries or external ac with optional adaptor; comes with shoulder strap, case, belt clip. W&F 0.4% wrms; S/N 45 dB; FR 63-10,000 Hz; 3/8"W x 6 1/8"H x 1 1/8"D ..... \$70

**MG1 Pocket Stereo**

Ultra-mini stereo cassette player with stereo headphones, metal tape capability, mute switch and anti-rolling mechanism. Features feather-weight stereo headphones; soft-touch play control; mute switch; separate balance and volume controls; operates on internal batteries or external power with optional adaptor; auto off; LED indicator lights; pitch control permits adjusting playback speed. W&F 0.25% wrms; S/N 40 dB; FR 40-16,000 Hz; 4"W x 3"H x 1/4"D .. \$60

**MG16D Pocket Stereo**

Mini-size stereo cassette player with stereo headphones, metal tape capability, anti-rolling mechanism and Dolby NR. Features extra-rugged tape mechanism; foam-cushioned, lightweight stereo headphones; slide hi/low tone switch; auto-stop; locking fast forward and rewind; separate volume and balance controls; operates on batteries or external ac with optional adaptor; comes with case and shoulder strap. W&F 0.3% wrms; S/N 57 dB off, 67 dB on; FR 40-14,000 Hz; 3/8"W x 4 1/8"H x 1 1/8"D ..... \$60

**MG31 Pocket Stereo**

Mini-size AM/FM stereo cassette player with metal tape capability and lightweight stereo headphones. Features locking fast forward and rewind; powered by 4 AA batteries (not supplied) or optional ac adaptor; comes with shoulder strap, case, owner's manual. W&F 0.25% wrms; S/N 48 dB; FR 63-14,000 Hz; 3/8"W x 6 1/8"H x 1 1/8"D ..... \$50

**RP77 Pocket Stereo**

AM/FM stereo radio with lightweight stereo headphones, and built-in arcade-type games, LCD clock

display. Features 3-position switch to select digital time display or either of 2 game variations on the LCD screen; spare headphone jack; game sound effects can be heard through headphones; precise slide-rule tuning dial for radio; FM stereo LED indicator; hi-lo tone switch; uses 3 AA cells; 3"W x 5 1/8"H x 1 1/8"D ..... \$50

**M6060 Pocket Stereo**

Mini stereo cassette player with stereo headphones, metal tape capability, auto-reverse/replay system and pulse drive governor operation. Features rugged cabinet and dual, shock-resistant, counter-rotating flywheels; auto replay when rewound to the beginning; high/low tone control; tape-direction and battery-check LEDs; variable pitch control; locking fast forward and rewind; comes with ultra-lightweight, foam cushioned stereo headphones and quilted white nylon case with support straps and pouch for extra cassette. W&F 0.12% wrms; S/N 50 dB; FR 40-14,000 Hz; 4 1/2"W x 6 1/8"H x 1 1/8"D ..... \$40

**MG15 Pocket Stereo**

Mini-size stereo cassette player with stereo headphones, metal tape capability, and auto-stop. Features fast-wind (forward or reverse) with sound; anti-rolling mechanism prevents W&F caused by movement; auto-stop; locking fast forward and rewind; separate balance, volume controls; high/low tone switch; operates on batteries or optional ac adaptor; comes with headphones, case, and shoulder strap. W&F 0.3% wrms; S/N 57 dB; FR 40-14,000 Hz; 3/8"W x 4 1/8"H x 1 1/8"D ..... \$40

**RP66 Pocket Stereo**

AM/FM stereo radio with lightweight stereo headphones, tone switch, and slide rule tuning. Features slide-rule tuning; hi/low tone switch; band selection switch; FM stereo indicator; mini-size stereo headphone jack; operates on 2 AA batteries; belt clip; 2 1/2"W x 4 1/8"H x 1/8"D ..... \$35

**MG7 Pocket Stereo**

Mini-size stereo cassette player with stereo headphones. Features foam-cushioned, adjustable stereo headphones; auto stop; locking fast forward; separate left and right volume controls. Operates on batteries, with optional dc car adapter or external ac power with optional adaptor. Comes with carrying strap. W&F 0.25% wrms; S/N 48 dB; FR 63-13,000 Hz; 3/8"W x 5 1/8"H x 1 1/8"D ..... \$20

**Pocket Stereo Speakers**

**MSP10 Mini Speakers**

Micro-size speaker system with built-in stereo power amplifier powered by 4 C batteries (not supplied) or optional adapters. Features auto off; LED power features "Amp-In" and "Direct-In" jacks for use with or without built-in amplifier; comes with instruction book and 4 feet of speaker wire and ac adapter connecting cord. 2.4 W/ch; imp 4 ohms; FR 90-20,000 Hz; speaker size 2 1/2" dia.; 3/8"W x 4 1/8"H x 3 1/2"D ..... \$50

**MSP20 Mini Speakers**

Mini-size speaker system with built-in stereo 3-W power amplifier and auto power switching, for use with Sportster headphone portables. Features "Amp-In" and "Direct-In" jacks for use with or without amplifier; operates off 4 "C" size batteries or optional ac adaptor. Comes with instruction book and 4 feet of speaker cord; auto power switching circuit shuts itself off automatically when not in use. Imp 4 ohms; speaker size 3" dia.; FR 100 Hz-20,000 Hz; 3/8"W x 5 1/8"H x 3 1/2"D ..... \$70

**B10 Mini Speakers**

Two-way auxiliary speaker system with built-in amplifier. Features 2-position tone control; operates on conventional household current. Features 4" woofer and 4" passive radiator for extended bass response; audio mute circuit; mode switch selects mono or stereo. Output power 15 W/ch rms; 5 1/8"W x 11 1/4"H x 8 3/8"D ..... \$100

**Audio terms are defined  
in the glossary on page 19.**  
**For an explanation of abbreviations,  
turn to the list on page 22.**

**SONY**

**WM-D6 Pocket Stereo**

Walkman Professional pocket stereo and miniature home cassette deck. Features quartz-locked capstan servo system and disc drive; Dolby NR; featherweight MDR-50L headphones; recording capability; 5-LED record-level meter; 3-position tape selector; W&F >0.04%; playback speed control; line in/line out-jacks; stereo mic input; 4-way power supply capability ..... \$350

**WM-F2 Pocket Stereo**

Walkman stereo cassette-corder with built-in FM tuner. Can record off the air or via optional ECM-101 mic; includes featherweight MDR headphones; mic input; metal tape playback; counter-inertial flywheel; instant edit; one-button recording; DX/local switch ..... \$220

**WM-R2 Pocket Stereo**

Walkman stereo cassette-corder with built-in shock mounted stereo mics. Features featherweight MDR stereo headphones; counter-inertial flywheel; instant edit; pause control; metal tape playback; auto shut-off; silver or black ..... \$200

**WA-55 Pocket Stereo**

Soundabout AM/FM stereo cassette-corder. Features built-in stereo mics; records off built-in AM/FM tuner; built-in monaural speaker; lightweight MDR stereo headphones; instant edit; local/DX sensitivity; 3-digit tape counter ..... \$200

**WM-7 Pocket Stereo**

Luxury Walkman with auto reverse, Dolby NR and feather-touch operation. Perfect for travel or commuting. Features auto reverse; feather-touch controls; Dolby NR; remote control positioned on headphone cord for start/stop/reverse play; featherweight MDR headphones; auto play ..... \$170

**WA-33 Pocket Stereo**

Soundabout AM/FM pocket stereo cassette-corder. Features featherweight MDR headphones; 2-inch dynamic speaker; recording from AM/FM tuner; metal tape playback; auto music sensor; record mute; stereo mic input ..... \$150

**WM-F5 Pocket Stereo**

Water-resistant Walkman cassette player with built-in FM tuner. Features rubber bushings for volume and tuning, rubber gasket for cassette compartment, plus heavy-duty door latch; FM stereo indicator LED; disc drive; soft-touch controls; water-resistant earphones; 2 headphone jacks; LED battery indicator; DX/local switch ..... \$150

**WM-5 Pocket Stereo**

Ultra-mini Walkman stereo cassette player. Features silver or black finish; featherweight MDR-30 headphones; counter-inertial flywheel; 2 headphone jacks; metal tape playback; auto shut off ..... \$130

**TCS-350 Pocket Stereo**

Full feature stereo cassette-corder for music and voice recording. Features built-in electret condenser



stereo mics; MDR stereo headphones; built-in monitor speaker; one touch recording; instant edit; three digit tape counter; auto record level control ..... \$110

**WM-10 Super Walkman**

Pocket stereo cassette player with same dimensions as cassette box. Features Dolby NR; up to 5 hours of play with single AA battery (optional EBP-10 external battery pack holds 2 AA batteries for 13 hours of play); brushless, slotless motor; metal tape compatibility; FG servo speed regulation; counter-inertial flywheel; auto stop. Comes with MDR-W30 headphones and carrying clip. 6.4 oz with battery ..... \$100

**WM-F10.** Similar to WM-10 except also has FM-stereo tuner with local/distant sens switch and headphone-cord antenna ..... \$130

**WM-F1 Pocket Stereo**

Stereo cassette player with built-in FM tuner. Features featherweight MDR headphones; headphone cord serves as FM antenna; counter-inertial flywheel; metal tape playback; 2 headphone jacks; distant/local sens selector; built-in belt clip ..... \$100

**WM-4 Pocket Stereo**

Compact Walkman stereo cassette player. Features featherweight MDR-1 headphones; counter-inertial flywheel; 2 headphone jacks; metal tape playback; built-in belt clip ..... \$75

**SRF-33W Pocket Stereo**

Walkman radio with FM and AM reception. Features ultra-light MDR headphones; LED tuning indicator; top-mounted controls; distant/local sens selector; 2 headphone jacks; adjusting belt clip ..... \$65

**SRF-5 Pocket Stereo**

Water-resistant Walkman FM radio with miniature ear-

phones. Features LED stereo indicator; soft-touch controls ..... \$55

**SRS-F10 Powered Speakers**

Cassette-sized AM/FM stereo folding active speaker system for use with pocket stereos. Features AM/FM indicator; LED battery/operation indicator; tension film diaphragm; built-in headphone amp; telescoping FM antenna; AM ferrite bar antenna; local/distant sens switch ..... \$70/system

**SRS-10 Powered Speakers**

Folding active speaker system for use with pocket stereos. Features internal amps (which also drive 2 extra headphones); tension-film diaphragms; flat square mylar diaphragms; samarium cobalt magnets. 2" x 2" ..... \$50/system

**SHARP**

**QT-19 Pocket Stereo With Amp and Speakers**

FM/cassette pocket stereo with separate amplifier section (containing AM tuner) and 2 speakers detachable from amp section. AM radio usable when pocket stereo is removed. Features touch reverse; anti-rolling mechanism; metal-tape compatibility; soft-touch controls; lightweight earphones; auto power off when phones unplugged; ac adapter. Red or black. Pocket stereo 125mmW x 81mmH x 30.4mmD; 276 g (0.61 oz) without batteries (uses 2 AA cells). AM tuner/amp section: 165mmW x 117mmH x 59mmD, 402 g (0.89 lbs) without batteries (uses 4 C cells). Complete (pocket stereo, amp/AM tuner, and speakers): 320mmW x 117mmH x 59mmD; 2.79 bs (1.25 kg) without batteries ..... \$230

**WF-9BR Pocket Stereo**

FM/cassette pocket stereo with dynamic earphones and touch reverse. Features anti-rolling mechanism; metal-tape compatibility; soft-touch controls; auto off; includes carrying holder. 125mmW x 81mmH x 30.4mmD; 9.7 oz (276 g) without batteries (uses 2 AA cells) ..... \$140

**FM-5R/3L FM Pocket Stereo**

Ultra-compact FM pocket stereo with presets for 2 stations. Features auto off; 5-g earphones; front clip for pockets; earphone-cord antenna; manual tuning; stereo/mono switch; comes with 2 AAA batteries. 53mmW x 95mm x 17mmD; 2.4 oz (68 g) without batteries ..... \$55

**TEAC**

**PC-7R Pocket Stereo**

Portable stereo cassette player with dbx NR and auto reverse. Features independent volume controls; 2 headphone jacks; HP-7 ultra-lightweight headphones; normal/metal tape selector switch; carrying case and belt hook. Options include TP7 AM/FM stereo tuner (\$70); HP-30 "Stereoights" headphones, LS-X3 internally amplified mini speaker system (\$50). FR 40-15,000 Hz (metal tape); S/N 82 dB (with dbx); 12 oz (with dc 3V batteries); 4 7/16"W x 3 1/16"H x 1 3/16"D ..... \$210

**Signal Processors**

**Signal Processors**

(Continued from page 171.)

in and rec out; max input 4.5 V line in and playback, 150 mV mic; max output 4.5 V; gain 0 dB; echo time 64 msec; sound image localization 30° backward; power consumption 11W; 16 1/16"W x 11 1/2"H x 2 1/2"D; 7.1 lb ..... \$200

**SH-8025 Graphic Equalizer**

Stereo 7-band equalizer with center frequencies at 63, 160, 400, 1k, 2.5k, 6.3k, 16k Hz. Features boost/cut 12 dB; low-noise amps; calibrated decibel scale; tape monitor. FR 5-100,000 Hz -1 dB; THD

0.005% 20-20,000 Hz; S/N 110 dB; input sens/imp 1 V/47k ohms; max input/output 8/8 V; rated output 1 V; power consumption 8 W. 16 1/16"W x 7 7/16"D x 3 11/32"; 4.4 lbs ..... \$150

**VECTOR RESEARCH**

**VQ-100 Graphic Equalizer**

Stereo 10-band graphic equalizer with low distortion, wide dynamic range. Features discrete circuit design; unity gain adjust to prevent overloading; separate left, right output-level LEDs; infrasonic filter; equalized tape recording capability; tape monitor function; accessory ac outlet. Center frequencies 32, 63, 125,

250, 500, 1k, 2k, 4k, 8k, 16k Hz; boost/cut range ±10 dB; gain 0 ±1 dB; FR 5-100,000 Hz ±1 dB; THD 0.005% at 2 V output; S/N 80 dB unwt'd at 2V input; unity gain range 0 to -20 dB ±1 dB; input/output imp 22k/470 ohms; max output 10 V; sep 40 dB at 10 kHz; power consumption 22 W; 17 1/16"W x 9 3/16"D x 4 1/4"H; 9 lb 11 oz ..... \$250

**YAMAHA**

**GE-5 Graphic Equalizer**

Stereo 10-band graphic equalizer with Spatial Expander system. Features preamp, tape switching; all special effects can be added to recordings ..... \$245

# 15

# Car Stereo

## ADS

### Amplifiers

**P120.** Stereo power amplifier for 4 and 8 ohm loads with load-sensing feedback control system. Speaker connectors have high-current spring-loaded terminals; screw-clamp power connectors; terminal blocks sized to handle wire up to 10 gauge size; input connectors are RCA jacks. Output power 60 w/ch into 4 ohm loads, from 20 to 20,000 Hz; <0.1% THD; 40 w/ch into 2 ohm loads <0.3% THD, and 50 W/ch into 8 ohms <0.06% THD. In the mono bridged mode: output power 90 W into 4 ohm loads, from 20 to 20,000 Hz, with <0.3% THD; 11.22"W x 1.97"H x 6.14"D; 6.4 lbs. .... \$330

**P80.** Similar to P120 except output power 40 w/ch RMS into 4 ohms, from 20 to 20,000Hz, <0.1% THD; 30 w/ch into 2 ohms <0.3% THD; 35 w/ch into 8 ohms <0.06% THD. .... \$260

### ADS Automotive Loudspeaker

**320i.** Wide-dispersion acoustic-suspension speaker with 1" soft-dome tweeter with inside dome damping and a long-excursion water-resistant 5/8" woofer with ADS' Stiffite® cone and butyl rubber surround. Tweeter and woofer have high-temperature all-metal voice-coil assemblies. Features black matte finish, frameless black metal grille. FR 50-20,000 Hz  $\pm 3$  dB; imp 4 ohms nominal; efficiency 90dB SPL from 2.8 vrms ("1 W") pink noise input, measured at 1 meter; crossover 2500Hz with 12dB/Oct slopes; power rating 50 W nominal, 100 W max peak program; 8.45"W x 5.7"H x 1.6"D, with grille; 3/4 lb. .... \$378/pr

## AIWA

### Cassette Radios

**CTR-70.** In-dash AM/FM radio/cassette player with digital synthesizer tuner and auto-reverse cassette deck. Features 6 AM/6 FM station presets; top-side priority-play mechanism; digital frequency display; auto-station search; locking fast forward/rewind; metal-tape capability; local/DX switch. Designed to fit X-body cars. Output power 8 W/ch. .... \$270

**CTR-50.** In-dash AM/FM radio/cassette player with auto-reverse cassette transport. Features single function forward and rewind; punch-button tuning (4 AM/1 FM or 4 FM/1 AM); local/DX switch; top side priority play mechanism. Designed for X-body cars. Output power 8 W/ch. .... \$200

**CTR-30.** In-dash AM/FM radio/cassette player with continuous silent reverse mechanism. Features high-sens AM/FM receiver; DX/local and stereo/mono switches; 6 1/2"W x 6 1/4"D x 1 1/4"H. .... \$180

**CTR-20.** In-dash AM/FM radio/cassette player with locking fast forward and auto motor stop at end of tape play. Output power 5 W/ch; 6 1/4"W x 4 3/4"D x 1 1/4"H. .... \$125

## ALARON

### Cassette Radios

**RY-747.** In-dash AM/FM stereo radio with auto-reverse cassette deck. Features short chassis with adjustable shafts; lighted slide-rule dial; LED stereo and

tape-direction indicators; pushbutton eject, stereo, rewind, fast-forward, tape program selector, mute switches; tone and balance controls; antenna trimmer; azimuth tape head adjuster; 6"W x 5"D x 1 1/4"H. .... \$80

**RY-705C.** In-dash AM/FM radio with auto-stop cassette player. Features digital frequency tuning; digital clock; built-in AFC; short chassis with adjustable shafts; mono/stereo switch; front-end antenna trimmer; azimuth tape head adjuster. 7 1/4" x 5" x 1 1/4" .... \$80

## ALPHASONIK by VISONIK

### Power Amplifiers

**A-265.** Class-A auto stereo power with low negative feedback (30 dB) and high slew rate (30V/micro-second) for low TIM. Features discrete power transistors; perma-tect circuit; class A auto stereo amp; power 65 W per channel into 4 or 2 ohms; frequency response 20-20,000Hz  $\pm 0.5$  dB; total harmonic distortion at rated power >0.01%; signal to noise ratio 85 dB; 2 1/2"W x 10 3/4"H x 6 3/4"D. .... \$350

**A-501.** Class A auto stereo power amp features switching power supply; molex harness connectors; protective circuit design; discrete power transistors; perma-tect circuit; stereo mode power 50 W per channel, both channels driven into 4 ohms; FR 20-20,000Hz  $\pm 25$  dB; total harmonic distortion at rated power >0.1%; signal to noise ratio <85 dB; 2 7/8"W x 9 1/2"H x 6 3/8"D. .... \$250

**A-240.** Auto stereo power amp with built-in noise filter to eliminate alternator whine. Features molex connectors; discrete power transistors; perma-tect circuit; power 40 W per channel into 4 ohms; FR 20-20,000Hz  $\pm 0.5$  dB; total harmonic distortion at rated power >0.5%; 2 7/8"W x 7 1/2"H x 6 3/8"D; 3 lbs. .... \$175

**A-220.** Similar to A-240 except delivers 20 w/ch (4 ohms) .... \$125

### Alphasonic Preamp Equalizer

**PEQ-7.** 7-band equalizer/preamp that takes both high (1V to 2.5V at 1000 ohms) and low level (50 to 800mV at 4K ohms). Features built-in low level fader; flexible sliding bracket allows easy installation; center detented slide controls for the 7 critical frequencies in auto stereos; FR 10-100,000Hz +0 -1dB; equalizer control frequencies 50, 150, 350, 1K, 2.5K, 6K, and 16kHz; signal to noise ratio >85 dB; total harmonic distortion 0.02%; 1 7/8"W x 6"H x 4 1/4"D. .... \$100

### Alphasonic Bass Amplifier

**AS-2001.** A universal add on subwoofer amp. Features remote operation with built-in, on off switch design; mounting bracket; Perma-Tect circuit; output power 60 wrms; FR 20-20,000Hz  $\pm 25$  dB; total harmonic distortion >0.25%; signal to noise ratio >85 dB; 5 3/4"W x 2 1/4"H x 6 1/2"D. .... \$145

### Alphasonic Amplifier Equalizer

**AEQ-720** 7-band equalizer and amp in one unit, with a preamp/EQ output for easy add on of an additional amp. Features 4 speakers, with a front/rear fader for balance adjustment; two "mini-plug" headphone

jacks; speaker on/off switch; optional HP-1 lightweight headphones; high efficiency samarium cobalt magnets; wide range 10 step total power meter; power 20 W per channel into 4 ohms; FR 20-20,000Hz  $\pm 1$  dB; total harmonic distortion >1%; equalizer control frequencies 50, 150, 350, 1K, 2.5K, 6K, and 16 kHz; S/N ratio 75 dB. Optional Hp-1 headphone specifications imp 30 ohms per channel (stereo); FR 20-20,000Hz  $\pm 3$  dB; limited one-year warranty. .... \$150

### Alphasonic Car Speakers

**D5000.** Two-way mini-speaker with 4" woofer and 1" dome tweeter in a cast aluminum housing. 50 W max; FR 50-25,000 Hz; 6 1/4" x 4 1/3"; 5lbs. ... \$276/pr

**D4000.** Similar to D5000 except FR 50-22,000 Hz and 4.4lbs. .... \$207/pr

**TP651.** 3-way system includes two 6" woofers, two 5" midranges, two dome tweeters, crossovers, and mounting hardware. .... \$200/system

**TP6951.** Same as TP651 with two 6 x 9" woofers instead of 6" .... \$200

**D5200.** Slim 2-way flush mount speaker with 4" woofer and 1" soft dome tweeter. Features gray Nextel finish; cast aluminum housing with low profile. FR 60-22,000 Hz; recommended amp power 10-50 W; 6 3/4" x 4 1/4" x 3/4"; 2.2 lbs. .... \$196/pr

**D4200.** 2-way flush-mount speaker with 4" woofer and 1" dome tweeter. FR 80-22,000 Hz; recommended amp range 10-50 W; 7 1/4" x 4 1/3" x 2"; 4 lbs. .... \$180/pr

**D3200.** Similar to D4200 but FR 60-22,000 Hz; 5-45 W power range; 6 3/4" x 4 1/4" x 1 1/4"; 3.5 lbs. .... \$160/pr

**WP-820.** 8-inch high compliance woofer with polypropylene cone and a 4 1/2 pound magnet structure, 1-inch copper clad aluminum edge wound. .... \$108/pr

**W-620.** 1-inch copper clad aluminum edge wound voice coil for higher efficiency. .... \$108/pr

**W-6920.** Edge wound voice coil. .... \$108/pr

**M-55.** Acoustically sealed midrange. .... \$52/pr

**T-35.** Sealed back mounting. .... \$27/pr

**DT-12G.** Sealed back mounting. .... \$27/pr

**DMT-1.** Dome midrange; dome tweeter; sealed from back to protect speaker; fits 4 x 6 hole. .... \$136/pr

**TPX-3.** 3-way one channel crossover network; 12 dB/Oct slope with crossover points 1000Hz and 4000Hz; power handling 150 watts. .... \$25/ea

## ALPINE

### Cassette Radios

**7347.** In-dash PLL frequency-synthesized digitally tuned AM/FM stereo radio with auto-replay cassette deck. Features dbx, Dolby B, and Dolby C noise reduction; programmable music sensor; balanced-mixer FM



tuner; dual preamp outputs; LiteTouch memory; 10 station presets; SC tape head; metal-local/distant dual-function switch; engine-noise suppressor; auto cassette glide; key-off eject; separate bass and treble; auto mute. Output power voltage 500 mV/10k ohms; W&F 0.09% wrms; FR 40-18,000 Hz  $\pm 3$  dB (metal, FeCr, CrO<sub>2</sub>), to 16,000 normal; S/N 86 dB with dbx, 72 with Dolby C, 64 with Dolby B, 55 with no noise reduction; sep 40 dB at 1 kHz; FM usable sens 16.3 dBf; FM S/N 70 dB with Dolby, 60 without; capture ratio 2 dB.  $7\frac{1}{2}'' \times 5\frac{1}{2}'' \times 2''$  H ..... \$600

**7146.** In-dash PLL frequency-synthesized, digitally tuned AM/FM stereo radio with auto-reverse cassette deck. Features Lite Touch 10-station presets; SCC tape head; memory logic; Dolby noise reduction; auto seek; metal-local/distant dual-function switch; music sensor; preamp fader; bilevel capability; illuminated cassette slot; separate bass and treble; key-off eject; engine noise suppressor. Output power 6 W at 1 kHz with 8% THD; output imp 4 ohms; wow and flutter 0.1% wrms; FR 40-16,000 Hz  $\pm 3$  dB (metal, FeCr, CrO<sub>2</sub>), to 13,000 with normal tape; tape S/N 55 dB without Dolby, 65 dB with Dolby; sep 40 dB; FM usable sens 16.3 dBf; FM S/N 60 dB Dolby off, 70 dB Dolby on; capture ratio 2 dB.  $7\frac{1}{2}'' \times 5\frac{1}{2}'' \times 2''$  H ..... \$500

**7136.** In-dash PLL frequency-synthesized, digitally tuned AM/FM radio with auto-reverse cassette deck. Features 10-station tuning presets; digital-numeric frequency display; SCC tape head; auto reverse at end of play, fast forward, rewind; key-off eject; dual-function metal/stereo switch; balance, preamp fader, Tone Tenor controls; local/distant switch; automatic loudness adjust; noise suppressor; Dolby noise reduction; locking fast forward/rewind; power antenna lead; tape-direction indicators. Output power 6 W at 1 kHz, 8% THD; output imp 4 ohms; wow and flutter 0.1% wrms; FR 40-16,000 Hz  $\pm 3$  dB metal/FeCr/CrO<sub>2</sub>, to 14 kHz normal tape; S/N Dolby off/on 55/65 dB; separation 40 dB; FM usable sens 16.3 dBf; S/N Dolby off/on 60/70 dB; capture ratio 2 dB;  $6\frac{1}{2}'' \times 5\frac{1}{2}'' \times 2''$  H ..... \$450

**7155.** In-dash PLL frequency-synthesized digitally tuned AM/FM stereo radio with auto-reverse cassette deck. Features Dolby B and C; full front DIN; bilevel capability; preamp fader; separate bass and treble; music sensor; SCC tape head; balanced-mixer FM tuner; auto dimmer; illuminated cassette loading slot; LiteTouch memory; 12 station presets; digital clock; noise suppressor. Output power 6 W at 1 kHz with 8% THD; W&F 0.1% wrms; frequency response 40-16,000 Hz  $\pm 3$  dB (metal), to 13,000 normal; tape S/N 55 dB Dolby off, 64 dB with Dolby B, 72 dB with Dolby C; sep 40 dB; FM usable sens 16.3 dBf; FM S/N 60 dB no Dolby, 70 dB with Dolby B; capture ratio 2 dB.  $7'' \times 5\frac{1}{2}'' \times 2''$  ..... \$400

**7154.** In-dash PLL frequency-synthesized digitally tuned AM/FM stereo radio with auto-reverse cassette deck. Features full front DIN; bilevel; preamp fader; separate bass and treble; music sensor; SCC tape head; balanced-mixer FM tuner; auto dimmer; illuminated cassette loading slot; 12 LiteTouch station presets; digital clock. Output power 6 W at 1 kHz with 8% THD; W&F 0.1% wrms; frequency response 40-16,000 Hz  $\pm 3$  dB (metal), to 13,000 normal; tape S/N 55 dB; sep 40 dB; FM usable sens 16.3 dBf; FM S/N 60 dB; capture ratio 2 dB.  $7'' \times 5\frac{1}{2}'' \times 2''$  ..... \$350

**7135.** Bilevel ETR/PLL AM/FM radio/cassette player with digital frequency synthesized tuning, auto-reverse transport, and SCC tape head. Features metal-tape compatibility; LiteTouch 10-station preset system; music sensor; auto seek; metal and local/distant dual-function switch; engine-noise suppression; LiteTouch memory system; separate bass and treble controls. FR 40-16,000 Hz  $\pm 3$  dB with metal tape; W&F 0.01% wrms; tape S/N 55 dB; FM usable sens 16.3 dBf;  $6\frac{1}{2}'' \times 5\frac{1}{2}'' \times 2''$  H ..... \$350

**7138.** Frequency-synthesized AM/FM radio/cassette player with 10-station tuning preset system. Features SCC tape head; memory logic electronics; Dolby noise reduction; auto seek; metal/stereo switch; stereo indicator; Tenor Tone control; auto loudness adjust; engine-noise suppression; local/distant switch; digital clock; manual up/down tuning; locking fast forward/-

rewind; cassette glide loading system; tape-direction indicators; program switch; power antenna lead. Output power 6 W at 1 kHz, 8% THD; output imp 4 ohms. W&F 0.1% wrms; frequency response  $\pm 3$  dB 40-16,000 Hz metal/FeCr/CrO<sub>2</sub>, to 13 kHz normal tape; S/N Dolby off/on 55/65 dB; sep 40 dB. FM usable sensitivity 16.3 dBf; alternate-ch sel 80 dB; capture ratio 2 dB.  $7'' \times 5\frac{1}{2}'' \times 2''$  H ..... \$350

**7128.** In-dash PLL digital frequency-synthesized AM/FM stereo radio with auto-reverse stereo cassette deck. Features metal-tape compatibility; hard Permalloy tape head; music sensor system; cassette glide lock-in insert; auto reverse at end of play, fast forward, rewind; metal/CrO<sub>2</sub>/FeCr bias switch; locking fast forward/rewind; 5-station tuner preset system; auto local/distant select; FM auto frequency control; manual tuning. Output power 2.2 W/ch continuous into 4 ohms, 70-20,000 Hz at 0.8% THD. W&F 0.1% wrms; frequency response 40-15,000 Hz  $\pm 3$  dB all tapes; S/N 50 dB; FM usable sens 2.2  $\mu$ V; sel 50 dB; S/N 55 dB;  $7'' \times 5\frac{1}{2}'' \times 2''$  H ... \$300

**7152.** In-dash PLL frequency-synthesized digitally tuned FM/AM stereo radio with auto-reverse cassette player. Features Dolby B and C; bilevel capability; balanced-mixer FM tuner; SCC tape head; bi-lite dial illumination; music sensor; metal/stereo dual-function switch; engine-noise suppressor; cassette glide. Output power 6 W at 1 kHz with 8% THD into 4 ohms; W&F 0.1% wrms; FR 40-16,000 Hz  $\pm 3$  dB (metal, FeCr, CrO<sub>2</sub>), to 13,000 normal tape; tape S/N 55 dB Dolby off, 64 dB Dolby B, 72 dB Dolby C; sep 40 dB; FM usable sensitivity 16.3 dBf; FM S/N 60 dB Dolby off, 70 dB Dolby on; capture ratio 2 dB.  $7\frac{1}{2}'' \times 5\frac{1}{2}'' \times 2''$  H ..... \$270

**7225.** High-power bilevel AM/FM-stereo receiver with auto-reverse stereo cassette deck. Features SCC tape head; metal-tape capability; metal and local/distance dual-function switch; locking fast forward/rewind; preamp fader; separate bass and treble controls; engine-noise suppression; FM afc (auto frequency control); program switch; detented volume control. Output power 16 W rms/ch into 4 ohms at 1 kHz, 8% THD. Other specifications same as for 7135 and 7140;  $6\frac{1}{2}'' \times 5\frac{1}{2}'' \times 2''$  H ..... \$250

**7151.** In-dash AM/FM stereo radio with stereo cassette deck. Features auto reverse; bilevel; balanced mixer FM tuner; Bi-Lite dial illumination; music sensor; SCC tape head; metal/stereo dual-function switch; engine noise suppressor; separate bass and treble controls. cassette glide. Output power 6 W at 1 kHz with 8% THD into 4 ohms; W&F 0.1% wrms; frequency response 40-16,000 Hz  $\pm 3$  dB (metal, FeCr, CrO<sub>2</sub>), to 13,000 normal tape; tape S/N 55 dB; separation 40 dB; FM usable sens 16.3 dBf; FM S/N 60 dB; capture ratio 2 dB.  $7\frac{1}{2}'' \times 5\frac{1}{2}'' \times 2''$  H \$200

**7124.** FM/AM cassette radio with auto reverse. Features Bi-level™ capability; SCC tape head; Metal-CrO<sub>2</sub>-FeCr switch; cassette glide™; locking fast forward and rewind; auto local/distance switching; mute switch; tape direction indicators; AFC built-in; volume control detent; program switch; FM/AM switch; stereo/mono switch; power antenna lead; stereo indicator. Output power 8W/ch 1,000 Hz into 4 ohms, at 8.0% THD. FM tuner section: usable sens 16.3 dBf 1.8  $\mu$ V (75 ohm); 50-dB quieting sens 19.2dBf 2.5  $\mu$ V (75 ohm); S/N 65 dB; alternate ch sel 50dB; capture ratio 2.0dB. Tape section: W&F 0.1% wrms; FR 40-13,000 Hz  $\pm 3$  dB; S/N 55 dB; sep 40dB ... \$200

**7150.** In-dash AM/FM radio with stereo cassette deck. Features auto reverse; built-in AFC; metal/stereo dual-function switch; cassette glide; power antenna lead; tone control. Output power 6 W at 1 kHz with 8% distortion into 4 ohms; W&F 0.1% wrms; frequency response 40-15,000 Hz  $\pm 3$  dB (metal, FeCr, CrO<sub>2</sub>), to 13,000 normal tape; tape S/N 55 dB; sep 40 dB; FM usable sens 16.3 dBf; FM S/N 60 dB; capture ratio 2 dB.  $6\frac{1}{2}'' \times 5\frac{1}{2}'' \times 2''$  H . \$160

#### Alpine Cassette Amplifier

**5114.** Compact under-dash amplifier and stereo cassette player with auto reverse. Compatible with normal, FeCr, CrO<sub>2</sub>, and metal tapes. Features cassette glide; loudness contour; locking fast forward and rewind; tape hiss canceller; separate bass and treble. Output power 6 W at 1 kHz with 8% THD into 4

ohms; wow and flutter 0.1% wrms; FR 40-16,000 Hz  $\pm 3$  dB (metal, FeCr, CrO<sub>2</sub>), to 13,000 normal; S/N 55 dB; sep 40 dB.  $6\frac{1}{2}'' \times 5\frac{1}{2}'' \times 2''$  H... \$150

#### Alpine Cassette/Preamp/Tuner

**7337.** ETR/PLL AM/FM preamplifier/tuner with stereo cassette deck. Features SC tape head; metal/stereo dual-function switch; LiteTouch 10-station tuner presets; music sensor; auto seek and FM mute; Dolby noise reduction; LiteTouch transport controls; separate bass, treble, detented volume controls; local/distant switch; fader control; key-off eject; auto cassette glide; engine noise suppressor. FR 40-18,000 Hz  $\pm 3$  dB with metal tape; W&F 0.09% wrms; S/N 65 dB, Dolby on; FM usable sens 16.3 dBf;  $6\frac{1}{2}'' \times 5\frac{1}{2}'' \times 2''$  H ..... \$500

#### Alpine Preamp/Equalizer

**3316.** 7-band graphic equalizer with subwoofer output. FR 20-30,000Hz  $\pm 3$  dB with 0.02% THD; input sens 500 mV/10,000 ohm; Equalizer frequency range 60Hz, 125Hz, 250Hz, 500Hz; equalizer tone action  $\pm 12$  dB; equalizer bands 7; (signal to noise ratio 100 dB (IHF A Weighted)); subwoofer out 500 mV/30Hz; Subwoofer crossover frequency 80Hz 12 dB/octave; size  $6\frac{1}{2}'' \times 1'' \times 4\frac{1}{2}''$  or  $160 \times 25 \times 120$ mm ..... \$200

#### Alpine Amplifiers

**3512.** 65W+65W power amplifier. Output power 65W/ch with 8% THD (min continuous average power into 4 ohms, both chs driven, at 1 kHz); 50 W/ch from 30-20,000 Hz with 0.1% THD (min continuous average power into 4 ohms, both chs driven); FR 20-60,000 Hz  $\pm 3$  dB; S/N 100dB (IHF A-weighted); speaker imp 4 ohms.  $7\frac{1}{2}'' \times 2\frac{1}{2}'' \times 7\frac{1}{2}''$  H ..... \$250

**3516.** 18W+18W power amplifier. Output power 18W/ch with 8% THD (min continuous average power into 4 ohms, both chs driven, at 1 kHz); 8W/ch from 30-20,000 Hz with 0.8% THD (min continuous average power into 4 ohms, both chs driven); FR 20-30,000 Hz  $\pm 3$  dB; S/N 75dB (IHF A-weighted); speaker imp 4 ohms.  $6\frac{1}{2}'' \times 1\frac{1}{2}'' \times 2\frac{1}{2}''$  H ..... \$60

**3518.** 40W+40W power amplifier. Output power 40W/ch with 8% THD (min continuous average power into 4 ohms, both chs driven, at 1 kHz); 30W/ch from 30-20,000 Hz with 0.1% THD (min continuous average power into 4 ohms, both chs driven); FR 20-60,000 Hz  $\pm 3$  dB; S/N 100dB (IHF A-weighted); speaker imp 4 ohms.  $7\frac{1}{2}'' \times 2\frac{1}{2}'' \times 5\frac{1}{2}''$  H ..... \$160

**3502.** 50W+50W bridgeable power amplifier. Output power 80W/ch with 8.0% THD (min continuous average power into 4 ohms, both chs driven, at 1 kHz); 50W/ch from 20-20,000 Hz with 8.0% THD (min continuous average power into 4 ohms, both chs driven); FR 10-100,000 Hz  $\pm 3$  dB; S/N 100dB (IHF A-weighted); speaker imp 4 ohms.  $7\frac{1}{2}'' \times 3\frac{1}{2}'' \times 9\frac{1}{2}''$  H ..... \$350

**3506.** 20W+20W bridgeable power amplifier. Output power 35W/ch with 8.0% THD (min continuous average power into 4 ohms, both chs driven, at 1 kHz); 20W/ch from 20-20,000 Hz with 0.04% THD (min continuous average power into 4 ohms, both chs driven); FR 10-70,000 Hz  $\pm 3$  dB; S/N 97dB (IHF A-weighted); speaker imp 4 ohms.  $6\frac{1}{2}'' \times 2\frac{1}{2}'' \times 7\frac{1}{2}''$  H ..... \$200

**3508.** 30W+30W bridgeable power amplifier. Output power 50W/ch with 8.0% THD (min continuous average power into 4 ohms, both chs driven, at 1 kHz); 30W/ch from 20-20,000 Hz with 8.0% THD (min continuous average power into 4 ohms, both chs driven); FR 10-70,000 Hz  $\pm 3$  dB; S/N 97dB (IHF A-weighted); speaker imp 4 ohms.  $6\frac{1}{2}'' \times 2\frac{1}{2}'' \times 7\frac{1}{2}''$  H ..... \$250

**3006.** 18W+18W power amplifier. Output power 18W/ch with 8.0% THD (min continuous average power into 4 ohms, both chs driven, at 1 kHz); 8W/ch from 40-20,000 Hz with 0.8% THD (min continuous average power into 4 ohms, both chs driven); FR 20-20,000 Hz  $\pm 3$  dB; speaker imp 4 ohms.  $3\frac{1}{2}'' \times 1\frac{1}{2}'' \times 6\frac{1}{2}''$  H ..... \$70

**3008.** 40W+40W power amplifier. Output power

40W/ch with 8.0% THD (min continuous average power into 4 ohms, both chs driven, at 1 kHz; 30W/ch from 30-30,000 Hz with 0.2% THD (min continuous average power into 4 ohms, both chs driven); FR 20-20,000 Hz  $\pm 3$  dB; speaker imp 4 ohms. 7-1/8" W  $\times$  2"D  $\times$  6"H ..... \$160

**Alpine Amplifier/Equalizers**

**3214.** 18W+18W 7-band graphic equalizer with amp. Output power 18W/ch 1,000Hz, 8% THD, 8W/ch 30-20,000 Hz, 0.8% THD; FR 30-30,000 Hz  $\pm 3$  dB; S/N 75dB; 5/8" W  $\times$  1 1/2" D  $\times$  5/8" H \$110  
**3023.** 18W  $\times$  2, 7-band graphic equalizer with amp. Output power 18W/ch 1,000Hz, 8% THD, 13W/ch 40-30,000 Hz, 0.8% THD; FR 20-20,000 Hz  $\pm 3$  dB; 5/8" W  $\times$  1 1/8" D  $\times$  5/8" H ..... \$150  
**3000.** 18W  $\times$  4, 5-band graphic equalizer with amp. Output power 18W/ch 1,000Hz, 8% THD, 8W/ch 40-20,000 Hz, 0.8% THD; FR 20-20,000 Hz  $\pm 3$  dB; 7/16" W  $\times$  1 1/8" D  $\times$  5/8" H ..... \$220  
**3004.** 18W+18W 5-band graphic equalizer. Output power 18W/ch 1,000Hz, 8% THD, 8W/ch 40-20,000 Hz, 0.8% THD; FR 20-20,000 Hz  $\pm 3$  dB; 7/16" W  $\times$  1 1/8" D  $\times$  5/8" H ..... \$200  
**3007.** 18W+18W Bi-level™, 5-band graphic equalizer with amp. Output power 18W/ch 1,000Hz, 8% THD, 8W/ch 40-20,000 Hz, 0.8% THD; FR 20-20,000 Hz  $\pm 3$  dB; 7/16" W  $\times$  1 1/8" D  $\times$  5/8" H ..... \$180

