Which Components Can Last Forever? Which Ones Wear Out?

Revolutionary Computer-Designed Car Stereo System!

PERFORMANCE TESTS!
Best Scott Tuner Yet, Unique Acoustat Amp,
4 More Super Components!

TESTED, COMPARED!
State-of-the-Art Stereo Video Disc Players

THAT WORK!
1, Clamp, more!!!
A TAPE DECK SO ADVANCED
IT HAS A FEATURE
THAT FINDS NOTHING.

We call it Blank Search. You'll no doubt call it the best thing to happen to recording since magnetic tape.

Because, the Pioneer CT-9R tape deck with Blank Search finally puts an end to the old Fast Forward/Stop/Play/Reverse/Stop/Play method of finding where your last recording left off and the next one can begin.

Now, all you have to do is push a button and let the tape deck do the work. It'll find the blank area that's long enough to tape on, back up to the last recorded piece, leave a four second space and stop, ready to record.

And there's more wizardry where that came from. Like Index Scan, Music Search, Blank Skip and a Real Time Counter that reads out the amount of tape left in meaningful minutes and seconds instead of meaningless inches. In other words, features that will revolutionize the way you record and listen to tapes.

But don't thank us. Thank the little brain that made it all possible. A tiny microprocessor that makes the CT-9R more than a tape deck, it makes it smart.

Smart enough to make your music easier to listen to. Even smart enough to make your music sound better, with Automatic Bias Level Equalization.

What Auto B.L.E. means, to those without a degree in electronics, is that the tape deck automatically analyzes the tape being used (no easy task with over 200 different tapes on the market) and then adjusts itself for optimum recording with that tape. Improving the quality of your recordings faster than you can say "wow and flutter."

Auto B.L.E. aside, all of the CT-9R's features, from Blank Search to Blank Skip, do only one thing.

Let you spend a lot less time looking for your music.

And a lot more time listening to it.

Because the music matters.
AUDIO

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*Cover Story
Presenting High Bias II and the Ultimate Tape Guarantee.

Memorex presents High Bias II, a tape so extraordinary, we're going to guarantee it forever.

We'll guarantee life-like sound.

Extraordinarily flat frequency response at zero dB recording levels, combined with remarkably low noise levels, means music is captured live. Then Permapass™, our unique oxide-bonding process, locks each oxide particle—each musical detail—onto the tape. So music stays live. Not just the 1st play. Or the 1000th. But forever.

We'll guarantee the cassette.

We've engineered every facet of our transport mechanism to protect the tape. Our waved-wafer improves tape-wind. Silicone-treated rollers insure precise alignment and smooth, safe tape movement. To protect the tape and mechanism, we've surrounded them with a remarkable cassette housing made rigid and strong by a mold design unique to Memorex.

We'll guarantee them forever.

If you ever become dissatisfied with Memorex High Bias II, for any reason, simply mail the tape back and we'll replace it free.
all over the world).

When I purchased the CBS set, the salesman yelled from his heart to be heard by all his colleagues: 'One set sold!' I do hope that Mr. Furie's fine and interesting review will contribute to a great many purchases of Schwanza and stimulate interest again in this unjustly forgotten opera.

William Gunther
Bronx, N.Y.

Maybe, Maybe Not

Rereading 'Simon & Garfunkel. Maybe' [May] brought back history, but a history that should be laid to rest. I am now forty-seven, and if their message seems dated and a trifle mawkish to me,

I can only imagine how it seems to my high school students. From the few things I hear, Simon & Garfunkel are at best anachronistic. Why can't they, like the Marschallin in Der Rosenkavalier, look into the mirror and say: 'It is time.'

It isn't just the wrinkles and the hairlines that say that their time has come; their sense of perception (so beautifully demonstrated in their past songs) should tell them that they are history. Gentlemen, take your places.

Edward M. Silva
Berkeley, Calif.

Reverse Cure

Your article on phono hum ["Retsoff's Remedies,"
August] failed to mention a very common cause of low-end hum, especially in newly installed or rearranged systems: the power cord being plugged into the AC outlet "backwards." The cure is simply to reverse the plug.

Raymond Kostanty
Wood-Ridge, N.J.

Mr. Retsoff replies: Good point, and certainly worth a try, although it may or may not help. Occasionally a ground loop is set up by the position of the plug in the AC outlet. Reversing the plug eliminates the loop and does away with the hum. Modern units with polarized plugs should not have this problem.

No Tubes Is Bad News

Lack of a reliable source of high-quality vacuum tubes has delayed Sidney S. Smith in responding to inquiries about his package of modifications for the Marantz Model 7 preamplifier (May, "Letters"). A new source of tubes now appears to have been found, however, and interested readers should expect to hear from Mr. Smith shortly. —Ed.
Music in the round.
The unique gift of BES speakers.

If you have a great turntable, a sensational amplifier, fine speakers and an inferior cartridge, your sound will suffer. If you have a great turntable, a sensational amplifier, BES speakers, and an inferior cartridge, your sound will suffer. But if you have a great turntable, a sensational amplifier, BES speakers, and a world-renowned Ortofon cartridge with the patented, variable magnetic shunt (VMS) system, your sound will shine.

Ortofon VMS cartridge will assure that your entire music system will attain its full potential. It will enhance the sound of your speakers and the finest amplifiers. It will make your music sound better than ever before.

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Circle 8 on Reader-Service Card
A unique solution to a serious turntable problem: 
Technics introduces turntables with the P-Mount system.

Unfortunately, standard turntable design has left too much to chance in terms of cartridge mounting and performance. 

Technics turntables with the patented P-Mount tonearm/cartridge system change all that. By providing complete compatibility between tonearm and cartridge to achieve the optimum tonearm resonant frequency: the level at which bass frequency interference is minimized. For the accuracy and fidelity conventional turntables can deny you.

In addition, P-Mount is a plug-in system. You’ll get outstanding performance without struggling to install the cartridge. There’s nothing to wire. There’s no longer a headshell. There’s no more fumbling to calibrate overhang or stylus position. In addition, tracking and anti-skating adjustments have been virtually eliminated.

Just plug any P-Mount cartridge into a Technics straight, low mass, high performance tonearm, and tighten one locking screw. With Technics, your records are now virtually immune to the groove wear, poor channel separation and distortion caused by improper cartridge-to-tonearm mounting.

And Technics standardized all key specifications with manufacturers of P-Mount cartridges: cartridge weight, external dimensions, connector shape, stylus position and more. So you have a wide range of cartridges to choose from.

The P-Mount plug-in cartridge system. Just one of the many advances you’ll find in the new line of sophisticated Technics turntables. From belt-drive to direct-drive to quartz-locked.

The turntable revolution continues at Technics.
Stevie’s cassette is SA-X for all the keys he plays in.

When it comes to music, Stevie Wonder and TDK are perfectionists. Stevie’s perfection lies in his talent. TDK’s perfection is in its technology. The kind of technology that makes our newly reformulated SA-X high bias cassette the cassette that Stevie depends on to capture every note and nuance of every performance. SA-X cassettes give Stevie a new dimension in high bias recording with sound performance which approaches that of high-energy metal. The exclusive TDK double-coating of Super Avilyn particles provides optimum performance for each frequency range. And SA-X’s super wide dynamic range and high MOL handle high signal levels without distortion or saturation. Last, but not least, TDK’s Laboratory Standard Mechanism gives Stevie unsurpassed cassette reliability, for a lifetime.

TDK SA-X—it’s the machine for Stevie Wonder’s machine. Shouldn’t it be the machine for yours?
New equipment and developments by the Editors

A Preamp Plus

Exceptional operating and control flexibility are the hallmarks of Soundcraftsmen's new CX-4200 combination preamp/equalizer with built-in CX disc-decoding circuitry. The unit's dual octave-band graphic equalizer features low-noise precision-wound inductors and offers ±15 dB of boost or cut in each band. In addition, the equalizer section employs Soundcraftsmen's Differential/Comparator unity gain circuitry for an input-to-output gain-balancing resolution of 0.1 dB. The preamp section offers adjustable phono-cartridge capacitance loading and a versatile signal processor patch bay; it will accommodate two turntables and three tape decks. The CX-4200 will fit in a standard 19-inch rack, and optional oak or walnut side panels are available. Price is $700.

Circle 72 on Reader-Service Card

AR Thinks Small

AR is the latest member of the "small is beautiful" school of speaker design. The company's AR-1MS is a two-way acoustic suspension system incorporating a 4-inch long-throw woofer and a 1/2-inch dome tweeter with a ferrofluid-treated voice coil. Rated for 75 watts (181/4 dBW) maximum input, the speaker measures 75/8 by 41/4 by 4 1/4 inches and is housed in a grey aluminum cabinet with a black metal grille. Price is $110.

Circle 86 on Reader-Service Card

Jet Propelled

Lear Jet's top-of-the-line car receiver/cassette player, the S400 A-15, features phase-locked-loop frequency-synthesis tuning with manual, search, scan, and preset tuning modes. The tuner's memory holds six AM and six FM stations. Power output into 4 ohms is said to be 22 watts per channel. National Semiconductor's one-chip DNR noise reduction system is built-in, as is switchable tape-playback equalization. The unit's digital display serves double duty as a frequency and clock readout.

Circle 92 on Reader-Service Card

P-Mounts on Pivots

Technics' SL-D30 is one of a line of seven new turntables with pivoted tonearms designed for plug-in P-mount carriages. (See "1983 New Products Roundup," September.) The automatic direct-drive unit features a base made of Technics' TNRC material, for vibration resistance; a gimbal suspension for its straight, low-mass tonearm; and an arm/cartridge resonance frequency near the 10-Hz ideal with any P-mount cartridge. Wow and flutter are rated at 0.0025% WRMS, rumble at less than -78 dB (DIN B). Price for the SL-D30 is $170.

Circle 90 on Reader-Service Card

Detailed Response

Thanks to its solid ruby cantilever, Grace's latest fixed-coil phono pickup is said to provide improved resolution of musical detail and excellent square-wave response. The F-9E Ruby also features hand-wound coils, an omnitaxial suspension, samarium-cobalt

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Brooklyn, NY 11204
magnets, and a nude-mounted Vital elliptical stylus. Price of the F-9E Ruby is $300; the RS-9E replacement stylus (which may also be used to upgrade Grace F-9E and F-9L cartridges) costs $100. 
Circle 88 on Reader-Service Card

A Baby Bose

Bose's least expensive Direct/Reflecting loudspeaker is the new Model 201. Priced at $262 per matched pair, each system is housed in a complex ported enclosure of injection-molded black plastic that is said to reduce low-frequency distortion by as much as 20 dB compared to designs using conventional cabinets. The 201 has a 6-inch long-excursion woofer, a 2-inch outward-firing tweeter, and a "Dual Frequency" crossover network that enables the two drivers to work together over almost an octave. According to Bose, this enhances the spaciousness of the sound while avoiding phase-shift effects and tonal coloration. A large vane in front of the tweeter can be rotated to alter the speaker's radiation pattern above 2 kHz to compensate its spatial reproduction for various placements or types of music. Excess power is absorbed by a built-in protection circuit without interruption of the music. 
Circle 82 on Reader-Service Card

An Equalizer/Analyzer from ADC

A built-in spectrum analyzer with a pink-noise generator and a calibrated microphone makes ADC's top-of-the-line Sound Shaper Thirty a highly sophisticated graphic equalizer. In addition to ten bands of equalization per channel, the SS-30 includes an infrasonic filter, provisions for two-way tape dubbing, and LED slide-position indicators. The SS-30 sells for $400. 
Circle 70 on Reader-Service Card

Cleaning Up

Allsop says that the pivoting arm on its new Orbitrac record cleaner automatically (Continued on page 10)
"I like to hear my music exactly the way I write it. That's why I listen on nothing less than a Yamaha Concert System."

YAMAHA, FOR THE MUSIC IN YOU. Award-winning composer/musician Marvin Hamlisch listens to music on a Yamaha Concert System. Because Yamaha's matched component Concert Systems are uncompromised in performance, convenience, and aesthetics. For the music in you, nothing less will do.

For more information, call 800-447-4700 In Illinois 800-322-4400.
Or write: Yamaha Electronics Corp., U.S.A., P.O. Box 6660, Buena Park, CA 90622.
Revox B795.
Short arm, no waiting.

At 1 1/2 inches, the B795's tonearm is the world's shortest. In fact, it's hardly a tonearm at all. The secret of our shortness is Linatrack™, a revolutionary/linear tracking system. Guided by an ultra-sensitive servo mechanism, the Linatrack™ tonearm glides smoothly straight across the disk. The result? Ideal resonance characteristics. No tracking error. And no waiting for a conventional linear tonearm to crawl back before changing records. Because, with a flick of your fingers, the entire Linatrack™ module pivots aside.

The B795 also offers a quartz-regulated, Hall-effect direct drive motor; precise cueing; and solid German craftsmanship. When it comes to tonearms, short is beautiful. Hear the Linatrack™ difference today, at your Revox dealer.

WEAR A CONCERT.
Discover the incredible accuracy of Sennheiser HD 420 Open-Aire® headphones. By combining exotic materials with advanced electroacoustic technology, we've done for personal listening what our world-famous studio microphones have done for professional recording. In a new ultra lightweight design surpassing even the performance of the HD 420s predecessors (which were also top-rated and rave-reviewed), with improved transient characteristics. Smoother, more extended response. Quietly surpassing even the most expensive speakers. And comfort so great, the only thing you'll feel is the music. Try a pair of HD 420s (or our top-of-the-line 430s) at your Sennheiser dealer. Hear what it's like to wear a concert.

On the Run
A compact handful from Olympus, the SR-11 combines a microcassette recorder and FM-stereo tuner on a single 10-ounce chassis. The two-speed capstan-drive system is driven by a coreless motor for maximum torque with low wow and flutter. The unit will make recordings direct from FM on regular or metal microcassettes, but requires external microphones for live recording. Other features include automatic end-of-tape shutoff, a balance control, a pause switch, and a mechanical tape counter. The 5-inch by 3-inch by 1-inch SR-11, priced at $200, includes headphones, a rod antenna, patch cords, and a carrying case.

JBL’s Compact
The smallest speaker ever offered in JBL’s...
L-Series line, the L-15, is said to combine high power-handling capability, high efficiency, and accurate frequency response. A two-way design, the L-15 employs a 1-inch phenolic dome tweeter with a 1-inch copper voice coil and a 6½-inch woofer with JBL's Symmetrical Field Geometry magnetic structure for reduced second-harmonic distortion. The walnut-veneered L-15 measures just 14¼ inches high, 9¼ inches wide, and 7¼ inches deep. Price is $150. Circle 93 on Reader-Service Card

An Automated Akai

Akai's top-of-the-line three-head cassette deck, the GX-FP1, offers both Dolby B and C noise reduction. Fully automatic tuning of bias, equalization, and tape sensitivity is performed over a series of sixty-four steps by a microprocessor. Once the deck has been tuned for a particular tape, the settings are entered into one of four memories. According to Akai, the Super GX Crystal ferrite recording and playback heads are so hard that they can be guaranteed for more than seventeen years of wear-free use. Convenience features include Intro Scan, which samples the first ten seconds of each selection, and the Instant Program Location System, which finds the beginning of any selection in either forward or reverse mode. There's also a digital real-time counter and an automatic fader that increases gain at the beginning of a recording and decreases it at the end. Seldom-used controls are normally concealed by a motor-driven flip-down panel. Price of the GX-FP1 is $750. Circle 89 on Reader-Service Card

Back to Basics

The manufacturer of the esteemed Linn Sondek turntable has introduced a moderate-price tonearm/cartridge combination called the Linn Basik LV-X. Among the features borrowed from the more expensive Linn Ittok arm are a substantial main-piller/horizontal-bearing assembly; close-tolerance, temperature-stable vertical bearings; and a rigid arm tube. The clamp linking the LV-X’s detachable headshell to the arm tube is said to ensure an especially firm connection. A fixed-coil pickup made especially for Linn completes the $200 package. Circle 87 on Reader-Service Card

CX Kit

A CX decoder and peak expander kit is now available from Sound Concepts. The manufacturer claims that the KSX-1 kit can be assembled in about four hours, and that the finished product is identical to the $119 factory-built SX-80. The device includes a peak unlimiter as well as a duplicate tape monitor loop. Supplied with a CBS calibration record, the KSX-1 is priced at $76. Circle 83 on Reader-Service Card


To recreate that natural energy...the emotional quality we find so difficult to define in a live performance...

Dahlquist has created a totally new speaker system, the DQM-5.

Every detail of the Dahlquist DQM-5, from its edge wound ribbon wire voice coil to its triple density imported enclosure board, has been painstakingly considered for acoustic value.

On listening, you'll discover an unprecedented integrity where nothing is forsaken.