**Alpine Equalizers**

**3011.** 5-band graphic equalizer/preamp. Features auto remote power-on switch; bi-amp in/out switch; accepts digital time delay; digital time delay max/min control; digital time delay mode switch; input sens control; slide controls with midrange detent; fader; DIN connector; input level indicators (LED). FR 20-20,000Hz  $\pm 3$  dB; equalizer range  $\pm 12$ dB; input sens 500 mV/10,000 ohms, 2.0 V/100 ohms; digital time delay 1,000 m sec; output voltage 500 mV/1,000 ohms; crossover frequency in bi-amp mode 1,000Mz ..... \$150  
**3015.** 7-band computerized graphic equalizer. Center frequencies 60Hz, 140Hz, 320Hz, 800Hz, 1,800Hz, 4,300Hz, 10,000Hz; boost/cut  $\pm 12$ dB; FR 20-60,000 Hz  $\pm 3$  dB; S/N 85dB; 6-1/4" W  $\times$  2"D  $\times$  5-1/2" H ..... \$400

**Alpine Active Crossover**

**3650.** Electronic active dividing network. Features frequency selector; frequency multiplier switch; remote power on-off; power indicator; DIN connectors; input mode switch; output level control; 2-way 12 dB/octave slope circuitry. FR 10-50,000 Hz  $\pm 3$  dB with 0.02% THD; input sens 500 mV/10,000 ohm; S/N (signal to noise ratio) 100 dB (IHF A-Weighted); frequency crossover points 80 Hz, 160 Hz, 320 Hz, 1,600 Hz, 3,200 Hz, 6,400 Hz; crossover slope 12 dB per octave; size 6-1/2"  $\times$  1-1/8"  $\times$  4-3/8" (160  $\times$  30  $\times$  120mm) ..... \$130

**Alpine Car Speakers**

**6227.** 5-1/4" driver and ribbon tweeter, deluxe 2-way component speaker system. FR 70-35,000 Hz  $\pm 3$  dB; imp 4 ohms; crossover at 3,000 Hz; sens 86 dB SPL/W/m; power range 80 W ..... \$200/pr  
**6112.** 12" subwoofer speaker system. FR 20-400 Hz; imp 4 ohms; max power 150 W ..... \$160/pr  
**6391.** Model 6391 6"  $\times$  9" 3-way ferrofluid polymer speaker system. FR 30-20,000 Hz; imp 4 ohms; sens 91 dB SPL/W/m; power range 100 W ..... \$150/pr  
**6207.** 2-way component speaker system. FR 50-20,000 Hz; imp 4 ohms; crossover 3000 Hz; sens 90 dB SPL/W/m; max power 80 W ..... \$130/pr  
**6292.** 6"  $\times$  9" 2-way hybrid polymer slim-mount speaker system. FR 30-20,000 Hz; imp 4 ohms; sens 89 dB SPL/W/m; max power 80 W ..... \$120/pr  
**6363.** 6-1/2" 3-way speaker system. FR 65-20,000 Hz; imp 4 ohms; crossover (built-in) midrange 8,400 Hz, 6 dB/octave and tweeter 18,000 Hz, 6 dB/octave; sens 89 dB SPL/W/m; ..... \$120/pr  
**6217.** 4"  $\times$  1" soft dome 2-way component speaker system. FR 80-20,000 Hz  $\pm 3$  dB; imp 4 ohms; crossover 3,000 Hz; sens 86 dB SPL/W/m; max power 60 W ..... \$110/pr  
**6209.** 6"  $\times$  9" and 2" hybrid polymer coaxial 2-way

system. FR 45-25,000 Hz  $\pm 3$  dB; imp 4 ohms; crossover 5000 Hz, 6 dB; sens 93 dB SPL/W/m; max power 80 W ..... \$100/pr  
**6214.** 4"  $\times$  10" and 1" micro polymer dome coaxial 2-way system. FR 60-20,000 Hz  $\pm 3$  dB; imp 4 ohms; crossover 5000 Hz, 6 dB; sens 91 dB SPL/W/m; max power 60 W ..... \$100/pr  
**6117.** Midrange/tweeter component speaker system. FR 2,000-30,000 Hz; imp 4 ohms; crossover (built-in) midrange 3,000 Hz, 6 dB and tweeter 26,000 Hz, 6 dB; sens 89 dB SPL/W/m; max power 80 W ..... \$100/pr  
**6108.** 8" subwoofer speaker system. FR 35-400 Hz; imp 4 ohms; max power 80 W ..... \$100/pr  
**6352.** 5-1/4" 3-Way ferrofluid polymer slim-mount speaker system. FR 65-20,000 Hz; imp 4 ohms; sens 91 dB SPL/W/m; max power 60 W ..... \$90/pr  
**6226.** 6-1/2" and 1" micro polymer dome coaxial 2-way system. FR 45-20,000 Hz  $\pm 3$  dB; imp 4 ohms; crossover 5000 Hz, 6 dB; sens 91 dB SPL/W/m; max power 80 W ..... \$90/pr  
**6162 Subwoofer.** 6-1/2" subwoofer speaker system. Power-handling capacity max 100 W, nominal 50 W; FR 40-3,000 Hz; efficiency 89 dB 1 W/Meter; voice-coil imp 4 ohms; voice-coil diameter 1 1/8" or 30mm; flux density 9,800 gauss; mounting depth 2-1/16" or 68mm ..... \$80/pr  
**6236.** 5-1/4" and 1" micro polymer dome coaxial 2-way system. FR 50-20,000 Hz  $\pm 3$  dB; imp 4 ohms; crossover 5,000 Hz, 6 dB/octave; sens 91 dB SPL/W/m; power range 60 W ..... \$80/pr  
**6161.** 6-1/2" hybrid polymer dual-cone slim-mount speaker. FR 60-20,000 Hz; imp 4 ohms; sens 91 dB SPL/W/m; max power 60 W ..... \$70/pr  
**6216.** 4" and 1" micro polymer dome coaxial 2-way system. FR 60-20,000 Hz  $\pm 3$  dB; imp 4 ohms; crossover 5,000 Hz, 6 dB/octave; sens 89 dB SPL/W/m; max power 40 W ..... \$70/pr  
**6151.** 5-1/4" hybrid polymer dual-cone slim-mount speaker. FR 65-20,000 Hz; imp 4 ohms; sens 91 dB SPL/W/m; max power 60 W ..... \$60/pr  
**6141.** 4" hybrid polymer dual-cone slim-mount speaker. FR 80-20,000 Hz; imp 4 ohms; sens 90 dB SPL/W/m; max power 20 W ..... \$50/pr  
**6142.** 4"  $\times$  6" hybrid polymer dual-cone slim-mount speaker. FR 80-20,000 Hz; imp 4 ohms; sens 91 dB SPL/W/m; max power 40 W ..... \$50/pr  
**6130.** 3-1/2" dual-cone speaker system. FR 130-20,000 Hz  $\pm 3$  dB; imp 4 ohms; sens 88 dB SPL/W/m; max power 20 W ..... \$45/pr  
**6205.** Coaxial 6  $\times$  9 2-way system with pole-mounted cone tweeter. FR 50-18,000 Hz; sens 91 dB SPL/W/m; max power handling 40 W; magnet 20 oz; mounting depth 1 1/8" ..... \$90/pr  
**6203.** Coaxial 6 1/2" 2-way system with pole-mounted tweeter. FR 70-20,000 Hz; sens 90 dB SPL/W/m; max power handling 40 W; magnet 10 oz; mounting depth 2 1/8" ..... \$80/pr

**ALTEC LANSING**

**Car Speakers**

**5-Piece System.** 3-way system 5-piece system consists of SW-1, 2 SK-1s, 2 TK-1s. FR 50-18,000Hz  $\pm 5$ dB; sens 92dB SPL/W/m; max power handling 20W; mounting depth 2 1/8" ..... \$430/ea  
**SW-1 Woofer.** FR 50-150Hz  $\pm 4$ dB; max power handling 40W; mounting depth 2 1/8" ..... \$260/ea  
**4B.** 6  $\times$  9 full range super duplex system. FR 60-18,000Hz  $\pm 5$ dB; sens 95dB SPL/W/m; max power handling 75W; mounting depth 3 1/2" ..... \$260/pr  
**4A.** 6  $\times$  9 full range duplex system. FR 80-18,000Hz  $\pm 6$ dB; sens 95dB SPL/W/m; max power handling 40W; mounting depth 3 1/2" ..... \$180/pr  
**4C.** 6  $\times$  9 full range duplex II system. FR 90-16,000Hz  $\pm 6$ dB; sens 94dB SPL/W/m; sens 92dB SPL/W/m; max power handling 35W; mounting depth 2 1/8" ..... \$130/pr  
**SK-1.** Extended-range speaker. FR 100-10,000Hz  $\pm 5$ dB; sens 92dB SPL/W/m; max power handling 35W; mounting depth 2" ..... \$130/pr  
**SK-2.** Full-range duplex system. FR 100-18,000Hz  $\pm 6$ dB; sens 92dB SPL/W/m; max power handling 35W; mounting depth 2 1/8" ..... \$120/pr  
**SK-3.** Extended-range speaker. FR 90-15,000Hz

$\pm 5$ dB; sens 92dB SPL/W/m; max power handling 20W; mounting depth 1 1/8" ..... \$90/pr  
**TK-1.** Tweeter. FR 5,000-18,000Hz; sens 94dB SPL/W/m; max power handling 20W; mounting depth 1 1/8" ..... \$80/pr

**AR**

**Car Speaker Systems**

**1CS.** Infinite-baffle 2-way system with 5.25" woofer, .75" liquid-cooled dome tweeter. Efficiency 86 dB SPL/W/m; power requirement 5 W/ch; max power 40 W nominal, 100 W max peaks; half-power points 63 and 30,000 Hz; imp 4 ohms; crossover at 2,200 Hz; mounting depth 32mm; 227mm  $\times$  150mm  $\times$  41mm (including grille); 3.6 kg (pair) .... \$260/pr  
**1MS.** Acoustic-suspension 2-way mini-speaker in rigid deep-drawn aluminum cabinet. Multiple mounting options by threaded inserts on the rear of cabinet. Features one 2" woofer; one 1/2" liquid-cooled dome tweeter. Efficiency 85 dB SPL/W/m; power range 7-75 W/ch; FR -3 dB (half power) at 95 Hz and 25,000 Hz; low-frequency performance -3 dB at 95 Hz with effective Q (at resonance) of 0.8; imp 4 ohms nominal; scratch-resistant textured grey or satin black cabinet with black aluminum grille; 194mm  $\times$  121mm  $\times$  122mmD including grille panel. 4.4 lbs ea \$238/pr  
 Mounting bracket (black or grey) ..... \$30/pr  
**3CS.** Single-driver dual-cone system with 100mm (4") full-range woofer. Mounts in single 108mm-(4.25") diameter hole. Efficiency 90 dB SPL/W/m; power requirement 5 W/ch; max power 10 W nominal, 20 W max peaks; half-power points 110 and 25,000 Hz; imp 4 ohms; 1.4 kg (pair) .... \$66/pr

**AUDIO PRO by SONIC RESEARCH**

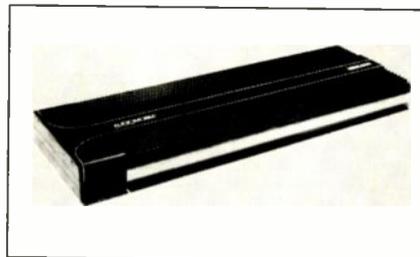
**B2-07 Amplified Subwoofer**

Bass reflex system with 2 long throw 4" woofers; 30 W bridge amplifiers with soft clipping circuit; active crossover; sensitivity control; SPL up to 95 dB (105 dB in car; FR 40-250 Hz; matte black finish; 14 lb; 29 1/2" W  $\times$  7 1/4" H  $\times$  5 1/4" D ..... \$595/pr

**AUDIOMOBILE**

**MDX Systems**

Modular Expandable Docking systems made up of various amplifier modules (not available separately), CS150 crossover, FD240 fader. SA550 amplifier module has 20 W/ch at 4 ohms, 40 W/ch at 2 ohms. FR 20-20,000 Hz  $\pm 1$  dB with <0.02% THD, 10-50,000 Hz  $\pm 3$  dB; THD <0.003% at 1 kHz at rated output; S/N >100 dB (IHF A-weighted); IM <0.005%; ch sep 70 dB at 1 kHz; slew rate 20 V/ $\mu$ sec; damping factor >200; input sens switchable to 100, 250, 500 mV and 1.2 V. SA1050 amplifier module is similar to SA550 except 50 W/ch at 4 ohms, 80 W/ch at 2 ohms. SA2050 amplifier module is similar to SA550 except 100 W/ch at 4 ohms, 150 W/ch at 2 ohms. MDX 340. Made up of SA 550, SA1050, SA2050 amp modules, slim-line system includes electronic crossover and fader modules. All-bridged design. THD



0.003%; S/N 110 dB A-weighted; slew rate 20 V/ $\mu$ sec; 2.656" H  $\times$  9.812" D  $\times$  27.836" L; 28 lbs ..... \$2,900  
**MDX 240.** Made up of CX-150 crossover, FD240 fader, 2 SA550 and 2 SA1050 amp modules; 2.656" H  $\times$  9.812" D  $\times$  26.136" L; 26 lbs \$2,350-2,400

**MDX 180.** Made up of SA1050 and 2 SA550 amp modules, CS150 crossover, FD240 fader. Handles 2 pairs of efficient satellites; 2.656"H x 9.812"D x 20.936"L; 20 lbs ..... \$1,850-1,900

**MDX 120.** Made up of CS150 crossover, FD240 fader, 3 SA550 amp modules. Features electronic front/rear fading; 2.656"H x 9.812"D x 15.736"L; 14 lbs ..... \$1,350-1,400

**MDX 80.** Made up of SA550 amp module and CX150 crossover. Will drive 4 4-ohm bass drivers (6.5" each) and 2 satellite speakers in parallel hookup or with passive fader. 160 W into 2 ohms. 2.656"H x 9.812"D x 10.121"L; 9 lbs ..... \$850-900

#### AudioMobile Preamplifier

**SP-300.** Preamp with adjustable input sens and miniature switching power supply. Features center-detented bass, midrange, treble controls. Output power 5 V max; FR 10-50,000 Hz +0/-1 dB; THD 0.05%; 4.5" x 4.1" x 1.6" ..... \$310

#### AudioMobile Booster Amps

**SA-2000.** Booster amplifier bridgeable for 200-W mono operation. Features regulated power supply; 2-sec turn-on delay; full protection; speaker fuses; thermal shutdown. Output power 100 W x 2; FR 10-50,000 Hz +0/-1 dB; THD 0.1%; S/N > 100 dB; 7 3/4"W x 7 1/2"L x 4 1/4"H ..... \$720

**SA-1000.** Similar to SA 2000 except bridgeable for 100-W mono operation, output power 50 W x 2 ..... \$520

**SA-450.** Booster amplifier handles 2-ohm loads. Features double power at 2 ohms; full protection; instant off, delayed on; adjustable input sens. Output power 20 W x 2; FR 20-20,000 Hz +0/-1 dB; THD 0.05%; S/N > 100 dB; 5 1/2"W x 4 1/4"L x 2"H ..... \$270

#### AudioMobile Amp Rack Systems

**AR-4.** Consists of SA-1 SA-1000, SA-450, SP-300, CXE-2, AC-504 fader control. Output power 340 W ..... \$2,300

**AR-3.** Consists of 2 SA-1000s, SA-450, CXE-2, SP-300, AC-504. Output power 240 W ..... \$2,085

**AR-2.** Consists of 2 SA-450s, SA-1000, CXE-2, SP-300, AC-504. Output power 180 W ..... \$1,775

#### AudioMobile Crossover

**CXE-2.** Electronic crossover with 12-dB/octave constant voltage filter, programmable high and low pass points, low-pass output, stereo or mono for subwoofer. FR 10-50,000 Hz +0/-1 dB; THD 0.005%; S/N 85 dB; 5.8" x 3.5" x 1.6" ..... \$245

### AUDIOSOURCE

#### LS-One Speaker System

Acoustic-suspension 2-way speaker system with 4" woofer, 1" tweeter. FR 100-20,000 Hz; power range 12-40 W; imp 8 ohms; sens 83 dB SPL/W/m; crossover 2.5 kHz; walnut wood-grain or cast-aluminum enclosure with metal grille; 7 1/8"H x 4 1/2"W x 4 9/16"D; 5.5 lb ..... \$100

#### LS-Four Car Speaker

A 1 1/2" ferro-fluid cooled tweeter and 4" free-edge woofer designed to flush-mount in car door or rear seat panel; depth clearance of 1 1/2" with 3" hole \$85

### AUDIOVOX

#### Hi-Comp Line Cassette Radios

**HCC-1250.** In-dash electronic tuning AM/FM/MPX receiver with logic-controlled cassette player, music sensor and quartz clock. Features back-lit LCD panel for readout of frequency, time and functions; Dolby noise reduction systems; metal/CrO<sub>2</sub> tape capability; amorphous tape head; logic-controlled cassette mechanism with key-off tape stand-by system; music sensor automatically locates next selection in fast wind modes; loudness contours; independent bass and treble controls; superreach FM circuitry with built-in noise canceller and muting; synthesized tuning with 12 station preset memory and auto seek control; built-in 50 W max power amplifier; low distortion pre-

amp output leads; compact 5" deep chassis .. \$400

**HCC-1200.** In-dash Hi-Fi electronic tuning AM/FM/MPX receiver with auto-reverse stereo cassette deck and quartz clock. Features in-door LED display for time and frequency; Dolby noise reduction; metal/CrO<sub>2</sub> tape capability; logic-controlled cassette mechanism with key-off tape standby system; loudness contour; independent bass and treble controls; superreach FM circuitry with noise canceller; synthesized tuning with 12 station memory and auto-seek; built-in 40 W maximum power amp and low-distortion preamp output leads; compact 5" deep chassis \$400

**HCC-1150.** In-dash hi-fi electronic tuning AM/FM/MPX receiver with auto reverse cassette player and quartz clock. Features back-lit Liquid Crystal Display panel for readout of frequency, time and function; DNR system for reduced noise on both radio and tape; metal/CrO<sub>2</sub> tape capability; logic controlled cassette mechanism with key-off tape standby system; loudness contours; separate bass and treble control; superreach FM circuitry for optimal FM reception; synthesized tuning with 12 station memory; auto seek; 4-way balance control; built-in 50 W max power amp; low-distortion pre-amp output leads; compact 5" chassis ..... \$280

**HCC-565.** In-dash hi-fi pushbutton tuning AM/FM/MPX receiver with auto-reverse cassette player. Features Dolby noise reduction; metal/CrO<sub>2</sub> tape capability; logic-controlled cassette mechanism with key-off tape standby system; loudness contour; independent bass and treble controls; superreach FM circuitry with noise canceller; 5 pushbuttons for pre-set station selection; built-in 50 W max power amp; low-distortion pre-amp output leads; compact 5" deep chassis ..... \$280

#### Audiovox Cassette Radios

**AVX-965.** In-dash Hi-Fi electronic tuning AM/FM stereo radio with auto reverse; logic controlled cassette mechanism and quartz clock. Features Dolby noise reduction; music sensor which automatically locates next selection in fast-wind modes; separate bass and treble control; 4-way balance control; metal tape capability; built-in 50 W max amplifier and FLEX installation capabilities ..... \$350

**AVX-955.** In-dash AM/FM stereo receiver/cassette player with electronic tuning and auto-reverse cassette deck. Features built-in LED digital clock and radio frequency display; 12 station preset electronic tuning; superreach FM circuitry; local switch; locking fast forward and rewind; tape direction indicators; compact chassis with FLEX installation capability ..... \$280

**AVX-940.** In-dash electronic tuning stereo AM/FM/MPX radio/cassette player with back-lit liquid crystal display for frequencies and function readout; locking fast-forward and rewind; metal/CrO<sub>2</sub> tape capability; 4-way balance control; quartz clock; 12 station preset electronic tuning; superreach circuitry; compact 5" deep chassis with FLEX installation capability ..... \$225

**AVX-690.** In-dash AM/FM/MPX auto-reverse cassette with built-in amplifier and 5-band graphic equalizer; 40 W power output; 4-way balance control; locking fast forward and rewind; FM muting; superreach tuner; hi-blend and AM IC circuit; and FLEX installation capability ..... \$210

**AVX-620.** In-dash manual tune AM/FM/MPX radio auto-reverse cassette player with switchable FM stereo, superreach circuitry; locking fast forward and rewind; FLEX installation capability; push-button eject; 4-way balance control ..... \$175

**AVX-3400.** In-dash pushbutton AM/FM/MPX radio with auto-reverse cassette player. Features logic controlled auto-reverse cassette mechanism with locking fast-forward and rewind; FM local/distant selector; LED indicators for FM stereo and tape direction; full range tone control; 4-way balance; 14 W max output power; compact 5 1/4" deep chassis with FLEX installation capability ..... \$175

**AVX-3200.** In-dash manual tuning AM/FM/MPX radio and auto-reverse cassette player with compact chassis and FLEX installation capability. Features locking fast forward and rewind; full range tone control; side load cassette mechanism; 14 W max power amp and

4-way balance control ..... \$120

**AVX-3100.** In-dash manual tuning AM/FM/MPX radio with compact chassis and FLEX installation capability for installation in nearly all foreign and domestic cars. Features locking fast-forward and rewind on cassette; full range tone control; 4-way balance control and 14 W max output power ..... \$110

#### Hi-Comp Car Speakers

**HCS-80.** 6 x 9" 3-way system with 26-oz barium ferrite magnet; 1.75" piezo tweeter, 2.25" cone mid-range; tweeter and midrange rings gloss black; max power 100 W; flat rectangular grille with diamond-cut badge ..... \$120/pr

**HCS-30.** Dual-cone 3.5" speaker ..... \$100/pr

**HCS-70.** 2-way coaxial 6 x 9" with polypropylene cone and dome tweeter; flat rectangular grille with diamond-cut badge ..... \$85/pr

**HCS-60.** 5.25" 3-way speaker system with 27-oz magnet; power handling 100 W; heavy-duty paper cone; flat square grille with diamond-cut badge; aluminum tweeter ring cover available ..... \$70/pr

**HCS-50.** 5.25" coaxial speaker system with 2" piezo tweeter; 10-oz ferrite magnet; door or deck mount; biamping capability; flat square grille with diamond-cut badge ..... \$60/pr

**HCS-20.** 4 x 6" coaxial speaker with oval grille finished in black and diamond-cut badge (aluminum tweeter ring cover available) ..... \$50/pr

**HCS-15.** Thin-line 4" speaker with flat square grille and diamond-cut badge. Mounting depth 1.5"; 7-oz strontium magnet ..... \$30/pr

**HCS-40.** 5.25" 3-way speaker system with cone tweeter; flat square grille with diamond-cut badge; biamp wiring capability; aluminum tweeter ring cover available; 20-oz barium ferrite woofer magnet ..... \$19/pr

#### Audiovox Car Speakers

**TRYVOX-9** 6" x 9" 3-way speaker system ..... \$47

**TRYVOX-15** 6" 3-way speaker system ..... \$43

### AUTOTEK

#### Cassette Radios

**CSR-5550 E.** Quartz-locked PLL electronic-tuned mini-chassis receiver with digital readout. Features Automatic Gain Control on FM; Lo/Dx switch; Auto Control Stereo; Dolby B NR; key-off eject; auto reverse; ceramic head; metal tape playback; program search; preamp fader; night illumination; noise blanker on FM. Output power 3 W; FR 50-15,000 Hz; FM usable sens 1.5 µV; capture ratio 1.5 dB; FM sel 60 dB. Tape section: W&F 0.15%; FR 30-16,000 Hz; S/N 65 dB ..... \$400

**5350 E.** Same as 5550 E but lacks Dolby, metal tape playback, program search. Specs same as for 5550 E except tape FR 30-12,000 Hz; S/N 55 dB ... \$330

**3500 E.** Analog push-button-tuning compact-chassis cassette radio with Auto Control Stereo. Features Lo/Dx switch; noise blanker on FM; Dolby B NR; DNR; metal tape playback; auto reverse; key-off eject; preamp output. Specs same as above except usable FM sens 2.0 µV; tape FR 30-16,000 Hz; S/N 70 dB ..... \$330

**3250 E.** Analog push-button-tuning mini-chassis cassette radio with Auto Control Stereo. Features Lo/Dx switch; noise blanker on FM; 4-way fader; adjustable shafts. Specs same as above except tape FR 30-12,000 Hz; S/N 55 dB ..... \$220

**CSR-5300.** Quartz-locked PLL electronic-tuned mini-chassis cassette radio with digital readout. Features Automatic Gain Control on FM, Lo/Dx switch; Auto



Control Stereo; noise blanker on FM; Dolby B NR; auto reverse; metal tape playback; fader; preamp output.

Specs same as above except tape W&F 0.2%; FR 30-15,000 Hz; S/N 60 dB ..... \$300  
**CSR-5200.** Same as above except lacks Dolby, metal-tape compatibility. Tape FR 30-12,000 Hz; S/N 50 dB ..... \$260  
**CSR-5100.** Quartz-locked PLL electronic-tuned cassette radio with digital readout. Features Auto Control Stereo; Lo/Dx switch; loudness control; locking fast forward and rewind; fader. Specs same as above except power output 7 W/ch ..... \$210  
**CSR-3050.** Analog push-button-tuning submini-chassis cassette radio with Auto Control Stereo; soft mute; adjustable loudness contour; 4-way fader. Specs same as above ..... \$180  
**CSR-2100.** Manual-tune compact-chassis cassette radio with noise blanker on FM; Lo/Dx switch; auto reverse; 4-way fader. Specs same as above except for power output 3 W/ch; FM sens 2.5  $\mu$ V ..... \$150

## BLAUPUNKT

### Cassette Radios

**"Berlin" SQR 83.** In-dash stereo AM/FM radio with auto-reverse cassette player. Features Dolby B; electronic tuning; LCD readout; remote control; metal-tape compatibility; Cassette Program Search; electronic seek tuning; 4 presets; auto volume control keyed to ambient noise; FM noise suppression. Output power 20 W/ch ..... \$1,850  
**"Washington" SQR 32.** In-dash AM/FM radio with auto-reverse cassette player. Features Dolby; electronic PLL tuning; LED digital display; metal compati-



bility; electronic seek tuning; 12 presets; separate bass and treble; balance and fader controls; FM noise suppression ..... \$600  
**"Richmond."** In-dash AM/FM radio with auto-reverse cassette player. Features Dynamic Noise Reduction; 5 AM/5 FM presets; metal compatibility; separate bass, treble, loudness, balance, and fader controls; FM noise suppression. Output power 7 W/ch; tape frequency response 30-18,000 Hz; W&F 0.15%; FM usable sens 13 dBf (75 ohms) ..... \$300  
**"Manhattan."** In-dash AM/FM radio with auto-reverse cassette player. Features Dolby; 5 AM/5 FM presets; separate bass and treble; loudness switch; balance and fader controls; switchable EQ for normal, chrome, metal tapes; FM noise suppression. Output power 4 W/ch; tape frequency range 30-15,000 Hz; W&F 0.15%; FM usable sens 13 dBf (75 ohms) .. \$300  
**"Seattle."** In-dash manual-tuned AM/FM radio with auto-reverse cassette deck. Features Dynamic Noise Reduction; separate bass and treble controls; switchable loudness contour; FM noise suppression. Power output 7 W/ch; tape frequency range 30-18,000 Hz; W&F 0.15%; FM usable sens 13 dBf (75 ohms) \$250

### Blaupunkt Cassette Tuner

**"Tucson."** In-dash AM/FM tuner with auto-reverse cassette player. Features Dolby B for tape and FM; digital display of frequency and time; electronic tun-

ing; metal compatibility; separate bass and treble; loudness, balance, and fader controls; FM noise suppression; Cassette Program Search. Separate amplifier required. Tape FR 30-20,000 Hz; wow and flutter 0.15%; FM usable sens 13 dBf (75 ohms) .. \$500

## BOSE

### CRC Digital Tuner/Cassette Player

DIN-size in-dash AM/FM-stereo tuner with stereo cassette player. Fits most vehicles manufactured since 1975. Features microprocessor-controlled PLL digital tuner with 12-station preset tuning; seek/scan/manual tuning; 4-digit LED frequency/time display; auto FM muting; local/distant switch; FM fringe blend and noise-cancel switches; power-antenna lead; auto-reverse cassette mechanism; Dolby noise reduction; normal/CrO<sub>2</sub>/metal playback equalization selector; Permalloy tape head; locking fast forward/rewind; volume, balance, bass, treble controls; low-level preamp outputs to connect directly to Bose 1401 booster/equalizer ..... \$575

### 1401" Speaker System

Direct/reflection stereo speaker system with 4 1/2" woofer; 1401 booster amplifier (4 x 25W); active electronic EQ; Spatial Control™, low frequency control; high frequency switch; 2 Direct/reflecting speakers with energy controls, 2 door mount speakers; mounting depth 1 1/2" ..... \$470

## BOSTON ACOUSTICS

### C700 Car Speakers

Two-way auto speaker system combines a 5 1/4" high-compliance, long-throw woofer and CFT/2 1" dome tweeter mounted on black thin line housing that can be mounted by a single circular cutout. Features polypropylene cone in 5-1/4" woofer; copolymer dome in the CFT/2. FR 58-20,000Hz,  $\pm$ 3 dB; imp 4 ohms; crossover frequency 3,000 Hz; power handling 50W; 6" x 8-1/2" (with only 1-1/2" required behind the mounting panel, and 1" above it) ..... \$198/pr

## B & W LOUDSPEAKERS

### LM-1 Leisure Monitor Speaker

Two-way mini speaker with colored nextel finishes, protection against overload, for home and car use. Available in brown, beige, charcoal, black, or red. Min power 10 W; 4" woofer, 1/2" tweeter ..... \$498/pr  
**LM-1/PM.** Panel-mount version ..... \$450/pr  
**LM-1/Mar.** Marine version (protected against corrosion) ..... \$598/pr  
**LM-1/PM-Mar.** Panel-mount marine version \$550/pr

## CANTON

### AC 200 Car Speakers

Self-powered 2-way car speaker for 12V operation with high amplifier output power; bass amplifier as bridge circuit with direct coupling; tweeter amplifier single amplifier. Features 20 mm; dome tweeter (fabric); long throw woofer; cone diaphragm 110mm; enclosure surfaces black; grille of perforated steel plate, black; built-in permanently adjusted equalizer; connecting cable and installation accessories enclosed; FR 48-25,000 Hz; crossover frequency 1,700 Hz; 2 kg ..... \$350/pr

### HC 100 Car Speakers

2-way car speaker. Also suitable as auxiliary home or add-on speaker for other applications; dome tweeter (fabric) 20mm; long throw woofer; cone diaphragm 110mm; enclosure surfaces black, white, or brown-metallic; grille of perforated steel plate; color to match enclosure; permalloy spring-clamps for easy connection; 5 meter connecting cable; one-point mounting fixture; removable grille; CF 1700Hz, 5.12" W x 7.49" H x 5.41" D; 1.8 kg ..... \$250/pr

### Pullman Car Speakers

Loudspeaker console consisting of 2 acoustically separate 3-way speakers; for powerful car stereo. Features 2 dome tweeter (fabric) 20mm; 2 dome

midranges (fabric) 28mm; 4 long throw woofers; cone diaphragm 110mm; enclosure surfaces black; grille of perforated steel plate, black; permalloy spring-clamps for easy connection; removable grille; crossover frequency 800 Hz, 4,000 Hz; slope 6/12, 12/12; 7.5 kg; 37.4" W x 4.13" H x 4.92" D \$400 complete

## CERWIN-VEGA

### CS-18A Car Speaker

Heavy-duty, two way, oval 6" x 9" speaker with resettable circuit breaker protection and a horn tweeter. Features heavy aluminum die-cast frame; 5-1/2" pound magnet structure; temperature resistant 1.6-inch voice coil; attached metallic Doppler filter grille. Frequency response 30-20,000Hz; 98 dB sens, 1 w/m; 150 W power handling capacity; 6" x 9". \$200/pr

### CS-17 Car Speaker

Similar to the CS-18, except with shallower low profile magnet ideal for door mount applications; integral Doppler filter grille ..... \$160/pr  
**CSW-16.** Similar to CS-18A but without the horn tweeter and the Doppler filter grille. The CSW-16 woofer can be used for dual or single voice coil operation ..... \$80/pr

### CSW-21 Subwoofer

A 12-inch round, dual voice coil, subwoofer for trunk mounting. Features mounting board on a 5-inch diameter flexible acoustic tube for conveying sound into the car interior. Can be paired with CS-18A or CS-17 \$90

### CSX-110 Subwoofer

Can be used with any combination of dual voice subwoofers; CSX-110 is a crossover rated at 500 watts per channel ..... \$60

## CLARION

### Clarion 8000 Series

#### 8500R Stereo Cassette Receiver

12W AM/FM compact chassis cassette receiver with quartz-locked electronic tuning and 5 FM/SAM touchbuttons. Features scan tuning; magi tune III FM; auto DX/LO (keyed AGC) MOS FET FM front end; dual gate with balanced mixer; super SASC w/multipath rej; clean Z; soft muting; traveler's advisory reception; auto reverse; auto program control; locking fast forward/rewind; permalloy head; illuminated tape door; separate bass and treble eq; 4-way balance controls; night control illumination; power antenna activator; compact chassis fits American European and most all Japanese vehicles; sens (50 dB quieting) 1.7 dBf; alternate ch selectivity 70 dB; capture ratio 1.5 dB; stereo separation at 1,000 Hz 35 dB; W&F (wrms) 15%; stereo separation (ref 1,000 Hz) 42 dB; S/N ratio 53 dB; FR 30-14,000 Hz 120 $\mu$ s (normal tape); 70 $\mu$ s (metal CrO<sub>2</sub>); 7 1/4" W x 12" H x 4 1/8" D ..... \$290  
**8550R.** Identical model to 8500R except has a mini chassis; 6 1/2" W x 1 1/4" H x 4 1/8" D ..... \$290  
**8100R.** Similar to 8500R; compact chassis cassette receiver except no magi-tune III FM; clear Z or auto reverse; 7 1/2" W x 12" H x 4 1/8" D ..... \$260

### Clarion 6000 Series

#### 6900RT Stereo Cassette Receiver/Tuner

AM/FM stereo compact chassis cassette receiver/tuner with 5 pushbutton preset tuning and Magi-tune III FM. Features MOS FET FM front end; dual gate with balance mixer; auto DX/LO (keyed AGC) super SASC with multipath rej; clean Z; traveler's advisory reception; tape auto reverse; Dolby "B" noise reduction; auto program control; metal (70 $\mu$ s) tape equalization; locking fast forward/rewind; permalloy head; illuminated tape door; amplifier 12 W max output (6 w/ch) separate bass and treble eq; 4-way balance controls; pre-amp output (RCA); night control identification; power antenna activator; compact chassis fits American European and most all Japanese vehicles. Sens (50 dB quieting) 1.7 dBf; alternate ch selectivity 70

### NEED MORE INFORMATION?

Write directly to the manufacturer or distributor. A list of names and addresses starts on page 25.

dB; capture ratio 1.5 dB; stereo separation at 1,000 Hz 35 dB; W&F(wrms) 15%; stereo separation (ref 1,000 Hz) 42 dB; S/N ratio 53 dB; FR 30-14,000 Hz 120µs (normal tape); 70µs (metal CrO2) 30-16,000 Hz; 7/8"W × 12"H × 4 1/8"D..... \$290  
**6950RT** Identical to 6900RT cassette receiver/tuner except has a mini chassis; 6 1/8"W × 1 1/4"H × 4 1/8"D..... \$290  
**6700RT**. Similar to 6900 RT compact chassis stereo cassette receiver/tuner except no pushbutton preset tuning 7 1/8"W × 12"H × 4 1/8"D..... \$260  
**6300 R**. Simplified model 6900R compact chassis cassette receiver with 5-pushbutton preset tuning except no super SASC with multipath rej; clear Z; locking fast-forward/rewind; metal tape equalization or pre-amp output; 7 1/8"W × 12"H × 4 1/8"D... \$220  
**6100R**. Similar to 6300R cassette receiver except no push-button preset; 7 1/8"W × 12"H × 4 1/8"D\$200  
**6150R** Identical to 6100R cassette receiver only with a mini-chassis; 6 1/8"W × 1 1/4"H × 4 1/8"D... \$200

#### Clarion 4000 Series

**4700R**. 12 W AM/FM compact chassis stereo cassette receiver with 5 preset tuning and improved FM reception system; compact chassis fits American, European and most all Japanese vehicles. Features MOS FET FM front end; auto DX/LO (keyed AGC); FM stereo/mono selector; traveler's advisory reception; tape locking fast forward/rewind; permalloy head; auto stop at end of play; tape end indicator; illuminated tape door; amplifier loudness contour; tone control; stereo balance control; sens (50 dB quieting)18 dB; alternate ch selectivity 65 dB; capture ratio 2.0 dB; stereo separation at 1,000 Hz 35 dB; W&F (wrms) .25%; stereo separation (ref 1,000 Hz) 40 dB; S/N ratio 50 dB; FR 120µs (normal tape); 70µs (metal CrO2) 40-12,000 Hz; 7 1/8"W × 12"H × 4 1/8"D..... \$190  
**4750R**. Identical system to 4700R except for a mini-chassis; 6 1/8"W × 1 1/4"H × 4 1/8"D; "mini-chassis" fits all Japanese, European and GM X-body vehicles..... \$190  
**4500R**. Similar to the 4700R compact cassette receiver except no preset tuning or auto stop at end of tape. Features tape program direction and auto-reverse..... \$170  
**4300R**. Similar to 4500R compact chassis cassette receiver model without auto reverse. Features locking fast forward and rewind capabilities and loudness contour; 7 1/8" × 12" × 4 1/8"..... \$130  
**4350R**. Identical model to 4300R except has a "mini chassis"; 7 1/8" × 1 1/4" × 4 1/8"..... \$130  
**4100R**. Basic model of the 4300R compact cassette receiver without loudness contour; tone control or auto stop; 7 1/8" × 12" × 4 1/8"..... \$120

#### Clarion Power Amps

**800 A2**. 4 channel stereo power amplifier with 4 ch inputs. Features selectable high or low level inputs; overload protection circuit; remote power switching circuit; high convection heat sink design; ground-loop isolation selector; signal to noise ratio 75 dB; FR 20-20,000 ±1.5 dB; output power 20 W/ch front and rear; 5 1/2"W × 1 1/2"H × 6 3/8"D..... \$130  
**400 A2**. 20 W/ch front and rear stereo power amplifier with selectable high or low level inputs. Features overload protection circuit; remote power switching circuit; high convection heat sink design; ground-loop isolation selector; optional fader control available (allows control on front and rear sound balance) .. \$80

#### Clarion Equalizer/Amplifiers

**300 EQB3**. 5 band graphic equalizer with LED audio power indicators; equalizer center frequencies 60 Hz, 250 Hz, 1,000 Hz, 3,500 Hz, 10,000 Hz, ±12 dB. Features front/rear fader and defeat switch; high/low input sens; floating ground input capability; high convection heat sink, overload protection circuit; signal to noise ratio 75 dB; FR 20-20,000 Hz ±1.5 dB; 6 1/8"W × 1 1/4"H × 6 1/8"D..... \$210  
**200 EQB2**. 50 W 7 band graphic equalizer with LED indicators. Features D.N.R. (dynamic noise reduction); front/rear fader and defeat switch; adjustable high/low input level sens; floating ground input capa-

bility; high convection heat sink; overload protection circuit; signal noise ratio 75 dB; FR 20-20,000 Hz 1.5 dB; 6 1/8"W × 1 1/4"H × 6 1/8"D..... \$150  
**100 EQB4**. 50 W 5 band graphic equalizer. Features front/rear fader and defeat switch; high convection heat sink; overload protection circuit; equalizer center frequencies 60 Hz, 250 Hz, 1,000 Hz, 3,500 Hz, 10,000 Hz ±12 dB; S/N 75 dB; FR 20-20,000 Hz ±1.5 dB; 5 1/8"W × 1 1/4"H × 5 1/8"D..... \$100

#### Clarion Speakers

**SD 1000**. 6 × 9" Coaxial Speaker System. Polypropylene woofer with KAPTON voice coil 7/8" poly-carbonate tweeter with ferrofluid 3" midrange; max capacity 140 W; rear mount depth 3 1/4"; FR 40-22,000 Hz..... \$80/pr  
**SD 980**. 6 × 9" Multiaxial Speaker System. High compliance woofer; pole mount midrange-tweeter; max capacity 80 W; rear mount depth 3 1/8"; FR 45-20,000 Hz..... \$120  
**SD 970**. 6 × 9" Coaxial Speaker System. High compliance woofer; pole mount tweeter; max capacity 60 W; rear mount depth 3 1/8"; FR 45-18,000 .. \$80/pr  
**SD 630**. 6 1/2" Multiaxial Speaker System. High compliance woofer; pole mount midrange-tweeter; max capacity 60 W; rear mount depth 2 1/2"; FR 55-20,000 Hz..... \$100/pr  
**SD 620**. 6 1/2" Coaxial Speaker System. High compliance woofer; pole mount tweeter; max capacity 40 W; rear mount depth 2 1/4"; FR 65-18,000 Hz .. \$70/pr  
**SD 610**. 6 1/2" Dual Cone Speaker. High compliance design hi frequency dispersion cone; max capacity 40 W; rear mount depth 2 1/4"; FR 65-16,000 Hz \$40/pr  
**SD 520**. 5" Coaxial Speaker System. High compliance woofer with strontium magnet; pole mount tweeter; max capacity 30 W; rear mount depth 1 1/4"; FR 70-18,000 Hz..... \$60/pr  
**SD 500**. 5" Speaker. High compliance design; extra shallow mount depth; max capacity 30 W; rear mount depth 1 1/2"; FR 95-16 Hz..... \$30/pr  
**SD 420**. 4" Coaxial Speaker System. High compliance woofer with strontium magnet; pole mount tweeter; max capacity 30 W; rear mount depth 1 1/4"; FR 80-17,000 Hz..... \$60/pr  
**SD 410**. 4" Dual Cone Speaker. High compliance design with strontium magnet; HF dispersion cone; max capacity 30 W; rear mount depth 1 1/4"; FR 100-15,000 Hz..... \$40/pr  
**SD 310**. 3 1/2" Dual Cone Speaker. High compliance design; high frequency dispersion cone; (may be custom mounted in GM dashboard without modification); max capacity 20 W; rear mount depth 1 1/2"; FR 100-18,000 Hz..... \$20/pr