On asking, you'll be pleasantly surprised by how affordable this pleasure is. Just $289 each in gray Nextel™ (shown) or $250 each in walnut woodgrain.

DAHLQUIST
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Discover the energy

Circle 17 on Reader-Service Card
Two Right Hands

I recently had the good fortune to find two JBL-112 loudspeakers in a warehouse closeout. Normally they are sold in mirror-image pairs, since the tweeter and midrange driver are on opposite sides of the cabinet. But I have two ‘right’ tweeters. To try to restore the intended tweeter/midrange relationship, I’ve turned one speaker upside down, with the 12-inch woofer on top. This seems to make a decided improvement in the imaging, but will this placement destroy the speaker? Is there another approach I should take?—Jim Larkin, Clifton, N.J.

I see no reason why the inversion should harm the speaker, but if one woofer is near the floor and the other raised from it, the result should be a disparity of room loading (the manner in which the room’s acoustics alter the sound) and therefore of tonal balance between the two speakers. It’s likely that this is more deleterious to stereo imaging than the want of tweeter/midrange symmetry—depending on the actual physical arrangement in your listening room. But by all means go with what sounds best. That’s the point of audio, after all.

Old Gram-Ma’s Tale

When I first got involved with stereo equipment, it seemed to me that there was a fairly direct relationship between stylus tracking force and record wear. But now I notice that moving-coil cartridges require a higher tracking force than moving-magnet or similar designs. Will a high quality moving-coil model cause greater wear than a high quality fixed-coil pickup?—Dean Perry, San Diego, Calif.

The ‘relationship’ you cite is (and always was) an old wives’ tale—based, no doubt on the competitive race among manufacturers in the late ’60s/early ’70s for ever-lower vertical tracking force (VTF) ratings. Actually, optimum tracking force is related to the geometry of the stylus tip. The contact area where a stylus rests against the groove walls varies among stylus designs. This contact area is called the bearing surface (as it bears the weight of the tonearm/cartridge/stylus assembly). As this area increases or decreases, the optimum tracking force changes. What is the best tracking force for one stylus won’t necessarily be best for another, even with the same tonearm/cartridge combination. If you set the VTF within the optimum range, record wear is very slight. If the VTF is too low, mistracking and severe wear can easily occur; set it too high, and the pressures created can exceed the bearing strength of the vinyl, which also damages the record.

Phono Detector

My system consists of a Pioneer SX-3600 receiver, Dual Model 1258 turntable, and Scott Model 208 speakers. Sometimes when I have the selector set to phono, I can hear radio or TV stations through the speakers. This sound stops if I unplug the turntable from the receiver. What causes this noise, and how can I correct it?—John P. McCarble, Beaumont, Texas.

In all probability, you’re experiencing a phenomenon about which we receive many letters. Any time the terminals in the phono signal path—either at the receiver or at the pickup cartridge—become oxidized, they can act as a detector, producing audio from modulated radio-frequency (RF) signals. Contact cleaner, wire brushing, or a brisk sliding or turning of the seated connectors will dislodge the oxidation products and should cure the noise. If it doesn’t, the culprit is probably the cables from the turntable to the receiver, which may be picking up RF signals and routing them into the receiver’s phono section. Short of installing new leads with better (preferably foil) shielding, you might try tying some loops in your present cables or changing their length or orientation.

Signal Supercharger

I have a Realistic/Archer FM antenna amplifier that is rated for 18 dB of gain. It supplies relatively noise-free listening in mono, but it still isn’t strong enough for stereo. If I put an identical amplifier in series with this one, will I get a stronger but still usable signal—or will I overload the antenna terminals on my receiver? What would happen if two audio amplifiers were connected this way?—Rusty W. Buck, Alexandria, La.

With two amplifiers in the antenna line, you’d end up boosting everything that comes from the antenna—broadcast signals, ignition noise, static, everything—by 36 dB (18 plus 18). If the RF is as weak to begin with as your letter implies (say, around 30 dB), such a boost would put it in the range you might expect in suburban reception (somewhere around the 65 dBf level at which tuners are tested), and well below the overload threshold of your tuner. But with all that noise being boosted along with the signal, you may not find the listening any more satisfactory than you did with a single 18-dB amplifier.

Audio amplifiers are different because they are designed for a standardized maximum input level and will readily overload if the output of one is fed to the input of another. RF amplifiers like your Archer are designed to work with a broad range of input levels. And since the voltages and current ratings involved are much lower in RF, the price of overload is not nearly as severe: Audio amplifiers burn out a lot more readily when abused.

Thunder and Snap

When a receiver is turned on, why does it sound like thunder in the speakers? Also, when the tonearm goes to its rest position, a loud snap occurs. (My tuner, phono, and 8-track player are four-channel stereo, and the two cassette units are two-channel stereo. They are all connected to the receiver.)—John P. Esparza, Inver Grove Heights, Minn.

Most components wouldn’t make these noises unless muting circuitry (in the receiver) or switching (in the turntable) had been omitted to keep the price down. Perhaps this is true in your case. The problem occurs because it takes a moment for the capacitors in an amplifier to charge up and the circuit voltages to stabilize; until they do, enough current can flow randomly within the circuitry to produce your “thunder.” The ‘snap’ is a transient induced in the unmuted audio cables of the turntable when the motor power is shut off at the end of the play cycle.

We regret that the volume of reader mail is too great for us to answer all questions individually.
If you're familiar with Maxell UD-XL tapes you probably find it hard to believe that any tape could give you higher performance.

But hearing is believing. And while we can't play our newest tape for you right here on this page, we can replay the comments of Audio Video Magazine.

"Those who thought it was impossible to improve on Maxell's UD-XL II were mistaken. The 1981 tape of the year award goes to Maxell XL II-S."

How does high bias XL II-S and our normal bias equivalent XL I-S give you such high performance? By engineering smaller and more uniformly shaped epitaxial oxide particles we were able to pack more into a given area of tape. Resulting in a higher maximum output level, improved signal-to-noise ratio and better frequency response.

To keep the particles from rubbing off on your recording heads Maxell XL-S also has an improved binder system. And to eliminate tape deformation, XL-S comes with our unique Quin-Lok Clamp/Hub Assembly to hold the leader firmly in place.

Of course, Maxell XL II-S and XL I-S carry a little higher price tag than lesser cassettes.

We think you'll find it a small price to pay for higher performance.

IT'S WORTH IT.
Loudspeaker Fundamentals

STRIPPED TO ITS ESSENCE, a loudspeaker is just an electric motor designed to move air. Much the same could be said of a window fan, however, so perhaps a little elaboration is in order.

The most common type of loudspeaker has four main parts: a magnet, a voice coil, a "basket," and a diaphragm. The voice coil is simply a hollow bobbin with a long wire wrapped continuously around it. One end of the bobbin is attached to the diaphragm, which may be paper, plastic, or even metal. Most diaphragms are cones, but a few are flat, and many used in speakers intended to reproduce only high or middle frequencies are domes. In a cone speaker, the voice coil extends back from the apex of the diaphragm. If the diaphragm is a dome, the attachment is made to the outer rim, so that the complete structure takes on something of the aspect of a grain silo.

The basket is just a metal form designed to anchor all the other parts in correct relation to one another. Its front rim is attached to the outer edge of the diaphragm by means of a flexible surround (so that the diaphragm is free to move fore and aft). The magnet is attached to the basket's back plate and has a circular gap deep enough and just wide enough to accommodate the voice coil, which is kept centered in the gap by a flexible disc, called a spider, whose outer edge is attached to the basket.

So, we have a coil of wire immersed in a permanent magnetic field. If a current is passed through a conductor, a magnetic field will be generated around it. Magnetic fields react to each other, either repelling or attracting, depending on their relative polarities. Thus, if a current is passed through the voice-coil wire of a loudspeaker, it will generate a magnetic field around the coil, which will react to the magnetic field in the gap of the permanent magnet.

The end result is that the voice coil moves, thereby moving the diaphragm to which it is attached, which in turn moves the air surrounding the diaphragm.

You can see this effect simply by connecting a battery across the terminals of a loudspeaker system while observing the woofer cone. The direction and distance of the diaphragm movement are determined by the current's polarity (direction of flow) and amplitude, respectively. A battery produces direct (non-alternating) current with a fixed polarity and voltage. Swapping the battery terminals around will reverse the direction of the cone motion, and using a different voltage battery will change the diaphragm displacement.

An alternating current, therefore, will cause the speaker diaphragm to move back and forth at the frequency of the current variation. What an amplifier delivers to a loudspeaker is an alternating current modulated at the frequency of the input voltage to the amplifier. The corresponding motion of the speaker diaphragm generates vibrations cancelling the speaker's output in both directions. The diaphragm can't get a grip on the air, any more than you can get a grip on a fistful of water.

Perhaps the most straightforward solution is to mount the speaker in a very large baffle, such as a room wall, to keep the radiation from the front of the driver separate from the back wave. Use of this "infinite baffle" technique is understandably rare, however. Usually, the speaker is mounted on a relatively small baffle that forms the front panel of an enclosed box. The designer must then take into account the springiness of the air trapped in the cabinet, which tends to raise the driver's resonance frequency. This is important because response rolls off (becomes attenuated) rapidly below resonance (at a rate of at least 12 dB per octave).

Designers have learned to work around this inherent limitation by using special types of enclosures. Acoustic suspension loudspeakers, for example, combine a totally sealed cabinet with a very floppy cone suspension, which yields a low resonance frequency. The air itself supplies the restoring force that otherwise would have to be provided by a stiffer surround. Bass reflex, passive radiators, and other ported enclosure types rely on a tuned resonator (usually an undriven diaphragm or a column of air in a tube open to the outside) to augment the speaker's low bass response.

The other main problem with dynamic loudspeakers is that it's nearly impossible to cover the entire ten-octave audible range adequately with a single driver. The response of a driver large enough to handle low frequencies will roll off above a certain frequency. Even if it didn't, it would, because of its size, still become very directional at high frequencies, so that it would sound very dull to anyone not sitting directly in front of it. A very small driver, on the other hand, cannot reproduce deep bass. Therefore, almost all dynamic loudspeaker systems include two or more drivers of different sizes. An electrical circuit, called a crossover or dividing network, is built into the system to separate the incoming signal from an amplifier into corresponding number of frequency ranges. The crossover in a two-way system, for example, directs energy below a certain frequency to a relatively large "woofer" and energy at higher frequencies to a small "tweeter."
Pioneer LaserDisc

A LASER BEAM IS CHANGING THE WAY YOU'LL SEE AND HEAR THINGS FOREVER.

Did you ever try to fantasize what your television and stereo would, someday in the hazy future, turn into?

Well, the fantasy has suddenly become a reality. Today, a laser beam has brought these two technologies together. Suddenly your TV and stereo can do things they've never done before.

This new technology is brought to you by Pioneer LaserDisc™.

A LaserDisc is a sight-and-sound recording. A disc read, not by a needle or a tape head, but by a beam of light.

**A BETTER PICTURE.**

The LaserDisc system puts a picture on your TV set that's better than normal home-TV reception has ever been. In fact, the LaserPicture is the closest thing in home video to what you'd see if your TV were in the TV studio itself. As surprising as it may seem, the video resolution of LaserDisc is actually 40% better than home VCR.

**BETTER SOUND.**

LaserSound is equally remarkable. Since both channels of sound are completely separate from each other, it may just be the purest stereo you've ever heard.

And the sound superiority to videotape is nothing short of astonishing. Take the signal-to-noise ratio. VCR without Dolby is 40-43 dB. Even with Dolby, it's only 50-53 dB. LaserDisc, with its CX+ noise-reduction system, has a signal-to-noise ratio of a whopping 68 dB and more. Which is even better than the best conventional audio records made today. Similarly, the differences in harmonic distortion and wow and flutter between LaserDisc and videotape are so vast, it becomes suddenly very clear that if you care anything about sound at all, you have absolutely no choice.

**WHAT YOU WANT TO SEE, HOW YOU WANT TO SEE IT.**

The most obvious value of LaserDisc is the astounding effect it has on the musical experience. So it's no wonder that there is an ever-growing library of operas, rock concerts, jazz performances, ballet and the like. To say nothing of movies from virtually every major motion picture studio.

There are even participative discs that let you learn at your own pace. See things backwards, forwards, fast motion, slow motion, even one frame at a time. LaserDisc may just be the future of education.

**LET US CHANGE THE WAY YOU SEE THINGS.**

The wonder of this new technology can only be appreciated in person. Simply call us at 800-621-5199 for the name of the Pioneer Video Showcase Dealer nearest you to arrange a free demonstration of our entire line, the LD-1100, the LD-660 and the VP-1000. And while you're there, see the Pioneer 50" Diagonal Projection Television. An idea as big as LaserDisc itself.

*(In Illinois 800-972-5855)*

'Dolby is a registered trademark of Dolby Laboratories. *CX+ is a trademark of CBS, Inc. Credits: Pioneer Artists. Paramount Home Video. Twentieth Century Fox Video. Catweazle Pictures Home Entertainment. MGM/UA Video. All titles subject to change without notice.*
The Most Unique Part Of Mitsubishi Component TV Is In The Lower Right-Hand Corner Of The Screen.

Mitsubishi is pleased to present its remarkable new component TV system. In some ways, it's just what you'd expect in state-of-the-art component TV: There's a frequency-synthesized tuner/control center with multiple video inputs for your VCR, video disc player, video game console, home computer or any of the other video wonders looming on the horizon. Electronic mode selection allows you to
switch instantly from one program source to another—at the control center itself or from your favorite chair via the wireless remote.

The 25-inch (diagonal) professional-quality monitor features an Automatic Picture Latitude Circuit and a comb filter that yield 330 lines of resolution (versus the normal 280) for a crisper, sharper over-the-air picture. Or a stunning 400 lines of resolution from direct tape or disc input, achieved by bypassing the picture-degrading RF signal conversion process.

A pair of big, beautiful, high-fidelity speakers deliver sound that's actually as good as the picture. Even stereo, from stereo video discs, videotapes and FM simulcasts.

In short, Mitsubishi component TV offers the picture and sound upgrade that results when individual components aren't compromised by the need to fit them all into one box.

But there's something more. Something you won't find in any other company's TV, component or otherwise.

Our exclusive, patented Diamond Vision™ picture tube.

**UP TO 40% WIDER COLOR RANGE WITH DIAMOND VISION.**

Diamond Vision is the most important picture tube innovation in years.

It was developed initially to eliminate image-fading sun glare on our outdoor electronic scoreboards. And was based on the proven fact that certain chemicals absorb certain colors in the light spectrum. The result was a combination of chemicals mixed with the glass to absorb the offending light.

In adapting this principle to our home screens, we added other color-absorbing chemicals to eliminate the undesirable light elements emitted by the phosphors of the picture tube. Then painstakingly re-engineered the phosphors themselves to match the new screen's transmission characteristics.

The result is not only a picture relatively unaffected by ambient light, but a significantly improved picture overall: Brightness. Contrast. Color fidelity.

And compared to conventional picture tubes, the color reproduction range is 15% to 40% wider, depending on the amount of ambient light present.

So when you shop for a component TV system, look for that little "Diamond Vision" sign in the lower right hand corner of the screen. It tells you a lot about what's inside.

And there's another sure sign just below that. Something that speaks even more eloquently about how that system is built. It's just one word.

Mitsubishi.

**MITSUBISHI**

Even If You Can't Have The Best Of Everything, You Can Have The Best Of Something.

Mitsubishi Electric Sales America, Inc. 3030 Victoria St., Rancho Dominguez, CA 90221. Available at specialty houses nationwide. Specifications are subject to change without notice.

Circle 61 on Reader-Service Card
NOW YOU CAN HAVE DIGITAL RECORDING WHERE YOU WANT IT MOST: AT HOME.

There are moments when a musician is so inspired he stops making music and starts making magic. And, as most artists agree, these peak periods of supreme inspiration don't always occur in the clinical conditions of the recording studio.

Which explains why Sony, the inventor of digital audio processing, has just created the world's smallest, lightest and most compact digital audio processor—the PCM-F1.

Already touted by every major audio magazine, the PCM-F1 leaves you awestruck by its vital statistics. Its level of performance surpasses that of even the most sophisticated analog recording studio. Its unique 3-way power supply allows you to use it anytime, anywhere.

And because Sony consciously designed it without a built-in VCR, it can be used with any VCR—1/2 or 3/4 inch.

But perhaps its greatest feature is its price.

Obviously, we can go on and on about the brilliance of this new machine, but by now we figure you've heard enough about it and you're ready to go to your Sony dealer and hear it for yourself.

SONY The one and only.