### CONCORD

#### In-Dash 100 Cassette Radio Series

**HPL-101**. Compact AM/FM-stereo receiver with stereo cassette deck. Features SA tape head; auto eject; separate bass and treble controls; loudness switch; tape equalization selector; 7 1/2"W × 4 1/4"D × 2 1/8"H..... \$250  
**HPL-122**. Compact programmable digital cassette receiver with seek and scan. Features 10 station presets; LED auxiliary and tape indicators; aux in and out switch; signal processor circuitry; auto eject; preamp fader; locking fast forward and rewind; Dolby B; metal tape eq; adjustable line output controls; matched phase tape head; loudness control; stereo/mono switch; separate bass and treble controls. 5 W/ch

0.8% THD from 20-20,000 Hz into 4 ohms; 7 1/2"W × 2 1/8"H × 4 1/4"D..... \$429  
**HPL-121**. Similar to HPL-122 except no built-in amplifier..... \$349

#### Concord In-Dash 500 Cassette Radio Series

**HPL-532**. Quartz digital synthesizer tuner-amplifier-tape deck. Features auto scan; 10 preset memory; electronic DC servo motor; front/back preamp; low level fader; lighted switches; lighted function indicators; lighted preset buttons; auto eject; adjustable low level line outputs; Dolby B; bass equlizer; aux signal processing circuitry; stereo/mono; metal tape eq. 50 W max; 12 W/ch rms; 0.8% THD; 20-20,000 Hz; 4 ohms 7 1/2"W × 1 1/2"H × 4 1/4"D..... \$500  
**HPL-525**. Similar to HPL-532 except no lighted functions indicators, lighted switches, or lighted preset buttons.  
**HPL-504**. Tuner/amp/tape deck with DC servo drive motor. Features lighted switches; lighted function indicators; low level front/back fader; auto eject; aux signal processing circuitry for optional dbx or Dolby C plug in module; Dolby B; adjustable line outputs for external amps; matched phase tape head; loudness control; metal tape eq; tuner/tape switch; mono/stereo. 12 W/ch with 0.8% THD from 20-20,000 Hz into 4 ohms; 7 1/2"W × 1 1/2"H × 4 1/4"D .. \$300  
**HPL-502**. Tuner/amp/tape deck with DC servo drive motor. Features lighted switches; low level front/back fader; auto eject; adjustable line outputs for external amps; matched phase tape head; loudness control; metal tape eq; tuner/tape switch; mono/stereo. 12 W/ch; 0.8% THD; 20-20,000 Hz; 4 ohms; 7 1/2"W × 1 1/2"H × 4 1/4"D..... \$250

#### Concord Signal Processors

**HPQ-89**. Dolby C plug-in module for use with Concord's Signal Processor Circuitry. Provides Dolby B or C or may be bypassed with switch. 5"W × 1 1/8"H × 3 1/8"D..... \$100-130  
**HPQ-90**. dbx II plug-in module for use with Concord's Signal Processor Circuitry and any car stereo that has line output levels of .5 to 1 volt (adapter cable provided) 5"W × 1 1/8"H × 3 1/8"D..... \$100-130

#### Concord Car Speakers

**HPS-271**. 6" × 9" speaker with Ferrofluid dome tweeter coaxial and 19 oz strontium magnet structure. 10-120 W power handling..... \$140-160  
**HPS-263**. 6" × 9" speaker with pole mounted sealed cone tweeter and 18 oz strontium magnet. 40 W continuous 90 W max..... \$100-103  
**HPS-265**. 6 1/2" speaker with sealed cone Ferrofluid pole mounted coaxial, 14 oz strontium magnet structure and 1 1/4" coil assembly bi-amp connections. 5-80 W power handling..... \$90-110  
**HPS-260**. 6 1/2" speaker with cone coaxial. Features strontium magnet and metal voice coil assembly. 4-50 W power handling..... \$80-100  
**HPS-152**. 5 1/4" slimline coaxial speaker with strontium magnet structure and 12 W recurve cone. 4-30 W power handling..... \$70-90  
**HPS-151**. 5 1/4" full range 12 W recurve cone. 4-30 W power handling..... \$60-90

### CRAIG

#### Cassette Radios

**W460**. Electronically tuned AM/FM radio with auto-reverse cassette player. Features 6 AM/6 FM presets;

## NOTICE TO READERS

Prices of items described are manufacturers' suggested prices only and are subject to change without notice. Actual selling prices are determined by the dealers.

clock; locking fast forward and rewind; Dolby noise reduction; sendust alloy tape head; separate controls for loudness, bass, treble, balance, and fader; LOC/DX and Mono/Stereo switches. 12 W/ch \$370

**T780.** Stereo AM/FM radio with auto-reverse cassette player. Features Performance Monitoring System; preset tuning; Dolby for FM and tape; line-in/line-out jacks; Electronic Search and Play; separate controls for loudness, bass, treble, balance, and fader. Twelve W/ch into 4 ohms 80-20,000 Hz with 3% THD; FM usable sens 20 dBf (2.8  $\mu$ V/75 ohms); alternate ch sel 65 dB; capture ratio 2.0 dB; W&F 0.15% wrms. . . . . \$350

**T742.** Stereo AM/FM radio with auto-reverse cassette player. Features Dolby for FM and tape; Electronic Search and Play; sendust tape head; separate loudness, bass, treble, balance, and fader controls; line-in and line-out jacks. Twelve W/ch into 4 ohms 80-20,000 Hz with 3% THD; FM usable sens 20 dBf (2.8  $\mu$ V/75 ohms); FM 50 dB quieting sens 22 dBf (3.5  $\mu$ V/75 ohms); alternate ch sel 65 dB; capture ratio 2.0 dB; W&F 0.15% wrms. . . . . \$280

**T860E.** Stereo AM/FM radio with auto-reverse cassette player. Features Dynamic Noise Reduction; Electronic Search and Play; locking fast forward and rewind; preset tuning; separate loudness, bass, treble, balance, and fader controls; line-out jacks; power-loading tape deck with power-off eject. Power output 3.2 W/channel into 4 ohms 90-20,000 Hz with 3% THD, 4.5 W/ch at 1 kHz with 1% THD; FM usable sensitivity 20 dBf (2.8  $\mu$ V/75 ohms); FM 50 dB quieting sens 22 dBf (3.5  $\mu$ V/75 ohms); alternate channel sel 65 dB; capture ratio 2.0 dB; wow and flutter 0.15% wrms. . . . . \$270

**T760.** Stereo AM/FM radio with auto-reverse cassette player. Features preset tuning; locking fast forward and rewind; Electronic Search and Play; Dynamic Noise Reduction; metal tape EQ; separate loudness, bass, treble, balance, and fader controls; line-out jacks. 3.2 W/ch into 4 ohms 90-20,000 Hz with 3% THD; 4.5 W at 1 kHz 1% THD; FM usable sens 20 dBf (2.8  $\mu$ V/75 ohms); FM 50 dB alternate ch sel 65 dB; capture ratio 2.0 dB; quieting sens 22 dBf (3.5  $\mu$ V/75 ohms); wow and flutter 0.15% wrms. . . . . \$240

**T741.** Stereo AM/FM radio with auto-reverse cassette player. Features locking fast forward and rewind; Dolby for FM and tape; Electronic Search and Play; metal tape EQ; separate loudness, bass, treble, balance, and fader controls; Stereo/Mono switch; auto DX/LOC switching; line-out jacks; 3.2 W/ch into 4 ohms 90-20,000 Hz with 3% THD; FM usable sens 20 dBf (2.8  $\mu$ V/75 ohms); FM 50 dB quieting sensitivity 22 dBf (3.5  $\mu$ V/75 ohms); alternate ch selectivity 65 dB; capture ratio 2.0 dB; W&F 0.15% wrms. . . . . \$220

**T740.** Stereo AM/FM radio with auto-reverse cassette player. Features locking fast forward and rewind; Electronic Search and Play; separate loudness, bass, treble, balance, and fader controls; Stereo/Mono switch; auto DX/LOC switching; line-out jacks; auto power antenna and dial-dimmer leads. 3.2 W/ch into 4 ohms 90-20,000 Hz with 3% THD; FM usable sensitivity 20 dBf (2.8  $\mu$ V/75 ohms); FM 50 dB quieting sens 22 dBf (3.5  $\mu$ V/75 ohms); alternate channel sel 65 dB; capture ratio 2.0 dB; wow and flutter 0.15% wrms. . . . . \$200

**T561.** Stereo AM/FM radio with auto-reverse cassette player. Features preset tuning; locking fast forward and rewind; separate bass, treble, balance, and fader controls; LOC/DX switch; IC-controlled soft mute; power-off eject; power antenna switching; line-level output jacks. 3.2 W/ch into 4 ohms 90-20,000 Hz with 3% THD; FM usable sens 20 dBf (2.8  $\mu$ V/75 ohms); FM 50 dB quieting sens 22 dBf (3.5  $\mu$ V/75 ohms); alternate ch sel 65 dB; capture ratio 2.0 dB; W&F 0.15% wrms. . . . . \$200

**T721.** Electronically tuned AM/FM radio with auto-reverse tape deck. Features digital display; electronic station seeker; locking fast forward and rewind; IC-controlled soft mute; DX/LOC and Stereo/Mono switches. 3.5 W/ch into 4 ohms 90-20,000 Hz with 5% THD; FM usable sens 23 dBf (4.0  $\mu$ V/75 ohms); FM 50 dB quieting sens 26 dBf (5.5  $\mu$ V/75 ohms); alternate ch sel 65 dB; capture ratio 3.0 dB; W&F 0.16% wrms. . . . . \$200

**T701.** Stereo AM/FM radio with auto-reverse cassette player. Features locking fast forward and rewind; Electronic Search and Play; volume, balance, fader, and tone controls; Stereo/Mono and LOC/DX switches; IC-controlled soft mute. 3.5 W/ch into 4 ohms 90-20,000 Hz with 5% THD; FM usable sens 23 dBf (4.0  $\mu$ V/75 ohms); FM 50 dB quieting sens 26 dBf (5.5  $\mu$ V/75 ohms); alternate ch selectivity 60 dB; capture ratio 3.0 dB; W&F 0.16% wrms. . . . . \$150

**T503.** Stereo AM/FM radio with auto-reverse cassette player. Features convertible nosepiece for import or domestic cars; locking fast forward and rewind; IC-controlled soft mute; power-off eject; power antenna switching; LOC/DX sens switch; Stereo/Mono switch. 3.5 W/ch into 4 ohms 90-20,000 Hz with 5% THD; FM usable sens 23 dBf (4.0  $\mu$ V/75 ohms); FM 50 dB quieting sens 26 dBf (5.5  $\mu$ V/75 ohms); alternate ch sel 60 dB; capture ratio 3.0 dB; W&F 0.16% wrms. . . . . \$130

**T700.** Stereo AM/FM radio with cassette player. Features locking fast forward and rewind; volume, balance, and tone controls; loudness switch; LOC/DX switch; Stereo/Mono switch; end-of-tape eject. 3.5 W/channel into 4 ohms 90-20,000 Hz with 5% THD; FM usable sens 23 dBf (4.0  $\mu$ V/75 ohms); FM 50 dB quieting sens 26 dBf (5.5  $\mu$ V/75 ohms); alternate ch sel 60 dB; capture ratio 3.0 dB; W&F 0.16% wrms. . . . . \$100

**T502.** Stereo AM/FM radio with convertible nosepiece for import or domestic cars. Features locking fast forward; LOC/DX switch; auto Stereo/Mono; tape-play indicator. 3.5 W/ch into 4 ohms 90-20,000 Hz with 5% THD; FM usable sens 23 dBf (2.8  $\mu$ V/75 ohms); FM 50 dB quieting sens 26 dBf (5.5  $\mu$ V/75 ohms); alternate ch sel 60 dB; capture ratio 3.0 dB; W&F 0.16% wrms. . . . . \$80

**T720.** Pushbutton-tuned AM/FM radio with auto-reverse cassette player. Features locking fast forward and rewind; Stereo/Mono switch; LOC/DX switch; fader control. Shafts adjustable from 130 to 148mm. Power output 4 W/ch with 5% THD. . . . . \$170

#### Craig Cassette Amplifier

**T103.** Stereo cassette deck with amplifier. Features auto reverse; separate bass and treble controls; locking fast wind; tape-direction indicators; volume and balance controls; pushbutton eject. 4.0 W/ch into 4 ohms 150-20,000 Hz with 5% THD; THD 5% at 1 kHz at rated output; FR 40-10,000 Hz  $\pm$  3 dB; W&F 0.15% wrms; sep 35 dB; S/N 50 dB A-weighted; crosstalk -55 dB. . . . . \$110

#### Craig Car Speakers

**V851.** Two XL 6"  $\times$  9" flush-mount three-way speakers with large diameter voice coil for high-power-output amplifiers. Features durable, high-compliance cloth surround; pole-mounted mid- and super-tweeter for more open bass response; precision-crafted acoustically transparent wire mesh grille; polarized quick-connect terminals and channel-coded leads for easy installation. Power input 50W nominal, 100W max; magnet 20 oz; sens 92dB SPL/W/m; FR 60-22,000 Hz  $\pm$  10dB; THD 0.16% 1 kHz/1 W; imp 6 ohms; depth below mounting surface 1"; 6  $\times$  8 1/2" cutout 60.5 oz per speaker. . . . . \$140/pr

**V862.** Two XL 6"  $\times$  9" coaxial speakers with separate woofer and tweeter for deeper bass and extended high frequencies. Features larger diameter voice coil for higher output of power amplifiers; pole-mounted tweeter for more open bass response; precision crafted acoustically transparent wire mesh grille; polarized quick-connect terminals and ch coded leads. Power input 50W nominal, 100W max; magnet 20 oz; sens 95.5dB SPL/W/m; FR 60-22,000 Hz  $\pm$  6dB, THD 0.5% 1 kHz/1 W; imp 6 ohms; depth below mounting surface 1"; cutout 6  $\times$  8 1/2"; 60.5 oz per speaker. . . . . \$130/pr

**V830.** Two XL 6 1/2" flush-mount three-way speaker with large diameter voice coil for higher power output of power amplifiers. Features durable, high-compliance cloth surround for richer, cleaner, deeper bass response; pole-mounted mid- and super-tweeters for more open bass response; precision-crafted acoustically transparent wire mesh grille; polarized quick-connect terminals and ch-coded leads for easy instal-

lation. Power input 40W nominal, 80W max; magnet 20 oz; imp 6 ohms; depth below mounting surface 2"; cutout 5"  $\times$  5"; 32 oz per speaker. . . . \$120/pr

**V822.** Two XL 6 1/2" coaxial speakers with large diameter voice coil for higher output of power amplifiers. Features durable, high-compliance cloth surround; pole-mounted tweeter for more open bass response; precision crafted, acoustically transparent wire mesh grille; polarized quick-connect terminals and ch-coded leads for easy installation. Power input 40W nominal, 80W max; magnet 10 oz; sens 89dB SPL/W/m; FR 80-10,000 Hz  $\pm$  3dB; THD 0.4% 1 kHz/1 W; imp 6 ohms; depth below mounting surface 2"; cutout 5"  $\times$  5"; 28oz per speaker. . . . . \$100/pr

**V351A.** Two 6"  $\times$  9" flush-mount three-way speakers with large diameter voice coil for higher power output of power amplifiers. Features durable, high-compliance cloth surround for richer, cleaner, deeper bass response; pole-mounted mid- and super-tweeters for more open bass response; precision crafted acoustically transparent wire mesh grille; polarized quick-connect terminals and ch-coded leads for easy installation. Power input 12.5W nominal, 25W max; magnet 20 oz; sens 92dB SPL/W/m; FR 60-22,000 Hz  $\pm$  10dB; THD 0.6% 1 kHz/1 W; imp 6 ohms; depth below mounting surface 3"; cutout 6  $\times$  8 1/2"; 60.5 oz per speaker. . . . . \$100/pr

**V363A.** Two 6"  $\times$  9" flush-mount coaxial speakers with large diameter voice coil for higher power output of power amplifiers. Features durable, high-compliance cloth surround for richer, cleaner, deeper bass response; pole-mounted tweeter for more open bass response; precision crafted acoustically transparent wire mesh grille; polarized quick-connect terminals and ch-coded leads for easy installation. Power input 12.5W nominal, 25W max; magnet 20 oz; sens 92dB SPL/W/m; FR 60-23,000 Hz  $\pm$  9dB; THD 0.6% 1 kHz/1 W; imp 6 ohms; depth below mounting surface 3"; cutout 6  $\times$  8 1/2"; 56 oz per speaker. . . . \$85/pr

**V302A.** Two 5 1/2" flush-mount speakers with polarized quick-connect terminals and ch-coded leads for easy installation. Power input 8W nominal, 15W max; magnet 5.4 oz; sens 90dB SPL/W/m; FR 110-13,500 Hz  $\pm$  10dB; THD 1.5% 1 kHz/1 W; imp 6 ohms; depth below mounting surface 1 1/8"; cutout 4 1/2"  $\times$  4 1/2"; 17.5 oz per speaker. . . . . \$43/pr

**V341.** Two 4"  $\times$  6" flush-mount speakers with polarized quick-connect terminals and ch-coded leads for easy installation. Power input 7W nominal, 15W max; magnet 5.4 oz; sens 90dB SPL/W/m; FR 100-21,000 Hz  $\pm$  6dB; THD 2.35% 1 kHz/1 W; imp 6 ohms; depth below mounting surface 1 1/8"; cutout 3 1/2"  $\times$  5 1/2"; 16.5oz per speaker. . . . . \$40/pr

**V300A.** Two 3 1/2" flush-mount speakers with polarized quick-connect terminals and ch-coded leads for easy installation. Power input 7W nominal, 15W max; magnet 5.4 oz; sens 88dB SPL/W/m; FR 130-18,000 Hz  $\pm$  6dB; THD 0.4% 1 kHz/1 W; imp 6 ohms; depth below mounting surface 1 1/2"; cutout 3 1/2"  $\times$  3 1/2"; 15.5 oz per speaker. . . . . \$25/pr

**V323A.** Two 6 1/2" flush-mount coaxial speakers separate woofer and tweeter for deeper bass and extended high frequencies. Features pole-mounted tweeter for more open bass response; precision crafted, acoustically transparent low-profile grille; polarized quick-connect terminals and ch-coded leads for easy installation. Power input 12.5W nominal, 25W max; magnet 10 oz; sens 91.5dB SPL/W/m; FR 70-21,500 Hz  $\pm$  9dB; THD 0.4% 1 kHz/1 W; imp 6 ohms; depth below mounting surface 1/2"; cutout 5"  $\times$  5"; 32 oz per speaker. . . . . \$70/pr

**V305A.** Two 6 1/2" flush-mount speakers large diameter voice coil on aluminum bobbin handles the higher power output of large amplifiers. Features polarized quick-connect terminals and ch-coded leads for easy installation; durable, high-compliance cloth surround for improved bass response. Power input 12.5W nominal, 25W max; magnet 13 oz; sens 92dB SPL/W/m; FR 70-17,000 Hz  $\pm$  3dB; THD 0.4% 1 kHz/1 W; imp 8 ohms; depth below mounting surface 2"; cutout 5"  $\times$  5"; 2.3 lb per speaker. . . . \$55/pr

**V203A.** Two 6 1/2" flush-mount speakers with polarized quick-connect terminals and ch-coded leads for easy installation. Power input 5W nominal, 10W max; magnet 5.4 oz; sens 92dB SPL/W/m; FR 80-17,500

Hz  $\pm$ 8dB; THD 0.5% 1 kHz/1 W; imp 6 ohms; depth below mounting surface 1 1/4"; cutout 5" x 5"; 19 oz per speaker .....\$43/pr  
**V322A.** Two 4" flush-mount coaxial speakers. Features separate woofer and tweeter for deeper bass and extended high frequencies; pole mounted tweeter for more open bass response; precision crafted, acoustically transparent low-profile grille; polarized quick-connect terminals and ch-coded leads for easy installation. Power input 8W nominal, 20W max; magnet 8 oz; sens 90dB SPL/W/m; FR 120-20,000 Hz  $\pm$ 9dB; THD 0.35% 1 kHz/1 W; imp 6 ohms; depth below mounting surface 1 1/4"; cutout 3 3/4" x 3 3/4"; 24 oz per speaker .....\$60/pr  
**V301A.** Two 4" flush-mount speakers dual-cone construction for smooth, extended high FR; polarized quick-connect terminals and ch-coded leads for easy installation. Power input 8W nominal, 15W max; magnet 8 oz; sens 90dB SPL/W/m; FR 120-25,000 Hz  $\pm$ 8dB; THD 0.4% 1 kHz/1 W; imp 6 ohms; depth below mounting surface 1 1/2"; cutout 3 3/4" x 3 3/4"; 22 oz per speaker .....\$42/pr  
**V252.** Two 6" x 9" flush-mount three-way speakers. Power input 10W nominal, 20W max; magnet 20 oz; imp 6 ohms; depth below mounting surface 3"; cutout 6" x 8 3/4"; 60.5 oz per speaker .....\$50/pr  
**V230.** Two 6 1/2" flush-mount three-way speakers. Power input 10W nominal, 20W max; magnet 20 oz; imp 6 ohms; depth below mounting surface 2"; cutout 5" x 5"; 32 oz per speaker .....\$45/pr  
**V242.** Two 6" x 9" flush-mount dual-cone speakers. Power input 10W nominal, 20W max; magnet 10 oz; sens 88dB SPL/W/m; FR 45-17,000 Hz  $\pm$ 5dB; imp 6 ohms; depth below mounting surface 3"; cutout 6" x 8 3/4"; 36 oz per speaker .....\$37/pr  
**V191.** Two 5 1/2" convertible-mount speakers with polarized quick-connect terminals and ch-coded leads for easy installation. Power input 5W nominal, 10W max; magnet 3 oz; sens 88dB SPL/W/m; FR 95-16,000 Hz  $\pm$ 6dB; THD 2.5% 1 kHz/1 W; imp 4 ohms; depth below mounting surface 1 3/4"; cutout 5" x 5"; 36 oz per speaker .....\$25/pr  
**V107.** Two 6 1/2" flush-mount speakers. Power input 5W nominal, 8W max; magnet 4 oz; sens 8dB SPL/W/m; FR 70-17,000 Hz  $\pm$ 10dB; THD 2.5% 1 kHz/1 W; imp 4 ohms; depth below mounting surface 1 3/4"; cutout 5" x 5"; 12.5 oz per speaker .....\$22/pr  
**V106.** Two 4" flush-mount speakers. Power input 5W nominal, 10W max; magnet 4 oz; sens 88dB SPL/W/m; FR 13-15,000 Hz  $\pm$ 6dB; THD 1.5% 1 kHz/1 W; imp 4 ohms; depth below mounting surface 1 1/2"; cutout 3 3/4" x 3 3/4"; 12 oz per speaker .....\$21/pr

dbx

**Model 22 Car Noise-Reduction Unit**

Decoder for dbx-encoded cassettes connects between cassette tuner and power amp or between cassette radio preamp outputs and power-amp inputs. Features bass and treble controls. Power requirements: 12 V dc nominal (10.5 min, 14 max); current draw 150 mA; ground negative; fuse 250 mA in line; connectors 3-pin quick disconnect. Requires at least 50-mV input signal (accepts 1.5 V max); max output 4 V. Dynamic range 100 dB (max rms signal to A-weighted noise); FR follows dbx type II decoding curve 20-20,000 Hz  $\pm$ 0.5 dB (pink noise or music); THD <0.15% at 1 kHz; output noise -88 dBV (A-weighted). 6" W x 5 1/4" D x 1 1/2" H .....\$159

**CA-1 Car Decoder**

Decoder for dbx-encoded cassettes, connecting between cassette tuner and power amp or between cassette radio's preamp outputs and power-amp inputs. Features treble and bass controls, spade-lug connectors. Requires at least 20mV input signal, accepts 1 V max; max output > 1 V. Dynamic range 100 dB (max rms signal to A-weighted noise); FR follows dbx type II decoding curve 30-20,000 Hz  $\pm$ 1 dB (pink noise or music); THD <0.3% at 1 kHz; output noise -100 dBV A-weighted. Power requirements 12 V dc nominal (10.5 min, 15.6 max); current draw <80 mA; ground negative; fuse 250 mA in line. 6" W x 3 1/8" H x 3 1/8" D .....\$99

**EGO SYSTEMS**

**EC 692 Car Speaker**

Coaxial 6" x 9" automotive speaker system featuring unique passive midrange and readily accessible environment control; full crossover at 4,000 Hz and variable from 400-4,000 Hz; nonpress moisture-proofed one piece woofer cone and 1" polydome tweeter; biamp terminals; 30 oz woofer magnet with 1 1/2" aluminum voice coil; easy mount grille assembly. Power range 4-100 W rms; sens 95 dB/W/m SPL; 16 lb/pr .....\$170  
**EC 592.** Similar to above except for 5" round basket with 20-oz woofer magnet; power range 6-75W rms; sens 93 dB/W/m SPL; 11 lb/pr .....\$130/pr

**FUJITSU TEN**

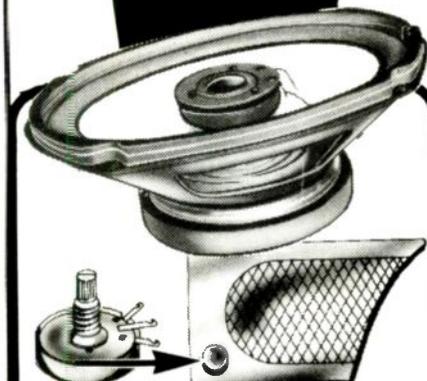
**Cassette Radios**

**CE-4133.** Under dash microcomputerized "Mini-Wizard" AM/FM stereo radio with auto-reverse cassette player. Features auto program selector; Dolby noise reduction; auto repeat; normal and chrome/metal tape selector; ceramic tape head; Hall effect IC in tape-end-sensing/auto-reverse control system; soft auto cassette loading; key-off eject; antirroll system for reduced W&F; fast forward/rewind mute; 4- way radio tuning; auto scan tuning and tuning search; 5 AM/5 FM station presets; manual tuning mode; preset program timing; auto sep control; soft mute; r-f auto gain control amplifier circuit; microprocessor-controlled PLL synthesizer tuning; local/distant switch; 5-band graphic equalizer; loudness switch; fader control; digital quartz clock; digital time/frequency display; black front panel. Rear-seat remote controller optional. W&F 0.09% wrms; FR 30-14,000 Hz  $\pm$ 3 dB; S/N Dolby off/on 50/58 dB. FM 50-dB quieting sens 24 dB; FR 30-15,000 Hz  $\pm$ 3 dB; capture ratio 3 dB; alternate-ch selectivity 64 dB; sep 32 dB at 1 kHz, 65 dB; image/i-f response ratio 65/90 dB. Equalizer center frequencies 60, 250, 1k, 3.5k, 10k Hz; boost/cut range  $\pm$ 12 dB; power consumption 2 A (1 W at 1 kHz); 7" W x 5 1/4" D x 2" H; 4.2 lb... \$800  
**CE-4130.** Same as CE-4133 except silver front panel .....\$800  
**EP-820.** Microprocessor-controlled AM/FM-stereo radio with preamp and auto-reverse cassette player with Dolby noise-reduction system. Unit features built-in 5-band graphic equalizer with center frequencies at 60, 250, 1k, 3.5k 10k Hz,  $\pm$ 12 dB; quartz clock and electronic tuning with digital frequency/time display; 7 AM/7 FM station presets; up/down search and scan tuning. Cassette features metal-compatible tape head, equalizer switch for CrO<sub>2</sub> and FeCr tape; locking fast forward/rewind. Radio features FM noise blanker; FM muting; 4-way fader control. Frequency range 40-14,000 Hz .....\$600  
**CR-1134.** High-power in-dash AM/FM-stereo receiver with auto-reverse stereo cassette deck. Features Dolby noise reduction; 3 FM/2 AM station presets; normal and CrO<sub>2</sub>/metal tape selector; ceramic tape head; ASC circuit; soft mute; fader control; 3-position adjustable shaft; universal DIN size. Output power 25 W x 2 or 7 W x 4 chs .....\$320  
**CR-1033.** Similar to CR-1143 except lower power; has separate bass and treble controls; no fader control. All-black finish .....\$290  
**CR-1032.** Similar to CR-1033 except has no Dolby NR or bass and treble controls; has high-cut filter and loudness switches .....\$250  
**CE-4432.** Electronic tuned receiver and cassette player with FM noise blanker and dual-gate MOSFET front end. Features Dynamic Noise Reduction; fader control; separate bass and treble controls; digital frequency readout; search tuning; 10-station memory (5 AM, 5 FM); mono/stereo switch; local/distant switch. Cassette section features metal-tape compatibility, tape-direction indicator, locking fast forward and rewind. Power output 4 W/ch into 4 ohms from 50-15,000 Hz with <5% THD; max power 8 W/ch. 50 ohm specs for tuner section; alternate ch selectivity 60 dB; FM stereo sep 35 dB at 1 kHz; FR 30-15,000 Hz; capture ratio 3 dB. Cassette section specs; FR 30-12,000 Hz; W&F 0.15%; S/N 50 dB; stereo sep

40 dB. Adjustable shafts; 7" W x 2" H x 4 1/4" H \$300  
**CR-1130.** in-dash unit with 3 FM/2 AM tuning presets and auto-reverse cassette player. Features separate bass and treble controls; high-cut filter; normal and CrO<sub>2</sub>/metal-tape capability; locking fast forward/rewind, FM muting; auto Separation Control (ASC) on FM; dual-gate MOSFET front end with agc action; ceramic filters for FM sel; loudness switch; FM stereo and tape-direction indicators. Amplifier output 16 W/ch min into 4 ohms at 10% THD; FR 40-20,000 Hz  $\pm$ 3 dB; S/N 70 dB A-weighted. FM usable sens 20 dB; FR 30-15,000 Hz  $\pm$ 3 dB; alternate-ch sel 60 dB; sep 35 dB at 1 kHz; capture ratio 3 dB.

**TAKE CONTROL OF YOUR EGO®**

**TRIAxIAL Performance from our COAxIAL DESIGN**



**Exclusive, Environmental Control™**

Introducing the EGO® model, EC-692 coaxial car speaker with exclusive Environmental Control™. Now, you can easily adjust the midrange tones to suit the acoustical environment of your car... without the need of a separate midrange driver! The unique new control (as pictured above) is neatly flush-mounted to your speaker grille. Now you can enjoy full Triaxial Performance from our Coaxial Design!

The EC-692 utilizes a heavy 30 oz. magnet woofer with an 1 1/2" aluminum voice coil and a 1" soft dome tweeter. Recommended for use with amplifiers ranging in power from 4 to 100 watts RMS. It has a bi-amp capability, a moisture-proof cone, and it comes with the EGO® 1-Year, over the counter, Warranty! It's truly, Super!



**INTER-EGO SYSTEMS, INC.**  
**50 WERMAN CT., PLAINVIEW, N.Y. 11803**

CIRCLE NO. 45 ON READER SERVICE CARD

W&F 0.09% wrms; FR 40-14,000 Hz  $\pm$  3 dB; S/N 53 dB A-weighted; 7"W  $\times$  5 1/4"D  $\times$  1 1/8"H; 3.8 lb ..... \$300  
**CR-1031.** Similar to CR-1130 except 4 W/ch, no fader control. Satin chrome finish ..... \$290  
**CR-1030.** Similar to CR-1031 except no separate bass and treble controls or fader control. Tape frequency response 40-14,000 Hz; amplifier output 4 W/ch ..... \$240  
**CM-6530.** AM/FM radio/stereo cassette player with FM noise blanker and dual-gate MOSFET front end. End-of-tape sensing reverses tape automatically when tape slows down. Features Dynamic Noise Reduction; music sensing; fader control; separate bass and treble; loudness switch; line output RCA jacks; antiroll mechanism; key-off pinch-roller release; permalloy tape heads; metal/CrO<sub>2</sub> switch. 50 ohm tuner specs: FM usable sens 20 dBf; alternate ch sel 60 dB; FM stereo sep 35 dB at 1 kHz; frequency response 30-15,000 Hz  $\pm$  3 dB; capture ratio 3 dB. Tape section: FR 30-15,000 Hz; W&F 0.09% wrms; S/N 50 dB; stereo sep 40 dB. Power 12 W/ch Into 4 ohms from 50-15,000 Hz with <5% THD; max power 29 W/ch ..... \$270  
**CM-6430.** Similar to CM-6530 except lacks DNR, music sensing, fader, and separate bass and treble controls. Power 12 W/ch into 4 ohms from 50-15,000 Hz with <5% THD. Maximum power is 9 W/ch ..... \$200  
**CE-4431.** Mini-size in-dash AM/FM-stereo radio with auto-reverse cassette player. Features digital frequency display; search tuning; local/distant switch; CrO<sub>2</sub>/metal tape selector; mono/stereo switch; FM noise blanker; locking fast forward/rewind; MOSFET front end; hard permalloy tape head; 6 AM/6 FM station presets; volume, tone, balance controls; tape-direction indicators; adjustable shafts. 180 mmW  $\times$  120 mmD  $\times$  50 mmH; 5 lbs ..... \$260

**DP-646.** In-dash AM/FM-stereo radio with auto-reverse cassette deck. Features built-in 4-W amplifier; separate bass and treble controls; DSS switch; normal and chrome/metal tape selector; life time metal tape head; antiroll system; ASC (Auto Separation Control) circuit; soft mute; universal (DIN) size ..... \$250  
**DP-640S4.** In-dash AM/FM-stereo receiver with auto-reverse cassette deck. Features FM noise blanker; locking fast forward/rewind; antiroll system for reduced wow and flutter. Output power 10 W .. \$185  
**GP-1010.** In-dash unit with 5-button preset tuning and illuminated dial in cassette door. Features multi-color AM, FM stereo, tape-end, and tape-run LEDs; soft-touch local/distant and mono/stereo switches; locking fast-forward/eject; FM noise blanker; AM/FM selector behind tuning control and high/low tone switch behind volume/balance control; silver front panel. Output power 4 W/ch Into 4 ohms at 10% THD; frequency response 63-20,000 Hz  $\pm$  3 dB. FM usable sens 26 dBf; FR 30-15,000 Hz  $\pm$  3 dB; alternate-ch sel 70 dB; separation 30 dB at 1 kHz; image/I-f response ratio 56/82 dB; capture ratio 6 dB. W&F 0.15% wrms; FR 63-14,000 Hz  $\pm$  3 dB; S/N 53 dB A-weighted; sep 34 dB; 6 1/8"W  $\times$  4 3/32"D  $\times$  1 7/32"H; 3.1 lb ..... \$180  
**GP-1011.** Same as GP-1010 except black front panel ..... \$180  
**DP-1006.** In-dash miniature AM/FM-stereo radio/cassette deck. Cassette player features locking fast forward/eject; chrome-tape compatibility; tape-end indicator light; W&F 0.15% wrms; FR 60-12,500 Hz  $\pm$  3 dB; S/N 50 dB. Radio features 5-W/ch output power into 4 ohms, 30-20,000 Hz with 10.0% THD; FR 30-10,000 Hz  $\pm$  3 dB; dial in door; separate bass and treble controls; loudness and local/distant switches; FM muting; LED stereo indicator; FM 50-dB quieting sens 23 dBf; image rejection 70 dB; FM f rejection 65 dB; sep 35 dB. Adjustable shafts to fit

most cars. 1 1/4"H  $\times$  6 1/4"W  $\times$  4 1/2"D ..... \$150  
**DP-1000.** Similar to DP-1006 except no loudness switch or bass and treble controls ..... \$130  
**DP-620.** In-dash AM-stereo FM radio/stereo cassette deck designed for small imported and domestic cars. Cassette features locking fast forward/rewind; tape-direction indicators; power-off eject; W&F 0.12% wrms; FR 60-8,000 Hz  $\pm$  3 dB; S/N 50 dB; sep 35 dB. Radio features stereo/mono switch; stereo LED; balance and tuning/select controls; 5-W/ch output power into 4 ohms, 150-20,000 Hz with 10.0% THD; FM tuner 50-dB quieting sens 24 dBf; sel 64 dB; sep 30 dB; FR 30-15,000 Hz  $\pm$  3 dB; 7"W  $\times$  5 7/16"D  $\times$  1 7/16"H ..... \$150

Fujitsu TEN Cassette Tuner

**DP-7872.** Universal in-dash AM/FM-stereo tuner with stereo cassette player. Features auto-reverse cassette deck; built-in noise blanker; locking fast forward/rewind; adjustable shafts ..... \$175

Fujitsu TEN Cassette Players

**SP-572.** Auto-reverse stereo cassette player with loudness switch; tape anti-tangle mechanism; antiroll system for reduced W&F; locking fast forward/rewind; program selector switch ..... \$120  
**SP-600.** Compact stereo cassette player with automatic eject; single fast-forward/rewind/eject lever; improved tone control; green guide light for cassette door; auto power source switching; balance control ..... \$110

FULTRON

Cassette Radios

**16-7600.** In-dash electronically tuned AM/FM stereo radio with auto-reverse cassette player. Features DNR; 6 AM/6 FM presets; seek and scan station find-

**Lifetime Warranty. Free! With Fultron Autosound.**



Who wants an autosound system that spends more time in the shop than it does on the road? Fultron is so confident in the quality of our products that we give a *free* lifetime warranty against any manufacturing defect on auto-reverse cassette stereos and speakers. A lifetime warranty is also available on Fultron power booster-equalizers and other products. To get complete warranty details and hear a demonstration of Fultron's state-of-the-art autosound systems with all the most-wanted features, visit your Fultron dealer. For the name of the dealer in your area write Arthur Fulmer, Inc., Electronics Division, P.O. Box 177, Memphis, Tennessee 38101.

**FULTRON**<sup>®</sup>  
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ing; sendust alloy tape head; CrO<sub>2</sub>-tape compatibility; auto tape search in forward and reverse; soft auto-load and key-off eject; separate bass and treble controls; built-in stereo/mono circuit; LED digital station frequency and time display; balance and fader controls; locking fast forward/rewind; preamp line output; small chassis to fit most cars. Free lifetime warranty. Output power 4 W/ch into 4 ohms at 1 kHz with <3% THD; FM FR 100-14,000 Hz ±3 dB.... \$350

**16-6900.** In-dash electronically tuned AM/FM stereo radio with auto-reverse cassette deck. Features Dynamic Noise Reduction; preamp outputs; 6 AM/6 FM station presets; LED digital frequency/time display; PLL frequency synthesized tuning; locking fast forward/rewind; CrO<sub>2</sub>-tape capability; separate bass and treble, balance, fader controls; local/distant switch; auto FM muting; small chassis that fits most cars. Free lifetime warranty. Specs same as for 16-7600 ..... \$300

**16-8000.** In-dash electronically tuned AM/FM stereo radio with auto-reverse cassette deck. Features 6 AM/6 FM station presets; LED digital frequency/time display; locking fast forward/rewind; CrO<sub>2</sub> tape capability; separate bass and treble, balance, fader controls; auto FM muting; small chassis that fits most cars. Free lifetime warranty. Specs same as for 16-7600 ..... \$250

**16-6700.** In-dash pushbutton AM/FM stereo radio with auto-reverse cassette deck. Features DNR; preamp outputs; separate bass and treble controls; mono/stereo switch; balance and fader controls; FM stereo and tape-direction indicators; locking fast forward/rewind; small chassis to fit most cars. Free lifetime warranty. Specs same as for 16-7600 \$200

**16-5700.** In-dash AM/FM stereo receiver with auto-reverse cassette deck. Features Dynamic Noise Reduction; preamp outputs; separate bass and treble controls; mono/stereo and FM muting switches; balance and fader controls; illuminated dial; FM stereo and tape-direction indicators; locking fast forward/rewind; small chassis that fits most cars. Specifications same as for 16-7600 ..... \$170

**16-6600.** In-dash pushbutton AM/FM stereo radio with auto-reverse cassette deck. Features pushbuttons for 5 AM/5 FM stations; preamp outputs; balance and fader controls; FM stereo and tape-direction indicators; local/distant and mono/stereo controls; locking fast



forward/rewind; small chassis fits most cars. Free lifetime warranty. Specs same as for 16-7600 ... \$170

**16-5200.** Compact chassis stereo AM/FM radio with auto-reverse cassette deck. Features locking fast forward/rewind; stereo and tape-direction indicator. Multiple nosepieces for import, vertical and standard installations. Free lifetime warranty. Specs same as for 16-7600 ..... \$120

**16-5000.** In-dash AM/FM stereo radio/cassette player. Features mono/stereo, local/distant, FM muting switches; balance and tone controls; small chassis that fits most cars. One year warranty. Specifications same as for 16-7600 ..... \$90

**Fultron 8-Track Radio**

**16-5600.** In-dash AM/FM stereo receiver with stereo 8-track cartridge player. Features mono/stereo, FM muting, program-change and local/distant switches; tape program indicators; small size that fits most cars. Free lifetime warranty. Specifications same as for 16-7600 ..... \$120

**GENESIS**

**Automotive Loudspeakers**

**AM 165.** 2-way plate system; response-corrected ferrofluid tweeter; edgewound woofer voice coil; 7" ×

9 1/2" overall; FR 50-20,000 Hz ±4 dB; driver size 6 1/2" woofer, 1" tweeter; sens 91 dB/1W; max power 80 W; mounting depth 2 1/4" ..... \$250

**AM 165.** 2-way plate system; response-corrected ferrofluid tweeter; edgewound woofer voice coil; 7" × 9 1/2" overall. FR 60-20,000 Hz ±4 dB; driver size 6 1/2" woofer, 1" tweeter; sens 92 dB/1W; max power 100W; mounting depth 3 1/4"/pr. .... \$250/pr

**AM 135.** 2-way plate system; response-corrected ferrofluid tweeter; 5 1/4" × 8 1/8" overall; FR 60-20,000 Hz; driver size 5 1/2" woofer, 1" tweeter sens. 91 dB/1 W; max power 60 W; mounting depth 1 1/4" \$200/pr

**GRUNDIG**

**Cassette Radios**

**GCE 9900.** Features auto-reverse cassette player with sendust head and Dolby, synthesized electronic tuning, digital display, night illumination, 6 + 6 station pushbutton, bi-directional seek function, automatic antenna lead, 22 watts of power ..... \$450

**GCH 9600M.** Metro traffic information (MTI) system, offering the driver traffic information. Features Dolby; 24 W rms; station pushbutton, separate bass and treble controls, fader control and built-in muting . \$350

**GCD 9800.** Features auto-reverse cassette player, digital display, 24 watts rms, stereo blend, loudness control, automatic high cut/soft mute, tape direction indicators, switchable AFC; separate bass/treble controls ..... \$300

**GCM 7000.** Features 11 watts rms, balance control, local/distance switch, adjustable shafts and DIN snap-in mounting ..... \$150

**INFINITY**

**Car Speaker Systems**

**A693.** Three-way system with crossover to blend the 6" × 9" polypropylene woofer, polycarbonate midrange, and EMIT tweeter. The midrange and tweeter



are mounted to minimize interference from the woofer's output. Power capacity 70 watts; FR 40-32,000Hz; crossover frequencies 4-8,000Hz; sens 90dB SPL/W/m; imp 4 ohms ..... \$179/pr

**A692.** 6" × 9" 2-way system with polycarbonate tweeter; 40-22,000Hz 20 oz woofer magnet. Power capacity 70 watts; FR 40-32kHz; crossover frequencies 4-8kHz; sens 90 dB SPL/W/m; imp 4 ohms ..... \$129/pr

**A63.** 6 1/2" round, 2-way design speaker system. Features polycarbonate midrange/tweeter. Power capacity 50 watts; FR 60-32,000Hz; crossover frequencies 4-8,000Hz; sens 88dB SPL/W/m; imp 4 ohms ..... \$139/pr

**A62.** 6 1/2" round, 2-way design speaker system. Features polycarbonate midrange/tweeter. Power capacity 50 watts; FR 60-18,000Hz; crossover frequencies 4,000Hz; sens 88dB SPL/W/m; imp 4 ohms \$99/pr

**A42.** 4" round, 2-way design speaker system. Features polypropylene woofer; separate polymer cone; mechanical crossover; optional adaptor for 1 1/4" to 1/4" mounting. Power capacity 25 watts; FR 100-

15,000 Hz; crossover frequencies 3,000Hz (mechanical); sens 87dB SPL/W/m; imp 4 ohms \$75/pr

**INTER-EGO SYSTEMS**  
(see Ego Systems)

**JBL**

**Automotive Loudspeakers**

**T545.** 3-way system, 6 × 9" woofer, 2 1/2" tweeter. FR 40-18,000 Hz; sens 92 dB SPL/W/m; max power 100 W; magnet 64 oz; mounting depth 3 1/4" \$180/pr

**T540.** 2-way system, 6 × 9" woofer, 2 1/2" tweeter. FR 40-18,000 Hz; sens 92 dB SPL/W/m; max power 100 W; magnet 64 oz; mounting depth 3 1/4" \$150/pr

**T420.** 2-way system, 6 1/2" woofer, 1" tweeter. FR 70-18,000 Hz; sens 90 dB SPL/W/m; max power 75 W; magnet 37 oz; mounting depth 2 1/4" ..... \$119/pr

**T205.** 2-way system, 4 1/2" woofer, 1" tweeter. FR 90-18,000 Hz; sens 88 dB SPL/W/m; max power 60 W; magnet 24 oz; mounting depth 1 1/4" ..... \$99/pr

**JENSEN**

**Cassette Radios**

**RE530.** Electronically tuned AM/FM cassette car stereo receiver; all of the features of the RE520 (below) plus: Dolby® and DNR; preset memory scan; switchable triple function automatic program control; double balanced mixer with four element tuner; noise blanker circuit; backlighting; standard chassis. Output power 10 W/ch 50-15,000 Hz into 4 ohms. FM tuner section: usable sens 14.8 dBf; 50-dB quieting sens 19.2 dBf; alternate ch sel 65 dB; capture ratio 1.7 dB. Tape section: W&F 0.12% wrms; FR 50-12,500 Hz, 50-15,000 (CrO<sub>2</sub>), 50-18,000 (metal); S/N 60 dB ..... \$500

**RE520.** Electronically tuned AM/FM cassette car stereo receiver; all of the features of the RE518 (below) plus: automatic tape search; Flex-Fader™ circuit; dual level outputs; universal chassis. Output power 10 W/ch 50-15,000 Hz into 4 ohms. FM tuner section: usable sens 14.8 dBf; 50-dB quieting sens 19.2 dBf; alternate ch sel 60 dB; capture ratio 1.7 dB. Tape section: W&F 0.12% wrms; FR 50-12,000 Hz, 50-15,000 (CrO<sub>2</sub>), 50-18,000 (metal); S/N 60 dB \$420

**RE518.** Electronically tuned AM/FM cassette car stereo receiver; all of the features of the RE512 (below) plus: Dolby noise reduction; tape equalization; switchable loudness compensation; local/distance switch; universal chassis. Output power 10 W/ch 30-15,000 Hz into 4 ohms. FM tuner section: usable sens 14.8 dBf; 50-dB quieting sens 19.2 dBf; alternate ch sel 60 dB; capture ratio 1.5 dB. Tape section: W&F 0.12% wrms; FR 50-10,000 Hz; S/N 50 dB. \$400

**RE512.** Electronically tuned AM/FM cassette car stereo receiver. Features digital display of time and frequency; 5 AM and 5 FM electronic station presets; electronic scan; auto reverse; separate bass/treble controls; separate balance/fader controls; local/distance switching; switchable stereo/mono FM modes; automatic power antenna control lead; mini chassis. Output power 10 W/ch 30-15,000 Hz into 4 ohms. FM tuner section: usable sens 14.8 dBf; 50-dB quieting sens 19.2 dBf; alternate ch sel 60 dB; capture ratio 1.5 dB. Tape section: W&F 0.12% wrms; FR 50-10,000 Hz; S/N 50 dB ..... \$370

**RE508.** Electronically tuned AM/FM cassette car stereo receiver; Features digital display of time and frequency; 4 AM and 4 FM electronic station presets; electronic scan; auto reverse; switchable stereo/mono FM modes; automatic local/distance switching; automatic power antenna control lead; universal chassis. Output power 10 W/ch 50-15,000 Hz into 4 ohms. FM tuner section: usable sens 14.8 dBf; 50-dB quieting sens 19.2 dBf; alternate ch sel 60 dB; capture ratio 1.7 dB. Tape section: W&F 0.12% wrms; FR 50-10,000 Hz; S/N 50 dB ..... \$300

**R408.** AM/FM cassette car stereo receiver; All of the features of the R220 (below) plus: Dolby noise reduction; tape equalization; auto load/key off eject; switchable FM interstation muting; separate bass/treble controls; standard chassis. Output power 10 W/ch 50-15,000 Hz into 4 ohms. FM tuner section: usable

**Audio terms are defined in the glossary on page 19.**  
**For an explanation of abbreviations, turn to the list on page 22.**

sens 14.8 dBf; 50-dB quieting sens 19.2 dBf; alternate ch sel 60 dB; capture ratio 1.5 dB. Tape section: W&F 0.12% wrms; FR 50-12,000 Hz metal; S/N 50 dB ..... \$290

**R220.** AM/FM cassette car stereo receiver. Features pushbutton station presets; auto reverse; triple function auto program control; switchable Flex-Fader™ circuit; dual level outputs; separate balance/fader controls; switchable loudness compensation; tuner activated power antenna control lead; auto load/eject cassette; mini chassis. Output power 8 W/ch 50-15,000 Hz into 4 ohms. FM tuner section: usable sens 14.8 dBf; 50-dB quieting sens 19.2 dBf; alternate ch sel 60 dB; capture ratio 1.5 dB. Tape section: W&F 0.1% wrms; FR 50-12,000 Hz; S/N 50 dB ..... \$250

**R210.** AM/FM cassette car stereo receiver; Features pushbutton station presets; switchable stereo/mono FM modes; automatic local/distance switching; automatic loudness compensation; separate balance/fader controls; mini chassis. Output power 8 W/ch 50-15,000 Hz into 4 ohms. FM tuner section: usable sens 17.3 dBf; 50-dB quieting sens 25.2 dBf; alternate ch sel 60 dB; capture ratio 2.0 dB. Tape section: W&F 0.3% wrms; FR 50-10,000 Hz; S/N 50 dB ..... \$200

**JR105.** AM/FM cassette car stereo receiver. Features switchable stereo/mono FM modes; automatic local/distance switching; separate bass/treble controls; universal chassis. Output power 10 W/ch 30-15,000 Hz into 4 ohms. FM tuner section: usable sens 14.8 dBf; 50-dB quieting sens 21.4 dBf; alternate ch sel 65 dB; capture ratio 1.5 dB. Tape section: W&F 0.12% wrms; FR 50-10,000 Hz; S/N 50 dB. \$170

#### Jensen Amplifier

**A35.** Features full electronic protection from thermal overload and reverse polarity; fused power lead; high

and low level inputs; compact size. Output power 40 W/ch; 10% THD; S/N 80 dB; 3 1/4" W x 4 1/2" D x 1 1/8" H ..... \$75

#### Jensen Equalizer/Amplifier

**EQA5000.** Graphic equalizer/amp features 7 bands of equalization; 18 dB boost, 6 dB attenuation for each band; full electronic protection from reverse polarity and thermal overload; fused power lead; high and low level inputs; LED output power meters; panel or under-dash mounting capabilities; EQ defeat switch; compact size. FR 20-50,000 Hz; Output power 40W/ch; 10% THD; center frequencies 60, 160, 400, 1,000 2,500 6,000 12,000 Hz S/N 80 dB; 6 1/8" W x 4 1/2" D x 1 1/8" H ..... \$140

#### Jensen Car Speakers

**J1242.** 6 x 9 Quadrax® patented four-way speaker; 2" Piezoelectric tweeter. FR 40-20,000 Hz; sens 103 dB SPL/W/m; max power 55 W; magnet 20 oz; mounting depth 4" ..... \$160/pr

**J3033.** 6 x 9 Triax® patented 3-way speaker; new P28™ polycellulose cone material; bi-amp capability: 2" phenolic cone piezoelectric tweeter. FR 38-40,000 Hz; sens 103 dB SPL/W/m; max power 100 W; magnet 20 oz; mounting depth 3 7/8" ..... \$160/pr

**J2020.** 6 x 9 Triax®. Patented 3-way speaker; 2" Piezoelectric tweeter. FR 40-40,000 Hz; sens 101 dB SPL/W/m; max power 65 W; magnet 12 oz; mounting depth 3 3/4" ..... \$140/pr

**J1365.** 6 x 9 Triax® Thinmount. Patented 3-way speaker; Thinmount™ design allows installation in many doors, side panels, and rear decks. FR 40-20,000 Hz; sens 101 dB SPL/W/m; max power 50 W; magnet 9 oz; mounting depth 1 3/4" ..... \$130/pr

**J1065.** 6 x 9 Triax®. Patented 3-way speaker; 2" Piezoelectric tweeter. FR 40-20,000 Hz; sens 102 dB SPL/W/m; max power 50 W; magnet 20 oz; mounting

depth 3 3/4" ..... \$130/pr  
**J1401.** 4 x 10 Triax® Thinmount. Patented 3-way speaker; Thinmount™ design allows greater applications. FR 40-20,000 Hz; sens 99 dB SPL/W/m; max power 45 W; magnet 9 oz; mounting depth 2 1/8" ..... \$130/pr

**J3023.** 6 1/2" Triax®. Patented 3-way speaker; extremely shallow mounting depth; fits 5/8" applications; 2" Piezoelectric phenolic cone midrange; 1 1/2" Piezoelectric tweeter; new P28™ Polycellulose woofer cone. FR 52-40,000 Hz; sens 101 dB SPL/W/m; max power 75 W; magnet 20 oz; mounting depth 1 3/8" ..... \$140/pr

**J1279.** 6 1/2" Triax®. Patented 3-way speaker; shallow mounting depth; 2" Piezoelectric tweeter. FR 52-40,000 Hz; sens 101 dB SPL/W/m; max power 75 W; magnet 16 oz; mounting depth 1 1/8" ..... \$125/pr

**J2037.** 6 x 9 Coax. Two-way speaker; 3" cone tweeter. FR 38-20,000 Hz; sens 102 dB SPL/W/m; max power 90 W; magnet 20 oz; mounting depth 3 7/8" ..... \$120/pr

**J1369.** 6 x 9 Coax Thinmount™. Two-way speaker; Thinmount™ design allows installation in many doors, side panels, and rear decks. FR 40-16,000 Hz; sens 100 dB SPL/W/m; max power 50 W; magnet 9 oz; mounting depth 1 3/4" ..... \$85/pr

**J1069.** 6 x 9 Coax. Two-way speaker. FR 40-18,000 Hz; sens 101 dB SPL/W/m; max power 45 W; magnet 20 oz; mounting depth 3 3/4" ..... \$85/pr

**J1405.** 4 x 10 Coax Thinmount™. Two-way speaker; Thinmount™ design allows greater applications. FR 45-18,000 Hz; sens 99 dB SPL/W/m; max power 45 W; magnet 9 oz; mounting depth 2 3/8" ..... \$85/pr

**J3013.** 6 1/2" Coax. Two-way speaker; shallow mounting depth; new P28™ Polycellulose woofer cone; fits 5/8" applications; 2" Phenolic cone Piezoelectric tweeter. FR 52-40,000 Hz; sens 100 dB SPL/W/m; max power 75 W; magnet 16 oz; mounting depth 1-



**Jensen drives sound into the future.**

Advanced technology gives you tomorrow's driving sound right now with the dynamic Jensen® Series 3000 TRIAX® and COAX car stereo speaker systems. High fidelity excitement that pushes sensitivity to the outer limits. Distortion is diminished. Clarity is redefined.

All Series 3000 speakers have been dynamic range-enhanced to maximize fidelity and performance, enabling them to respond brilliantly to the acoustics of any car interior.

That's Jensen. The sound that moves you like no other. One listen and you'll never drive anything less. Now or in the future.

**JENSEN**  
CAR AUDIO

**When it's the sound that moves you.**

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7/8" ..... \$110/pr  
**J1201.** 6 1/2" Coax. Two-way speaker; shallow mounting depth; fits 5 1/4" applications. FR 55-20,000 Hz; sens 100 dB SPL/W/m; max power 50 W; magnet 16 oz; mounting depth 1-3/8" ..... \$100/pr  
**J1188.** 6 1/2" Coax. Two-way speaker; shallow mounting depth; fits 5 1/4" applications. FR 58-18,000 Hz; sens 99 dB SPL/W/m; max power 45 W; magnet 12 oz; mounting depth 1-7/8" ..... \$85/pr  
**J1077.** 5 1/2" Coax. Two-way speaker; 2" Piezoelectric tweeter. FR 60-18,000 Hz; sens 99 dB SPL/W/m; max power 45 W; magnet 20 oz; mounting depth 2-3/16" ..... \$80/pr  
**J3003.** 4 1/2" Coax. Two-way speaker; shallow mounting depth; P28" Polycellular woofer cone; 2" Piezoelectric tweeter. FR 63-40,000 Hz; sens 98 dB SPL/W/m; max power 50 W; magnet 12 oz; mounting depth 1-7/8" ..... \$90/pr  
**J1093.** 4 1/2" Coaxial. FR 65-18,000 Hz; sens 97 dB SPL/W/m; max power 40 W; magnet 10 oz; mounting depth 2" ..... \$72/pr  
**J1245.** 6 1/2" Dual Cone Convertible Mount. Includes removable angled collar for surface or flush mounting; 2" high frequency whizzer cone. FR 50-14,000 Hz; sens 94 dB SPL/W/m; max power 40 W; magnet 5 oz; mounting depth 1-7/16" Flush, 3-3/16" Surface ..... \$50/pr  
**J1186.** 4 1/2" Coax Convertible Mount. Two-way speaker includes removable angled collar for surface or flush mounting; 2" Piezoelectric tweeter. FR 65-18,000 Hz; sens 97 dB SPL/W/m; max power 40 W; magnet 10 oz; mounting depth 2 Flush, 3-7/8" Surface ..... \$77/pr  
**J1445.** 4 1/2" Dual Cone Convertible Mount. Includes removable angled collar for surface or flush mounting; 1 1/2" high frequency whizzer cone. FR 70-17,000 Hz; sens 95 dB SPL/W/m; max power 25 W; magnet 3 oz; mounting depth 1-1/16" Flush, 3-7/8" Surface ..... \$35/pr  
**J1292.** 5 1/2" Thinmount". Full range speaker; Thinmount" designed to fit imports and other small cars. FR 58-16,000 Hz; sens 96 dB SPL/W/m; max power 40 W; magnet 9 oz; mounting depth 1 1/16" ..... \$60/pr  
**J1283.** 4" Thinmount". Full range speaker; Thinmount" designed to fit imports and other small cars. FR 65-20,000 Hz; sens 95 dB SPL/W/m; max power 30 W; magnet 5 oz; mounting depth 1 1/8" ..... \$50/pr  
**J1435.** 4 x 6 Dual Cone Dashboard Upgrade. High-power dashboard upgrade speaker for cars with 4 x 6 cutouts. FR 65-18,000 Hz; sens 97 dB SPL/W/m; max power 25 W; magnet 4.5 oz; mounting depth 1-11/16" ..... \$38/pr  
**J1350.** 3 1/2" Dual Cone Dashboard Upgrade. High-power dashboard upgrade speaker for cars with 3 1/2" cutouts. FR 80-15,000 Hz; sens 90 dB SPL/W/m; max power 25 W; magnet 3 oz; mounting depth 1-1/2" ..... \$33/pr  
**J2060.** 6 1/2" woofer for component systems; installs in rear deck or side panels. FR 52-56,000 Hz; sens 99 dB SPL/W/m; max power 65 W; magnet 15 oz; mounting depth 2 1/2" ..... \$45/pr  
**J2080.** 8" woofer for component systems; installs in rear deck or side panels. FR 35-1,000 Hz; sens 92 dB SPL/W/m; max power 65 W; magnet 12 oz; mounting depth 4-1/2" ..... \$60/pr  
**J2094.** High-power soft-dome dashboard tweeter fits 3 1/2" and 4" x 6" standard and metric applications; 5 kHz crossover network. FR 1,700-24,000 Hz; sens 94 dB SPL/W/m; max power 75 W; mounting depth 1 1/16" ..... \$55/pr

## J.I.L.

## Cassette Radios

**CD-83F.** Concept® in-dash AM/FM stereo/cassette player with auto cassette mechanism and digital tuning with DNR (Dynamic Noise Reduction). Features DCFC dc-controlled function circuit; seek switch; AM/FM station presets; auto-reverse tape mechanism; Sen-Alloy tape head; locking fast forward/rewind; separate bass and treble controls; key-off eject; digital clock display; fader control; mute switch; local/DX switch. Tuner section: FM 50-dB quieting sens mono/stereo 20/39 dBf; FM S/N mono/stereo 65/55 dB at 65 dBf; THD mono/stereo 0.4%/0.1%

at 1 kHz, 50 dB quieting; FM capture ratio 1 dB; adjacent/alternate-ch sel 15/75 dB; spurious/image-i-f response 72/73/75 dB; AM suppression 60 dB. Cassette deck section: W&F 0.18% wrms; frequency range 30-15,000 Hz; S/N 50 dB; THD < 0.6% at 0 dB output; ch sep 30 dB. Amplifier section: output level > 775 mV; THD < 0.5% at 0 dB output ..... \$400  
**CD-82FN.** Concept® in-dash AM/FM stereo/cassette player with auto-reverse cassette mechanism and DNR. Features DCFC dc-controlled function circuit; Sen-Alloy tape head; locking fast forward; separate bass and treble controls; key-off eject; stereo hi-blend switch; fader control; muting switch; PLL circuitry; local/DX switch. Specs same as for CD-83F ... \$232  
**CD-80N.** Concept® in-dash AM/FM stereo/cassette player with auto-reverse cassette mechanism and DNR. Features DCFC dc-controlled function circuit; locking fast forward/rewind; separate bass and treble controls; key-off eject; mute switch; PLL circuitry; local/DX switch. Specifications same as for CD-83F ..... \$180  
**CD-72.** Concept® in-dash AM/FM stereo/cassette player. Features pushbutton tuning and cassette player with DNR system; locking fast forward/rewind; auto stop; key-off eject; adjustable shafts; PLL circuitry; local/DX switch; loudness switch. Specifications same as for CD-83F except output power 8 W rms/ch into 4 ohms; S/N > 60 dB; THD 0.5% at 6-W output into 4 ohms ..... \$134

## Booster Amplifiers

**AP-40F.** Booster amp with bridged circuit. Features short-circuit and 4 output channels. 20 W into four ohms; 20-50,000 Hz -5 dB; 0.5% THD, S/N > 60 dB ..... \$120  
**AP-40.** Same as AP-40 except 20W into 2 output channels ..... \$70

## JVC

## Cassette Radios

**KS-R35.** In-dash mini-chassis pushbutton AM/FM radio with auto-reverse cassette player. Features Dolby B; metal-tape compatibility; separate bass and treble controls; low-level preamp output jacks; engine-noise suppressor; key-off release; sendust alloy heads; 4-way fader; biphonic sound. Output power 8 W/ch maximum, 3 W/ch into 4 ohms; FR 100-20,000 at no more than 0.8% THD ..... \$270  
**KS-R30.** In-dash mini-chassis AM/FM radio with auto-reverse cassette deck. Features pushbutton presets; Dolby B; metal-tape compatibility; separate bass and treble controls; low-level preamp output jacks; engine-noise suppressor; key-off release; metaperm heads. Output power 8 W/ch max, 3 W/ch into 4 ohms; FR 100-20,000 at no more than 0.8% THD .... \$240  
**KS-R15.** In-dash mini-chassis AM/FM radio with metal-capable cassette deck. Features pushbutton presets; Dolby B; music scan; separate bass and treble controls; low-level preamp output jacks; key-off release; sendust alloy heads; 4-way fader. Output power 8 W/ch max, 3 W/ch into 4 ohms; frequency response 100-20,000 at no more than 0.8% THD ..... \$210  
**KS-R10.** In-dash mini-chassis AM/FM radio with metal-capable cassette deck. Features Dolby B; music scan; separate bass and treble controls; low-level preamp output jacks; Output power 8 W/ch max, 3 W/ch into 4 ohms; FR 100-20,000 at no more than 0.8% THD ..... \$180

## JVC Audio Express Line Components

**KSC100.** PLL-synthesized AM/FM tuner with auto-reverse cassette player. Requires separate power amp. Features music scan; Dolby B and C; digital clock; metal-tape compatibility; separate bass and treble controls; 4-ch low-level preamp output jacks; engine-noise suppressor; key-off release; sendust alloy heads; 4-way fader ..... \$400  
**KS-R75.** In-dash mini-chassis AM/FM radio with auto-reverse cassette deck. Features scan and seek; digital clock; PLL digitally synthesized tuner; Dolby B noise reduction; metal-tape compatibility; music scan; separate bass and treble controls; low-level preamp output

jacks; engine-noise suppressor; key-off release; sendust alloy heads; 4-way fader; biphonic sound. Output power 22 W/ch max, 12 W/ch into 4 ohms from 40-20,000 Hz at no more than 0.8% THD ..... \$380  
**KS-R55.** In-dash mini-chassis AM/FM radio with metal-capable cassette deck. Features PLL digitally synthesized tuner; Dolby B noise reduction; separate bass and treble controls; low-level preamp output jacks; engine-noise suppressor; key-off release; sendust alloy heads; 4-way fader; biphonic sound. Output power 22 W/ch max, 12 W/ch into 4 ohms from 40-20,000 Hz at no more than 0.8% THD ..... \$330

## JVC Power Amplifiers

**KS-A100.** Audio Express component power amplifier with 50 W/ch max and 22 W/ch into 4 ohms from 40-20,000 Hz < 0.8% THD ..... \$150  
**KS-A50.** Component power amplifier with 25 W/ch max and 12 W/ch into 4 ohms from 40-20,000 at < 0.8% THD ..... \$80

## JVC Signal Processors

**KS-E7.** Audio Express 7-band SEA equalizer with time delay ..... \$180  
**KS-EA50.** 7-band SEA stereo graphic equalizer/amplifier with 25 W/ch max and 12 W/ch into 4 ohms from 40-20,000 at < 0.8 THD ..... \$150  
**KS-E5.** Passive 7-band SEA stereo equalizer .... \$80

## JVC Car Speakers

**CS-6930.** Rear deck 6" x 9" three way speaker system with olefin diaphragm material. FR 30-20,000 Hz; imp 4 ohms; power handling 90 W ..... \$150  
**CS-6920.** 6" x 9" rear deck mounting coaxial speaker system with olefin diaphragm. FR 30-20,000 Hz; power handling 90 W ..... \$120  
**CS-4120.** 4" x 10" rear deck speaker system with olefin diaphragm material designed for mounting in General Motors' cars; imp 4 ohms; FR 40-20,000 Hz; max power handling 40 W ..... \$90  
**CS-620.** 6 1/2" round door mount coaxial with olefin diaphragm. FR 40-20,000 Hz; imp 4 ohm; mounting depth 1 1/8"; power handling 50 W ..... \$80  
**CS-610.** 6 1/2" round door mount dual cone speaker with olefin diaphragm. Mounting depth 1 1/8"; imp 4 ohm; FR 20-18,000 Hz; max power handling 40 W ..... \$60  
**CS-420.** 4" round door mount coaxial speaker with olefin diaphragm. FR 45-20,000 Hz; mounting depth 1 1/2"; imp 4 ohms; power handling 30 W ..... \$70  
**CS-410.** 4" round dual cone door mounting speaker system with olefin diaphragm material. FR 45-16,000 Hz; imp 4 ohms; mounting depth 1 1/4"; power handling 30 W ..... \$50  
**CS-300.** 3 1/2" round, single cone speaker system for in-dash mounting. Featuring olefin diaphragm cone material; FR 80-15,000 Hz; imp 4 ohms; mounting depth 1 1/2"; power handling 30 W ..... \$30

## KENWOOD

## Cassette Radios

**KRC-7100.** Compact flat-chassis AM/FM radio/cassette deck with PLL synthesized tuning. Features auto seek; 18 FM/6 AM presets; preset scan; memory address; broadcast monitoring in fast forward and rewind; distant/local switch; auto noise reduction; auto reverse with tape advance; Dolby noise reduction; metal tape compatibility; separate bass and treble; preout terminal. Output power 5W/channel. 7 1/8" W x 2"H x 5 1/4" D ..... \$469  
**KRC-712.** Compact flat-chassis AM/FM radio/cassette deck with PLL synthesized tuning. Features auto scan; 5 FM/5 FM presets; auto noise reduction; auto reverse; key off eject; separate bass and treble. Output power 15W/channel for rear, 5W/channel for front; frequency response 30-16,000Hz ±3dB; wow and flutter 0.12% wrms; 7 1/8" W x 2"H x 5 1/4" D ..... \$429  
**KRC-512.** Mini-chassis cassette receiver with PLL synthesized tuning; auto seek; 5 AM/5 FM station presets; Dolby noise reduction; metal tape capability; auto local/distant switching; hard permalloy head; bass and treble controls; preamp out jacks; 4-speaker fader control; lighting for all knobs; auto reverse cassette deck; auto stereo/mono switching; manual tun-

ing. Output power 5W/channel; 6 $\frac{1}{2}$ "W  $\times$  4 $\frac{1}{4}$ "H  $\times$  1 $\frac{3}{4}$ "D ..... \$399  
**KRC-3100.** Compact flat-chassis AM/FM radio with auto reverse cassette player. Features PLL synthesized tuning; auto seek; 5 FM/5 AM presets; auto noise reduction; illuminated cassette door and controls; balance and fader controls; preout terminal; separate bass and treble. Output power 5W/channel; 7 $\frac{1}{16}$ "W  $\times$  4 $\frac{1}{16}$ "H  $\times$  2"D ..... \$299  
**KRC-2100.** Compact flat-chassis AM/FM radio with auto reverse cassette deck. Features high sensitivity receiver; analog tuning with 5 presets; stereo/mono switch; auto noise reduction; tape advance; key off eject; separate bass and treble; loudness switch. Output power 5W/channel; frequency response 30-14,000Hz  $\pm$ 3dB; wow and flutter 0.12% wrms; FM usable sensitivity 14.8dBf; 7 $\frac{1}{16}$ "W  $\times$  2"H  $\times$  5 $\frac{1}{16}$ "D ..... \$239  
**KRC-112.** Mini-chassis AM/FM radio with auto reverse cassette player. Features auto mono/stereo and distant/local switching; auto noise reduction; preamp output terminal; loudness switch. Output power 5W/channel; frequency response 40-15,000Hz  $\pm$ 3dB; wow and flutter 0.12% wrms; FM usable sensitivity 14.8dBf; 6 $\frac{1}{16}$ "W  $\times$  2"H  $\times$  4 $\frac{1}{16}$ "D .. \$169

#### Kenwood Tuner/Cassette Decks

**KRC-1022.** PLL-synthesized AM/FM tuner with manual and 12-channel preset tuning, auto reverse cassette deck; designed for installation in European sized cars. Features automatic noise reduction system; mono/stereo switch; auto broadcast sensor system; muting switch; noise killer; balance control; seek tuning; key off cassette eject; Dolby noise reduction; tape advance control; fader, bass, treble controls; local/distance and loudness switches; digital frequency display; display dimmer ..... \$649  
**KRC-722.** In-dash unit with PLL synthesized tuning, digital frequency display, auto reverse cassette deck, and Dolby noise reduction system. Features ABSS; ANRS; autoscanning; 5 AM/5 FM station presets plus manual tuning; key off eject; bass and treble controls; cassette standby; local/distant switch; metal tape capability. FM sensitivity 14.8dBf; frequency response 30-15,000Hz  $\pm$ 2dB; S/N 70dB mono. Wow and flutter 0.12% wrms; frequency response 30-15,000Hz  $\pm$ 2dB; separation 35dB; S/N 70dB A-weighted, Dolby on ..... \$499  
**KRC-922.** Similar to KRC-722 except has auto seek/scan; loudness control; ceramic tape head; tape advance; FM tuner S/N ratio 70dB mono \$569

#### Kenwood Amplifiers

**KAC-901.** Power output 100 watts per ch; THD 0.04% (10 watts); FR 20Hz-50kHz  $\pm$ 3dB; Switchable input sens 100mV or 500mV; 11 $\frac{1}{16}$ "W  $\times$  2 $\frac{3}{4}$ "H  $\times$  8 $\frac{1}{4}$ "D ..... \$369  
**KAC-8200.** Power output 75 watts per ch; THD 0.03% (60 watts); Frequency range 5Hz-200kHz  $\pm$ 3dB; Switchable input sens 100mV or 500mV 7 $\frac{1}{16}$ "W  $\times$  2 $\frac{3}{8}$ "H  $\times$  7 $\frac{1}{4}$ "D ..... \$299  
**KAC-801.** Power output 50 watts per ch; THD 0.04% (10 watts); FR 20Hz-70kHz  $\pm$ 3dB; input sens 100mV; 11 $\frac{1}{16}$ "W  $\times$  2 $\frac{3}{4}$ "H  $\times$  6 $\frac{1}{16}$ "D ..... \$249  
**KAC-7200.** Power output 35 watts per ch; THD 0.03% (30 watts); FR 5Hz-200kHz  $\pm$ 3dB; Switchable input sens 100mV or 500mV 5 $\frac{7}{16}$ "W  $\times$  2 $\frac{1}{16}$ "H  $\times$  6"D ..... \$199  
**KAC-887.** 4-Channel power amplifier. Power output 15 watts per ch; THD 0.05% (4 watts); FR 20Hz-50kHz  $\pm$ 3dB; Switchable input sens 100mV or 500mV 5 $\frac{1}{16}$ "W  $\times$  2 $\frac{1}{16}$ "H  $\times$  6 $\frac{1}{16}$ "D ..... \$149

**KAC-501.** Power output 15 watts per ch; THD 0.07% (1 watt); FR 20Hz-50kHz; Switchable input sens 100mV or 500mV; 1"H  $\times$  5 $\frac{1}{4}$ "D ..... \$85

#### Kenwood Preamp/Equalizer

**KGC-7400.** Preamp/9-band graphic equalizer. Equalization frequencies 60Hz, 120Hz, 250Hz, 500Hz, 1kHz, 2kHz, 4kHz, 8kHz, 16kHz; boost/cut  $\pm$ 12dB; Sound Exciter; Front Compensator; Digital push switch control; Fader Control; FR 20-70,000 Hz  $\pm$ 3 dB, S/N 97 dB; THD 0.02%; 5 $\frac{7}{16}$ "W  $\times$  2"H  $\times$  5"D ..... \$199

#### Kenwood Equalizer/Amplifier

**KG C-7300.** Graphic equalizer/amplifier. Total 40 watts output power; Equalization frequencies 60Hz, 120Hz, 250Hz, 500Hz, 1kHz, 3.5kHz, 10kHz; boost/cut  $\pm$ 12dB; Sound Exciter; Fader Control; LED level/peak indicator; FR 15Hz-60kHz  $\pm$ 3dB; S/N 92dB 5 $\frac{7}{16}$ "W  $\times$  2"H  $\times$  5 $\frac{1}{16}$ "D ..... \$199

#### Kenwood Preamp Equalizer

**KGC-447.** Preamp/5-band graphic equalizer. Equalization frequencies 50Hz, 200Hz, 800Hz, 3.2kHz, 12.8kHz,  $\pm$ 12dB, Defeat switch; LED indicators; Fader Control; Digital type push switch; FR 20Hz-50kHz  $\pm$ 3dB; Signal to noise ratio 70dB; THD 0.02%; 4 $\frac{1}{16}$ "W  $\times$  1 $\frac{11}{16}$ "H  $\times$  3 $\frac{3}{16}$ "D ..... \$139

#### Kenwood Crossover

**1000.** Electronic crossover allows selection of one 3-way, 2 2-way and a subwoofer system; crossover points continuously adjustable; with output level control. THD 0.04% (20Hz-20kHz) at 1.0v output; FR 10Hz-100kHz 5 $\frac{7}{16}$ "W  $\times$  2"H  $\times$  3 $\frac{1}{2}$ "D ..... \$219

#### Kenwood Car Speakers

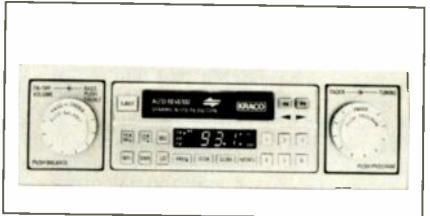
**KFC-6900.** 6"  $\times$  9" 3-Way speaker. Ribbed polypropylene woofer cone; aluminum voice coil bobbin; a pair of dome tweeter-used alnico magnet; 100 watts power handling; 4 ohm rated; wire mesh grille; 20 oz. magnet ..... \$199/pr  
**KFC-2020.** 8" Sub-Woofer. 100 watts power handling; high strength ribbed 8" polypropylene woofer; 4 ohm rated; wire mesh grille; 1" spacer ..... \$149/pr  
**KFC-6910.** 6"  $\times$  9" 3-Way speaker. Non-Press white cone; aluminum voice coil bobbin; 20 oz. magnet; 80 watts power handling; 4 ohm rated; wire mesh grille ..... \$149/pr  
**KFC-160.** 6 $\frac{1}{2}$ " 3-Way speaker. 60 watts power handling; horn type tweeter; wire mesh grille; FR 4-Hz-20kHz; 4 ohm rated ..... \$125/pr  
**KFC-6920.** 6"  $\times$  9" 2-Way speaker. Non-Press white cone; glass coated (nomex) voice coil bobbin; 20 oz. magnet; 80 watts power handling; 4 ohm rated; wire mesh grille ..... \$125/pr  
**KFC-571.** 5"  $\times$  7" 2-Way speaker. 60 watts power handling; 10 oz. magnet; wire mesh grill; 4 ohm rated ..... \$119/pr  
**KFC-1610.** 6 $\frac{1}{2}$ " 2-Way speaker. Aluminum voice coil bobbin; rainshields included; 20 oz. magnet; 50 watts power handling; 4 ohm rated; low profile wire mesh grille ..... \$99/pr  
**KFC-1620.** 6 $\frac{1}{2}$ " 2-Way speaker. Aluminum voice coil bobbin; rainshields included; 10 oz. magnet; 30 watts power handling; 4 ohm rated; low profile wire mesh grille ..... \$85/pr  
**KFC-4610.** 4"  $\times$  6" 2-Way speaker. Universal Size Frame; Rainshield and Space included; 3 oz. Strontium Magnet; 20 watts power handling; 4 ohm rated; wire mesh grille ..... \$75/pr  
**KFC-120.** 5" 2-way. 25 watts power handling; low

profile wire mesh grille; rainshields included; heavy-duty strontium magnet; 4 ohm rated ..... \$75/pr  
**KFC-1630.** 6 $\frac{1}{2}$ " 2-Way Door Mount speaker. Shallow white cone (1-11/16"); rainshields included; 10 oz magnet; 25 watts power handling; 4 ohm rated; low profile wire mesh grille ..... \$75/pr  
**KFC-103.** 4" Dual Cone Door Mount. 5.8 oz. Strontium Magnet; 20 watts power handling; low profile wire mesh grille; rainshields included; 4 ohm rated ..... \$65/pr  
**KFC-1220.** 5" Dual Cone speaker. Ribbed polypropylene cone; 1 $\frac{3}{4}$ " depth; 6.3 oz. strontium magnet; 25 watts power handling; 4 ohm rated; low profile wire mesh grille ..... \$65/pr  
**KFC-694.** 6"  $\times$  9" Dual Cone speaker. 10 oz. Magnet; 25 watts power handling; wire mesh grille; 4 ohm rated ..... \$65/pr  
**KFC-1640.** 6 $\frac{1}{2}$ " Dual Cone speaker. Shallow white dual cone (1 $\frac{11}{16}$ "); rainshields included; 7.7 oz. magnet; 25 watts power handling; 4 ohm rated; low profile wire mesh grille ..... \$55/pr  
**KFC-83.** 3 $\frac{1}{2}$ " Dual Cone Dash Mount speaker. 5.8 oz. High Energy Strontium Magnet; 20 watts power handling; high efficiency; FR 100-20kHz ..... \$32/pr

#### KRACO

#### Cassette Radios

**KID-597.** Designer Series Dashmaster pushbutton AM/FM/MPX radio with auto-reverse cassette tape player. Features auto high blend (high-end signal boost); 5 preselect pushbuttons; mute; fader control; local/distant switch; locking fast forward/rewind ..... \$240  
**ETR-1089.** Pushbutton electronically tuned AM/FM stereo receiver with auto-reverse stereo cassette deck. Features electronic tune scan; digital clock; digital frequency/time display; 5 AM/5 FM station tuning presets; sendust tape head; auto high-end signal boost; custom designer kit with 4 reversible faceplates ..... \$280  
**KID-597.** In-dash AM/FM-stereo receiver with auto-reverse stereo cassette deck. Features auto high-blend; 5 preselect tuning buttons; FM muting; fader control; local/distant switch; locking fast forward/rewind ..... \$270  
**KGE-803.** High-power AM/FM stereo receiver with auto-reverse stereo cassette deck and 5-band graphic equalizer. Features high-end signal boost; program selector; AM/FM, high-blend, stereo/mono, equalizer switches; AM, FM, EQ, tape-direction indicators; balance and fader controls; custom designer kit with faceplates to match most car interiors. Output power 20 W/channel; equalizer center frequencies 60, 250, 1k, 3.5k, 10k Hz ..... \$250  
**ETR-1088.** Designer Series AM/FM stereo cassette radio with 6 AM and 6 FM pushbutton tuning, DNR,



and auto reverse. Features separate bass and treble control; FM muting; loudness control; metal compatibility; super alloy tape head; digital frequency display and clock readout; locking fast forward and rewind; balance and fader controls. Custom designer kit includes four interchangeable face plates. 20 W/ch ..... \$250  
**KHP-1085.** Designer Series AM/FM stereo cassette radio with Dolby noise reduction and metal-tape compatibility. Features separate bass and treble controls; FM muting switch; loudness switch; balance and fader controls; stereo/mono switch; auto reverse; locking fast forward and rewind; tape-direction indicator. Custom designer kit includes 4 interchangeable face plates. 20/W ch ..... \$250

## NOTICE TO READERS

Prices of items described are manufacturers' suggested prices only and are subject to change without notice. Actual selling prices are determined by the dealers.