Features and Specifications: Wow and flutter — unmeasurable; dynamic range — greater than 90dB; distortion — less than 0.005%; frequency response — 10-20,000 Hz; ± 0.5 dB; height — 314”; depth — 12”; width — 8 1/4”; and 16-bit quantization. © 1982 Sony Corp. of America. Sony is a register trademark of the Sony Corp.
Delco/Bose’s Perfect Match

The elemental problem of car stereo is the car—which does all it can to get in the way of the stereo. A small, often noisy interior with relatively few opportunities for adequate speaker installations makes a discouraging beginning. Response irregularities induced by the interior’s size, shape, and upholstery, combined with enforced listening positions that work against anyone in the car hearing a proper stereo image, add to the frustration.

This is not to say, however, that good equipment, skillfully installed, can’t overcome these difficulties. It can. Especially effective in the battle against abominable auto acoustics are such devices as equalizers, subwoofers, and add-on tweeters (see “Autophile,” September). But installation is always the joker in the deck. Badly done, it can thwart the best efforts of the best equipment money can buy.

Intimate familiarity with all these sad truths made the chance to get acquainted with a radically different approach to car stereo all the more exciting. My particular opportunity came all wrapped up in a big Cadillac with cruise control, a seat that remembered my name, and a clutch of lovers, subwoofers, and add-on tweeters (see “Autophile,” September). But installation is always the joker in the deck. Badly done, it can thwart the best efforts of the best equipment money can buy.

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Opinion and comment on the changing audio scene

The Trouble with Tape Rankings

SOME YEARS AGO, when we undertook our first round of cassette-tape testing, we received a letter expounding what seemed at first glance a very attractive idea. The writers had assigned numerical values to those of our findings that didn't already consist of some sort of specific measurement (e.g., packaging). Then they devised weighting factors for all the data elements—both ours as published and theirs as assigned—so that they could be compared. Finally, they fed the whole works into a computer and asked it to rank the tapes we had tested both in order of absolute performance quality and in order of what the British call “value for money.”

It was obvious that a great deal of thought had gone into the project. I don’t remember the details, but there was a mechanism for assigning numerical values to our subjective value judgements, because not all the important characteristics of cassettes can be measured in lab tests.

Weighting factors are, of course, crucial to an accurate rating system. Take, for example, a tape with a signal-to-noise (S/N) measurement of 60 dB and midrange headroom of 3 dB. If S/N ratio and separation are held to be of equal importance, the weighting factor of the former would have to be one-twentieth that of the latter. On the other hand, if midrange headroom is seen as twice as important as S/N ratio, its weighting factor would have to be forty times as great. It’s easy to see that the assignment of weighting factors is at least as important as the measurements (or the arbitrary values) to which they are applied.

Even this example is an oversimplification of the knots that must be examined and untied to lead to any kind of useful conclusion. The fact is that the systems proposed by our ingenious correspondents didn’t work, for all their good intentions. The one tape that we considered less than acceptable for high fidelity recording came out in their ranking as the best “value for money”—which, perhaps, should not have surprised us much. What did surprise us were the quality rankings, which placed some fine tapes well down on the list and some distinctly mediocre ones near the head.

The success or failure of a tape depends on how it is used.

At first I thought the compilers must have mistaken some of our lab measurements, but all their numbers checked. When I examined the weighting factors, however, some of their method’s fallacies began to emerge. One characteristic that I considered fairly important was not factored in at all, evidently because the analysts were unable to find a formula that could distill the information into a simple numerical rating. Worse, there were major disparities in how other parameters were weighted. Some were given an importance factor that would be appropriate to inexpensive equipment but not to the top models; others were treated conversely.

And as I considered the individual parameters I realized that, for many of them, no single weighting formula was likely to be satisfactory. Beyond a certain point, for example, a tape’s dynamic range (with noise reduction) can easily exceed that of a source like FM. At that point, the dynamic range drops from being a highly important factor to an unimportant one. Thus, a complex function, rather than a simple multiplier, would be needed to convert the raw dynamic range into a figure of merit. And the function would have to vary with the tape’s intended use—making a 70-dB dynamic range, for example, excellent for recording from FM, but standard for live recording of a jazz band.

Of course, that raises another question: How are we to cope with two interrelated parameters when both are influenced by use? Take, for instance, the matter of headroom. Midrange headroom is very important, but only up to the level where the recordist stops using it—a point that depends on the recordist’s style and the equipment. If it’s possible to pin the meter (that is, drive it all the way up) without exceeding the headroom, few recordists—even those with three-head decks that permit monitoring during recording—would be willing to trust the tape’s rated limits over the testimo-
Once again, JVC harnesses higher tech in the pursuit of higher fidelity.

The power of higher tech, harnessed by superior engineering. Once again, it's the mark of JVC's leadership. Even in the realm of moderately priced components like these.

The intricacy of JVC turntable design.
You see it, and hear it, in attention to subtle, yet significant details. Like a straight, low-mass tonearm with tracing hold to stabilize tracking. And quartz control to insure virtually perfect platter rotation.

Powerful, yet musically pure receivers.
A JVC innovation called Super-A removes subtle forms of distortion. So musical overtones and transients are amplified intact for a pure, musically natural sound. Add graphic equalization and quartz tuning, and you have receivers unsurpassed for performance and versatility.

The innovators in metal cassette decks.
It was JVC who first put together the technology needed to record metal tapes. Now we've added Dolby C for ultra-quiet recordings. Plus features like Music Scan to find selections automatically. Spectro-Peak metering. Logic controls, digital indication, memory and more.

Speakers more precise than the ear itself.
Our Dyna-Flat ribbon tweeter extends to 100 kHz, higher than the ear can hear. By doing so, it helps provide correct amplitude and phase characteristics in the audible range. So music takes on the focus, detail and spatial image of live sound.

Your JVC dealer is waiting to demonstrate the full new line of higher tech components. Computerized tuners. "Thinking" tonearms. Self-optimizing cassette decks. Higher tech engineering all focused on one goal — achieving the highest fidelity possible.

* Dolby is a registered trademark of Dolby Laboratories.
For the first time a music system and the listening environment have been designed together.

The performance of even the best home music systems is limited by the acoustics of the environment, the placement of the speakers and the location of the listeners. These important factors are beyond the control of the designer.

Three years ago Delco Electronics, General Motors Car Divisions and Bose Corporation began research to design a music system with, and for, its environment. The acoustics of the car were measured, the speakers precisely placed, and the known locations of the listeners were considered in the design. The result is a music system designed differently for each automobile body, but with one element in common—the performance!

And how much difference does this new design concept make? We let hundreds of people listen to the Delco-GM/Bose Music System during its development. From musicians to people who had not believed that music was important in their lives, the reaction was the same.

But if we say more we might bias the experience you will have when you visit your GM dealer. "Just try not to get excited!"

Sound so real, it will change how you feel about driving.


Available as a factory-installed option on Cadillac Seville and Eldorado, Buick Riviera, and Oldsmobile Toronado.

A totally new class of music systems from Delco-GM.
Great Scott!  
A Tiger of a Tuner!

It has been some years since we tested a Scott tuner. Audiophiles with long memories are still sighing over the LT-112B, a superb tuner when we tested it in '66 and one of Scott's last great kit models. Well, friends, you can put away your LT-112Bs: for all its sterling qualities, it has been altogether eclipsed. Behind the slim faceplate and modest pricetag of the Model 558T lurks a tiger of a tuner.

Not that it's gussied up with the sort of pyrotechnical features of some of today's fancy models; on the contrary, this is a relatively simple digital tuner with memory that just happens to perform better than most of the competition. Its design centers around a four-gang PLL frequency-synthesis front end with a pulse-filtration circuit to control the noise that is a by-product of digital switching.

The AM and FM bands have seven station memories each. The AM section strikes us as distinctly above average. Scott's products are distributed widely in Europe, where AM services are quite important, so it follows that a good deal of attention has been paid to this tuner's AM circuitry. In fact, if you look closely at the fluorescent display panel, you'll see faint designations for MW and LW—medium wave and long wave, respectively. (The European version of the 558T, in fact, offers all three bands—MW is what we call AM, while LW lies at lower frequencies yet—with somewhat different front-panel switching.) Also present, but unused in the U.S. version, are an extra digit in the number display and marks on either side of the TUNED indicator, evidently to indicate which direction to tune in the narrower frequency steps of the European version. Our model steps along smartly in full-channel increments: 200 kHz for FM and 10 kHz for AM.