**KGE-801.** In/under-dash unit combines stereo cassette player, AM/FM-stereo radio, weather-band radio, 5-band graphic equalizer, 20 W/ch power amplifier. Equalizer has center-frequency slide controls set at 60, 250, 1k, 3.5k, 10k Hz and EQ bypass/on switch with LED; cassette player has locking fast forward/eject button, built-in auto stop, and LED tape play/end indicators; radio features pushbutton FM mute, AM/FM switch with LED indicators; stereo/mono switch; separate weather band; illuminated AM/FM dial scale in cassette door; adjustable shafts ..... \$200

**KGE-800.** Same as KGE-801 except with 8-track player, without weather band ..... \$240

**KXI-89.** In-dash AM/FM-stereo receiver with auto-reverse stereo cassette deck. Features compact design to fit most small cars; fader control; local/distant switch; locking fast forward; AM/FM, FM mute, stereo/mono switches; FM stereo indicator ..... \$190

**KID-587.** In/under-dash AM/FM-stereo radio/cassette player. Cassette features fast forward and eject and LED tape run indicator. Radio features 5 AM/FM station presets; tone controls; LED FM stereo indicator; local/distant and AM/FM switches; balance and fader controls ..... \$170

**KXI-87.** AM/FM-stereo pushbutton radio with auto-stop cassette player. Designed for imported cars, compact X-body, and Citation in-dash installation. Features 5-button AM/FM tuning; fader control; local/distance switch; locking fast forward; auto stop. Comes with nosepieces for all models and in-dash installation hardware ..... \$170

**KID-588B.** In-dash AM/FM-stereo radio with auto-reverse cassette player. Features manual tape select; tape program selector switch; LED tape-play and tape-direction indicators; balance and tone controls; local/distant and FM mute switches; LED stereo, AM, and FM indicators ..... \$170

**KID-595.** Designer Series AM/FM cassette radio that can record from tuner or included handheld microphone. Features Dynamic Noise Reduction; balance and fader controls; fast forward and rewind; local/distant switch; remote on/off. 20 W/ch ..... \$160

#### Kraco Amplifier/Equalizers

**KE-7.** Booster amp/equalizer ( $\pm 12$  dB range) with fader control; power supply; dual-edgewise power meters; headphone jack. Output power  $40 \times 2$  W/ch; frequency response 25-40k Hz  $\pm 3$  dB; THD 10%; center frequencies 60, 150, 400, 1k, 2.4k, 6k, 15k Hz;  $200\text{mmD} \times 180\text{mmW} \times 65\text{mmH}$  ..... \$170

**KE-6.** Booster amp/EQ; front-to-rear fader control; power meter. Output power  $30 \times 2$  W/ch; center frequencies 60, 250, 1k, 3.5k, 10k Hz ..... \$90

**KE-5.** Booster amp/EQ; fader control. Output power  $30 \times 2$  W/ch; center frequencies 60, 250, 1k, 3.5k, 10k Hz ..... \$80

**KE-4.** Booster amp/EQ; dual 5-LED power meters; fader control. Output power  $25 \times 2$  W/ch; center frequencies 60, 250, 1k, 3.5k, 10k Hz ..... \$80

#### Kraco Car Speakers

**THP543.** 3-way system; horn loaded dome tweeter. Frequency response 55-20,000 Hz; maximum power 80 W; magnet weight 20 oz. woofer, 1 midrange, 0.5 tweeter; mounting depth  $3\frac{3}{4}$ " ; driver size  $5\frac{1}{4}$ " W ..... \$130/pr

**THP693.** 3-way system; horn loaded dome tweeter. Maximum power 100W; magnet weight 20 oz. woofer, 1 midrange, 0.5 tweeter; mounting depth  $3\frac{3}{4}$ " ; driver size  $6 \times 9$ " W ..... \$130/pr

**THP692.** 3-way system; cone tweeter. Frequency response 45-18,000Hz; maximum power 80W; magnet weight 20 oz. woofer, 1 tweeter; mounting depth  $3\frac{3}{4}$ " ; driver size  $6 \times 9$ " W,  $1\frac{1}{2}$ " T ..... \$110/pr

**THP542.** 2-way system; cone tweeter. Frequency response 55-18,000Hz; maximum power 70W; magnet weight 20 oz. woofer, 1 tweeter; mounting depth  $2\frac{3}{4}$ " ; driver size  $5\frac{1}{4}$ " W,  $1\frac{1}{2}$ " T ..... \$90/pr

#### Kraco Cassette Adapter

**KCA-8.** Allows cassettes to be played in 8-track cartridge tape players. Plugs directly into cartridge slot. Features auto stop or rewind at end of play ..... \$50

## LINEAR POWER

### Linear Power Amplifiers

**300.** Variable gain; protection circuitry; frequency response 12-150,000 Hz; THD 0.15%; S/N 95 db; output power 150 W/chn;  $7\frac{1}{4}$ "  $\times$   $13\frac{1}{2}$ "  $\times$   $4\frac{1}{2}$ " ..... \$700

**2120.** Crossover amp. Bi/tri phase coherent. FR 12-150,000 Hz; THD 0.15%; S/N 95 db; output power 60/120 mono W/ch;  $7\frac{1}{4}$ "  $\times$   $13\frac{1}{2}$ "  $\times$   $4\frac{1}{4}$ " ..... \$700

**1501.** Variable gain, protection circuitry. FR 12-150,000 Hz  $\pm 1$  dB. THD 0.15%; S/N 95 db; output power 75 W/ch;  $7\frac{1}{4}$ "  $\times$   $13\frac{1}{2}$ "  $\times$   $4\frac{1}{4}$ " ..... \$430

**2601.** Bi-amplifier. 30 W/ch, plus 60 W mono. FR 12-150,000  $\pm 1$  dB; THD 0.15%; S/N 95 db; output power 30 W/ch, 60 mono;  $8$ "  $\times$   $10$ "  $\times$   $2\frac{1}{4}$ " ..... \$350

**901.** Power amp with variable gain protection circuitry. FR 12-150,000 Hz  $\pm 1$  dB; THD 0.15%; S/N 95 dB; output power W/chn 45;  $7\frac{1}{4}$ "  $\times$   $6\frac{1}{2}$ "  $\times$   $4\frac{1}{8}$ " ..... \$280

**601.** Power amp with variable gain; protection circuitry. FR 12-150,000 Hz  $\pm 1$  dB; THD 0.15%; S/N 95 dB; output power W/chn 30;  $8$ "  $\times$   $6\frac{1}{2}$ "  $\times$   $2\frac{1}{2}$ " ..... \$200

**401.** Variable gain; protection circuitry. FR 12-150,000 Hz  $\pm 1$  dB; THD 0.15%; S/N 95 dB; output power W/chn 20;  $8\frac{1}{4}$ "  $\times$   $5$ "  $\times$   $1\frac{1}{8}$ " ..... \$150

### Linear Power Preamp/Graphic Equalizer

**EQ-1.** Variable input sens. FR 5-30,000 Hz  $\pm 1$  dB; THD 0.006%; S/N 105 dB; output power W/chn 5V max; center frequency 70, 180, 300, 1,200, 2,700, 10,000;  $4\frac{1}{2}$ "  $\times$   $5\frac{1}{4}$ "  $\times$   $1\frac{1}{4}$ " ..... \$200

### Linear Power Electronic Crossover

**X0-1** Crossover points from 30-12,000 in  $\frac{1}{2}$  octave steps; 12 dB/octave slope. FR 4-250,000  $\pm 1$  dB; THD 0.01%; S/N 105 dB; output power unity;  $4\frac{1}{2}$ "  $\times$   $5\frac{1}{4}$ "  $\times$   $1\frac{1}{4}$ " ..... \$140

### Linear Power Subwoofers

**BassVent<sup>™</sup> Combo.** Bass vent subwoofer; packaged with model 2601 bi-amplifier; frequency range 100 Hz on down; sens 90 dB spl/W/M; max power 120 W; 20 oz magnet; 10" mounting depth ..... \$500

**BassVent<sup>™</sup> Subwoofer System.** Preferred crossover 70-100 Hz; drivers mounted on a  $10$ "  $\times$   $10$ "  $\times$   $2\frac{1}{2}$ " loading chamber; requires  $6$ "  $\times$   $1\frac{1}{4}$ " slot in rear deck. Frequency range 100 Hz on down; sens 90 dB SPL/W/m; max power 150 W; 20 oz magnet; 10" mounting depth ..... \$200

## MARANTZ

### Cassette Radios

**CAR302.** In-dash AM/FM-stereo receiver with stereo cassette deck. Features 5-station tuning presets; AIR (Atmospheric Interference Rejection); FM muting; separate bass and treble controls; preamp outputs; Dolby noise reduction; auto eject; locking fast forward/rewind; antenna-power lead; dial-scale dimmer lead. Output power 4 W/ch; THD 0.9%; preamp output level/imp 500 mV/3k ohms. Wow and flutter 0.15%; FR 40-13,000 Hz  $\pm 3$  dB; S/N Dolby off/on 48/56 dB. FM 50-dB quieting sens 42.13 dBf; capture ratio 2 dB; sel/sep 65/30 dB; FR 40-14,000 Hz  $\pm 3$  dB; S/N 60 dB;  $6\frac{3}{4}$ " W  $\times$   $4\frac{1}{2}$ " D  $\times$   $2\frac{1}{4}$ " H ..... \$250

**CAR322.** In-dash AM/FM-stereo receiver with auto-reverse stereo cassette deck. Features Dolby noise reduction; Interference Management System; separate bass and treble controls; metal-tape capability; fader control; locking fast forward/rewind; power-antenna lead; dial-scale dimmer lead. Output power 4 W/ch; THD 0.9%. W&F 0.15%; frequency response 40-13,000 Hz  $\pm 3$  dB; S/N Dolby off/on 52/60 dB. FM 50-dB quieting sensitivity 42.13 dBf; capture ratio 2 dB; sel/sep 70/34 dB; FR 40-14,000 Hz  $\pm 3$  dB; S/N 60 dB;  $6\frac{3}{4}$ " W  $\times$   $4\frac{1}{2}$ " D  $\times$   $1\frac{1}{4}$ " H ..... \$250

**CAR312.** In-dash AM/FM-stereo receiver with stereo cassette deck. Features Compusik; separate bass and treble controls; IMS; CMS (Continuous Music System); locking fast forward/rewind; auto eject; power-antenna lead. Output power 4 W/ch into 4 ohms; THD

0.9%. W&F 0.15% wrms; frequency response 40-12,000 Hz  $\pm 3$  dB; S/N 50 dB. FM 50-dB quieting sens 44.31 dBf; capture ratio 2 dB; sel/sep 60/35 dB; frequency response 40-14,000 Hz  $\pm 3$  dB; S/N 60 dB;  $6\frac{3}{4}$ " W  $\times$   $4\frac{1}{2}$ " D  $\times$   $1\frac{1}{4}$ " H ..... \$200

**CAR320.** In-dash AM/FM-stereo receiver with auto-reverse stereo cassette deck. Features IMS; CMS; locking fast forward/rewind; tone control; auto eject; power-antenna lead. Output power 4 W/ch into 4 ohms; THD 0.9%. W&F 0.15%; frequency response 40-13,000 Hz  $\pm 3$  dB; S/N 50 dB. FM 50-dB quieting sens 44.3 dBf; capture ratio 2 dB; sel/sep 60/35 dB; FR 40-14,000 Hz  $\pm 3$  dB; S/N ratio 60 dB;  $6\frac{3}{4}$ " W  $\times$   $4\frac{1}{2}$ " D  $\times$   $1\frac{1}{4}$ " H ..... \$165

**CAR360.** Stereo cassette receiver with Dolby NR for tape. Features auto reverse; 6 AM/FM station presets; auto scan tuning; preamp output and speaker



output; speaker fader control; IMS; CMS; separate bass and treble; locking fast forward and rewind; loudness-compensated volume control ..... \$360

**CAR355.** Stereo cassette receiver with auto reverse. Features 6 AM/FM station presets; auto scan tuning; preamp output and speaker output; IMS; CMS; locking fast forward and rewind; loudness-compensated volume control ..... \$300

### Marantz Gold Series Car Speakers

**MZS 693.**  $6$ "  $\times$   $9$ " 3-way; 20 oz. barium ferrite magnet; FR 50-20,000 Hz; piezoelectric tweeter; ferrofluid midrange driver; heat-resistant grille; molded woofer cone; max power 100 W; 4 ohms imp ..... \$140

**MZS 630.**  $5\frac{1}{4}$ " 3-way; 20 oz barium ferrite magnet; FR 100-18,000 Hz; dome type tweeter; ferrofluid midrange driver; high temperature resistant grille; molded woofer cone; max power 100 W; imp 4 ohms ..... \$120

**MZS 692.**  $6$ "  $\times$   $9$ " 2-way; 20 oz barium ferrite magnet; FR 60-18,000 Hz; ferrofluid cone tweeter; heat-resistant grille; molded woofer cone; max power 100 W; imp 4 ohms ..... \$100

**MZS 620.**  $5\frac{1}{4}$ " 2-way slimline; 4 oz barium ferrite magnet; FR 120-18,000 Hz; piezoelectric tweeter; heat-resistant grille; molded woofer cone; max power 50 W; imp 4 ohms ..... \$90

**MZS 412.**  $4$ "  $\times$   $10$ " 2-way; 20 oz barium ferrite magnet; FR 80-20,000 Hz; 2" piezoelectric tweeter; heat-resistant grille; max power 90 W; imp 4 ohms ..... \$90

**MZS 420.**  $4$ " 2-way; 5 oz barium ferrite magnet; FR 120-18,000 Hz;  $1\frac{1}{2}$ " piezoelectric tweeter; max power 50 W; imp 4 ohms ..... \$60

**MZS 350.**  $3\frac{1}{2}$ " 2-way; 6 oz barium ferrite magnet; FR 150-18,000 Hz;  $1\frac{1}{2}$ " piezoelectric tweeter; max power 20 W; imp 4 ohms ..... \$45

**MZS 410.**  $4$ " full-range slimline; 6 oz barium ferrite magnet; FR 120-14,000 Hz; max power 20 W; imp 4 ohms ..... \$40

## MITSUBISHI CAR AUDIO

### Cassette Radios

**CZ-757.** In-dash AM/FM stereo radio with auto reverse, metal compatible stereo cassette deck in compact chassis designed to fit almost any domestic or foreign car. Cassette deck features Dolby noise reduction, tape program search in either direction; normal/CrO<sub>2</sub>/FeCr switch; Dolby and metal tape indicators. W&F 0.15% wrms; FR 40-15,000Hz with metal tape; S/N ratio 57 dB, Dolby on; stereo sep 35 dB. Radio features 6 button AM/FM electronic tuning

with memory; auto electronic and manual electronic scan tuning; LED digital frequency/clock display, FM Dolby noise reduction; bass, treble, fader, balance controls. FM S/N ratio 60 dB, Dolby on; sel 80 dB; FR 30-15,000Hz at -3dB; sep 35 dB at 1,000Hz; capture ratio 2 dB. Unit also features ignition noise killer; key off/end-of-play pinch roller release, low level connectors for separate 8, 25 W/ch power amplifiers; 7<sup>1</sup>/<sub>8</sub>"W x 4<sup>3</sup>/<sub>8</sub>"H x 2"D ..... \$400

**RX-735.** In dash AM/FM stereo receiver with auto reverse stereo cassette deck. Features quartz PLL frequency synthesized AM/FM tuning; 6 AM/6 FM presets; auto seek, scan, manual rotary step tuning; super distant/local circuit; distance/local, mono/stereo switches; FM muting; locking fast forward/rewind; program selector switch; "pinch-off" tape protection; tape running indicator; adjustable shafts; fader and balance controls for 4 speaker system; display dimmer lead. Output power 8 W rms/ch into 4 ohms; 7"W x 4<sup>3</sup>/<sub>8</sub>"H x 2"D ..... \$320

**RX-909.** In dash high power unit with 10 W/ch output at 1% THD, DIN chassis to fit most imported or domestic cars. Features auto reverse; locking fast forward/rewind; program selector switch; Music Program Sensor; "pinch off" tape protection; Dynamic Noise Reduction; tape indicator; cassette door light; separate AM/FM dial light; FM ignition noise killer; super DX/LOC circuitry; fader and balance controls; separate bass and treble controls; 5 button AM/FM tuning power antenna lead; adjustable shafts. Tape section: W&F 0.15% wrms; FR 50-10,000Hz at 3 dB; S/N ratio 55 dB; sep 40 dB; FR 30-15,000Hz ±2 dB; sep 35 dB at 1,000Hz; capture ratio 3 dB; 7"W x 6"D x 2"H ..... \$320

**RX-755.** In dash DIN chassis unit fits most imported cars. Features auto reverse deck; locking fast forward/rewind; 5 button AM/FM tuning; "pinch off" tape protection; tape program selector; Music Program Selector; mono/stereo switch; fader and balance controls; cassette door light; separate radio dial light; power antenna lead; adjustable shafts. Amplifier section: power output 8 W/ch at 1,000Hz; 5 W/ch at 5% THD from 100-10,000Hz, 4 W/ch at 1% THD 110-10,000Hz; FR 50-30,000Hz ±3 dB. FM tuner: usable sens 22 dB; 50 dB quieting sens 22 dB; FR 30-15,000Hz at 2 dB; capture ratio 3 dB; alternate ch sel 86 dB; stereo sep 35 dB at 1,000Hz; THD 0.5% at 65 dB; S/N ratio 60 dB. Tape section specs: FR 50-10,000 ±3 dB; W&F 0.15% wrms; stereo sep 40 dB; S/N ratio 50 dB A-wtd; crosstalk 50 dB; 50mm x 178mm x 150mm ..... \$270

**RX707.** In dash unit with super compact chassis to fit almost any car. Features auto reverse; locking fast forward/rewind; 5 button AM/FM tuner; program selector switch; mono/stereo switch; super DX/LOC circuitry; loudness control; fader and balance controls; FM stereo indicator; power antenna lead; adjustable shafts. Amplifier: power output 7W/ch at 1,000Hz, 4 W/ch at 5% THD from 100-10,000Hz, 3.5 W/ch at 1% THD from 100-10,000Hz; FR 50-20,000Hz ±3 dB. FM tuner; usable sens 22 dB; 50 dB quieting sens 22 dB; FR 30-15,000Hz at 2 dB; capture ratio 3 dB; alternate ch sel 86 dB; stereo sep 35 dB at 1,000Hz; THD 0.5% at 65 dB; S/N ratio 64 dB. Tape section: FR 50-10,000Hz ±3 dB; W&F 0.15% wrms; sep 40 dB; S/N ratio 50 dB A-wtd; crosstalk 45 dB; 50mm x 178mm x 120mm ..... \$230

**CZ-727.** In dash unit features super compact chassis to fit almost any domestic or foreign car. Features auto reverse deck; locking fast forward/rewind; eject button; program selector switch; DNR noise reduction; normal/chrome/ferriochrome selector switch; DNR tape indicator; manual tuning; bass, treble, fader, balance controls; dial illumination; distant/local switch; loudness control; low level output for separate power amplifier; optional nosepiece for vertical installation. W&F 0.15% wrms; FR 50-12,500Hz; S/N ratio 57 dB, Dolby on; 35 dB sep. FM S/N ratio 64 dB; sel 80 dB; FR 30-15,000Hz; sep 35 dB at 1,000Hz; capture ratio 2 dB; 6<sup>1</sup>/<sub>8</sub>"W x 4<sup>3</sup>/<sub>8</sub>"D x 1<sup>3</sup>/<sub>32</sub>"H ..... \$250

**RX-726.** Super compact AM/FM stereo receiver with auto reverse cassette player. Features locking fast forward/rewind; tape program selector; metal/CrO<sub>2</sub> equalization switch; hard permalloy tape head; indica-

tors for FM stereo and metal tape; manual tuning; fader and balance controls for 4 speaker system; loudness control; distant/local switch; adjustable shafts; power antenna lead. Output power 7 W rms/ch into 4 ohms; 6<sup>1</sup>/<sub>8</sub>"W x 4<sup>3</sup>/<sub>8</sub>"D x 2"H \$200

**RX-711.** In dash AM/FM stereo receiver with full auto stop cassette player. Features locking fast forward; tape end indicator; dial in cassette door; hard permalloy tape head; metal tape compatibility; 5 AM/5 FM station presets; local/distant switch; stereo indicator; loudness control; fader and balance controls for 4 speaker system; adjustable shafts. Output power 8 W rms/ch into 4 ohms; 7<sup>3</sup>/<sub>8</sub>"W x 4<sup>3</sup>/<sub>8</sub>"D x 2<sup>1</sup>/<sub>2</sub>"H \$180

**RX-723.** Super compact in dash unit with loudness control and 7 W/ch amplifier. Features auto stop deck; tape end indicator; locking fast forward; eject button; manual radio tuning; local/distance switch; mono/stereo switch; fader and balance controls; nose piece for vertical installations; adjustable shafts; power antenna lead. W&F 0.15% wrms; FR 50-15,000Hz; S/N ratio 50 dB. FM S/N ratio 62 dB; sel 68 dB; FR 30-15,000Hz; capture ratio 2 dB; 6<sup>1</sup>/<sub>8</sub>"W x 4<sup>1</sup>/<sub>2</sub>"D x 1<sup>3</sup>/<sub>8</sub>"H ..... \$140

**Mitsubishi Under-Dash Units**

**RX-103.** Under dash unit combines FM stereo radio and stereo cassette player. Cassette deck features hard permalloy head; auto eject; 7 W/ch amplifier; bass, treble, balance controls; ignition noise killer ..... \$170

**GX-111.** Under dash auto reverse cassette deck features locking fast forward/rewind; tape program selector; hard permalloy head; low level DIN connector output; output power 7 W/ch at 4 ohms ..... \$130

**CX-21.** Under dash deluxe stereo cassette deck. Features hard permalloy tape head; auto reverse; auto eject; locking fast forward/rewind; program selector switch; dimmer control connection; NR; W&F 0.15% wrms ..... \$140

**Mitsubishi Amplifier/Equalizer**

**CV-231.** Stereo amplifier and booster with a built-in six band graphic equalizer. Features balanced transformless circuitry; dual high and low level inputs; equalizer defeat switch; power on/off switch; two ch power level indicators; fader and balance controls for four speaker system; illuminated equalizer controls; 25 W/ch max power at 4 ohms; 2"W x 5<sup>1</sup>/<sub>8</sub>"H x 6<sup>1</sup>/<sub>2</sub>"D ..... \$130

**Mitsubishi Car Speakers**

**SX-205A.** Acoustic suspension 2 way system; tweeter diecast aluminum cabinet. FR 90-22,000Hz; Sens 88 dB SPL/W/m; max power 30 W; magnet oz. 10 woofer, 5; Driver size 4" woofer x 1" tweeter. \$100/pr

**SG-69TB.** 3-way system; cone type midrange and tweeter. Frequency range 50-20,000Hz; Max power 100 W; magnet oz. 17.4 woofer; Driver size 6" x 9 woofer ..... \$140/pr

**SG-69CB.** Coaxial 2 way system. Max power 40 W; magnet oz. 20.7 woofer; driver size 6" x 9" woofer ..... \$100/pr

**SG-13CD.** Coaxial 2 way door mount system; waterproof cover. Max power 30 W; magnet oz. 5.5 woofer; Driver size 5<sup>1</sup>/<sub>4</sub>" woofer ..... \$80/pr

**SG-13WD.** Dual cone speaker, waterproof cover. Max power 30 W; magnet oz. 2.8; mounting depth 1"; Driver size 5<sup>1</sup>/<sub>4</sub>" ..... \$60/pr

**SG-10WE.** Dual cone speaker. Max power 20 W; magnet oz. 5.3; driver size 4" ..... \$50/pr

**SR-35WA.** Dual cone front-tray-mount speaker. Max power 20 W; magnet oz. 5; Driver size 3<sup>1</sup>/<sub>2</sub>" ..... \$35/pr

**SB-2SA.** Stalk mount super tweeter; signal indicator. FR 5,000-20,000Hz; max power 20 W; Driver size 1/2" ..... \$40/pr

**SG-10CE.** Coaxial door mount waterproof cover. Max power 30 W; magnet oz. 3; Driver size 5<sup>1</sup>/<sub>4</sub>". \$65/pr

**MTX**

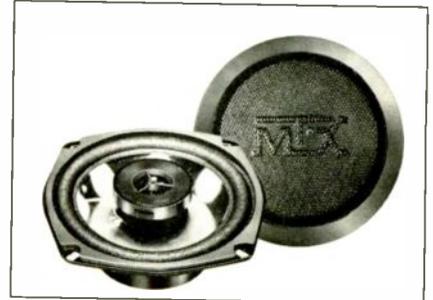
**Polyplex 7.0.** Auto speakers with 6" x 9" polypropylene woofer driven by 1<sup>1</sup>/<sub>2</sub>" high-temp aluminum voice coil with 1" polycarbonate dome tweeter. Frequency range 48-20,000 Hz; power range 30 W/ch at continuous 8 hr power and 60 W at max capacity; nomi-

nal imp 4 ohms; mounting depth 3<sup>1</sup>/<sub>4</sub>" ..... \$199/pr

**Polyplex 6.5.** Auto speakers with 6<sup>1</sup>/<sub>2</sub>" polypropylene woofer driven by 1" high-temp aluminum voice coil with ferrofluid-damped, 10mm polycarbonate dome tweeter. Frequency range 60-20,000 Hz; power range 30 W at max capacity; imp 4 ohms; mounting depth 2<sup>1</sup>/<sub>8</sub>" ..... \$149/pr

**Polyplex 6.9.** Auto speakers with 6" x 9" polypropylene woofer driven by 1" high-temp aluminum voice coil with ferrofluid-damped, 10mm polycarbonate dome tweeter. Frequency range 55-20,000 Hz; power range 30 W/ch rms at 8 hr continuous power and 60 W at max capacity; nominal imp 4 ohms; mounting depth 3" ..... \$149/pr

**Polyplex 5.3.** Auto speakers with 5<sup>1</sup>/<sub>2</sub>" polypropylene woofer driven by 1" high-temp aluminum voice coil with ferrofluid-damped 10mm polycarbonate dome



tweeter. Frequency range 75-20,000 Hz; power range 30 W/ch rms at continuous 8 hr power and 60 W at max capacity; imp 4 ohms; mounting depth 1<sup>1</sup>/<sub>2</sub>" ..... \$129/pr

**Polyplex 4.5.** Auto speakers with 4<sup>1</sup>/<sub>2</sub>" polypropylene woofer driven by 1" high-temp aluminum voice coil with ferrofluid-damped, 10mm polycarbonate dome tweeter. Frequency range 90-20,000 Hz; power range 30 W/ch rms at continuous power for 8 hrs and 60 W at max capacity; imp 4 ohms; mounting depth 1<sup>1</sup>/<sub>4</sub>" ..... \$119/pr

**NAKAMICHI**

**TD-1200 Mobile Tuner/Cassette Deck**

In-dash auto-reverse cassette player incorporates much of the technology found in the Nakamichi Dragon home cassette deck, including the Nakamichi Auto Azimuth Control System which automatically and continually aligns the 0.6 micron playback head to the recorded music track on the tape to insure perfect playback of any tape recorded on any cassette deck. Features Dolby B and C, 70 and 120 μsec EQ; micro-processor-controlled transport driven by unique Super Linear Torque motor and housed in a slide-out drawer. Quartz PLL digital display tuner with 5 AM/5 FM presets; FM Dolby; FM blend; separate bass, midbass, treble controls; anti-theft system-lock code. Minimum specifications: W&F .045% wrms; 20-22,000 Hz ±3 dB; S/N 64 dB, Dolby B and C on 64/70 dB; FM section: THD 0.13% (stereo); S/N 65 dB mono; capture ratio 1.5 dB; sens 20 dB; sel 60 dB. Main unit 7<sup>1</sup>/<sub>8</sub>" x 2<sup>1</sup>/<sub>8</sub>" x 7<sup>1</sup>/<sub>8</sub>"H; 5 lbs 8 oz; additional electronics enclosure 7<sup>1</sup>/<sub>8</sub>" x 2" x 5<sup>1</sup>/<sub>8</sub>"H; 1 lb 14 oz ..... \$1,260

**PA-300 Mobile Power Amplifier**

A low-distortion high-power amp designed for the mobile environment incorporating a digital switching DC



to DC converter; 70 W rms/ch at <.003% THD 4 ohms; 1,000 Hz; bandwidth 5-50,000 Hz; 6 lbs 10 oz ..... \$340

#### SP-400 Mobile Speaker System

3-way speaker system consisting of 5 $\frac{1}{4}$ " cone woofer, 1 $\frac{1}{4}$ " soft dome midrange, 1" soft dome tweeter mounted in a die cast frame, passive crossover networks in separate enclosures to eliminate magnetic interference. Power capacity 80 W, 50-22,000 Hz; crossover frequencies 2.5kHz, 8.5 kHz; 4 ohms; speaker unit 10 $\frac{1}{8}$ " x 1 $\frac{1}{8}$ " x 6 $\frac{1}{2}$ "; 5 lbs; crossover network 4 $\frac{1}{2}$ " x 1 $\frac{1}{8}$ " x 2 $\frac{1}{4}$ "; 7 oz ..... \$390/pr

### NORELCO by PHILIPS AUTO AUDIO

#### Power Amplifiers

**402B.** 50-W total system power amp. Min continuous average power 25 W/ch; FR 20-20,000 Hz; S/N 80 dB; THD 1%; impedance 4 ohms; high- and low-imp input sens; 5 $\frac{1}{8}$ "W x 1 $\frac{1}{8}$ "H x 5 $\frac{1}{2}$ "D; 2 lbs ... \$80  
**802B.** 80-W total system power amp. Min continuous average power 40 W/ch; FR 20-20,000 Hz; S/N 80 dB; THD 1%; imp 4 ohms; high- and low-imp input sens; 5 $\frac{1}{8}$ "W x 1 $\frac{1}{8}$ "H x 6 $\frac{1}{4}$ "D; 2.8 lbs..... \$130

#### Norelco Equalizer/Amplifiers

**550 EQA.** 5-band graphic equalizer, 50 W total system power amp. Features min continuous average channel 25 W/ch; FR 20-20,000 Hz; S/N 80 dB; THD 1%; imp 4 ohms; high- and low-imp input sens; 6"W x 1 $\frac{1}{4}$ "H x 5"D; 3 lbs..... \$120  
**870 EQA.** 7-band graphic equalizer, 80 W total system power amp. Features min continuous average channel 40 W/ch; FR 20-20,000 Hz; S/N 75 dB; THD 1%; imp 4 ohms; high- and low-imp input sens; 6 $\frac{1}{2}$ "W x 2"H x 6 $\frac{1}{4}$ "D; 4 lbs..... \$230

#### Norelco Car Speakers

**NCS 769.** 6" x 9" 3 way system. Power handling capacity 50 W; max power handling 80 W; FR 40-20,000 Hz; sens 90 dB; imp 4 ohms; midrange 3"; tweeter 2"; magnet weight 20 oz; mounting depth 3 $\frac{1}{2}$ "; 6 $\frac{3}{8}$ "W x 9 $\frac{1}{8}$ "L x 4 $\frac{1}{8}$ "D; 11 lbs ... \$130/pr  
**NCS 710.** 4" x 10" 3 way system. Power handling capacity 35 W; max power handling 50 W; FR 60-20,000 Hz; sens 90 dB; imp 4 ohms; midrange 2"; tweeter 1 $\frac{1}{4}$ "; magnet weight 20 oz; mounting depth 2 $\frac{1}{2}$ "; 4 $\frac{1}{2}$ "W x 10"L x 4"D; 9 lbs ..... \$110/pr  
**NCS 1000.** 4" "Hatchbox" coaxial system. Features power handling capacity 30 W; max power handling 60 W; FR 120-20,000 Hz; sens 90 dB; imp 4 ohms; tweeter 2"; magnet weight 7.25 oz; 4"W x 5 $\frac{1}{2}$ "L x 9"D ..... \$100/pr  
**NCS 765.** 6 $\frac{1}{2}$ " 3 way system. Power handling capacity 40 W; max power handling 60 W; FR 45-20,000 Hz; sens 89 dB; imp 4 ohms; midrange 2 $\frac{1}{2}$ "; tweeter 1 $\frac{1}{4}$ "; magnet weight 20 oz; mounting depth 2 $\frac{1}{4}$ "; 7" Dia. x 3 $\frac{1}{4}$ "D; 9 lbs ..... \$100/pr  
**NCS 755.** 5 $\frac{1}{8}$ " 3 way system. Power handling capacity 30 W; max power handling 50 W; FR 55-20,000 Hz; sens 90 dB; imp 4 ohms; midrange 2"; tweeter 1 $\frac{1}{4}$ "; magnet weight 20 oz; mounting depth 2 $\frac{1}{2}$ "; 6 $\frac{1}{4}$ "Dia. x 3 $\frac{3}{8}$ "D; 9 lbs ..... \$90/pr  
**NCS 746.** 4" x 6" coaxial system. Power handling capacity 15 W; max power handling 25 W; FR 80-14,000 Hz; sens 88 dB; imp 4 ohms; tweeter 2"; magnet weight 10 oz; 4 $\frac{3}{8}$ "W x 6 $\frac{3}{8}$ "L x 2 $\frac{1}{2}$ "D ..... \$70/pr  
**NCS 741.** 4" coaxial system. Power handling capacity 20 W; max power handling 30 W; FR 100-15,000 Hz; sens 89 dB; imp 4 ohms; tweeter 1 $\frac{1}{2}$ "; magnet weight 10 oz; mounting depth 1 $\frac{1}{4}$ "; 4 $\frac{1}{8}$ "W x 4 $\frac{1}{8}$ "L x 2 $\frac{1}{8}$ "D; 5 lbs ..... \$70/pr

**NCS 740.** 4" full-range system. Power handling capacity 15 W; max power handling 30 W; FR 75-15,000 Hz; sens 90 dB; imp 4 ohms; magnet weight 3.5 oz; mounting depth 1.5"; 2.2 lbs ..... \$40/pr  
**NCS 735.** 3 $\frac{1}{2}$ " dash-mount system. Power handling capacity 10 W; max power handling 50 W; FR 60-20,000 Hz; sens 90 dB; imp 4 ohms; magnet weight 6 oz; mounting depth 1 $\frac{1}{8}$ "; 3 $\frac{1}{2}$ " Dia. x 1 $\frac{1}{8}$ "D; 2 lbs 8 oz ..... \$35/pr

### OMNISONIX

#### 801-A Omnisonic Imager

Designed to reproduce mono or stereo signals to create dimensional or three-dimensional sound (volume level, stereo separation, surround-sound imagery) respectively; connects to internal tape loop of any system. Features tape monitor, in/out buttons. Operates from 12 V dc negative ground power sources; can be bracket or Velcro mounted under most dashboards or inside glove compartment. Max output 2 V; THD <0.03%; input imp 200 ohms; FR 10-100,000 Hz  $\pm$ 0.5 dB; 4.75"W x 5.25"D x 1.94"H ..... \$150

### PANASONIC

#### Cassette Radios

**RM-310.** Ceiling-mount car stereo system with Repeatrack cassette player. Features locking fast forward/rewind; key-off eject; high filter switch; AM/FM-stereo tuner with 3 station reference guides; FM-stereo auto/mono switch; LED function indicators; mute switch; local/DX switch; INQ circuit; center-detented balance and fader controls; 3-band graphic equalizer; loudness switch; stereo power amplifier; audio power indicators; 4-position dome light. Output power 10 W min/ch into 4 ohms at 1% THD, 30-20,000 Hz. Tape W&F 0.15% wrms; frequency response 40-12,000 Hz  $\pm$ 3 dB; S/N ratio 55 dB A-weighted; sep 40 dB. FM section: usable sensitivity 16 dBf; S/N ratio 73 dB A-weighted; image rejection 60 dB; FR 30-15,000 Hz  $\pm$ 3 dB; sep 35 dB \$600  
**CQ-S958.** Electronic-tuned AM/FM radio with auto-reverse cassette player. Features Dolby noise reduction; 10 station presets (5 AM/5 FM); seek/scan tuning; digital time and frequency display; FM optimizer; impulse noise-quieting circuitry; 4-way balance; loudness-compensated tone control; separate bass and treble controls; compact chassis with adjustable shafts; Tape Program Search; compatible with normal, chrome, metal tape; locking fast forward/rewind. Power output 3 W/ch into 4 ohms (EIA), 7.5 W/ch at 400 Hz, volume control at max. Radio specs: usable sens 19 dBf; 50 dB quieting sensitivity 19 dBf; FR 30-15,000 Hz  $\pm$ 3 dB; alternate ch sel 75 dB; stereo sep 35 dB at 1 kHz; image response ratio 40 dB; IF response ratio 100 dB; capture ratio 1.5 dB. Tape player specs: FR 40-12,500 Hz  $\pm$ 3 dB; W&F 0.12% wrms; sep 40 dB; S/N ratio 60 dB with Dolby, 50 without. 7"W x 5 $\frac{1}{8}$ "D x 2 $\frac{1}{8}$ "H ..... \$540  
**CQ-S818.** Bantam mini-chassis electronic-tuned AM/FM stereo radio with cassette player compatible with metal, chrome, and normal tape. Digital display of frequency and time. Features 10 station presets (5 AM/5 FM); MOSFET FM tuner; loudness-compensated tone control; Traveler's Information Stations; Daily Priority Station; locking fast forward/rewind; radio monitor; 4-way balance control; preamp out. Power output 3 W/ch into 4 ohms (EIA), 7.5 W/ch at 400 Hz, volume control at max. Radio specs: usable sensitivity 19 dBf; FR 30-15,000 Hz  $\pm$ 3 dB; alternate ch sel 75 dB; stereo separation 35 dB at 1 kHz; image response ratio 40 dB; IF response ratio 100 dB; capture ratio 1.5 dB. Tape player specs: FR 80-12,500 Hz  $\pm$ 3 dB; W&F 0.13% wrms; sep 45 dB; S/N ratio 50 dB. 6 $\frac{1}{8}$ " x 5" x 2 $\frac{1}{8}$ " ..... \$350  
**CQ-S903.** Compact in-dash pushbutton AM/FM-stereo receiver and metal-compatible auto-reverse cassette player with Dolby noise reduction and hard permalloy head. Cassette player features locking fast forward/rewind; metal/CrO $_2$  tape selector; W&F 0.18% wrms; FR 40-12,500 Hz  $\pm$ 3 dB; S/N ratio 50 dB; Dolby off/on 50/60 dB. Radio features seek/scan electronic tuning with 6 AM/6 FM preset buttons and digital time/frequency display; FM optimizer circuit;

INQ circuit designed to suppress impulse noise on FM band; local/distant switch; fader, bass, treble controls; preamp output 1.0 V at 2,000 ohms; amplifier output power 4 W/ch continuous at 400 Hz, both chs driven into 4 ohms with 1.0% THD; usable sens 19 dBf; frequency response 30-15,000 Hz  $\pm$ 3 dB; i-f rejection 80 dB; sep 35 dB at 1 kHz; 7"W x 5 $\frac{1}{8}$ "D x 2 $\frac{1}{8}$ "H ..... \$430  
**CQ-S761.** Compact AM/FM radio/cassette player with auto-reverse mechanism and pushbutton AM/FM tuning. Features FM optimizer; INQ circuit; MOSFET and adaptive FM front end; auto gain control on AM; locking fast forward/rewind; Dolby B tape noise reduction; metal/CrO $_2$ /normal tape capability; W-cut hard permalloy tape head; 4-way balance controls (fader); separate bass and treble controls; fully adjustable shafts. Output power 7.5 W/ch into 4 ohms; FR 40-35,000 Hz -3 dB. W&F 0.18% wrms; frequency range 40-12,500 Hz; S/N ratio Dolby on/off 60/50 dB. FM usable sens 15 dBf; 7"W x 5 $\frac{1}{8}$ "D x 2 $\frac{1}{8}$ "H ..... \$290  
**CQ-S763.** Similar to CQ-S761 except black .. \$270  
**CQ-S768.** Similar to CQ-S763 except new Ambience auto-reverse cassette player with Ambience control switch; no Dolby NR ..... \$290  
**CQ-S747.** In-dash AM/FM radio/cassette player with Repeatrack cassette player and manual pushbutton AM/FM tuning. Features FM optimizer; INQ circuit; MOSFET and adaptive FM front end; distributed-multi-stage auto gain control on AM; locking fast forward/rewind; Dolby tape noise reduction; metal/CrO $_2$  tape selector; hard permalloy tape head; 4-way balance controls (fader); separate bass and treble controls; radio monitor; compact chassis; fully adjustable shafts. Output power 20 W/ch into 4 ohms; FR 20-40,000 Hz -3 dB. Tape wow and flutter 0.13% wrms; frequency range 80-12,000 Hz; S/N ratio Dolby on/off 60/50 dB. FM usable sens 14 dBf; 7"W x 5 $\frac{1}{8}$ "D x 1 $\frac{1}{2}$ "H ..... \$250  
**CQ-S703.** Ambience Repeatrack cassette player with pushbutton AM/FM radio. Features Ambience control switch; FM optimizer; INQ circuit; MOSFET and adaptive front end; distributed multi-stage auto gain control on AM; locking fast forward/rewind; hard permalloy head; 4-way balance controls (fader); loudness-compensated tone control; fully adjustable shafts. Output power 7.5 W/ch into 4 ohms; frequency response 40-35,000 Hz -3 dB. Tape wow and flutter 0.12% wrms; frequency range 40-12,500 Hz; S/N ratio 50 dB. FM usable sens 14 dBf; 7"W x 5 $\frac{1}{8}$ "D x 2 $\frac{1}{8}$ "H ..... \$230  
**CQ-S708.** Similar to CQ-S703 except has separate bass and treble controls, radio monitor ..... \$220  
**CQ-S682.** Compact Repeatrack cassette player with pushbutton AM/FM radio. Features FM optimizer; INQ circuit; MOSFET and adaptive FM front end; distributed multi-stage auto gain control on AM; locking fast forward/rewind; hard permalloy tape head; 4-way balance controls (fader); loudness-compensated tone control; fully adjustable shafts; chrome front. Output power 7.5 W/ch into 4 ohms; frequency response 40-35,000 Hz -3 dB. Tape W&F 0.18% wrms; frequency range 80-10,000 Hz; S/N ratio 50 dB. FM usable sens 14 dBf; 7"W x 5 $\frac{1}{8}$ "D x 2 $\frac{1}{8}$ "H ..... \$190  
**QS-S687.** With black front ..... \$190  
**CQ-S668.** Compact Repeatrack cassette player with manual AM/FM radio. Features FM optimizer; INQ circuit; MOSFET and adaptive FM front end; distributed multi-stage auto gain control on AM; Dolby tape noise reduction; locking fast forward/rewind; hard permalloy tape head; separate bass and treble controls; radio monitor; compact chassis; fully adjustable shafts. Output power 7.5 W/ch into 4 ohms; frequency response 50-35,000 Hz  $\pm$ 3 dB. Tape wow and flutter 0.13% wrms; frequency range 80-12,500 Hz; S/N ratio Dolby on/off 60/50 dB. FM usable sens 14 dBf; 7"W x 5 $\frac{1}{8}$ "D x 1 $\frac{1}{2}$ "H ..... \$170  
**CQ-S668.** Compact AM/FM-stereo/cassette player with locking fast forward/rewind and manual-tune AM/FM tuner. Features tape-play and FM-stereo indicators; automatic frequency control on FM; adjustable shafts. Output power 7.5 W/ch max into 4 ohms; wow and flutter 0.13% wrms; tape frequency range 30-15,000 Hz; S/N ratio 45 dB; FM usable sens 10 dBf; 7"W x 5 $\frac{1}{8}$ "D x 1 $\frac{1}{2}$ "H ..... \$150

#### NEED MORE INFORMATION?

Write directly to the manufacturer or distributor. A list of names and addresses starts on page 25.