The tuning system is fairly conventional. In the manual mode, UP and DOWN bars (actually, opposite ends of a single rocker element) step the tuner each time you apply gentle pressure, allowing you to audition each channel as you go. Pressing harder tunes the 558T rapidly, with no audible output. The automatic mode keeps stepping until a receivable channel is reached. The muting operates while the tuner is in transit, but not when it is set to a frequency where there is no receivable station. To avoid the roar of uninhabited channels, use the automatic mode, which stops only at occupied frequencies. To store a particular station, press MEMORY and a corresponding area of the fluorescent panel lights for a few seconds, during which the station can be entered.

To help you orient a rotatable antenna for the best signal, there is a multi-element signal-strength indicator, shaped something like a hysteresis curve, on the fluorescent panel. Though it has six segments, the top two come on together in our model, yielding five functioning levels of differentiation—more than most of today's tuners afford. Furthermore, the LEDs' signal thresholds are well distributed: the first illuminates at 16 dBf, and the remaining ones occur at fairly even intervals of about 10 dBf, up to 54 dBf for the top two elements.
### Signet's Hand-Crafted Cartridge

**Signet TK-7LCa** fixed-collar phono cartridge, with Straight Line Contact multiradial diamond stylus.


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They thus cover the range from marginal mono reception (about 55 dB of quieting) to maximum mono quieting (74 dB) and nearly full stereo quieting. (In this area, the meter on the old LT-112B—which measured multipath as well as signal strength—did outperform those on the large majority of today's tuners, including the 558T, because of its response to much smaller increments.)

An unusual feature of the back panel is a captive, permanently attached one-meter output cable to feed your amplifier. It seems a sensible length, though some users may grumble that it's a little too long or too short to be ideal for their particular systems. The usual AM bar antenna is included, along with binding posts for a long-wire AM antenna and an FM-antenna downlead. For 75-ohm coax, there is a binding post for the hot lead and a collar for the grounding shield—a common arrangement in current equipment. (One of these days, some enterprising company is going to realize that the popularity of coax is on the increase for both FM and TV use, that video recorders have made the so-called F connectors the standard for such use, and that it would be a logical convenience to standardize on those connectors for quality FM tuners as well. But that day is not here yet.)

Areas in which the 558T's performance particularly shines include sensitivity, frequency response, and channel separation. Actually, Scott could have sacrificed more of its exemplary channel separation to the BLEND, which takes more of a nibble than a bite out of the hiss on weak stereo stations. Also exemplary is the degree to which the pilot and subcarrier frequencies are suppressed. And, at 4 dB, the adjacent-channel selectivity is unusually good (the alternate-channel's is slightly less so). But there's no respect in which this tuner cannot be characterized as good or better. As a whole, it represents a performance level that belies its moderate price.

**Circle 98 on Reader-Service Card**

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**In the detail shown here, the 558T's neat visual display tells us at a glance that we're perfectly tuned to a very strong FM stereo broadcast on 90.3 MHz, which also happens to occupy the fourth memory preset position.**

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#### FM SENSITIVITY & QUIETING

- **Stereo sensitivity (for 50-dB noise suppression)**
  - 111/2 dB at 98 MHz
  - 801/2 dB at 106 MHz

- **Stereo quieting (noise)**
  - 101/4 dB at 98 MHz
  - 81/2 dB at 106 MHz

<table>
<thead>
<tr>
<th>Frequency (MHz)</th>
<th>Mono S/N ratio</th>
<th>Stereo S/N ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>98</td>
<td>69 dB</td>
<td>74 dB</td>
</tr>
<tr>
<td>106</td>
<td>72 dB</td>
<td>74 dB</td>
</tr>
</tbody>
</table>

| Selectivity (alternate-channel) | 531/2 dB |

<table>
<thead>
<tr>
<th>Mono sensitivity (for 50-dB noise suppression)</th>
</tr>
</thead>
<tbody>
<tr>
<td>111/2 dB at 98 MHz</td>
</tr>
</tbody>
</table>

- **Muting threshold:** see text

---

**Stereo Pilot Intermodulation**

- **0.15%**

**IM Distortion (mono)**

- **0.037%**

**AM Suppression**

- **531/4 dB**

**Pilot (19 kHz) Suppression**

- **76 dB**

**Subcarrier (38 kHz) Suppression**

- **109 dB**

---

**Signet has always stressed the importance of combining craftsmanship with technology, apparently feeling that the latter alone is not enough. This attitude is reflected throughout the current TK series of moving-magnet cartridges, which are individually tweaked and tested for maximum performance. Judging from the TK-7LCa, which is medium-high in the line (there are four models below it and two above it), the results are well worth the extra effort.**

The TK-7LCa uses two coils per channel, each wound with a single low-oxygen copper wire without solders or welds for maximum efficiency. The coil cores are of Signet's laminated UniCore construction, with integral pole pieces for minimum loss at high frequencies, and there are separate magnets for each channel for maximum separation. Compliance and damping are said to be hand-adjusted for each cartridge during assembly. A nude-diamond Straight Line Contact multiradial stylus is mounted into the TK-7LCa's tapered beryllium-rod cantilever by means of a laser-bored square hole. The square shape of the diamond's shank reduces tip mass and helps assure correct orientation in the cantilever.

The tracking-force recommended is a range: from 0.8 to 1.6 grams. Diversified Science Laboratories put the pickup...
From the Driving Force:

A powerful solution to underpowered car stereo.
Panasonic High Power.

The awesome power of the Driving Force is unleashed through the 40-watt Panasonic High Power car stereo.

Forty watts, 20 per channel, to pump out your music the way you want it. Forty watts for clean, crisp highs, thundering lows and everything in between. And that's just the beginning.

In the cassette player, there's Dolby noise reduction to cut tape hiss down to size. Locking last forward/reverse trees your hands. The 3-mode tape selector gives you metal, chrome and normal tape capability. And Radio Monitor lets you listen to the radio without ejecting the cassette.

The FM Optimizer minimizes high end noise and enhances FM signal reception. INQ circuits reduce interference from power lines, passing traffic and your car's own engine. The adaptive front end helps the tuner maintain optimum sensitivity for maximum reception.

There are 4-way faders as well as separate bass and treble controls to help balance the sound.

Feel the power of your music with High Power from Panasonic.

Panasonic car audio
The driving force
through our standard "torture test" (actually, certain cuts on the CBS STR-120 and STR-100 test records) at the minimum value in that range without misadventure. For the remainder of its tests—and for our listening tests—a median value seemed more prudent, and 1½ grams was adopted for both. Vertical tracking angle matched the 20-degree spec in the low-frequency test; at midrange frequencies, where rake angle begins to play a part in the results, the apparent VTA measured a little lower, suggesting that the rake angle is nearly as good as the VTA. (Both are influenced somewhat by vertical tracking force, of course, because cantilever attitude varies accordingly.)

The resonance figures in the SME tonearms suggest the TK-7LCA will have little trouble tracking warps—and, indeed, we had none in our listening tests, even with a somewhat more massive arm. They do indicate, however, that the Signet could be kept even farther out of harm's way in this respect by mounting it in a lighter arm.

The SME is moderately bulky by today's standards; with it, the arm/carridge resonance falls half-way between the worst warp range (around 5 Hz) and the optimum frequency (around 10 Hz). The lighter the arm, the higher the arm-carridge resonance, but even an extremely light arm should not raise the resonance into the audible range (above 20 Hz).

Sanyo's Sane and Simple Deck


THOSE FOR WHOM a $230 cassette deck is at the bottom, rather than the top of the price spectrum may be somewhat put off by Sanyo's sometimes extravagant description of its Plus Series cassette deck. Don't be. The D-57 may not be as ultrasophisticated as some of the company's product literature suggests, but it's a very nice deck and an excellent value nonetheless.

It employs a combination record/play head and is equipped for both Dolby B and Dolby C noise reduction. There are three tape-selector options: ferric, "chrome," and metal. The peak-reading level display is calibrated from -20 to +6 dB, with increments of 3 dB or less per step from -7 dB up (and a "cal" mark at 0 dB, which is curious since you can't calibrate the deck in normal use). The fanciest touch is what Sanyo calls AMSS (Automatic Music Select System), which seeks out the blank spaces between selections in either direction of fast wind and begins playback when it finds one. The spaces should be at least four seconds long and reasonably noise-free. The AMSS works about as well as A/B comparisons, it's hard to imagine how the sound of the TK-7LCA could be improved on. We considered it exceptional on every record we subjected it to and a challenge for any cartridge on the market—fixed-coil or moving-coil—at any price. Circle 95 on Reader-Service Card.
Because Sony redesigned the car stereo, the auto makers don't have to redesign the car.

The interior of an automobile is designed with a lot of purposes in mind. Unfortunately, great stereo sound reproduction isn't one of them.