**Panasonic Cassette Tuner/Preamp**

**RM-710.** Overhead console-type car audio system with auto-reverse cassette player, Dolby B noise reduction, AM/FM-stereo tuner, and stereo preamplifier. Features locking fast forward/rewind; key-off eject; normal/CrO<sub>2</sub> tape selector; tape program sensor; AM/FM-stereo tuner with 5-way electronic soft-touch tuning; 6 AM/6 FM station presets; pushbutton manual tuning; LED tuning indicators; local/DX switch; impulse-noise quieting (INQ) circuit; 5-band graphic equalizer; electronic volume control with LED level indicators; sound-attenuator switch; joystick balance and fader controls; loudness and dimmer switches; stereo power amplifier; 4-position dome light. Preamp frequency response 20-50,000 Hz ± 3 dB; THD 0.02% at 1 kHz. Tape W&F 0.13% wrms; frequency response 30-14,000 Hz ± 3 dB; S/N ratio Dolby on/off 63/55 dB; sep 40 dB. FM usable sensitivity 16 dBf; THD 0.15%; S/N ratio 72 dB; image rejection 65 dB; FR 20-15,000 Hz ± 3 dB; sep 40 dB at 1 kHz .. \$1,400

**Panasonic Amplifier**

**CY-SB25.** Booster amplifier with 25 W/ch output power. FR 20-40,000 Hz. 5½"W × 4¼"D × 1½"H.....\$80

**Panasonic Car Speakers**

**EAB-009.** 6½" Honeycomb 2-way system. FR 35-25,000 Hz; max power 60 W; magnet 13.5 oz; .....\$300/pr  
**EAB-080.** 8" coaxial 2-way system. FR 30-20,000 Hz; max power 100W; magnet 20 oz; .....\$180/pr  
**EAB-069.** 6½" coaxial 2-way system with horn tweeter. FR 40-25,000 Hz; max power 60W; magnet 10 oz; .....\$90/pr  
**EAB-692.** 6" × 9" coaxial 2-way system with tweeter. FR 40-25,000 Hz; max power 30W; magnet 20

oz; .....\$90/pr  
**EAB-063.** 6½" coaxial 2-way speaker with tweeter. FR 40-25,000 Hz; max power 25W; magnet 20 oz; .....\$85/pr  
**EAB-412.** 4" × 10" coaxial 2-way system with tweeter. FR 60-25,000 Hz; max power 25W; magnet 10 oz; .....\$80/pr  
**EAB-062.** 6½" coaxial 2-way system with tweeter. FR 45-25,000 Hz; max power 25W; magnet 10 oz; .....\$75/pr  
**EAB-049.** 4" coaxial 2-way system with horn tweeter. FR 50-25,000 Hz; max power 30W; magnet 6.5 oz; .....\$70/pr  
**EAB-691.** 6" × 9" dual-cone speaker with high-frequency whizzer. FR 45-20,000 Hz; max power 30W; magnet 10 oz; .....\$65/pr  
**EAB-411.** 4" × 10" dual-cone speaker with high-frequency whizzer. FR 60-20,000 Hz; max power 25W; magnet 10 oz; .....\$65/pr  
**EAB-061.** 6½" dual-cone speaker with water shield. FR 45-20,000 Hz; max power 25W; magnet 10 oz; .....\$60/pr  
**EAB-050A.** 5" dual-cone super-thin speaker with waterproof cone. FR 50-16,000 Hz; max power 25W; magnet 4.7 oz; .....\$53/pr  
**EAB-040.** 4" dual-cone speaker with waterproof cone. FR 70-18,000 Hz; max power 25W; magnet 4 oz; .....\$50/pr  
**EAB-911.** 5" single-cone speaker with water shield. FR 50-15,000 Hz; max power 20W; magnet 7 oz; .....\$40/pr  
**EAB-915.** 4" single-cone speaker with water shield. FR 60-15,000 Hz; max power 20W; magnet 7 oz; .....\$40/pr  
**EAB-909.** 5" single-cone speaker with water shield. FR 50-15,000 Hz; max power 8W; magnet 3 oz; .....\$35/pr  
**EAB-914.** 4" single-cone speaker with water shield.

FR 65-14,000 Hz; max power 8W; magnet 3 oz; .....\$35/pr  
**EAB-030.** 3½" dual-cone speaker with high frequency whizzer. FR 100-20,000 Hz; max power 20W; magnet 3.2 oz; .....\$30/pr

**PHILIPS AUTO AUDIO**

**AC825 AM/FM Tuner/Cassette Player**

Quartz digital AM/FM tuner with Dolby cassette player. Features PLL circuitry; remote LCD frequency readout; microcomputer-controlled wave-band switching; 6 AM/6 FM presets; back-lit buttons; programmed IF correction; auto adjustment of ch sep and high response; music search; electronic speed control; FSX permalloy head; auto repeat; cassette standby; auto head and capstan release.....\$600

**Philips Equalizer/Preamplifier**

**EN600.** 6-band graphic equalizer-preamp master control center with Sound Series 2000™. Features master gain and volume control; electronic fader control; multi-amplifier control capability; FR 20-20,000 Hz; THD <.05%; input sens adjustable; 1¼"H × 6¼"W × 5¼"D; 3 lbs.....\$300

**Philips Power Amplifiers**

**EN220.** Power amplifier Sound Series 2000™ with LED system fault monitor. FR 20-20,000 Hz; 20 W/ch; S/N > 100 dB; THD <.05%; imp 4 ohms; input sens adjustable; 2¼"H × 5¼"W × 7¼"D; 4 lbs.....\$200  
**EN250.** System power amplifier with LED fault monitor. FR 20-20,000 Hz; 50 W/ch; S/N > 100 dB; THD <.05%; imp 4 ohms; input sens adjustable; 2¼"H × 9¼"W × 7¼"D; 7 lbs.....\$350  
**EN2100.** Power amplifier Sound Series 2000™. FR 20-20,000 Hz; 100 W/ch; >S/N 100 dB; THD <.05%; imp 4 ohms input sens adjustable ..\$500

**Philips Car Speakers**

**EN8895.** Four way hi-fi panel system. Power handling capacity 100; max power handling 200; FR 20-22,000 Hz; ferrofluid cooling; imp 2/4 ohms; sens 1W 90 dB; bi-amp capable; mounting depth 1¼"; 15 lbs 40 oz .....\$400/pr  
**EN8390.** Two way panel system with ferrofluid cooling. Power handling capacity 50 W; max power handling 100 W; FR 50-20,000 Hz; imp 4 ohms; sens 1W 91 dB; magnet 25 oz; mounting depth 1¼"; 10¼"W × 6"L × 3"D; 9 lbs 4 oz .....\$200/pr  
**EN8365.** Two way bass reflex system with ferrofluid cooling. Power handling capacity 40 W; max power handling 80 W; FR 80-20,000 Hz; imp 4 ohms; sens 1 W 86 dB; magnet 15 oz; 9¼"W × 4¼"L × 5¼"D; 8 lbs 4 oz .....\$170/pr  
**EN8869.** 6 × 9 polyolefin cone double dome™ three way system with ferrofluid cooling. Power handling capacity 100 W; max power handling 200 W; FR 35-22,000 Hz; imp 4 ohms; sens 1W 92 dB; magnet 36 oz .....\$200/pr  
**EN8769.** 6 × 9 dome coaxial system with ferrofluid cooling. Power handling capacity 100 W; max power handling 200 W; FR 40-20,000 Hz; imp 4 ohms; sens 1W 90 dB; magnet 40 oz; mounting depth 3¼"; 6¼"W × 9¼"L × 4¼"D; 16 lbs.....\$150/pr  
**EN8749.** 6 × 9 polyolefin cone dome coaxial system with ferrofluid cooling. Power handling capacity 50 W; max power handling 100 W; FR 40-20,000 Hz; imp 4 ohms; sens 1W 93 dB; magnet 20 oz; mounting depth 2¼"; 6¼"W × 9¼"L × 4D; 14 lbs \$130/pr  
**EN8710.** 4 × 10 dome coaxial system with ferrofluid cooling. Power handling capacity 50 W; max power handling 100 W; FR 65-20,000 Hz; ferrofluid cooling; imp 4 ohms; sens 1W 91 dB; magnet 25 oz; mounting depth 3"; cable length 16"; 4¼"W × 10½"L × 4¼"D; 11 lbs.....\$130/pr  
**EN8885.** 6½" double dome™ three way system. Power handling capacity 60 W; max power handling 120 W; FR 25-22,000 Hz; imp 4 ohms; sens 1W 90 dB; magnet 36 oz; mounting depth 2¼"; 6¼"Dia. × 3¼"D; 10 lbs 6 oz .....\$180/pr  
**EN8875.** 6½" dome coaxial system with ferrofluid cooling. Power handling capacity 60 W; max power

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**PHILIPS AUTO AUDIO** **Amperex Electronic Corporation**  
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CIRCLE NO. 48 ON READER SERVICE CARD

handling 120 W; FR 25-20,000 Hz; imp 4 ohms; sens 1W 87 dB; magnet 35 oz; mounting depth 2 1/4"; 6 1/8" Dia. x 3 3/8"D; 10 lbs 4 oz ..... \$140/pr

**EN8855.** 5 1/4" dome coaxial system with ferrofluid cooling. Power handling capacity 50 W; max power handling 100 W; FR 35-20,000 Hz; ferrofluid cooling; imp 4 ohms; sens 1W 88 dB; magnet 25 oz; mounting depth 2 1/4"; cable length 16"; 5 3/8"W x 5 3/8"L x 3 1/8"D; 7 lbs 4 oz ..... \$120/pr

**EN8845.** 4" dome coaxial system with ferrofluid cooling. Power handling capacity 40 W; max power handling 80 W; FR 60-22,000 Hz; imp 4 ohms; sens 1W 90 dB; magnet 11 oz; mounting depth 1 3/4"; 4 3/8"W x 4 3/8"L x 2 3/8"D; 3 lbs 10 oz ..... \$90/pr

**EN8741.** 4" high efficiency system. Power handling capacity 40 W; max power handling 80 W; FR 60-20,000 Hz; imp 4 ohms; sens 1W 88 dB; magnet 10 oz; mounting depth 1 3/4"; 4 3/8"W x 4 3/8"L x 2 3/8"D ..... \$60/pr

**EN8751.** 5" ultra-slim system. Power handling capacity 15 W; max power handling 25 W; FR 80-15,000 Hz; imp 4 ohms; sens 1W 88 dB; magnet 5 oz; mounting depth 1 1/8"; 5 1/2" Dia. x 1 3/8"D; 2 lbs 4 oz ..... \$60/pr

**EN8846.** 3 1/2" x 4 x 6" dome coaxial system. Power handling capacity 30 W; max power handling 60 W; FR 200-22,000 Hz; imp 4 ohms; sens 1W 90 dB; magnet 5 oz; 5 3/8"W x 4 1/2"L x 4 1/2"D; 7 lbs 4 oz ..... \$130/pr

**EN8235.** Dome coaxial mini system with ferrofluid cooling. Power handling capacity 30 W; max power handling 60 W; FR 200-22,000 Hz; imp 4 ohms; sens 1W 90 dB; magnet 5 oz; 5 3/8"W x 4 1/2"L x 4 1/2"D; 7 lbs 4 oz ..... \$130/pr

**EN8320.** Tunable hi-fi tweeter with ferrofluid cooling. Power handling capacity 50 W; max power handling 100 W; FR 2700-22,000 Hz; imp 4 ohms; sens 1W 90 dB; magnet 5 oz; mounting depth 1"; 4 1/2"W x 5 3/8"L x 1 1/2"D; 2 lbs 8 oz ..... \$70/pr

**EN8320G.** Powder grey finish ..... \$70/pr

**EN8335.** Ford/Chrysler mounting dome tweeter system with ferrofluid cooling. Power handling capacity 50 W; max power handling 100 W; FR 2700-22,000 Hz; imp 4 ohms; sens 1W 90 dB; crossover frequency 2700 Hz; magnet 5 oz; mounting depth 3/4"; 2.8 lbs ..... \$50/pr

**EN8340.** 4" mounting dome tweeter system for import cars with ferrofluid cooling. Power handling capacity 50 W; max power handling 100 W; FR 2700-22,000 Hz; imp 4 ohms; sens 1W 90 dB; crossover frequency 2700 Hz; magnet 5 oz; mounting depth 3/4"; 2.8 lbs ..... \$50/pr

**EN8346.** GM mounting 3 1/2" x 4 x 6" dome tweeter system with ferrofluid cooling. Power handling capacity 50 W; max power handling 100 W; FR 2700-22,000 Hz; imp 4 ohms; sens 1W 90 dB; crossover frequency 2700 Hz; magnet 5 oz; mounting depth 3/4"; 3 oz ..... \$50/pr

**EN8500.** 6 1/2" polyolefin subwoofer system. Power handling capacity 75 W; max power handling 150 W; FR 60-5,000 Hz; imp 4 ohms; sens 1W 94 dB; magnet 25 oz; mounting depth 2 3/4"; 6 1/2" Dia. x 3 3/4"D ..... \$120/pr

**EN6900.** 6 x 9 polyolefin subwoofer system. Power handling capacity 100 W; max power handling 200 W; FR 48-2000 Hz; imp 4 ohms; sens 1W 94 dB; magnet 40 oz; mounting depth 3 3/4"; 9 3/4" x 6 3/4" Dia. x 3 3/4"D; 14 lbs ..... \$150/pr

**EN8000.** 8" polyolefin subwoofer system. Power handling capacity 100 W; max power handling 200 W; FR 43-3,000 Hz; imp 4 ohms; sens 1W 94 dB; magnet 30 oz; mounting depth 3 3/4"; 8 1/8" Dia. x 4"D; 14 lbs ..... \$150/pr

## PIONEER

### Cassette Radios

**KE-7200.** In-dash stereo AM/FM Supertuner III with auto-reverse cassette deck. Features 15 station presets (10 FM, 5 AM); feather-touch tuning; digital time/frequency display; auto/local scan; Dolby noise reduction; separate bass and treble control; tape guard; music search; metal-tape compatibility; key-off pinch-roller release; FM auto/mono switch; auto muting; volume, balance, and loudness controls; locking

fast forward and rewind; power-antenna activator; 3.2 W/ch ..... \$380

**UKE-7100.** Mini in-dash AM/FM-stereo radio/cassette player with Supertuner II and Dolby noise reduction. Features quartz PLL electronic tuning; auto-reverse cassette deck; music search; 4-digit green LED time/frequency display; 10 FM/5 AM station electronic preset feather-touch tuning; separate bass and treble controls; auto/local scan; FM auto/mono switch; auto FM muting; pulse-noise suppressor; hard permalloy head; locking fast forward/rewind; tape guard; key-off pinch-roller release; loudness, balance, volume controls; metal/chrome tape selector; power-antenna activator ..... \$350

**KE-6100.** In-dash unit with digital quartz AM/FM-stereo Supertuner II and stereo cassette player with Dolby noise reduction. Features LED address indicators on preset buttons (10 FM/5 AM); 4-digit green LED time/frequency display; local/scan switch; pulse-noise suppression; quartz PLL tuning; chrome/metal-tape selector; parallel fader control that permits use of 2 amplifiers; locking fast forward/rewind; auto replay after rewind; loudness switch; auto eject; power-antenna activator; 2.9 W/ch into 4 ohms .... \$330

**KEX-20.** In-dash AM/FM-stereo cassette radio with electronic Supertuner II. Features electronic tuning with 10 FM/5 AM station presets; Dolby noise reduction; separate bass and treble controls; metal/chrome tape selector; electronic LED pointer and LED AM/FM band indicators; pulse-noise suppression; auto muting on FM; auto/mono switch; locking fast forward/rewind; auto replay after rewind ..... \$300

**UPX-9600.** Mini in-dash cassette radio with Supertuner II AM/FM-stereo tuner. Dolby noise reduction, and radio interplay feature. Features auto-reverse cassette deck; 5-station preset tuning; FM auto/mono switch; pulse-noise suppressor; auto FM muting; tape guard; key-off pinchroller release; music search; hard permalloy tape head; separate bass, treble, loudness controls; tape selector; power-antenna activator \$300

**UKE-3100.** Mini quartz-PLL-tuned AM/FM-stereo radio with cassette deck. Features 4-digit green LED time/frequency display; 10 FM/5 AM station presets; auto/local scan; FM stereo/mono switch; auto FM muting; music search; tape guard; key-off pinch-roller release; hard permalloy head; tape play indicator; volume, tone, balance, loudness controls; power-antenna activator ..... \$270

**KP-7500.** In-dash AM/FM-stereo Supertuner and auto-reverse cassette player with permalloy head and Dolby noise reduction. Features metal/chrome selector; locking fast forward/rewind; auto tape-slack canceler. Radio features pulse-noise suppression; auto muting; loudness; auto stereo/mono; balance, volume, tone, fader controls; playback response 50-12,000 Hz; S/N Dolby off/on 45/52 dB; output power 2.9 W/ch continuous, both chs driven into 4 ohms, 50-15,000 Hz with 5.0% THD; FM 50-dB quieting sens 19.2 dBf; FM sel 74 dB; 7 1/8"W x 7 1/8"D x 2"H ..... \$260

**KP-6500.** Similar to KP-7500 except without Dolby and auto reverse, 5-station preset tuning, auto eject and replay ..... \$220

**KP-A700.** In-dash AM/FM stereo radio with Supertuner III® and auto-reverse cassette player. Features 5 station presets; separate bass and treble controls; fader control; auto replay after rewind; RCA-type pre-out; music search; tape guard; key-off pinch-roller release; built-in pulse-noise suppressor; hard permalloy head; FM auto/mono switch; locking fast forward and rewind; balance and loudness controls; illuminated cassette door; power-antenna activator ..... \$260

**KP-A600.** In-dash AM/FM stereo radio with Supertuner III® and auto-reverse cassette player. Features 5 station presets; fader control; auto replay after rewind; music search; tape guard; key-off pinch-roller release; built-in pulse-noise suppressor; hard permalloy head; FM auto/mono switch; locking fast forward and rewind; balance, tone, and loudness controls; illuminated cassette door; power-antenna activator \$250

**KP-A500.** In-dash AM/FM stereo radio with Supertuner III® and cassette player. Features 5 station presets; separate bass and treble controls; RCA-type pre-out; auto replay after rewind; music search; tape

guard; key-off pinch-roller release; built-in pulse-noise suppressor; hard permalloy head; FM auto/mono switch; locking fast forward and rewind; balance and loudness controls; illuminated cassette door; power-antenna activator ..... \$240

**KE-2100.** In-dash cassette player with Supertuner AM/FM-stereo radio. Features electronic tuning; 10-station electronic presets; FM mono/stereo, local/DX, muting switches; electronic LED station pointer; locking fast forward/rewind; auto play after rewind; AM/FM LED indicator; auto eject; connector for pulse-noise suppressor; adjustable shafts; power-antenna activator ..... \$230

**KP-A400.** In-dash AM/FM radio with cassette player. Features Supertuner III®; 5 station presets; auto replay after rewind; music search; tape guard; key-off pinch-roller release; hard permalloy head; built-in pulse-noise suppressor; locking fast forward and rewind; FM auto/mono switch; loudness control; volume, tone, and balance controls; illuminated cassette door; power-antenna activator ..... \$210

**KP-500.** Under-dash unit with FM Supertuner, PLL MPX demodulator. Features bass, treble, balance controls; FM muting; stereo/mono and loudness switches; auto eject; tape-play and stereo indicators. Output power 3 W/ch into 4 ohms 50-15,000 Hz at 5% THD; W&F 0.3% wrms; tape FR 50-10,000 Hz ±3 dB; FM usable sens 12 dBf (mono); FM sel 74 dB; 7 1/8"W x 7 1/8"D x 3"H ..... \$190

**KP-5500.** In-dash AM/FM radio with Supertuner and cassette player. Features 5-station preset pushbutton tuning; FM/mono/stereo and muting switches; auto replay after rewind; locking fast forward/rewind; auto eject; volume, tone, and balance controls; adjustable shafts; power-antenna activator ..... \$190

**KP-4500.** Similar to KP-5500 except without auto eject, stereo/mono, station preset buttons; has auto reverse and auto muting; output power 3.2 W/ch; FM sens 19.2 dBf; FM sel 50 dB ..... \$170

**KP-2500.** Similar to KP-4500 less auto tape-slack canceler, loudness, auto reverse, auto muting; has auto eject and stereo/mono ..... \$150

**KP-1500.** Similar to KP-2500 except designed for Japanese imports and X-body cars; mini chassis; FM muting; locking fast forward; output power 2.5 W/ch continuous; FM sens 20.7 dBf; 6 3/8"W x 5 3/8"D x 1 3/8"H ..... \$130

**KP-4205.** In-dash AM/FM radio with auto-reverse cassette player. Features music search; tape guard; auto replay; cassette eject; loudness control; key-off pinch-roller release; tape-direction LED; locking fast forward and rewind; hard permalloy head; FM mono/stereo switch; FM stereo indicator; volume, tone, and balance controls; power-antenna activator; adjustable shafts ..... \$185

**KP-2205.** Stereo AM/FM radio with cassette player. Features music search; tape guard; auto replay; cassette eject; loudness control; key-off pinch-roller release; locking fast forward and rewind; hard permalloy head; FM mono/stereo switch; FM stereo indicator; volume, tone, and balance controls; power-antenna activator; adjustable shafts ..... \$160

**KP-2000.** Stereo AM/FM radio with cassette player. Features auto replay after rewind; hard permalloy head; locking fast forward and rewind; FM stereo/mono switch; loudness control; volume, balance, and tone controls; power-antenna activator ..... \$130

### Pioneer Cassette Decks

**KP-909G.** Three-motor, direct-reel-drive auto-reverse cassette deck. Features Dolby noise reduction; tape guard; separate bass and treble controls; microprocessor-controlled music search, music repeat, music scan, blank skip; feather-touch transport controls; high density ferrite head; metal/chrome tape selector; key-off soft eject; locking fast forward/rewind; loudness, volume, balance controls; illuminated cassette door; Auto-Guard eject; terminal for optional remote-control unit. Requires separate power amp ... \$380

**KP-404G.** Stereo cassette deck with Dolby noise reduction. Features music search; tape guard; separate bass and treble controls; ferrite head; metal/chrome tape selector; illuminated cassette door; key-off pinch-roller release; auto replay and eject; locking fast forward/rewind; loudness, volume, balance controls.

Requires separate power amplifier ..... \$160  
**KP-575.** Under-dash cassette auto-reverse cassette player with auto tape-slack eliminator, locking fast forward/rewind, tape-direction indicators; loudness, volume, tone, and balance controls. W&F 0.25% wrms; frequency range 50-10,000 Hz; S/N 45 dB; max output power 6 W continuous; 6 $\frac{1}{2}$ "W x 4 $\frac{1}{2}$ "D x 2"H ..... \$130

#### Pioneer Tuners

**GEX-90.** Stereo AM/FM digital tuner with Supertuner III\* requiring separate power amp. Features 15 station presets (10 FM/5 AM); LED address indicators on preset buttons; electronic feather-touch tuning; digital time/frequency display on 4-digit green LEDs; built-in clock with clock button; pulse-noise suppression; quartz PLL tuning; audio attenuator; auto scan/seek tuning; local scan/seek; FM auto/mono switch; balance control; bass, treble, and loudness controls; input connector for tape deck; terminal for optional remote control unit (CD-R90); power-antenna activator ..... \$300  
**GEX-60.** Under-dash Supertuner\* III requiring separate power amp. Features 15 station presets (10 FM/5 AM); LED address indicators on preset buttons; feather-touch electronic tuning; separate bass and treble controls; built-in pulse-noise suppressor; auto tuner/deck switching circuit; FM auto/mono switch; FM stereo indicator; AM/FM LED indicator; input connector for separate tape deck; power-antenna activator ..... \$220

#### Pioneer Cassette Tuners

**KEX-65.** In-dash auto-reverse cassette deck with quartz-controlled electronic AM/FM tuner. Features Supertuner II front end; 10 FM/5 AM station electronic preset feather-touch pushbutton tuning; auto/local scan; FM auto/mono switch; auto FM mute; pulse-noise suppression; 4-digit green LED time/frequency display; separate bass and treble slide controls; Dolby noise reduction; metal/chrome tape selector; music search; locking fast forward/rewind; ferrite head; tape guard; key-off pinch-roller release; loudness, volume, balance controls; installation bracket with special security keys; power-antenna activator. Requires separate power amplifier ..... \$420  
**KEX-50.** Digital quartz AM/FM-stereo tuner with cassette deck. Features Supertuner II; 4-digit green LED time/frequency display; LED address indicators on preset buttons; metal/chrome tape selector; quartz-PLL tuning; Dolby noise reduction; separate bass, treble, loudness controls; 10 FM/5 AM station electronic preset feather-touch tuning buttons; auto scan/seek tuning; FM auto/mono and local/scan switches; pulse-noise suppression; locking fast forward/rewind; auto replay after rewind; auto eject; illuminated cassette door; power-antenna activator. Requires separate power amplifier ..... \$380  
**KPX-600.** Under-dash FM-stereo Supertuner and stereo cassette player. Features auto replay and eject; locking fast forward/rewind; tape-play indicator; electronic governor motor; center-detented volume, bass, treble, balance controls; FM muting; loudness contour switch; FM stereo indicator; FM stereo/mono switch. FM S/N 68 dB; capture ratio 1.7 dB; sep 32 dB (65 dBf, 1 kHz); sens 14.3 dBf; selectivity 74 dB. Fast-wind time 120 seconds with C60 cassette; W&F 0.13% wrms; frequency response 30-15,000 Hz - 3 dB; S/N 52 dB; 7 $\frac{1}{2}$ "W x 6 $\frac{1}{4}$ "D x 2 $\frac{3}{8}$ "H... \$140

#### Pioneer Component Amplifiers

**GM-120.** Output power 30 W/ch into 4 ohms; max power output 60 W/ch; FR 30-30,000 Hz  $\pm$ 3 dB; THD 0.3%; 75 dB; 2 $\frac{1}{2}$ "H x 7"W x 8 $\frac{1}{4}$ "D . \$150  
**GM-5.** Output power 10 W/ch into 4 ohms; max power output 20 W/ch; FR 30-30,000 Hz  $\pm$ 3 dB; THD 0.8%; S/N 70 dB; 1"H x 5 $\frac{1}{4}$ "W x 6 $\frac{1}{4}$ "D . \$80  
**GM-2.** Output power 2.8 W/ch into 4 ohms; max power output 6.5 W/ch; FR 40-30,000 Hz  $\pm$ 3 dB; THD 0.8%; S/N 75 dB; 1"H x 5 $\frac{1}{4}$ "W x 3 $\frac{1}{2}$ "D . \$45

#### Pioneer Car Speakers

**TS-1222.** 5.5" door-mount. FR 50-20,000 Hz; sens 91 dB SPL/W/m; max power 20 W; magnet 6.7 oz; mounting depth 1 $\frac{1}{8}$ " ..... \$55/pr

**TS-1200K Tilt-Axial.** 5.5" door-mount. FR 50-20,000 Hz; sens 91 dB SPL/W/m; max music power 30 W; magnet 6.7 oz; mounting depth 1 $\frac{1}{8}$ " ..... \$90/pr  
**P-16L.** 6.5" door-mount. FR 50-10,000 Hz; sens 89 dB SPL/W/m; max power 8 W; magnet 3.7 oz; mounting depth 1 $\frac{1}{4}$ " ..... \$30/pr  
**TS-1611.** 6.5" door-mount. FR 40-20,000 Hz; sens 92 dB SPL/W/m; max music power 30 W; magnet 6.3 oz; mounting depth 2" ..... \$40/pr  
**TS-1600X.** 6.5" door-mount. FR 40-20,000 Hz; sens 92 dB SPL/W/m; max power 20 W; magnet 7.3 oz; mounting depth 2" ..... \$35/pr  
**TS-1620X.** 6.5" door-mount. FR 40-20,000 Hz; sens 92 dB SPL/W/m; max power 20 W; magnet 10 oz; mounting depth 2 $\frac{1}{2}$ " ..... \$45/pr  
**TS-1622.** 6.5" door-mount. FR 40-20,000 Hz; sens 91 dB SPL/W/m; max power 25 W; magnet 8.5 oz; mounting depth 1 $\frac{1}{8}$ " ..... \$60/pr  
**TS-164.** 6.5" door-mount. FR 40-16,000 Hz; sens 92 dB SPL/W/m; max power 20 W; magnet 10 oz; mounting depth 2 $\frac{1}{2}$ " ..... \$60/pr  
**TS-165.** 6.5" door-mount. FR 30-16,000 Hz; sens 94 dB SPL/W/m; max power 20 W; magnet 20 oz; mounting depth 2 $\frac{1}{2}$ " ..... \$65/pr  
**TS-167.** 6.5" door-mount. FR 30-20,000 Hz; sens 93 dB SPL/W/m; max power 20 W; magnet 10 oz; mounting depth 2 $\frac{1}{2}$ " ..... \$70/pr  
**TS-1644.** 6.5" door-mount. FR 40-20,000 Hz; sens 92 dB SPL/W/m; max power 25 W; magnet 8.5 oz; mounting depth 1 $\frac{1}{8}$ " ..... \$60/pr  
**TS-1633K.** 6.5" door-mount. FR 30-20,000 Hz; sens 92 dB SPL/W/m; max music power 90 W; magnet 10.2 oz; mounting depth 1 $\frac{1}{8}$ " ..... \$80/pr  
**TS-168.** 6.5" door-mount. FR 35-20,000 Hz; sens 90 dB SPL/W/m; max power 40 W; magnet 10 oz; mounting depth 2 $\frac{1}{8}$ " ..... \$120/pr  
**TS-1655K.** 6.5" door-mount. FR 30-20,000 Hz; sens 90 dB SPL/W/m; max music power 90 W; magnet 9.5 oz; mounting depth 2 $\frac{1}{8}$ " ..... \$125/pr  
**TS-1690K Tilt-Axial.** 6.5" door-mount. FR 40-24,000 Hz; sens 91 dB SPL/W/m; max music power 90 W; magnet 9.7 oz; mounting depth 2 $\frac{1}{8}$ " ..... \$150/pr  
**TS-87.** Special application 3 $\frac{1}{2}$ ". FR 100-18,000 Hz; sens 87 dB SPL/W/m; max power 20 W; magnet 2.4 oz; mounting depth 1 $\frac{1}{2}$ " ..... \$30/pr  
**TS-T3.** Special application 3 $\frac{1}{2}$ ". FR 250-20,000 Hz; sens 92 dB SPL/W/m; max power 60 W; magnet 6.5 oz; mounting depth 1 $\frac{1}{4}$ " ..... \$50/pr  
**TS-M2.** Special application 2 $\frac{1}{4}$ ". FR 450-20,000 Hz; sens 91.5 dB SPL/W/m; max power 20 W; magnet 3 oz ..... \$50/pr  
**TS-M6.** Special application 2 $\frac{1}{4}$ ". FR 350-22,000 Hz; sens 91.5 dB SPL/W/m; max power 20 W; magnet 4 oz ..... \$80/pr  
**TS-462.** Special application 4x6. FR 60-20,000 Hz; sens 89 dB SPL/W/m; max power 20 W; magnet 3 oz; mounting depth 1 $\frac{3}{8}$ " ..... \$50/pr  
**TS-411.** Special application 4x10. FR 50-20,000 Hz; sens 90.5 dB SPL/W/m; max power 20 W; magnet 10 oz; mounting depth 2 $\frac{1}{4}$ " ..... \$70/pr  
**TS-W203.** Six-by-nine inch (speaker size 8"). FR 28-10,000 Hz; sens 93 dB SPL/W/m; max power 60 W; magnet 20 oz; mounting depth 3 $\frac{1}{32}$ " ..... \$150/pr  
**TS-202.** 6x9" (speaker size 8"). FR 30-20,000 Hz; sens 92 dB SPL/W/m; max power 60 W; woofer magnet 20 oz, tweeter magnet, 3.5 oz; mounting depth 3 $\frac{1}{32}$ " ..... \$180/pr  
**TS-205.** 6x9" (speaker size 8"). FR 30-22,000 Hz; sens 92 dB SPL/W/m; max power 60 W; woofer magnet 20 oz, tweeter magnet, 0.7 oz; mounting depth 3 $\frac{1}{32}$ " ..... \$200/pr  
**TS-692.** 6x9". FR 35-16,000 Hz; sens 93 dB SPL/W/m; max power 20 W; magnet 20 oz; mounting depth 3 $\frac{1}{4}$ " ..... \$64/pr  
**TS-6903.** 6x9". FR 40-19,000 Hz; sens 93 dB SPL/W/m; max music power 40 W; magnet 8 oz; mounting depth 3 $\frac{1}{4}$ " ..... \$55/pr  
**TS-6904.** 6x9". FR 35-20,000 Hz; sens 94 dB SPL/W/m; max music power 80 W; magnet 15.5 oz; mounting depth 3 $\frac{1}{4}$ " ..... \$85/pr  
**TS-6905.** 6x9". FR 30-20,000 Hz; sens 94 dB SPL/W/m; max music power 80 W; magnet 15.5 oz; mounting depth 4" ..... \$120/pr  
**TS-6906.** 6x9". FR 35-22,000 Hz; sens 95 dB SPL/W/m; max music power 100 W; magnet 18.7 oz;

mounting depth 4" ..... \$150/pr  
**TS-6907.** 6x9". FR 30-22,000 Hz; sens 95 dB SPL/W/m; max music power 100 W; magnet 18.7 oz; mounting depth 4" ..... \$170/pr  
**TS-5.** Surface-mount 5 $\frac{1}{4}$ ". FR 180-13,000 Hz; sens 92 dB SPL/W/m; max power 8 W; magnet 3 oz ..... \$30/pr  
**TS-55.** Surface-mount 5 $\frac{1}{4}$ ". FR 180-13,000 Hz; sens 90 dB SPL/W/m; max music power 40 W; magnet 3.7 oz ..... \$38/pr  
**TS-X1.** Surface-mount 3 $\frac{1}{2}$ ". FR 120-18,000 Hz; sens 86 dB SPL/W/m; max power 20 W; magnet 2.4 oz ..... \$50/pr  
**TS-X5.** Surface-mount 4". FR 80-20,000 Hz; sens 88 dB SPL/W/m; max power 20 W; magnet 7.6 oz ..... \$80/pr  
**TS-X6.** Surface-mount 4". FR 80-20,000 Hz; sens 88 dB SPL/W/m; max power 20 W; woofer magnet 5 oz, tweeter magnet 2.5 oz ..... \$110/pr  
**TS-X7.** Surface-mount 4". FR 70-20,000 Hz; sens 88 dB SPL/W/m; max music power 60 W; magnet 4.9 oz ..... \$100/pr  
**TS-X8.** Surface-mount 4 $\frac{1}{8}$ ". FR 55-20,000 Hz; sens 86.5 dB SPL/W/m; max music power 80 W; magnet 8.1 oz ..... \$150/pr  
**TS-X9.** Surface-mount 3 $\frac{3}{4}$ ". FR 50-22,000 Hz; sens 86 dB SPL/W/m; max power 40 W; woofer magnet 7, tweeter-5.6 oz ..... \$200/pr  
**TS-Z80.** Surface-mount 6 $\frac{1}{2}$ ". FR 70-20,000 Hz; sens 89 dB SPL/W/m; max power 60 W; magnet 13.5 oz ..... \$400/pr

## POLK AUDIO

### Speaker Systems

**MM V.** Features 3 separate units per ch;  $\frac{1}{4}$ " ferro-fluid damped polymer dome high-frequency radiator; cast-magnesium-basket 5 $\frac{1}{4}$ " high-definition bass-midrange driver with polymer-impregnated nylon cone; complex 12 dB/octave crossover network. FR 40-25,000 Hz; recommended amplification 5-100 W; driver size MW-5 $\frac{1}{4}$ ", HF- $\frac{3}{4}$ "; tweeter 1 $\frac{1}{2}$ " diam. x 1 $\frac{1}{2}$ "H; driver 6 $\frac{1}{2}$ " diam. x 1 $\frac{1}{2}$ "H; crossover 3"L x 2"W x 1 $\frac{1}{2}$ "H; mounting depth 1 $\frac{1}{4}$ " ..... \$260  
**MM IV.** Polymer laminate cone 5 $\frac{1}{4}$ " driver,  $\frac{1}{4}$ " wide-dispersion high-frequency radiator and sophisticated crossover network. Lexan housing. FR 40-20,500 Hz; recommended amplification 5-100 W; driver size MW-5 $\frac{1}{4}$ ", HF- $\frac{3}{4}$ "; overall dimensions 8 $\frac{1}{4}$ "L x 6"W x 1 $\frac{1}{2}$ "H; mounting depth 1 $\frac{1}{4}$ " ..... \$220/pr  
**MM III.** Combines coaxially the same two drivers used in the MM IV and MM V. FR 40-20,500 Hz; recommended amplification 5-100 W; driver size MW-5 $\frac{1}{4}$ ", HF- $\frac{3}{4}$ "; overall dimensions 6 $\frac{1}{2}$ " diam. x 1 $\frac{1}{2}$ "H; mounting depth 1 $\frac{1}{4}$ " ..... \$160/pr  
**MM I.** Polymer-treated full-range 4" system. FR 80-15,000 Hz; recommended amplification 5-50 W; driver size FR-4"; overall dimensions 5 $\frac{1}{4}$ " diam. x 1 $\frac{1}{4}$ "H; mounting depth 1" ..... \$80/pr

## PROTON

### Cassette Radios

#### 212 AM/FM Radio/Cassette Player

Digital AM/FM radio with auto-reverse cassette player. Features the exclusive Schotz Phase III Variable Bandwidth PLL Detector specifically designed for Proton. Four amplifiers, bridgeable to two, biased Class A/B. Features triple J-FET; 4-gang tuner; Automatic Loudness Compensation; 5 AM/FM presets; Automatic Program Search; FM scan; muting; detented volume control; night illumination; separate bass and treble; Dolby B; shock-mounted tape transport; sendust tape head. Power output 4 x 6 W/ch or stereo bridged 18 W/ch and 1 kHz with 8% THD; output imp 4 ohms; capture ratio 1.5 dB. 6 $\frac{1}{2}$ "W x 2"H x 5 $\frac{1}{4}$ "D \$370  
**204.** Digital AM/FM radio with auto-reverse cassette player. Features the exclusive Schotz Phase III Variable Bandwidth PLL Detector specifically designed for Proton. Amplifier biased Class A/B. Features triple J-FET; 4-gang tuner; Automatic Loudness Compensation; 5 AM/FM presets; Automatic Program Search; FM scan; muting; detented volume control; night illumination; separate bass and treble; Dolby B; 2 pairs of preamp outputs with preamp; level fader. Power

# 1984 STEREO BUYERS GUIDE



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ed mid/woofer; high-power vented-aluminum voice coil; 40 W power capacity; FR 60-20,000Hz  $\pm$ 5dB; efficiency 91dB/1 W/1 meter; 4 ohm voice coil imp; crossover frequency 3,000Hz; 5.3 oz. strontium magnet; 2" mounting depth; optional wedges available for "on axis" mounting ..... \$80/pr

**PYLE**

**Car Speakers**

**P-HS100A.** 2-Way mini box (rect), driver size 4". FR 50-20,000 Hz; sens 90dB SPL/W/m; max power 80 W ..... \$230/pr  
**P-HS150P.** 2-Way mini box (wedge), driver size 4". FR 50-20,000 Hz; sens 90dB SPL/W/m; max power 80 W ..... \$220/pr  
**P-HP523A.** 2-Way system, driver size 5 1/4". FR 45-20,000 Hz; sens 92dB SPL/W/m; max power 80 W ..... \$190/pr  
**PK69C290-FCD.** With dome tweeter, driver size 6" x 9". FR 40-20,000 Hz; sens 97dB SPL/W/m; max power 140 W; magnet 30 oz ..... \$186/pr  
**PK69C290-FT.** With cone tweeter, driver size 6" x 9". FR 40-20,000 Hz; sens 97dB SPL/W/m; max power 140 W; magnet 30 oz ..... \$176/pr  
**PKP69C200-FCD.** Polypropylene coax, driver size 6" x 9". FR 40-20,000 Hz; sens 95dB SPL/W/m; max power 120 W; magnet 20 oz ..... \$165/pr

**PK410C100-WF.** Dual cone, driver size 4" x 10". FR 55-18,000 Hz; sens 93dB SPL/W/m; max power 60 W; magnet 10 oz ..... \$85/pr  
**PK69C100-WF.** Dual cone, driver size 6" x 9". FR 55-18,000 Hz; sens 94dB SPL/W/m; max power 80 W; magnet 10 oz ..... \$84/pr  
**PK52C100-WF.** Dual cone, driver size 5 1/4". FR 60-18,000 Hz; sens 92dB SPL/W/m; max power 60 W; magnet 10 oz ..... \$80/pr  
**FP69C200-FCD.** Polypropylene coax, driver size 6" x 9". FR 40-20,000 Hz; sens 95dB SPL/W/m; max power 120 W; magnet 20 oz; mounting depth 3 1/2" ..... \$68/ea  
**F69C200-FCD.** With dome tweeter, driver size 6" x 9". FR 40-20,000 Hz; sens 96dB SPL/W/m; max power 120 W; magnet 20 oz; mounting depth 3 1/2" ..... \$66/ea  
**PKM46C55-WF.** Metric dual cone, driver size 4" x 6". FR 80-18,000 Hz; sens 92dB SPL/W/m; max power 50 W; magnet 5.5 oz ..... \$62/pr  
**PK46C55-WF.** Dual cone, driver size 4" x 6". FR 80-18,000 Hz; sens 92dB SPL/W/m; max power 50 W; magnet 5.5 oz ..... \$61/pr  
**F69C160-FCD.** With dome tweeter, driver size 6" x 9". FR 40-20,000 Hz; sens 96dB SPL/W/m; max power 100 W; magnet 16 oz; mounting depth 3 1/2" ..... \$60/ea  
**PK35C55-WF.** Dual cone, driver size 3 1/4". FR 90-