Fortunately, Sony did more than just tackle this problem. They actually solved it. By designing a stereo system that meets the acoustical challenges inherent in a car.

**INTRODUCING THE SONY SOUNDFIELD™ SYSTEM.**

As the very name of our system indicates, we started with the acoustical sound field itself by treating the entire front of the car as a stage. The very directional high-end and mid-range frequencies emanate from this stage in an accurate stereo image.

Two Super Woofers at the rear create deep, dramatic bass.

The bass frequencies below 100Hz actually are directed from the rear of the car, where the Super Woofers are placed. However, since these frequencies are omnidirectional, they seem to be coming from the proper "stage" location.

The result is richer, fuller, and more dramatic bass.

**CONVERT WITH COMPONENTS.**

The optimum SoundField System consists of a powerful amplifier (XM-L20) driving a pair of 8" Super Woofers (XS-L20), along with a medium-powered amplifier driving the front speakers. This means full-range speakers can be used without risk of modulation distortion.

But you can begin to enjoy the SoundField System simply by adding one of our lower powered amplifiers and the Super Woofers to the car stereo you already have. Then you can slowly build up your system, adding a higher powered amplifier, more speakers, and an equalizer.

**A SOUND THAT TAKES A BACKSEAT TO NONE.**

Although the technology of the Sony SoundField System is complex, the reason for it is simple. It will give you high dB levels with very low distortion, extremely precise stereo imaging, and an amazingly broad frequency response. In addition, you'll be pleasantly surprised at just how easily a SoundField System can be installed in your car.

So come into your local Sony dealer and ask to hear the next generation in autosound systems.

One listen and you'll know why the auto makers don't have to redesign the car.

**SONY THE ONE AND ONLY**

So the highs come across clear and soaring. The midrange, natural and accurate.

The bass frequencies below 100Hz seem to come from the front "soundstage."
...and then came the SE-9.

35 years ago, to satisfy listening preferences, serious music lovers had to redesign their listening rooms. Remove the drapes. Add a rug here. Rearrange the upholstered sofa there. Get rid of that crystal chandelier! Bass and treble tone controls came later, and they helped—but only a little. When you needed a boost in that lowest bass region, you had to accept boosted upper bass and mid-range tones as well—whether you needed them or not.

By 1958, the first equalizers appeared. They allowed you to alter specific bands of tones to suit the needs of the listening room—and the music program. With special mics, a pink noise generator, and a real-time analyzer, you could electronically adjust your system to your listening preference. If—that is—you didn’t mind spending several thousand dollars and a half hour adjusting and readjusting controls to enjoy a half hour of listening.

Then came Sansui’s remarkable SE-9 Compu-Equalizer. It takes the guesswork and the frustration out of equalization. At the touch of a button, the SE-9’s built-in pink noise generator feeds its signals first to one speaker, then the other. Sounds picked up by the SE-9’s calibrated microphone are then analyzed by its microprocessor. Sit back and watch in amazement, as the SE-9’s motorized system moves each of its 16 fader controls (8 per channel) to create the curve that yields precisely flat response at your preferred listening location.

Touch another button, and the curve is memorized for future, instant recall. Move to another location—even another room—and the SE-9 can create and store a new curve—up to four of them.

At last, after 35 years, a perfect equalization system without errors or frustration. And, at a price that makes perfect equalization affordable for all serious music lovers.

See the SE-9 and Sansui’s truly complete line of high quality components and systems at your Sansui dealer today. Or write to us for details.
A Quick Guide to Tape Types

Our tape classifications, Type 0 through 4, are based primarily on the International Electrotechnical Commission measurement standards.

Type 0 tapes represent "ground zero" in that they follow the original Philips-based DIN spec. They are ferric tapes, called LN (low-noise) by some manufacturers, requiring minimum (nominal 100%) bias and the original, standard 120-microsecond playback equalization. Though they include the "garden variety" formulations, the best are capable of excellent performance at moderate cost in decks that are well matched to them.

Type 1 (IEC Type I) tapes are ferrics requiring the same 120-microsecond playback EQ but somewhat higher bias. They sometimes are styled LH (low-noise, high-bias) output formulations or "premium ferrics."

Type 2 (IEC Type II) tapes are dual-layered ferrimicrives, implying the 70-microsecond ("chrome") playback EQ. Approaches to their biasing and recording EQ vary somewhat from one deck manufacturer to another.

Type 3 (IEC Type III) tapes are dual-layered ferrimicrives, implying the 70-microsecond ("chrome") playback EQ. Approaches to their biasing and recording EQ vary somewhat from one tape manufacturer to another.

Type 4 (IEC Type IV) are the metal-particle, or "alloy" tapes, requiring the highest bias of all and retaining the 70-microsecond EQ of Type 2.

CONVERSION TABLE FOR POWER OUTPUT

<table>
<thead>
<tr>
<th>WATTS</th>
<th>dBW</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.00</td>
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</tr>
<tr>
<td>1.25</td>
<td>1.00</td>
</tr>
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<td>6.30</td>
<td>8.00</td>
</tr>
<tr>
<td>8.00</td>
<td>9.00</td>
</tr>
</tbody>
</table>

运输控制在上面的测量。拥有者的手册，是对其比更平均的进行产品，描述这些控制为“推按钮”。事实上，它们是接触点，它们可能更高，当您刷一把刀在他们暗暗地。尽管只有更新的锁和PAUSE是被符合与推LEDs。它有时很难确定，对于刀片是做什么你理解，尤其是当你可以监视从刀片中进行录制的。然而，一个开关在它的 analyzer我们通常认为它更多是，在刀片中。一旦我们变得熟悉与这个刀片和它的"feeling"，我们的初步焦虑倾向于蒸发。

推按钮控制是主要的，因为它们切割的喂养信号，作为你触摸它们并且服务于没有其他功能，如果你想要去从MUTE到PAUSE，等待的下一个选择来开始。你可以保持你的触摸在MUTE而你催促用于PAUSE的。推面板本身很乱。然而，它没有自动推拉，许多不平等推按钮控制采取的，将终止的播放不规则化，当该刀片重新启动。如果你开始在音乐中中间，你可以将它的干涉性在D-57。但你也有无缝的推按钮（没有"hole"从推按钮）如果你停止并开始充满尖锐，被声音（像掌声或嘶嘶）或在停止期间的，我们将考虑这个一个重要的优势的，对于各种编码。最可取的是录制的水平控制，谁的完全独立的元素

使它很难保持信道平衡。例如，来做。

性能通常是相当不错的，尽管你不会找到闪耀的响应在极端的高或低，你将与三个刀片的装置匹配，有一个推多普勒滤波器切换的刀片。但是，即使对于这样的“高级”刀片，低音响应是比其他比D-57更少的。

Sanyo建议了三个TDK刀片，对于DSL的测试：SA是Type 2（"chrome"）Ferricobalt，MA是Type 4铁磁，和D是FeCo。在这三个，我们已经称为后者"Type 1"，它在某种程度上，我们已经给定D作为Type 0——这是一个相对便宜的modest ferric。它已经煮沸了小部分一点由小，然而，和它今天的特点是更好的分类为一个Type 1刀片而不是D-57。D-57做得很好，它在，任何事件。结果，包括Dolby tracking，和三组刀片通常不比好，对于一个在价格等级的刀片，除了微不足道的降低的（在刀片的系统），在该D-57，对于最大THD计算近1%与所有三刀片。

一个$300的Cassette刀片是的也不错有，但不希望有时候，是一个罕见的这类。Sanyo Plus entry是这样的：在事实上，有些用户可能找到它显示他们更好，它看起来更美，比许多刀片在两次的价格。

Circle 97 on Reader-Service Card
IT'S NO SURPRISE that most of the loudspeakers on the U.S. market are made in the United States. But it does puzzle us slightly that so few Canadian manufacturers have brought their products south. England, an ocean away, is better represented. This is beginning to shift, however, and the company perhaps most responsible is Mirage Acoustics.

The Model 2.5 is the second Mirage loudspeaker we have reviewed. The first (which has now been replaced in the line) was a medium-size two-way system called the SM-1 (test report, April 1981). Differences between the two are in emphasis and refinement, rather than in basic approach. Like the earlier speaker, the 2.5 is designed for use on short stands (which are available separately as a kit for a modest price) and uses first-order (6-dB-per-octave) crossovers for best phase response.