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SBC841

# push it!

## Pyle Drivers® deliver

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**P** The Source of Great Sound  
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 Quality speakers by Pyle Industries, Inc.  
 501 Center St., Huntington, In. 46750 Ph 219-356-1200

**FP65C100-FR.** Polypropylene coax, driver size 6 1/2". FR 65-20,000 Hz; sens 91dB SPL/W/m; max power 50 W; magnet 10 oz; mounting depth 1 1/2" . . . \$49/ea

**W69C290-F4.** Woofer 4 ohm, driver size 6" x 9". FR 35-5,500 Hz; sens 95dB SPL/W/m; max power 140 W; magnet 30 oz; mounting depth 3 3/4" . . . \$49/ea

**W69C290-F.** Woofer, driver size 6" x 9". FR 35-6,000 Hz; sens 95dB SPL/W/m; max power 140 W; magnet 30 oz; mounting depth 3 3/4" . . . \$48/ea

**F52C100-FCD.** With dome tweeter, driver size 5 1/4". FR 60-20,000 Hz; sens 94dB SPL/W/m; max power 60 W; magnet 10 oz; mounting depth 2" . . . \$48/ea

**W10C200-F4S.** Small box woofer, driver size 10". FR 29-1,000 Hz; sens 94dB SPL/W/m; max power 150 W; magnet 20 oz; mounting depth 3 3/4" . . . \$48/ea

**WP10C200-F4.** Polypropylene woofer, driver size 10". FR 25-5,000 Hz; sens 96dB SPL/W/m; max power 150 W; magnet 20 oz; mounting depth 4 1/4" . . . \$47.50/ea

**FP4C99-FR.** Polypropylene coax, driver size 4". FR 70-20,000 Hz; sens 92dB SPL/W/m; max power 50 W; magnet 10 oz; mounting depth 1 1/4" . . . \$45/ea

**WP69C200-F4.** Polypropylene woofer, driver size 6" x 9". FR 40-5,500 Hz; sens 94dB SPL/W/m; max power 130 W; magnet 20 oz; mounting depth 3 3/4" . . . \$44.50/ea

**W10C200-F4.** Woofer 4 ohm, driver size 10". FR 25-5,000 Hz; sens 96dB SPL/W/m; max power 150 W; magnet 20 oz; mounting depth 4 3/4" . . . \$44/ea

**F4C99-FR.** With ribbon tweeter, driver size 4". FR 70-20,000 Hz; sens 92dB SPL/W/m; max power 50 W; magnet 10 oz; mounting depth 1 1/4" . . . \$44/ea

**WP8C200-F4.** Polypropylene woofer, driver size 8". FR 30-5,500 Hz; sens 95dB SPL/W/m; max power 140 W; magnet 20 oz; mounting depth 3 3/4" . . . \$43.50/ea

**W65C200-F4D.** Dual voice coil subwoofer, driver size 6 1/2". FR 35-4,000 Hz; sens 91dB SPL/W/m; max power 120 W; magnet 20 oz; mounting depth 3 3/4" . . . \$43/ea

**W10C200-F.** Woofer 4 ohm, driver size 10". FR 25-5,500 Hz; sens 96dB SPL/W/m; max power 150 W; magnet 20 oz; mounting depth 4 3/4" . . . \$43/ea

**F46C75-FR.** With ribbon tweeter, driver size 4" x 6". FR 70-20,000 Hz; sens 92dB SPL/W/m; max power 50 W; magnet 8 oz; mounting depth 2" . . . \$42/ea

**W69C200-F4S.** Small box woofer, driver size 6" x 9". FR 25-1,500 Hz; sens 92dB SPL/W/m; max power 130 W; magnet 20 oz; mounting depth 3 3/4" . . . \$42/ea

**P-CD2C10-X.** Dome tweeter, driver size 16". FR 4,000-20,000 Hz; sens 88dB SPL/W/m; max power 60 W; magnet 1 oz; mounting depth 1/2" . . . \$42/pr

**W8C200-F4S.** Small box woofer, driver size 8". FR 29-1,500 Hz; sens 93dB SPL/W/m; max power 140 W; magnet 20 oz; mounting depth 3 3/4" . . . \$41/ea

**W8C200-F4.** Woofer 4 ohm, driver size 8". FR 30-5,500 Hz; sens 95dB SPL/W/m; max power 140 W; magnet 20 oz; mounting depth 3 3/4" . . . \$40/ea

**WP65C200-F4.** Polypropylene woofer, driver size 6 1/2". FR 40-6,000 Hz; sens 93dB SPL/W/m; max power 120 W; magnet 20 oz; mounting depth 3 3/4" . . . \$39.50/ea

**W8C200-F.** Woofer 4 ohm, driver size 8". FR 30-6,000 Hz; sens 95dB SPL/W/m; max power 140 W; magnet 20 oz; mounting depth 3 3/4" . . . \$39/ea

**W65C170-F4S.** Small box woofer, driver size 6 1/2". FR 25-5,500 Hz; sens 91dB SPL/W/m; max power 130 W; magnet 16 oz; mounting depth 3 3/4" . . . \$39/ea

**P-T3C24-X.** Cone tweeter, driver size 3". FR 4,000-20,000 Hz; sens 94dB SPL/W/m; max power 90 W; magnet 2.4 oz; mounting depth 1 1/4" . . . \$38/pr

**W65C200-F4.** Woofer 4 ohm, driver size 6 1/2". FR 40-6,000 Hz; sens 93dB SPL/W/m; max power 120 W; magnet 20 oz; mounting depth 3 3/4" . . . \$37/ea

**W65C200-F.** Woofer: driver size 6 1/2". FR 40-6,500 Hz; sens 93dB SPL/W/m; max power 120 W; magnet 20 oz; mounting depth 3 3/4" . . . \$36/ea

**W52C165-F4S.** Small box woofer, driver size 5 1/4". FR 30-3,000 Hz; sens 90dB SPL/W/m; max power 90 W; magnet 16 oz; mounting depth 2 1/4" . . . \$35/ea

**W69C160-F4.** Woofer 4 ohm, driver size 6" x 9". FR 45-7,000 Hz; sens 97dB SPL/W/m; max power 90 W; magnet 16 oz; mounting depth 3 3/4" . . . \$35/ea

**W8C160-F4.** Woofer 4 ohm, driver size 8". FR 40-

7,000 Hz; sens 97dB SPL/W/m; max power 100 W; magnet 16 oz; mounting depth 3 3/4" . . . \$34/ea

**F69C180-WF.** Dual cone mount, driver size 6" x 9". FR 50-18,000 Hz; sens 96dB SPL/W/m; max power 80 W; magnet 20 oz; mounting depth 3 1/2" . . . \$33/ea

**W65C160-F4.** Woofer 4 ohm, driver size 6 1/2". FR 50-7,500 Hz; sens 95dB SPL/W/m; max power 80 W; magnet 16 oz; mounting depth 2 3/4" . . . \$33/ea

**W52C165-F.** Woofer, driver size 5 1/4". FR 50-7,000 Hz; sens 92dB SPL/W/m; max power 90 W; magnet 16 oz; mounting depth 2 3/4" . . . \$31/ea

**W410C160-F.** Woofer, driver size 4" x 10". FR 40-7,000 Hz; sens 93dB SPL/W/m; max power 80 W; magnet 16 oz; mounting depth 3 3/4" . . . \$31/ea

**P-T3PAS.** Piezoelectric tweeter, driver size 3 3/4". FR 3,000-20,000 Hz; sens 89dB SPL/W/m; max power 140 W; mounting depth 1/2" . . . \$31/pr

**M5C160-CR.** Midrange, driver size 5". FR 500-14,000 Hz; sens 94dB SPL/W/m; max power 100 W; magnet 16 oz; mounting depth 2" . . . \$30.50/ea

**F65C120-WCR.** Dual cone, driver size 6 1/2". FR 55-20,000 Hz; sens 95dB SPL/W/m; max power 70 W; magnet 12 oz; mounting depth 2 1/4" . . . \$30/ea

**M5C160-F.** Midrange, driver size 5". FR 500-10,000 Hz; sens 94dB SPL/W/m; max power 100 W; magnet 16 oz; mounting depth 2" . . . \$30/ea

**WP52C100-F4.** Polypropylene woofer, driver size 5 1/4". FR 55-8,000 Hz; sens 93dB SPL/W/m; max power 70 W; magnet 10 oz; mounting depth 2 1/4" . . . \$28.50/ea

**F69C100-WF.** Dual cone mount, driver size 6" x 9". FR 55-18,000 Hz; sens 94dB SPL/W/m; max power 80 W; magnet 10 oz; mounting depth 3" . . . \$28/ea

**F410C100-WF.** Dual cone mount, driver size 4" x 10". FR 55-18,000 Hz; sens 93dB SPL/W/m; max power 60 W; magnet 10 oz; mounting depth 2 1/4" . . . \$27.50/ea

**F57C100-WF.** Dual cone mount, driver size 5" x 7". FR 60-18,000 Hz; sens 93dB SPL/W/m; max power 60 W; magnet 10 oz; mounting depth 2 1/4" . . . \$27/ea

**W4C55-F4S.** Small box woofer, driver size 4". FR 55-4,000 Hz; sens 89dB SPL/W/m; max power 60 W; magnet 55 oz; mounting depth 1 1/4" . . . \$27/ea

**F52C100-WF.** Dual cone, driver size 5 1/4". FR 60-18,000 Hz; sens 92dB SPL/W/m; max power 60 W; magnet 10 oz; mounting depth 2" . . . \$26/ea

## REALISTIC

### 12-1889 AM/FM Radio/Cassette Player

In/under-dash unit combines AM/FM-stereo receiver, stereo cassette player, and LED digital radio frequency/clock display with LED dimmer switch. Cassette section features key-off eject and locking fast forward/rewind; radio has stereo/mono switch; includes speaker and cables. Total power 24 W \$180

## SANSUI CAR AUDIO

### Cassette Radios

**RX-700.** In-dash radio/player with quartz synthesizer PLL tuning. Features presets for 18 FM and 6 AM stations; preset scanning; tuner monitor provides radio music during rewind or fast-forward; auto reverse, auto music program search, soft-touch transport controls, Dolby B, preamp outputs for insertion of equalizer in preamp circuitry; bass and treble controls; and four-way fader controls. Selectivity 65 dB; FM sens 14.8 dBf for 30 dB quieting; 20 W/ch per IHF A-202 reference; 7 1/2" W x 1 3/32" H x 5 1/16" D . . . \$429

**RX-710.** DIN sized version of RX-700, 7 1/2" W x 1 3/32" H x 5 3/32" D . . . \$429

**RX-500.** Same as RX-700/710 but with 6 W/ch power and minus Dolby B. 7 1/2" W x 1 3/32" H x 5 1/16" D . . . \$339

**RX-510.** Same as RX-500 but in DIN size, 7 3/32" W x 1 3/32" H x 5 3/32" D . . . \$339

### Sansui Cassette Tuner/Preamps

**CX-990.** Cassette tuner/preamp automatically selects AM stereo broadcasting system of tuned station. Features quartz synthesizer PLL tuning; 18 FM and 6 mono or stereo AM station presets; auto scanning of presets in 5-second intervals; tuner monitor provides radio music when rewinding or fast-forwarding a tape;

IC-logic-controlled tape transport with auto-reverse feather touch operation and auto music program search; in-dash mounting; Dolby B and C; dual amp balance; bass and treble controls; and preamp outputs for insertion of equalizer via preamp circuitry. Requires power amp-FM sens 14.8 dBf for 30 dB quieting; 65 dB sel . . . \$519

**CX-900.** In-dash stereo cassette tuner/preamp with quartz synthesizer PLL tuning. Features 18 FM and 6 AM station presets; auto preset scan; tuner monitor provides for radio music during tape rewind/fast forward; auto-reverse; auto music program search; IC logic-controlled transport for feather-touch operation; Dolby B and C; preamp outputs for equalizer; bass and treble controls; 4-way dual amp balance controls. FM sens 14.8 dBf for 30 dB quieting; sel 50 dB; S/N 70 dB (mono), 65 dB (stereo); 7-3/32" W x 1-3/32" H x 4-3/32" D . . . \$499

**CX-910.** Same as CX-900 but in DIN size, 7-3/32" W x 1-3/32" H x 5-3/32" D . . . \$499

### Sansui Cassette Player

**SX-7.** Stereo cassette player with full-logic control for feather-touch operation and auto reverse. Features Dolby B; Auto Music Program Search; optional remote control (RM-3); input for Sansui ST-7 tuner. Requires amplifier. W&F 0.08% wrms; S/N 62 dB metal tape, with Dolby; FR with metal tape 30-16,000 Hz  $\pm 3$  dB; 6" W x 2" H x 6" D . . . \$279

### Sansui Cassette Amplifier

**SY-7.** Full-logic auto reversing cassette player with amplifier. Features Auto Program Search; Dolby B; bass and treble controls; connections for graphic equalizer; optional remote control (RS-3). Power amp may be mounted up to 20 inches from player. W&F 0.08% wrms; S/N 62 dB with metal tape; 12 W/ch min rms into 4 ohms, from 30-20,000 Hz, 1% THD. 6" W x 2" H x 7 1/2" D . . . \$399

### Sansui Tuner

**ST-7.** Quartz-PLL synthesizer tuner with presets for 5 FM and 5 AM stations and remote control unit, with digital frequency readout and preset buttons. Remote is bracket mountable or unit can be operated handheld. FM sens 1.3  $\mu$ V/75 ohms IHF; S/N 68 dB stereo, 75 dB mono; 6" W x 2" H x 1 1/4" D . . . \$269

### Sansui Preamplifiers

**SA-7.** Pre-main amplifier includes "Sound Commander" remote control. Features "Space 4" circuitry for spacious sound enhancement; electronic peak power display; graphic equalizer connection; headphone jack. Remote control adjusts volume, balance, bass and treble, and select loudness and Space 4 sound effects. 12 w/ch min rms into 4 ohms from 30 Hz to 20 kHz with no more than 1% THD; S/N ratio 80 dB (IHF-A); 6" W x 2" H x 6" D . . . \$259

**SA-5.** Similar to SA-7 but minus Space 4 circuitry . . . \$199

**SA-3.** Similar to SA-5 but with operating controls mounted on front panel rather than in remote control unit . . . \$159

### Sansui Graphic Equalizer

**SG-7.** Palm-sized self-contained seven-band graphic equalizer, for hand-held use or in-car mounting. Control frequencies 60, 150, and 400 Hz, and 1, 2, 5, 6, and 12 kHz in a boost/cut range of 12 dB; S/N ratio 85 dB . . . \$99

### Sansui Amplifiers

**SM-100.** Power amp with DC servo feedback circuit for stable power at low frequencies; Features selectable input levels; booster input (for 8 ohms); high/low inputs (RCA jacks); and DIN output. 32 w/ch continuous into 4 ohms, from 20 Hz to 20 kHz, 1.0% THD; S/N ratio 90 dB (IHF A-200); FR 20 to 50,000 Hz at 0 dB, -3 dB (IHF A-202); 8 1/4" W x 2 1/2" H x 8 3/2" D . . . \$229

**SM-56.** Similar to SM-100 but 12 w/ch; 3 1/2" W x 1 1/4" H x 6 1/2" D . . . \$99

### Sansui Car Speakers

**SB-X907.** Rear-mount system with 5-1/4" woofer, dual

passive radiator, 2½" mid-range, 1" tweeter, in die-cast aluminum housing. Handles 110 W; Imp 4 ohms; FR 43 Hz to 22 kHz, ±2 dB ..... \$449

**SB-F707.** Flush-mount rear deck model with 8" round woofer, 2½" mid-range, with Flexible-Axis 1-inch tweeter mounted above frame. Handles 80 W; Imp 4 ohms; FR 28 Hz to 22 kHz, ±2 dB; Mounting clearance 3" ..... \$269

**SB-X903.** Rear-mount system with 4-¾" woofer, dual passive radiator, 2" mid-range, 1" tweeter, in ABS high-impact plastic cabinet. Handles 80 W; Imp 4 ohms; FR 55 Hz to 21 kHz, ±2 dB ..... \$239

**SB-F703.** Flush-mount rear deck model with 6½" round woofer, 2" midrange, with Flexible-Axis 1-inch tweeter mounted on frame; Handles 60 W; Imp 4 ohms; FR 38 Hz to 22 kHz, ±2 dB; Mounting clearance 2½" ..... \$199

**SB-7.** Flush-mount speaker system with flexible axis acoustic lens tweeter and 6½" inch woofer with high energy strontium magnet. Power handling 60 W; Impedance 4 ohms; FR 40 Hz to 20 kHz; Approximately 8½" W × 6-½" H × 5-¾" D; Mounting depth 2½" ..... \$179

**SB-6.** Oval coaxial speaker with 8" × 5" woofer and 2" tweeter, strontium magnet; Handles 30 W; Imp 4 ohms; FR 45 Hz to 20 kHz; Approx. 9" W × 5½" H × 3¼" D; Mounting depth 2½" ..... \$109

**SB-165.** Flush-mount with 6½" woofer and 2" tweeter; handles 80 W; Imp 4 ohms; FR 40 Hz to 21kHz; Mounting depth 2½" ..... \$99

**SB-5.** Round Coaxial speaker with 6½" barium ferrite magnet woofer and 2" strontium magnet tweeter; Handles 30 W input; Imp 4 ohms; FR 40 Hz to 20 kHz; Approx. 6½" W × 6½" H × 3¼" D; Mounting depth 2-½" ..... \$99

**SB-3.** Door/flush-mount thin-design coaxial with 6½" woofer and 2" chrome cobalt magnet tweeter; Comes with rain protector cover; Handles 30 W input; Imp 4 ohms; FR 50 Hz to 20 kHz; Approx. 6½" W × 6½" H × 2¼" D; Mounting clearance 1-¾" ..... \$89

## SANYO

### In-Dash Power Plus Cassette Radios

**FTX 180.** Component-style AM/FM stereo radio with auto-reverse cassette player. Features digital frequency display; quartz clock; Dolby B and C noise reduction; metal-tape compatibility; Auto Music Select; Super Permalloy tape head; bass equalizer with 3 or 6 dB boost at 100/200/300 Hz; separate bass, treble, balance, fader controls; line-out jacks. Output power 15 W/ch (into 4 ohms, 50-20,000 Hz, at 0.3% THD); amp FR 50-20,000 Hz ±1 dB; FR 30-20,000 Hz ±3 dB; tape FR 63-14,000 Hz ±3 dB; S/N ratio 50 dB (A-weighted); W&F 0.15% wrms; tape sep 40 dB; usable sens 14.8 dB; 50 dB quieting sens 17.6 dB; tuner sep 35 dB at 1 kHz; alternate ch sel 70 dB; capture ratio 2 dB. 7½" W × 5½" D × 2"H .. \$400

**FTX 160.** Component-style AM/FM stereo radio with auto-reverse cassette player. Features Dolby B and C noise reduction; LCD frequency display; quartz clock; metal tape compatibility; Auto Music Select; Super Permalloy tape head; bass equalizer with 3 or 6 dB boost at 100/200/300 Hz; separate bass, treble, balance, fader controls; line-out jacks. Output power 15 W/ch (into 4 ohms, 50-20,000 Hz, at 0.3% THD); amp FR 50-20,000 Hz ±1 dB; FR 30-20,000 Hz ±3 dB; tape FR 63-14,000 Hz ±3 dB; S/N ratio 50 dB (A-weighted); W&F 0.15% wrms; tape sep 40 dB; usable sens 12.8 dB; 50 dB quieting sens 16.8 dB; tuner sep 35 dB at 1 kHz; alternate ch sel 70 dB; capture ratio 2 dB. 7½" W × 5½" D × 2"H .. \$350

**FTX 140.** Component-style AM/FM stereo radio with auto-reverse cassette deck. Features Dolby B and C; metal-tape compatibility; Auto Music Select; Super Permalloy tape head; separate bass, treble, loudness, balance, fader controls; anti-jamming system; local/distant and mono/stereo switches; line-out jacks. Output power 15 W/ch (into 4 ohms, 50-20,000 Hz, at 0.3% THD); amp FR 50-20,000 Hz ±1 dB; FR 30-20,000 Hz ±3 dB; tape FR 63-14,000 Hz ±3 dB; S/N ratio 50 dB (A-weighted); W&F 0.15% wrms; tape sep 40 dB; usable sens 12.8 dB; 50 dB quieting sens 16.8 dB; tuner sep 35 dB at 1 kHz; capture ratio 2 dB. 7½" W × 5½" D × 2"H ..... \$300

**FTX 120.** Component-style AM/FM radio with auto-reverse cassette player. Features ultra-compact E-Z-C chassis; Dolby B and C, FM optimizer; Auto Music Select; Super Permalloy tape head; separate bass, treble, loudness, balance, fader controls; anti-jamming system; local/distant and stereo/mono switches; line-out jacks. Output power 10 W/ch (into 4 ohms, 50-20,000 Hz, at 1% THD); amp FR 50-20,000 Hz ±3 dB; FR 30-20,000 Hz ±3 dB; tape FR 63-14,000 Hz ±3 dB with metal tape; S/N ratio 50 dB (A-weighted); W&F 0.15% wrms; tape sep 40 dB; usable sens 12.8 dB; 50 dB quieting sens 16.8 dB; tuner sep 35 dB at 1 kHz; alternate ch sel 70 dB; capture ratio 2 dB. 6½" W × 5½" D × 2"H ..... \$270

**FTV 100.** Stereo AM/FM radio with auto-reverse cassette player. Features Auto Music Select; manual reverse if chosen; Dolby noise reduction; fader and balance controls; FM optimizer; locking fast forward and rewind. Output power 9.5 W/ch (into 4 ohms, at 1% THD); tape FR 50-20,000 Hz; S/N ratio 50 dB; W&F 0.15% wrms; tape sep 40 dB; usable sens 19.2 dB; tuner sep 35 dB at 1 kHz; capture ratio 2 dB. 7½" W × 5½" D × 2"H ..... \$200

**FTV 92.** High-power AM/FM-stereo receiver with auto-reverse cassette deck. Features Auto Music Select System; pushbutton tuning; FM optimizer; manual reverse; fader, bass, treble, loudness controls; locking fast forward/rewind; local/distant and stereo/mono switches; auto-antenna control. Output power 9.5 W/ch into 4 ohms; FR 50-20,000 Hz; THD 1%. W&F 0.15% wrms; FR 63-12,500 Hz ±3 dB with normal tape; S/N ratio 50 dB A-weighted; sep 40 dB. FM 50-dB quieting sens 21.6 dB; alternate-ch sel 70 dB; capture ratio 2 dB; sep 40 dB; 7" W × 5½" D × 2"H ..... \$180

**FTV 98.** AM/FM radio with auto-reverse cassette deck. Features Dolby; Auto Music Select; FM optimizer; reverse switch; handles all tape types; switchable equalization; RCA line-output jacks; locking fast forward and rewind; separate bass and treble controls; loudness and fader controls; local/distant and stereo/mono switches; backlit function labels. Output power 9.5 W/ch (into 4 ohms, 50-20,000 Hz, at 1% THD); FR 50-20,000 Hz ±3 dB; tape FR 63-12,500 Hz ±3 dB; S/N ratio 50 dB (A-weighted); W&F 0.15% wrms; tape sep 40 dB; usable sens 19.2 dB; 50 dB quieting sens 19.2 dB; tuner sep 35 dB at 1 kHz; alternate ch sel 70 dB; capture ratio 2 dB. 7½" W × 5½" D × 2"H ..... \$180

**FTC 68.** Stereo AM/FM radio with auto-reverse cassette player. Features Dolby; compatible with all tapes; Auto Music Select; FM optimizer; manual reverse; locking fast forward and rewind; fader and loudness controls; separate bass and treble controls; local/distant and stereo/mono switches; RCA line-out jacks; E-Z-C installation. Output power 9.5 W/ch (into 4 ohms, 50-20,000 Hz, at 1% THD); FR 50-20,000 Hz ±3 dB; tape FR 63-12,500 Hz ±3 dB; S/N ratio 50 dB (A-weighted); W&F 0.15% wrms; tape sep 40 dB; usable sens 19.2 dB; 50 dB quieting sens 21.6 dB; tuner sep 35 dB at 1 kHz; alternate ch sel 70 dB; capture ratio 2 dB. 6½" W × 4¾" D × 2"H .. \$180

**FTC 48.** Stereo AM/FM radio with auto-reverse cassette player. Features Dolby; Auto Music Select; manual reverse; compatible with all tapes; FM optimizer; locking fast forward and rewind; local/distant switch; fader control; adjustable control shafts; E-Z-C installation. Output power 9.5 W/ch (into 4 ohms, 50-20,000 Hz, at 1% THD); FR 50-20,000 Hz ±3 dB; tape FR 80-10,000 Hz ±3 dB; S/N ratio 50 dB-Dolby off, 58 dB Dolby on (A-weighted); W&F 0.15% wrms; tape sep 35 dB; usable sens 20.8 dB; 50 dB quieting sens 23.8 dB; tuner sep 30 dB at 1 kHz; alternate ch sel 60 dB; capture ratio 3 dB. 6½" W × 4¾" D × 2"H ..... \$160

**FTV 88.** Stereo AM/FM radio with auto-reverse cassette player. Features Auto Music Select; locking fast forward and rewind; fader control; pushbutton tuning for 5 AM or FM stations; manual reverse; knurled controls; local/distant and stereo/mono switches; loudness control; indicators for AMSS, tape direction, FM stereo. Output power 3 W/ch (into 4 ohms, 100-20,000 Hz, at 10% THD); FR 100-20,000 Hz ±3 dB; tape FR 80-12,500 Hz ±3 dB; S/N ratio 50 dB (A-weighted); W&F 0.15% wrms; tape sep 40 dB; us-

able sens 19.2 dB; 50 dB quieting sens 21.6 dB; tuner sep 35 dB at 1 kHz; alternate ch sel 70 dB; capture ratio 3 dB. 7" W × 5½" D × 2"H ..... \$150

**FTV 90.** Stereo AM/FM radio with auto-reverse cassette player. Features Dolby; FM optimizer; compatible with all tapes; Auto Music Select; manual reverse; local/distant switch; locking fast forward and rewind; fader control; tape-direction and stereo indicators; adjustable control shafts. Output power 9.5 W/ch (into 4 ohms, 50-20,000 Hz, at 1% THD); FR 50-20,000 Hz ±3 dB; tape FR 80-10,000 Hz ±3 dB; S/N ratio 50 dB Dolby off, 58 dB Dolby on (A-weighted); wow and flutter 0.15% wrms; tape sep 35 dB; usable sens 20.8 dB; 50 dB quieting sens 23.8 dB; tuner sep 30 dB at 1 kHz; alternate channel sel 60 dB; capture ratio 3 dB. 7½" W × 5½" D × 2"H ..... \$150

**FTC 18.** In-dash AM/FM cassette radio with metal-tape capability, pushbutton tuning, Automatic Music Select System, and FM optimizer. Features auto-reverse cassette deck with Dolby noise reduction; line-level outputs; distant/LOC switch; loudness control; separate bass and treble controls; backlit function labels. Output 500 mV, 30-20,000 Hz ±3 dB; W&F 0.15% wrms; S/N ratio 50 dB A-weighted; FR 63-14,000 Hz ±3 dB; sep 46 dB; FM usable sens 19.2 dB; alternate-ch sel 60 dB; capture ratio 2 dB; 6½" W × 4¾" D × 2"H ..... \$150

**FTC 12.** In-dash AM/FM cassette radio with digital frequency/time display and auto-reverse cassette deck. Features locking fast forward/rewind; distant/local, frequency/time, FM/AM, reverse switches. Output power 2.4 W/ch into 4 ohms at 5% THD 100-20,000 Hz; FR 100-20,000 Hz ±3 dB. W&F 0.1% wrms; FR 80-10,000 Hz ±3 dB; S/N ratio 50 dB A-weighted; sep 35 dB. FM usable sens 17.2 dB; alternate-ch sel 60 dB; capture ratio 3 dB; 6½" W × 4¾" D × 2"H ..... \$150

**FTC 46.** Stereo AM/FM radio with auto-reverse cassette player. Features pushbutton tuning with 5 AM or FM (or combination) station presets; locking fast forward and rewind; fader control; local/distant and stereo/mono switch; E-Z-C installation. Output power 9.5 W/ch into 4 ohms, 50-20,000 Hz, at 1% THD; FR 50-20,000 Hz ±3 dB; tape FR 80-10,000 Hz ±3 dB; S/N ratio 50 dB A-weighted W&F 0.15% wrms; tape sep 40 dB; usable sens 20.8 dB; 50 dB quieting sens 21.6 dB; tuner sep 30 dB at 1 kHz; alternate ch sel 60 dB; capture ratio 3 dB. 6½" W × 4¾" D × 2"H ..... \$150

**FTC 27.** Mini-size high-power AM/FM-stereo receiver with auto-reverse cassette deck. Features FM optimizer; Dolby noise reduction; locking fast forward/rewind; separate bass and treble controls; stereo/mono and local/distant switches; E-Z-C install system; auto-antenna control. Output power 9.5 W/ch into 4 ohms at 1% THD; FR 50-20,000 Hz ±3 dB. W&F 0.1% wrms; FR 80-10,000 Hz ±3 dB; S/N ratio 50 dB A weighted; sep 35 dB. FM 50-dB quieting sensitivity 20.2 dB; alternate-ch sel 60 dB; capture ratio 3 dB; sep 30 dB at 1 kHz; 6½" W × 4¾" D × 2"H ..... \$150

**FTV 84.** Stereo AM/FM radio with auto-reverse cassette player compatible with any tape. Features Auto Music Select; manual reverse; separate bass and treble; fader control; locking fast forward and rewind; local/distant and stereo/mono switches; LED function indicators. Output power 9.5 W/ch into 4 ohms, 50-20,000 Hz, at 1% THD; FR 50-20,000 Hz ±3 dB; tape FR 80-10,000 Hz ±3 dB; S/N ratio 50 dB (A-weighted); W&F 0.15% wrms; tape sep 40 dB; usable sens 20.8 dB; 50 dB quieting sens 23.8 dB; tuner sep 30 dB at 1 kHz; alternate ch sel 60 dB; capture ratio 3 dB. 7½" W × 5½" D × 2"H ..... \$130

**FTC 45.** AM/FM-stereo receiver with auto-eject/auto-replay cassette deck. Features pushbutton memory tuning; auto stereo/mono switching; fader control; locking fast forward/rewind; local/distant switch; separate volume, tone, balance controls. Output power 3 W/ch into 4 ohms at 10% THD; FR 100-20,000 Hz ±3 dB. W&F 0.15% wrms; FR 80-10,000 Hz ±3 dB; S/N ratio 50 dB A-weighted; sep 40 dB. FM 50-dB quieting sens 21.6 dB; alternate-ch sel 60 dB; capture ratio 3 dB; sep 30 dB at 1 kHz; 6½" W × 4¾" D × 1¾" H ..... \$120

**FTC 40.** Stereo AM/FM radio with auto-reverse cas-

sette player compatible with all tapes. Features Auto Music Select; manual reverse; auto stereo/mono; local/distant switch; fader control; locking fast forward and rewind; separate bass and treble; EZ-C installation. Output power 9.5 W/ch into 4 ohms, 50-20,000 Hz, at 1% THD; FR 50-20,000 Hz  $\pm 3$  dB; tape FR 80-10,000 Hz  $\pm 3$  dB; S/N ratio 50 dB A-weighted; W&F 0.15% wrms; tape sep 40 dB; usable sens 20.8 dB; 50 dB quieting sens 21.6 dB; tuner sep 30 dB at 1 kHz; alternate ch sel 60 dB; capture ratio 3 dB.  $6\frac{1}{2}'' \times 4\frac{1}{4}'' \times 2''$  H ..... \$120

**FTV 80.** Stereo AM/FM radio with auto-reverse cassette player compatible with all tapes. Features locking fast forward and rewind; local/distant and stereo/mono switches; manual reverse; function indicators. Output power 9.5 W/ch into 4 ohms, 50-20,000 Hz, at 1% THD; FR 50-20,000 Hz  $\pm 3$  dB; tape FR 80-10,000 Hz  $\pm 3$  dB; S/N ratio 50 dB A-weighted; W&F 0.15% wrms; tape sep 40 dB; usable sens 20.8 dB; 50 dB quieting sens 21.6 dB; tuner sep 30 dB at 1 kHz; alternate ch sel 60 dB; capture ratio 3 dB.  $7\frac{1}{2}'' \times 5\frac{1}{4}'' \times 2''$  H ..... \$100

**FTC 38.** Stereo AM/FM radio with auto-reverse cassette player compatible with all tapes. Features LED function indicators; manual reverse; locking fast forward and rewind; local/distant switch; adjustable control shafts; EZ-C installation. Output power 9.5 W/ch into 4 ohms, 50-20,000 Hz, at 1% THD; FR 50-20,000 Hz  $\pm 3$  dB; tape FR 80-10,000 Hz  $\pm 3$  dB; S/N ratio 50 dB A-weighted; W&F 0.15% wrms; tape sep 40 dB; usable sens 20.8 dB; 50 dB quieting sens 23.8 dB; tuner sep 30 dB at 1 kHz; alternate ch sel 60 dB; capture ratio 3 dB.  $6\frac{1}{2}'' \times 4\frac{3}{4}'' \times 1\frac{1}{2}''$  H ..... \$100

**FTV 76.** Stereo AM/FM radio with auto-eject cassette player. Features FM stereo indicator; locking fast forward and rewind; local/distant switch; tape-play indicator; adjustable control shafts. Output power 3 W/ch into 4 ohms, 150-20,000 Hz, at 10% THD; FR 100-20,000 Hz  $\pm 3$  dB; tape frequency response 80-10,000 Hz  $\pm 3$  dB; S/N ratio 50 dB A-weighted; W&F 0.2% wrms; tape sep 33 dB; usable sens 22.8 dB; 50 dB quieting sens 25.8 dB; tuner sep 25 dB at 1 kHz; alternate ch sel 35 dB; capture ratio 4 dB.  $7\frac{1}{4}'' \times 4\frac{3}{4}'' \times 2''$  H ..... \$80

**FTC 28.** Mini-size AM/FM radio with auto-reverse cassette player. Features locking fast forward and rewind; manual reverse; auto FM stereo/mono switching; local/distant switch; LED stereo and tape-direction indicators; EZ-C installation. Output power 3 W/ch into 4 ohms, 100-20,000 Hz, at 10% THD; FR 100-20,000 Hz  $\pm 3$  dB; tape FR 80-10,000 Hz  $\pm 3$  dB; S/N ratio 47 dB A-weighted; W&F 0.2% wrms; tape sep 35 dB; usable sens 24.2 dB; 50 dB quieting sens 26.2 dB; tuner sep 28 dB at 1 kHz; alternate ch sel 35 dB; capture ratio 4 dB.  $6\frac{1}{2}'' \times 4\frac{1}{4}'' \times 1\frac{1}{2}''$  H ..... \$80

**FTC 1.** Mini-size AM/FM-stereo receiver with stereo cassette deck. Features auto stop; auto stereo/mono switching; locking fast forward; tone, balance, volume controls; local/distant switch; AM/FM slide-bar band selector. Output power 3 W/ch into 4 ohms at 10% THD; FR 300-15,000 Hz  $\pm 3$  dB. W&F 0.2% wrms; FR 60-8000 Hz  $\pm 3$  dB; S/N ratio 50 dB A-weighted; sep 40 dB. FM 50-dB quieting sens 26.2 dB; capture ratio 4 dB; sep 35 dB at 1 kHz;  $6\frac{1}{2}'' \times 4\frac{1}{2}'' \times 1\frac{1}{4}''$  H ..... \$60

#### Sanyo In-Dash Cassette Tuner

**FT 590.** AM/FM-stereo tuner/cassette player with LCD frequency display, metal-tape capability, and Automatic Music Select System. Features Dolby noise reduction; 5 AM/5 FM statio presets; FM optimizer circuitry; line-level cassette deck inputs; tape-protection system; sendust alloy head; full auto reverse; locking fast forward/rewind; PLL frequency synthesizer tuner; auto-scan tuning; Dolby FM; separate bass and treble controls; loudness switch; function labels that light up when engaged; exclusive EZ Install system. Line output FR 30-20,000 Hz  $\pm 3$  dB at 500 mV. W&F 0.15% wrms; FR 63-14,000 Hz  $\pm 3$  dB with metal tape; S/N ratio 50 dB A-weighted; sep 40 dB. FM 50-dB quieting sens 20.2 dB; capture ratio 2 dB; alternate-ch sel 70 dB; sep 30 dB at 1 kHz;  $7'' \times 5\frac{1}{2}'' \times 2''$  H ..... \$280

#### Sanyo Cassette Player

**FT50.** Mini-size stereo cassette player with locking fast forward; calibrated tone control; auto stop. Output power 3.8 W/ch into 4 ohms at 10% THD; frequency response 50-15,000 Hz  $\pm 3$  dB. W&F 0.2% wrms; FR 63-10,000 Hz  $\pm 3$  dB with normal tape; S/N ratio 45 dB A-weighted; sep 40 dB;  $6\frac{1}{4}'' \times 4\frac{1}{4}'' \times 1\frac{1}{2}''$  H ..... \$50

#### EQA 600 7-Band Graphic Equalizer/Power Amplifier

30 W graphic equalizer/power amp combination with twin LED meters and fader control. Features equalizer defeat switch; audio muting switch; center-detented slide controls; accepts line level or speaker level inputs; frequency center 50, 150, 400, 1k, 2.5k, 6k, 15kHz; input sensitivity and imp max: 2.0V/47 ohm; total harmonic distortion (max.) 0.3%; frequency response 20-20,000Hz  $\pm 1$ dB; S/N ratio (A-wtd.) 70dB;  $6'' \times 5\frac{1}{4}'' \times 2''$  H ..... \$100

#### EQA 650 7-Band Graphic Equalizer/Power Amplifier

40 W combination graphic equalizer/power amp with fader control. Features 5-segment LED meters; dimmer switch; meter sensitivity switch; tone defeat switch; mute switch; black satin finish; frequency centers 50, 150, 400, 1k, 2.5k, 6k, 15kHz; input level high 2.0mV/47 $\mu$ ; total harmonic distortion (max) 0.1%; FR 20-40,000Hz; S/N ratio (A-wtd) 70dB;  $5\frac{1}{2}'' \times 6\frac{1}{2}'' \times 2''$  H ..... \$130

#### Sanyo Car Speakers

**SP90.** Enclosed speaker system with passive radiator. Features 4" long-throw woofer with high temperature aluminum bobbin; Separate 5" passive bass radiator; 1" hard-dome tweeter with aluminum bobbin and ferrofluid damping; Solid, cast-aluminum enclosure with cooling fins; 3-position high-frequency level control; Internal L-C crossover plus separate woofer and tweeter connection terminals for biampified or conventional use. FR 80-20,000 Hz; sens 85 dB SPL/W/m; max power 100 W peak and 50 W rms; magnet weight 12.6 oz; mounting depth 7". \$220/pr

**SP9046H.** Ultra-high-power  $6\frac{1}{2}''$  coax speaker system. Features  $6\frac{1}{2}''$  woofer cone with long-throw Fiber-Flex<sup>®</sup> suspension and oversize  $1\frac{1}{4}''$  voice coil; Separate coaxially mounted  $2\frac{1}{2}''$  cone tweeter; new post-type tweeter mounting; heat-dissipating aluminum bobbin; black mesh-type grille; includes hardware, wire, waterproof cover and instructions. FR 60-20,000 Hz; max power 50 W rms and 100 W peak; magnet weight, woofer 20 oz, tweeter, 1.5 oz; mounting depth  $2\frac{1}{4}''$  ..... \$100/pr

**SP75.** 5"  $\times$  7" Convertible/Surface mount speaker system. Features Ferrofluid-filled 2" cone tweeter; protective netting; ABS resin housing; wire mesh grille; heat-dissipating aluminum bobbin; unique lock wire voice coil winding; includes hardware, wire, and instructions. FR 80-17,000 Hz; max power 30 W peak and 15 W rms; magnet weight woofer 11.9 oz, tweeter, 0.6 oz; mounting depth  $2\frac{1}{2}''$  ..... \$55/pr

**SP92.** 6"  $\times$  9" coax speaker system. Features 6"  $\times$  9" woofer with Fiber Flex<sup>®</sup> edge; coaxially mounted  $2\frac{1}{2}''$  cone ferrofluid tweeter; special lock wire construction; char-proof aluminum bobbin; wire mesh grille; post-type tweeter mounting; protective netting; includes hardware, wire and instructions. FR 55-17,000 Hz; max power 40 W peak and 20 W rms; magnet woofer 20 oz, tweeter, 2 oz; mounting depth  $3\frac{1}{8}''$  ..... \$70/pr

**SP94.** High-performance 6"  $\times$  9" 3-way deck-mount speaker system. Features mounting depth less than 4 inches; 6"  $\times$  9" woofer with Fiber Flex<sup>®</sup> edge and Concentrated Mass<sup>®</sup> 20 oz. magnet weight;  $2\frac{1}{2}''$  ferrofluid midrange; high-temperature aluminum bobbin and SV wire voice coil; wire mesh grille; includes hardware, wire and instructions. FR 55-20,000 Hz; max power 20 W rms and 40 W peak; magnet weight, woofer 20 oz, Midrange, 2 oz; mounting depth  $3\frac{3}{32}''$  ..... \$80/pr

**SP165.** High-power 4"  $\times$  10" coax speaker system. Features 4"  $\times$  10" woofer with Fiber Flex<sup>®</sup> edge; 2" tweeter with ferrofluid construction; protective netting; includes hardware, wire and instructions. FR 80-17,000 Hz; max power 20 W rms and 40 W peak; magnet weight, woofer 10 oz, Midrange, 0.6 oz;

mounting depth 3" ..... \$50/pr

**SP88.** 2-way enclosed mini speaker system with bass reflex port. 4" air-suspension woofer and 2" cone tweeter; high-temperature 1" aluminum bobbin voice coil; special lock wire construction; ABS enclosure; wire mesh grille; high-energy strontium magnet; includes hardware, wire, mounting brackets, and instructions. FR 80-20,000 Hz; max power 15 W rms and 30 W peak; magnet weight, woofer 6.5 oz, tweeter, 0.6 oz ..... \$100/pr

**SP96.** High power 3-way speaker system. Features 6"  $\times$  9" woofer with a massive magnet and  $1\frac{1}{2}''$  voice coil (aluminum bobbin);  $2\frac{1}{2}''$  midrange cone with aluminum bobbin and ferrofluid damping; wire mesh grille; includes hardware, wire, and instructions. FR 55-20,000 Hz; max power 100 W peak and 50 W rms; magnet weight, woofer 20 oz, Midrange 2 oz, tweeter, 0.5 oz ..... \$100/pr

**SP16.** High power 4"  $\times$  10" coax speaker system. Features 4"  $\times$  10" woofer with Fiber Flex<sup>®</sup> edge; 2" tweeter with ferrofluid construction; black wire-mesh grille; rugged ABS resin frame; protective netting; includes hardware, wire and instructions. FR 80-17,000 Hz; max power 20 W rms and 40 W peak; magnet weight, woofer 10 oz, tweeter, 0.6 oz \$60/pr

**SP9035.** Ultra-thin  $6\frac{1}{2}''$  coax speaker system. Features  $6\frac{1}{2}''$  woofer with Fiber-Flex<sup>®</sup> long-throw suspension; separate coaxially mounted 2" piezoceramic tweeter; solid-state driver element; post-type tweeter mounting; high-energy strontium magnet; special lock wire voice coil winding; includes hardware, wire, water-proof cover and instructions. FR 70-17,000 Hz; max power 15 W rms and 30 W peak; magnet weight, 6.7 oz; mounting depth  $1\frac{1}{4}''$  ..... \$50/pr

**SP67.** High power  $6\frac{1}{2}''$  coax speaker system. Features high-temperature aluminum bobbin voice coils; 2" tweeter with ferrofluid construction; ABS resin frame; black wire-mesh grille; protective cover and netting; bridgeless design; includes hardware, wire, waterproof cover and instructions. FR 60-17,000 Hz; max power 20 W rms and 40 W peak; magnet weight, woofer 10 oz, tweeter 0.5 oz; mounting depth  $1\frac{3}{32}''$  ..... \$60/pr

**SP40.** High performance 4" coax speaker system. Features 4" woofer with Fiber Flex<sup>®</sup> long-throw suspension; separate  $1\frac{3}{4}''$  "super cone" tweeter; high-temperature aluminum bobbin and special lock wire voice coil; black cone and surround finish; wire-mesh grille; built-in crossover plus separate woofer and tweeter connection terminals; includes hardware, wire, waterproof cover and instructions. FR 70-20,000 Hz; max power 30 W peak and 15 W rms; magnet weight, woofer 8 oz, tweeter 0.5 oz; mounting depth  $1\frac{1}{4}''$  ..... \$50/pr

**SP24.** 4"  $\times$  6" coax speaker system. Features special lock wire construction; 4"  $\times$  6" woofer with Fiber Flex<sup>®</sup> edge; protective netting; wire-mesh grille; includes hardware, wire, and instructions. FR 80-20,000 Hz; max power 20 W peak and 10 W rms; magnet weight, woofer 4.1 oz, tweeter 0.26 oz; mounting depth  $1\frac{3}{32}''$  ..... \$40/pr

**SP62.**  $6\frac{1}{2}''$  dual-cone speaker system. Features lock wire voice coil winding; protective cover; includes hardware, wire, waterproof cover and instructions. FR 70-15,000 Hz; max power 20 W peak and 10 W rms; magnet weight, 6.7 oz; mounting depth  $1\frac{1}{8}''$  \$25/pr

**SP64.**  $6\frac{1}{2}''$  coax speaker system. Features  $6\frac{1}{2}''$  air-suspension speaker; protective cover and netting; wire-mesh grille; 2" cone tweeter; black design with silver tweeter cap; special lock wire voice coil winding; includes hardware, wire, waterproof cover and instructions. FR 60-17,000 Hz; max power 20 W peak and 10 W rms; magnet weight, woofer 6.7 oz, Tweeter 0.34 oz; mounting depth  $1\frac{3}{32}''$  ..... \$45/pr

**SP245.** 4"  $\times$  6" coax speaker system. Features special lock wire construction; 4"  $\times$  6" woofer with Fiber Flex<sup>®</sup>; includes hardware, wire, and instructions; (kit does not include speaker grilles). FR 80-20,000 Hz; max power 20 W peak and 10 W rms; magnet weight, woofer 4.1 oz, tweeter 0.26 oz; mounting depth  $1\frac{3}{32}''$  ..... \$33/pr

**SP55.**  $5\frac{1}{4}''$  flush-mount speaker system.  $5\frac{1}{4}''$  full range speaker; special lock wire voice coil winding; wire-mesh grille; protective cover; hardware, wire, and instructions included; high-energy strontium magnet.

FR 80-12,000 Hz; max power 7 w rms and 15 W peak; magnet weight, 5 oz; mounting depth 1 1/2" ..... \$30/pr

### SONAB by AUDIOSOURCE

#### SW-TWO Car Subwoofer

Free-standing subwoofer with 6.5" driver for panel mounting. Mounting depth 3"; extends .75" above surface; magnet weight 11.6 oz; total weight 2.25 lbs; FR 45-5,000 Hz; sens 87 dB (-2 dB); imp 7 ohms; max power 80 W ..... \$100/pr

### SONY

#### Cassette Radios

**XR-77.** Digital FM/AM cassette radio with 25 W/ch amplifier. Features PLL-synthesis tuner; 5 FM and 5 AM soft-touch presets; local/DX and mono/stereo-mute switches; digital display with quartz clock; auto music sensor system; Dolby noise reduction; metal and CrO<sub>2</sub> tape-EQ switch; separate bass, treble and loudness controls; preamp rear-ch output with fader. Output power 12 W/ch (ad hoc rules) at 0.5% THD; 7 1/8" x 2 1/2" x 6"; 4 lbs, 13 oz ..... \$500

**XR-85.** Black auto-reverse cassette radio AM/FM with 20 W/ch amplifier (may be used as 10 W x 4 with fader). Features PLL-synthesis tuner; 6 AM and 6 FM soft-touch presets; precision auto-reverse tape transport with key-off eject; dual-adjust tape head; separate bass, treble and loudness controls. 12 W/ch into 4 ohms from 40-20,000 Hz at 0.5% THD; 7 1/8" x 2 1/4" x 6"; 4 lbs, 3 oz ..... \$475

**XR-75.** Silver AM/FM cassette radio with 4-way RCA preamp output with fader. Features PLL-synthesis tuner; 6 AM and 6 FM soft-touch presets; digital display with quartz clock; local/DX and mono/stereo-mute switches; precision auto-reverse tape transport with key-off eject; dual-adjust head system; Dolby noise reduction system; metal, CrO<sub>2</sub> tape EQ switch; cassette-door night light; separate bass, treble and loudness controls. 7 1/8" x 2" x 6"; 3 lbs, 5 oz ..... \$475

**XR-75B.** Same as above but black ..... \$475

**XR-55.** FM/AM cassette radio with precision auto-reverse tape transport and preamp RCA jack outputs. Features Dolby noise reduction; tape EQ switch; 6 station presets; pushbutton tuning; 10 W/ch into 4 ohms 40-20,000 Hz at 1.0% THD; separate bass, treble, loudness controls; output cable for remote power antenna. 7" x 1 1/4" x 6"; 4 lbs. .... \$370

**XR-65.** Silver AM/FM cassette radio with auto-reverse and preamp output system. Features PLL-synthesis tuner; 5 AM and 5 FM soft-touch presets; dual-adjust head system; LED tone-tuning system; Dolby B noise reduction; auto music sensor; separate bass, treble, fader, system EQ controls. 6 W/ch. 7 1/8" x 2" x 5"; 3 lb, 7 oz ..... \$330

**XR-65B.** Same as above but in black ..... \$330

**XR-45.** Silver auto-reverse FM/AM cassette radio with preamp output system. Features PLL-synthesis tuner; 5 AM and 5 FM soft-touch presets; LED tone-tuning scale; separate bass and treble controls; fader. 6 W/ch. 7 1/8" x 2" x 5"; 3 lb, 3 oz ..... \$280

**XR-45B.** Same as XR-45 but black ..... \$280

**XR-25.** FM/AM cassette radio with precision auto-reverse tape transport and 3-band step equalizer (center frequencies 100 Hz, 1 kHz, 10 kHz). Features 4-speaker output with fader and balance controls; center-tune indicator tuning system; preamp RCA pin jack outputs; output cable for remote power antenna; compact chassis design. 4 W/ch into 4 ohms 180-10,000 Hz at 1.0% THD. 6 1/8" x 1 1/4" x 4 1/4"; 2 lbs, 10 oz ..... \$240

**XR-15.** Precision auto-reverse tape transport AM/FM cassette radio with continuously adjustable high filter. Features 4-speaker output with fader and balance control; system EQ switch; metal and CrO<sub>2</sub> tape-EQ switch; night light; output cable for remote power antenna; 4 W/ch into 4 ohms 180-10,000 Hz at 1.0% THD. 7 1/8" x 2" x 5 1/8"; 3 lbs, 6 oz ..... \$200

#### Sony Cassette Preamp

**XR-100.** Auto-reverse cassette preamp with Dolby B and C noise reduction. Features Diversity Reception System™; dual-adjust tape head; auto music sensor; 6

FM and 6 AM preset tuning; 4-way preamp outputs with fader; bass and treble controls; digital display with quartz clock; night illumination. Black panel. 7 1/8" x 2" x 6"; 4 lbs ..... \$650

### SPARKOMATIC

#### Cassette Radios

**SR-308.** High-powered electronically tuned AM/FM radio/cassette player. Features presets for 5 AM and 5 FM stations; PLL tuning; Dynamic Noise Reduction; bass, treble, balance, and fader controls; metal tape selector; locking fast forward and rewind; also controls for FM muting, loudness, local/distant and mono/stereo switching. 45 W audio power ... \$250

**SR-3300.** In-dash AM/FM-stereo radio/cassette player with auto-reverse tape transport and direction control. Features auto stop; pushbutton eject; electronic loudness, muting, high filter, AM/FM controls; locking fast forward/rewind; bass, treble, balance, fader controls; LED stereo indicator. W&F 0.3% rms; S/N ratio 40 dB; sep 45 dB; output power 40 W continuous at 1% distortion; FR 20-20,000 Hz; 5 1/2" D x 1 1/4" H ..... \$250

**SR-305.** High-power AM/FM-stereo/cassette radio with 5-band equalizer. Features left-right balance and front fader controls; loudness control; FM muting; local/distant and mono/stereo switches; locking fast forward/rewind; AM/FM switch. Output power 40 W at 1% THD; FR 20-20,000 Hz; wow and flutter 0.3% rms; S/N ratio 38 dB; sep 42 dB; FM sens 4 μV for 30 dB S/N; i-f/image rejection 60/50 dB; 7" W x 5 1/2" D x 1 1/4" H ..... \$150

**SS 31E.** Under-dash AM/FM radio/cassette player with Dynamic Noise Reduction. Features auto reverse; locking fast forward/rewind; metal-tape switch; bass, treble, loudness, balance, and fader controls. 45 W rms output power ..... \$130

**SR-303.** In-dash AM/FM-stereo radio/cassette player. Features continuous play; auto reverse; auto key-off and pushbutton eject; locking fast forward/rewind buttons with LEDs, W&F 0.3% rms; S/N ratio 38 dB. Radio features local/distant, program, and AM/FM switches; balance and fader controls for 4-way speaker adjustment, volume, tone, tuning controls; output power 8 W at 1.0% THD; FM sens 7 μV for 30-dB S/N; FR 60-12,000 Hz; 6 1/8" W x 4 1/8" D x 1 1/4" H ..... \$120

**SR-306.** High-power AM/FM stereo radio/cassette player with LED digital frequency display. Features volume, tuning, tone controls; left-right balance and front fader controls; local/distant, mono/stereo, AM/FM switches; locking fast forward. Output power 40 W at 1% THD; W&F 0.3% rms; FR 20-20,000 Hz; S/N ratio 38 dB; FM sens 4 μV for 30 dB S/N; sep 28 dB at 1 kHz; i-f/image rejection 60/50 dB; 7" W x 5 1/2" D x 1 1/4" H ..... \$130

**SR-304.** In-dash AM/FM cassette radio with interchangeable nosepieces and trim plates for Japanese, European, GM X-body, Citation cars. Features tone, balance, controls; locking fast forward/rewind; AM/FM and stereo/mono switches; auto stop; tape-end light; cassette end loading. Output power 8 W rms at 1% THD. 75-10,000 Hz; FM usable sens 8 μV for 30 dB S/N (mono); sep 24 dB at 1 kHz; i-f/image rejection ratio 45/54 dB; W&F 0.3% rms; S/N ratio 35 dB; sep 40 dB. 6 1/8" W x 4 1/8" D x 1 1/4" H ..... \$120

**SR-300.** In-dash AM/FM cassette radio with cassette end loading. Features volume, tone, balance, tuning controls; locking fast-forward/eject button; AM/FM and local/distant switches; stereo and tape-end indicators. Output power 7.5 W rms at 1% THD, 75-10,000 Hz. FM sensitivity 8 μV for 30 dB S/N; sep 24 dB at 1 kHz; i-f/image rejection 50/45 dB. W&F 0.3% rms; S/N ratio 35 dB; sep 40 dB. 7" W x 4 1/8" D x 1 1/4" H ..... \$90

**SR-200.** In-dash AM/FM-stereo receiver with cassette player. Features volume, tone, balance, tuning controls; AM/FM, local/distant, mono/stereo switches; illuminated dial in tape door; program-selector and MPX lights. Output power 7.5 W rms at 1% THD, 75-10,000 Hz. FM sens 8 μV for 30 dB S/N; sep 24 dB at 1 kHz; i-f/image rejection 50/45 dB. Wow and flutter 0.3% rms; S/N ratio 35 dB; sep 40 dB ... \$90

**SS 30E.** Under-dash AM/FM radio/cassette player

with Dynamic Noise Reduction. Features locking fast forward and rewind; metal-tape selector; auto stop; bass, treble, balance, fader controls. 45 W rms. \$90

#### Sparkomatic Cassette Player/Amp

**SS-200.** Under-dash end-load cassette player with amplifier. Features left and right slide-type controls; fast-forward/eject and high/low tone switches; tape play light; auto stop at end of play. Output power 3 W at 1% THD, 100-8,000 Hz. W&F 0.35% rms; S/N ratio 30 dB; sep 35 dB. 6 1/8" W x 4 1/8" D x 1 1/4" H ..... \$35

#### Sparkomatic 8-Track Player/Amp

**SS-100.** Under-dash 8-track cartridge player with amplifier. Features slide-type volume, balance, tone controls; program selector; program indicator lights. Output power 3 W at 1% THD, 100-8,000 Hz. Wow and flutter 0.35% rms; S/N ratio 30 dB; sep 35 dB. 5 1/2" W x 5 1/2" D x 2 1/4" H ..... \$35

#### Sparkomatic Amplifier/Equalizers

**GE 50.** Booster amp/EQ; dual 5 LED power meters; EQ boost/cut range ±12dB; fader control. Center frequencies 60, 250, 1,000, 3,500, 10,000 Hz; Output power 201 W/ch; 1% THD; FR 20-20,000 Hz ±3 dB; 4 1/4" W x 4 1/4" D x 1 1/4" H ..... \$70

**LC 102.** Booster amp/EQ; power meter (analog); EQ boost/cut range ±12dB. Center frequencies low, mid, high; Output power 40 W/ch; FR 20-20,000 Hz ±3 dB; 6 1/8" W x 5 1/2" D x 1 1/8" H ..... \$50

#### Sparkomatic Booster Amp

**LC 52.** Booster amp. Output power 20 W/ch; FR 20-20,000 Hz ±3 dB; 10% THD; 4 1/8" W x 4" D x 1 1/8" H ..... \$30

#### Sparkomatic Prewired Car Stereo

**C 42.** Complete prewired 40 W car stereo system, including AM/FM radio/cassette player, compact door-mount speaker set, 40 W power booster ..... \$130

#### Sparkomatic Car Speakers

**SK 6950.** Deck mount 4-way system; 2 tweeters (9 1/4" x 6 1/2" x 4"). Driver size 6" x 9" W, 3" M, 1 1/2" T. FR 50-20,000 Hz; sens 92dB SPL/W/m; max power 100 W rms; magnet 20W oz ..... \$100/pr

**SK 6922T.** Deck mount 3-way system (9 1/4" x 6 1/2" x 3 1/2"). Driver size 6" x 9" W, 3" M, 1 1/2" T. FR 30-17,000 Hz; sens 96.6dB SPL/W/m; max power 40 W rms; magnet 20W oz; mounting depth 3 1/2" ..... \$70/pr

**SK 6920C.** Deck mount coaxial system (9 1/4" x 6 1/2" x 3 1/2"). Driver size 6" x 9" W, 3" T. FR 30-15,000 Hz; sens 95.3dB SPL/W/m; max power 25 W rms; magnet 20 W oz; mounting depth 3 1/4" ..... \$48/pr

**SK 4120C.** Deck mount coaxial system (10" x 4 1/4" x 3 1/2"). Driver size 4" x 10" W, 2" T. FR 50-15,000 Hz; sens 95dB SPL/W/m; max power 25 W rms; magnet 20 W oz; mounting depth 3 1/4" ..... \$48/pr

**SK 690.** Deck mount dual cone speaker; high frequency whizzer cone (9 1/4" x 6 1/2" x 3 1/2"). Driver size 6" x 9" W. FR 50-12,000 Hz; sens 94dB SPL/W/m; max power 15 W rms; magnet 10 W oz; mounting depth 3 1/4" ..... \$30/pr

**SK 650.** Door mount 4-way system (6 1/4" x 6 1/4" x 2 1/4"). Driver size 6" W x 1 1/2" M, 1" T. FR 70-20,000 Hz; sens 92dB SPL/W/m ..... \$75/pr

**SK 622T.** Door mount 3-way system (6 1/4" x 6 1/4" x 2 1/4"). Driver size 6" W x 2" M, 1" T. FR 50-17,000 Hz; sens 96.6dB SPL/W/m; max power 40 W rms; magnet 20 W oz; mounting depth 2 1/4" ..... \$55/pr

**SK 620C.** Door mount coaxial system (6 1/4" x 6 1/4" x 2 1/4"). Driver size 6" W, 2" T. FR 50-15,000 Hz; sens 95dB SPL/W/m; max power 25 W rms; magnet 20 W oz; mounting depth 2 1/4" ..... \$40/pr

**SK 610.** Door-mount dual-cone speaker; high frequency whizzer cone (6 1/4" x 6 1/4" x 2 1/4"). Driver size 6" W. FR 70-12,000 Hz; sens 92dB SPL/W/m; max power 15 W rms; magnet 10 W oz ..... \$20/pr

### VECTOR RESEARCH

#### Cassette Radios

**VM-700.** Features 30 W/ch; 15 W rms at 1% THD;

analog tuning; bass and treble; Dolby B; power load; loudness; five presets; metal; fader; line output; local/dx; mono/stereo; key-off eject; auto reverse; ceramic head; FM usable sens 3µV; W&F <0.18%; 178mmW × 44mmH × 130mmD ..... \$325  
**VM-950.** Features 30 W/ch, 15 W rms at 1% THD; synthesized tuning; bass and treble; Dolby B; power load; loudness; 12 presets; metal compatibility; fader; line output; local/dx; mono/stereo; music search; clock; key-off eject; auto reverse; solenoid transport, manual scan; auto scan; backlit panel; flat nose; ceramic head; FM usable sens 3 µV; W&F <0.12%; 178 mmW × 50 mmH × 140mmD ..... \$500  
**VM-900.** Features 30 W/ch; 15 W RMS at 1% THD; synthesized tuning; bass and treble; Dolby B; power load; loudness; 12 presets; metal; fader; line output; local/dx; mono/stereo music search; clock; key-off eject; auto reverse; auto scan; ceramic head; FM usable sens 3 µV; W&F <0.18; 178mmW × 44 mmH H 130mmD..... \$400

**YAMAHA**

**Cassette Radios**

**YCR-900.** AM/FM stereo receiver with bottom-loading auto-reverse cassette player. Features Dolby B; electronic synthesized tuning; full-logic controls; auto seek and manual tuning; 6 AM/6 FM presets; adjustable muting threshold; FM Auto Noise Control; tape scan; key-off eject; blank skip; music search/repeat; metal compatibility; Maintenance Monitor System; continuously variable loudness; separate bass and treble; fader; Spatial Expander circuit; display of frequency, tape scan mode, spatial expansion, tape equalization, memory in use, mono/stereo, local/distant, tape direction and speed, maintenance condition, tape search, and Dolby in use. Notched for easy installation. Power output 18 W/ch into 4 ohms with both chs driven at 1 kHz with 8% THD. FM tuner section: usable sens 17.3 dBf, 2µV, 75 ohms; 50 dB quieting sens 20.7 dBf, 3µV, 75 ohms; alternate ch sel 80 dB; image response ratio 60 dB; capture ratio 2 dB; S/N ratio 65 dB; THD 0.2% mono, 0.4% stereo; frequency response 30-15,000 Hz; sep 40 dB. AM tuner section: usable sens 30 µV; sel 35 dB. Cassette section: W&F 0.12% wrms; frequency response 40-14,000 Hz; S/N ratio 55 dB Dolby off, 65 dB Dolby on. 180mmW × 135mmD × 50mmH \$550  
**YCR-700.** Similar to YCR-900 except lacks tape scan and has 5 AM and 5 FM presets. Power output 5 W/ch into 4 ohms with both chs driven at 1 kHz with 8% THD..... \$480  
**YCR-500.** Similar to YCR-700 except lacks blank skip, music search and repeat, separate bass and treble ..... \$400

**Yamaha Cassette Tuners**

**YCT-800.** AM/FM stereo standard-chassis tuner with auto-reverse cassette player. Features FM Auto Noise Control System; electronic synthesized tuning; seek and manual tuning; presets for 6 AM/6 FM stations; local/distant switching; adjustable mute threshold; auto tape loading; full-logic controls; soft eject; key-off eject; Dolby B; compatible with normal, metal, CrO<sub>2</sub> tape; Music Search Repeat; blank skip; Maintenance Monitor System; illuminated cassette door; separate bass and treble controls; fader; continuously variable loudness; Spatial Expander circuit; adjustable output voltage; readouts for AM or FM, tape scan mode, tape type, memory in use, mono/stereo, local/distant, tape direction and speed, maintenance condition, tape search, and Dolby. Requires separate amplifier. FM tuner section: usable sens 17.3 dBf, 2µV, 75 ohms; 50 dB quieting sens 20.7 dBf, 3µV, 75 ohms; alternate ch sel 80 dB; image response ratio 60 dB; capture ratio 2 dB; S/N ratio 65 dB; THD 0.2% mono, 0.4% stereo; frequency response 30-15,000 Hz; sep 40 dB. AM tuner section: usable sens 30 µV; sel 35 dB. Cassette section: W&F 0.12% wrms; FR 40-16,000 Hz; S/N ratio 55 dB Dolby off, 65 dB Dolby on. 180mmW × 130mmD × 50mmH ..... \$600  
**YCT-600.** Similar to YCT-800 except lacks tape scan and has 5 AM and 5 FM presets. Image response ratio

45 dB; FM tuner FR 40-14,000 Hz. 160mmW × 125mmD × 50mmH..... \$450

**Yamaha Amplifier**

**YPA800.** Amp designed to operate with equally high efficiency and low distortion into 2 ohms and 4 ohms. Features adjustable input levels; subsonic filtering; super efficient power design; can be biamped. Continuous power output 100 W/ch, into 4 ohms, both ch driven, at 1 kHz with 1% THD; speaker imp 4-8 ohms; FR 30-20,000 Hz ±3 dB; S/N (IHF) 95 dB; 6¼" × 1¼" × 9¼" ..... \$350

**Yamaha Car Speakers**

**YCSA-530.** 2-way system for rear deck or door mounting; 5½" woofer and a 1 inch titanium carbide 4 ohm tweeter; 1½" voice coil and 10 ounce strontium magnet; mounting depth of 1¼"; FR 50-20,000 Hz; sens 89 dB/W; power handling 60 W \$200/pr  
**YCS-691.** 6" × 9" coaxial 2-way deck mount unit with a 1½" titanium carbide 4-ohm tweeter; FR is 40-20,000 Hz; power handling 60 W nominal; sens 91 dB/W; mounting depth is 2¼"; 6½" coaxial 2-way door mount speaker with 1½" titanium carbide tweeter; FR 45-20,000 Hz; sens is 91 dB/W; power handling capacity is 60 W; mounting depth is 2¼" ..... \$160/pr  
**YCS-690.** 6½" coaxial 2-way door or rear deck mountable 4 ohm speaker with 2" tweeter mounted at a 15 degree angle; mounting depth is 2¼"; FR 45-20,000 Hz; power handling capacity 50 W nominal; sens 91 dB/W ..... \$100/pr  
**YCS-400.** 4" dual cone full range door mount speaker (4 ohm); mounting depth is 1¾"; FR 70-20,000 Hz; power handling 40 W nominal; sens 91 dB/W ..... \$60/pr  
**YCS-800.** 4 ohm 8" subwoofer with a 6" × 9" under deck mounting design; mounting depth is 2¼"; FR 20-1000 Hz; power handling capacity 100 W nominal; sens 92 dB/W ..... \$140/pr  
**YCS-300.** 1½" titanium carbide dome tweeter with a ¼" diameter voice coil; FR 2,000-20,000 Hz; power handling capacity 60 W; sens 90 dB/W; strontium magnet ..... \$90/pr

**ZAPCO**

**Booster Amplifiers**

**230A.** Booster amp with output power 115 × 2 W/ch; .003% THD; FR 5-200,000 Hz -0.5dB; S/N > 106dB; 8"W × 3½"D × 5"H ..... \$940  
**230.** Booster amp with output power 115 × 2W/ch; .1% THD; FR 5-200,000 Hz -0.5dB; S/N > 106dB; 8"W × 3½"D × 5"H ..... \$750  
**151A.** Low-distortion class AB booster amp. Output power 75×2 W/ch; 0.03% THD; FR 5-200,000 Hz -0.5dB; S/N >106dB; 8"W × 7"D × 2¼"H \$686  
**AGM.** Active 0-30 dB gain module matches 151A to low-level line-output cassette players ..... \$90  
**ESM.** Energy storage module for 151A; increases power to 165W; extends full power bandwidth to 16-20,000 Hz ..... \$74  
**151.** Low-distortion class B booster amp. Output power 75 × 2 W/ch; .1% THD; FR 5-200,000 Hz -0.5dB; S/N >106 dB; 8"W × 7"D × 2¼"H ..... \$495

**Zapco Equalizer/Preamplifier**

**PEQ.** Stereo 9-band equalizer/preamp. EQ boost/cut range ±18 dB; adjustable input matching; volume control; output level switch; mounting bracket. Center frequencies 50, 100, 200, 800, 1,600, 3,200, 6,400, 12,800 Hz; output line level; THD <0.05%; FR 10-43,000 Hz ±3 dB; S/N 86 dB; 8¼"W × 4¼"D × 1¼"H..... \$352

**Zapco Equalizer/Crossover**

**PX.** Paragraphic equalizer/active crossover; includes standard set filter modules. Output power line level; .005% THD; S/N > 105dB..... \$400

**Zapco Crossover/Preamp**

**AEX.** Crossover/preamp with line-level output power; .005% THD; S/N >105dB; 6½"W × 4"D × 2"H..... \$400

**STEREO BUYERS GUIDE  
 1984 EDITION  
 ADVERTISERS' INDEX**

READER SERVICE NO.	ADVERTISER	PAGE NUMBER
	Acoustic Research.....	117
41	ADC Division BSR (USA) Ltd..	165
	ADS.....	41
5	Aiwa.....	Cover 3
	Akai America, Ltd.....	11
	Allison Acoustics.....	119
44	Audiophile Systems.....	176
30	B & W.....	123
2	BASF.....	7
15	B.E.S.....	121
7	Carver Corporation.....	30
	Cerwin Vega.....	125
	Custom Woodwork & Design..	104
32	Dahlquist.....	127
35	D'Ascanio Audio.....	133
	dbx, Inc.....	8
31	DCM Corp.....	126
19	Denon America, Inc.....	13
16	Denon America, Inc.....	29
20	Denon America, Inc.....	83
11	Denon America, Inc.....	99
28	Discount Music Club, Inc.....	113
9	Discwasher.....	Cover 4
33	EGO Systems.....	128
45	EGO Systems.....	189
12	Empire Scientific.....	71
29	Fourier Systems, Inc.....	115
46	Fultron by Arthur Fulmer, Inc..	190
	Harman Kardon, Inc.....	24
50	Hitachi.....	175
26	Illbruck/USA.....	111
	Illinois Audio.....	50
36	IMF Electronics.....	134
34	J & R Music World.....	132
47	Jensen Car Audio.....	192
37	KLH.....	137
	Klipsch & Associates.....	139
8	Kyocera.....	33
21	Kyocera.....	81
42	Kyocera.....	173
18	LaBelle Camera & Stereo of Maine.....	79
17	The LAST Factory.....	77
24	The LAST Factory.....	106
38	Magnepan.....	141
23	Maxell Corp. of America.....	97
13	Mirage Acoustics.....	27
	Nakamichi.....	Cover 2, 1
25	Niles Audio Corp.....	108
39	Ohm Acoustics Corp.....	143
3	Onkyo.....	17
46	Philips Auto Audio.....	198
14	Pickering.....	75
6	Pioneer Electronics.....	18
1	Polk Audio.....	3
49	Pyle Industries.....	204
43	Sansui Electronics Corp.....	37
40	Shure Brothers.....	145
27	Stanton.....	112
22	Stereo Corp. of America.....	93
4	Technics.....	23
	Wharfedale.....	149
10	Wisconsin Discount Stereo.....	59

## Open-Reel Tape Decks

6

## Open-Reel Tape Decks

(Continued from page 95)

reel capacity 10 1/2". Features IC-logic plus transistor tape transport controls with LED indicators, mode-to-mode switching with auto pause between modes; 3-position bias and EQ switches; dual 2-scale VU meters with  $\pm 3$ -dB normal, +6-dB high-range meter scale selector; separate mic and line level input controls with mixing; 0/20-dB mic attenuator; output-level control; L/R tape/source monitor switches; L/R rec mode switches; 4-digit tape counter showing elapsed time in minutes, secs; timer start with external audio timer; fast-wind time 150 secs (2,500-ft, 1.5-mil tape). W&F 0.018% wrms at 15 ips, 0.03% at 7 1/2 ips; FR  $\pm 3$  dB 30-30,000 Hz at 15 ips, 20-25,000 Hz at 7 1/2 ips, 20-15,000 Hz at 3 3/4 ips; S/N 60 dB NAB wtd at 7 1/2 ips, 58 dB at 3 3/4 ips; THD at 400 Hz, 0 VU 0.08%; separation 50 dB; input sens/imp 0.25 mV/4.7k ohms (mic, unbalanced), 60 mV/150k ohms (line, phono jack); rosewood veneer side panels; 19 3/4"W x 17 1/2"H x 10 3/4"D ..... \$1,600  
**RS-1506US**. Similar to RS-1500US except 4-track 2-ch play/record, 2-track 2-ch play ..... \$1,600  
**RS-1700**. Similar to RS-1506US except auto reversing 4-track 2-ch record/play ..... \$2,100

### TELEX

#### Telex/Magnecord 1400 Series

Three-speed (15, 7 1/2, 3 3/4, 1 7/8 ips) open-reel tape recorder. Accepts reel sizes up to 8 3/4". Available with variety of head configurations for single-, 2-, or 4-track operation. Features brushless dc servo ball-bearing drive system. W&F 0.35% at 3 3/4 ips, 0.24% at 7 1/2 ips, 0.17% at 15 ips (all DIN wtd) or 0.25% at 3 3/4 ips, 0.17% at 7 1/2 ips, 0.12% at 15 ips (all unwt'd rms); S/N 60 dB NAB wtd; FR 30-10,000 Hz  $\pm 3$  dB at 3 3/4 ips, to 18 kHz at 7 1/2 ips; 35-22,000 Hz at 15 ips (2-track); crosstalk 50 dB at 1 kHz (2-track head); inputs 150-ohm mic, balanced bridge, unbalanced bridge, mixing bridge, aux bridge; outputs 150/600 ohms balanced, +4 dBm aux A and B unbalanced. Features VU meters; separate microphone and line-input controls; master gain control; catenary head block design; hyperbolic heads ..... \$2,500

#### Telex/Magnecord 3000 Series

Professional-style 3-motor 1/4" system that offers option of purchasing transport, electronics package, and accessories separately or as a package. Different speeds and head formats may also be chosen. Accepts up to 10 1/2" reels with NAB Type A or B hubs



and fits 19" racks. Features transformer-isolated CMOS-logic transport controls; automation capability; Auto Cue Release switch; interchangeable head blocks for variety of head configurations; snap-on head cover with mu-metal shield; heavy-gauge head assembly plate that accommodates up to 4 heads and contains tape guides, head selector switch, and optical infrared sensor. W&F 0.22% DIN, 0.15% wrms at 3 3/4 ips to 0.15% DIN, 0.1% wrms at 15 ips; speeds 3 3/4 ips and 7 1/2 ips or 7 1/2 and 15 ips; record/play frequency response  $\pm 3$  dB 50-20,000 Hz at 15 ips, 30-18,000 Hz at 7 1/2 ips, 20-12,000 Hz 3 3/4 ips with adjustments optimized for 3M 176 tape; S/N 60 dB or better NAB wtd with half-track head, 3M 176 tape; record/play THD at 1 kHz 1% or less at 0 dB with 600-ohm line output termination; equalization adjustable for most standard or high-output, low-noise tapes; crosstalk rejection 50 dB or better at 1 kHz; fast-wind times 90 secs or less for 10 1/2" 2,400-ft tape, 80 secs for 7" 1,200-ft tape. Transport: 19"W x 12 1/2"H x 10"D; 46 lb. Record/play electronics: 19"W x 5 3/4"D x 3 1/2"H; 5.5 lb .. \$1,990-\$2,470

### UHER by WALTER ODEMER

#### SG-631 Logic Open-Reel Deck

Three-speed (7 1/2, 3 3/4, 1 7/8 ips) 2- or 4-track stereo record/play deck; Omega looping system eliminates pinch-roller, drive couplings, springs, and function wheels; 4-motor drive system includes 2 dc hub motors, electronically regulated capstan drive, and servomotor to form Omega loop. Features built-in strobe disc; speed control; peak-reading meter; switchable peak-level limiter; separate stereo headphone power with volume, bass, and treble controls; A/B monitoring; remote-control facility; 10 1/2" reel max. W&F 0.05%; FR 20-25,000 Hz at 7 1/2 ips, to 16,000 at 3 3/4 ips, to 12,000 Hz at 1 7/8 ips; S/N 65 dB at 7 1/2 ips ..... \$1,936

#### SG-561 Royal Open-Reel Deck

Four-speed (7 1/2, 3 3/4, 1 7/8, 1 3/16) 2- or 4-track mono/stereo record/play deck with interchangeable head mount. Features Reovac long-life heads; built-in stereo amp with mixing facility; 7" reel capacity; Synchro-Play sound-with-sound; Multi-Play sound-on-sound; reverb; echo; Dia-Pilot for record/play of cueing signals for auto slide projectors and synchronizing sound and film in 8 and 16mm film-making; separate mic/radio and phone input controls; mic in/out switch; dual peak-indicating meters; tape/source monitoring switch; separate and continuous tandem tone control; 4-digit tape counter with zero reset; tape tension comparator; end-of-tape shutoff. W&F 0.05%; FR 20-20,000 Hz at 7 1/2 ips, to 15,000 at 3 3/4 ips, to 9,000 Hz at 1 7/8 ips; S/N 65 dB on 2-track at 7 1/2 ips. 18"W x 13.9"H x 7.5"D \$1,711

#### Report Monitor Series Tape Recorders

Report Monitor series tape recorders feature 3 heads, LED function indicators, integrated power supply, fully electronic amp switching, battery or AC operation, tape-tension regulators, die-cast aluminum casings. All models can be used in portable or stationary applications. Speeds 7 1/2, 3 3/4, 1 7/8, 1 3/16 ips.

**4400 Report Monitor**. Four-track stereo ... \$1,512  
**4200 Report Monitor**. Two-track stereo ... \$1,512  
**4000 Report Monitor AV**. Half-track monaural \$1,313

## Cartridges & Tonearms

5

## Cartridges & Tonearms

(Continued from page 78.)

mV at 1 kHz, 5 cm/sec; FR 10-40,000 Hz; sep/balance > 22/1.8 dB at 1 kHz; compliance 12 x 10<sup>6</sup> cm/dyne; load imp 47k-100k ohms; effective moving mass 0.29 mg; tracking force 1.25 g; 6 g \$50  
**EPS-28ES**. Replacement stylus ..... \$30

#### Linear-Tracking Turntable Cartridges

**EPC-23**. MM cartridge ..... \$70  
**EPS-310MC**. MC cartridge. Replacement for SL-10 turntable ..... \$130  
**EPC-P205CMK3**. MM cartridge ..... \$210

#### EPC-310MC Moving Coil Cartridge

MC cartridge with pure boron pipe cantilever. Features coreless twin ring coils; plug-in connector; Technics Temperature Defense Damper. FR 10-60,000 Hz; output voltage 0.2mV at 1 kHz, 5 cm/sec; ch sep > 25 dB 1 kHz; imp 80 ohms purely resistive; compliance 12 x 10<sup>6</sup> cm/dyne 100 Hz; tracking force 1.25 g  $\pm 0.25$  g; stylus tip 0.1mm square nude diamond, 0.2 x 0.7 mil elliptical; effective moving mass 0.23 mg; 6 g ..... \$130

#### EPC-305MCMK2 Moving Coil Cartridge

MC cartridge with pure boron tapered pipe cantilever. Features coreless twin ring coils; temperature damper; 0.07mm precision-polished square block elliptical diamond stylus; anti-resonant aluminum die-cast headshell; cartridge supplied ready mounted; crystal glass faceplate; gold-plated terminal pins; individual FR graph; FR 20-15,000 Hz  $\pm 0.5$  dB; output voltage 0.18mV at 1 kHz, 5 cm/sec zero to peak lateral velocity; ch sep > 25 dB at 1 kHz; ch balance within 1

dB at 1 kHz; compliance 12 x 10<sup>6</sup> cm/dyne at 100 Hz; stylus tip 0.2 x 0.7 mil 0.07 mm square block diamond; imp 25 ohms; effective moving mass 0.098 mg; tracking force 1.25  $\pm 0.25$  g 6.7 g (cartridge only) 14.2 g (with headshell) ..... \$300

### YAMAHA

#### MC-1S Phono Cartridge

Universal unmounted headshell MC phono cartridge with tapered tubular beryllium cantilever, twin dual coreless IC coils in aluminum die-cast housing. Output 0.2 mV at 5 cm/sec, 1 kHz; sep 28 dB at 1 kHz; FR 10-20,000 Hz; stylus pressure 1.8 g & 0.2 g; 0.1-mm square pure diamond stylus with special-contour 8 x 40-micron elliptical tip; 18.5 g & 0.1 g ... \$280

#### MC-3 Phono Cartridge

Cross-matrix air-core moving-core stereo phono cartridge with samarium-cobalt magnet, 8 x 40-micron diamond stylus, tapered beryllium tube cantilever. Output 0.2 mV at 1 kHz, 5 cm/sec; FR 10-20,000 Hz; sep/balance > 28/0.8 dB at 1 kHz; tracking force 1.2 g; 5.9 g ..... \$220  
**MC-9**. Similar to MC-3 except has 8 x 20-micron stylus, aluminum-tube cantilever. Output 0.3 mV; balance within 1 dB at 1 kHz; tracking force 1.5 g; 5.3 g ..... \$100  
**MC-4 Moving Coil Cartridge**

Phono cartridge with Cross Matrix coils system for precise stereo imaging while permitting independent adjustment of vertical and horizontal compliance. Features equalizing damper; tapered tubular aluminum cantilever; resonance-free cartridge housing; samarium cobalt magnet; stylus 0.06 mm square solid

diamond 8 x 40  $\mu$ m; output voltage 0.2 mV (1 kHz) 5 cm/sec peak 45; ch sep > 28 dB (1 kHz); FR 20-20,000 Hz; recommended tracking force 1.4  $\pm 0.2$  g ..... \$210

#### MC-5 Phono Cartridge

Lightweight MC cartridge with high-efficiency linear output, low distortion, 8 x 40-micron elliptical diamond stylus. Features special vertical-horizontal matrix system with cross-shaped Sendust core; tapered tubular beryllium cantilever; precision 1-point cantilever suspension. Total equivalent stylus mass 0.167 mg; output 0.03 mV at 1 kHz, 5 cm/sec; balance within 1 dB at 1 kHz; imp 30 ohms (purely resistive); FR 10-20,000 Hz (capability to 60 kHz); tracking force 1.2 g & 0.2 g; compliance static/dynamic 28 x 10<sup>6</sup> cm/dyne; vertical tracking angle 22° & 2°; 12.7 g. Accessories include stylus brush, 2 hex nuts, stylus cover ..... \$195

**MC-11** Similar to MC-4 except rare earth magnet; stylus 0.1 x 0.2 mm square solid diamond 8 x 20  $\mu$ m; output voltage 0.35 mV (1 kHz, 5 cm/sec peak 45; ch sep greater than 28 dB (1 kHz); FR 20-20,000 Hz (10-50,000 Hz capability); recommended tracking force 1.8  $\pm 0.3$  g ..... \$85

#### MC-7 Phono Cartridge

Vertical/horizontal matrix MC phono cartridge with V/H cross Sendust core armature, tapered aluminum tube cantilever, 0.14 x 0.07-mm square solid diamond stylus. Output 0.3 mV at 1 kHz, 5 cm/sec peak; balance/sep at 1 kHz 1 dB/28 dB; FR 10-20,000 Hz; tracking force 1.5 g & 0.3 g; dynamic compliance 15 x 10<sup>6</sup> cm/dyne; high-impact plastic housing; 5.7 g ..... \$150

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