Unlike the older speaker, however, or any of Mirage's other current models, the 2.5 is a three-way system, with a 10-inch woofer, a 4-inch midrange, and a 3/4-inch dome tweeter. The company had until now been reluctant to build a three-way, feeling that almost all such systems were flawed by response anomalies originating with their midrange drivers. A considerable part of the design effort for the 2.5 therefore went into the development of a satisfactory "squawker," as the British sometimes call them.

Physically, the 2.5 is tall and slender, with a walnut- or oak-grain vinyl finish and a dark brown grille cloth. The speakers come in mirror-image pairs, with the midrange and tweeter set close together in a vertical line and offset toward the inside edge of the cabinet. Amplifier connections are made to color-coded binding posts inset in the back panel.

Except where otherwise noted, Diversified Science Laboratories made all of its measurements with the right-hand speaker set on one of Mirage's 10-inch-high stands about three inches from the rear wall and away from any side walls. Power handling was excellent. The 2.5 accepted without strain the full power of the test amp (63½ volts peak, equivalent to 27 dBW, or more than 500 watts, into 8 ohms) on 300-Hz tone bursts. On the more stringent, if somewhat less realistic, 300-Hz continuous-tone test, it handled DSL's maximum level of 28.3 volts (equivalent to 20 dBW, or 100 watts, into 8 ohms) without excessive distortion or buzzing.

Total harmonic distortion (THD) was, as one would expect from the power-handling performance, agreeably low. At a moderately high sound pressure level (SPL) of 85 dB, it averaged about 0.4% over the entire test range (30 Hz to 10 kHz) and about 0.5% from 80 Hz up. Distortion increased gradually at higher levels, but did not become really significant until a very loud 100 dB SPL was reached. These are fine results.

The 2.5's sensitivity proved moderately high. In addition, its impedance curve is exceptionally smooth and for the most part reasonably high, with a maximum of 10 ohms at approximately 50 Hz and a minimum of 6.8 ohms above 250 Hz. The overall minimum, however, is 3.6 ohms at approximately 90 Hz. This alone should be no problem for most amplifiers, but we would recommend against running a pair of 2.5s in parallel with another set of speakers.

Frequency response is very smooth, remaining within ±4 dB from 40 Hz to 20 kHz on axis and within ±4.5 dB from 40 Hz to 16 kHz off-axis. DSL also ran curves (not reproduced here) with the 2.5 placed forty inches from the rear wall. They start rolling off about an octave higher in the bass, because of the loss of reinforcement from the rear wall, but are otherwise slightly smoother than the curves made with the speaker against the wall. The on-axis curve stays within ±3½ dB from 80 Hz to 20 kHz, and the off-axis response was within ±3½ dB from 70 Hz to 16 kHz. Indeed, in this position, the off-axis response was flat within a mere ±1½ dB from 100 Hz to 2.8 kHz—a range that encompasses the entire musical midrange, plus a healthy swath of the upper bass and lower treble. In both positions, the advantage of a very small tweeter was evident in the treble extension of the off-axis curves, indicating excellent dispersion.

In the listening room, we experimented a bit and finally placed the 2.5s about midway between the two positions DSL used. (The speakers do not seem overly placement-sensitive.) Their overall sound is smooth, clean, and transparent. To whatever small extent they deviate from neutrality, it is in the direction of a slightly warm sound, which is not generally displeasing. One of this speaker's nicest qualities, in fact, is the sense of authority and solidity it projects. Imaging is precise and well maintained, especially laterally. In short, the Mirage 2.5 generates a very credible illusion of the real thing for an altogether reasonable price. And it looks nice, besides. If it fits your budget, it's well worth a listen.

Circle 94 on Reader-Service Card

Report Policy: Equipment reports are based on laboratory measurements and controlled listening tests. Unless otherwise noted, test data and measurements are obtained by Diversified Science Laboratories. The choice of equipment to be tested rests with the editors of High Fidelity. Samples normally are supplied on loan from the manufacturer. Manufacturers are not permitted to read reports in advance of publication, and no report or portion thereof may be reproduced for any purpose or in any form without written permission of the publisher. All reports should be construed as applying to the specific samples tested. High Fidelity and Diversified Science Laboratories assume no responsibility for product performance or quality.
JBL Automotive Loudspeakers.

When you understand how well they're put together, the argument for buying anything else simply falls apart.

A unique flat-wire voice coil (Patent applied for) helps JBL Automotive Loudspeakers achieve both high efficiency and high power capacity.

Each speaker features a die-cast aluminum frame to ensure complete freedom from warping or corrosion.

The loudspeaker's magnetic structure produces a symmetrical magnetic field around the voice coil gap of the low frequency driver. This design provides a dramatic reduction in distortion.

You're looking at the inner workings of a remarkable automotive product. It's manufactured to tolerances so precise that they actually rival those found in critical engine components. It incorporates some of today's most advanced metalworking and chemical engineering techniques. And its performance is unsurpassed.

The product is JBL's T545, 3-way automotive loudspeaker. Part of a full line of new JBL speakers designed with innovative features you can see as well as hear. Each model, for example, utilizes a rugged die-cast aluminum frame to ensure tight tolerances and complete freedom from warping and corrosion. The loudspeakers also feature large, long-exursion, flat-wire voice coils. This design uses the magnetic field in the voice coil gap more efficiently so the speakers need less power to operate.

And that's only part of the story. Through the use of large-diameter, high-temperature voice coil formers and the latest in high-temperature adhesive technology, power capacity has also been improved. Combined with the loudspeakers' high efficiency, this provides outstanding dynamic range and significantly higher maximum sound output.

Other features include a massive, barium ferrite magnetic structure, powerful high frequency and ultra-high frequency drivers, and biamplification capability on 6 x 9-inch models.

Of course, the best way to appreciate their advanced engineering is to audition them for yourself. So ask the audio specialists at your JBL dealer for a complete demonstration of JBL Automotive Loudspeakers. Once you hear them, the argument for buying anything else will simply fall apart.
A Dynamite Amp from Acoustat

Acoustat TNT-200 power amplifier, in metal case. Dimensions: 17 by 5 inches (front), 14 inches deep. Manufacturer: Acoustat Corp., 3101 Southwest First Terrace, Fort Lauderdale, Fla. 33315.

RATED POWER 23 dBW (200 watts/channel)
OUTPUT AT CLIPPING (both channels driven)
8-ohm load 23 1/2 dBW (240 watts/channel)
4-ohm load 25 dBW (320 watts/channel)
16-ohm load 21 1/2 dBW (140 watts/channel)
DYNAMIC HEADROOM (re rated power, 8-ohm load)
+11 dB
HARMONIC DISTORTION (THD: 20 Hz to 20 kHz)
at 23 dBW (200 watts) ≤ 0.259%
at 0 dBW (1 watt) ≤ 0.02%
*See text

IT HAS BEEN SAID that all power amps sound the same, and indeed, ones with similar specs—at least for power, distortion, and so forth—are normally almost indistinguishable, leaving reviewers the unenviable task of comparing the virtually identical. On rare occasions, however, we come across a power amplifier that is different in concept and, very subtly, in sound. Such is the case with the Acoustat TNT-200.

The Acoustat is not the first power amp to use MOS FET (metal-oxide semiconductor field-effect transistor) output devices. Nor is it the first design of this type to pack 200 watts per channel. But it is novel in the way its circuitry uses these devices, whose potential Acoustat feels is not fully exploited in conventional configurations. (See "How It Works.")

Power FETs cost several times as much as comparable bipolar transistors, but they offer certain significant advantages. They are more linear and therefore generate less high-order distortion; they have low output conductance—another way of saying that the input is relatively unaffected by what is happening at the output; they have no "storage effect," and thus have a very fast response time.

Most important, the current through a supply voltage must therefore be higher than in a similarly-rated bipolar amplifier, which causes a substantial loss in efficiency and greater heat generation.

Furthermore, a FET's input impedance is highly capacitive. Because a source-follower doesn't have any voltage gain, its input voltage must be the same as its output voltage. And to charge the input capacitance to that voltage requires considerable driving current. Without such (essentially wasted) drive, the amplifier's slew rate (the maximum rate of change of the output voltage in response to high-level signals) is reduced. Thus, reasoned Acoustat, a source-follower is not the answer. A FET output stage should have voltage as well as current gain, just as tube circuits do.

The classic FET configuration for voltage gain is called the common-source topology. However, it is difficult to use in a balanced complementary-output stage without introducing a driver transformer, which would degrade performance. Instead, Acoustat has resurrected an old tube circuit that has ground-referenced inputs and "floating" power supplies, with the speakers connected to the ground return of the power supplies. (In such a circuit, neither output terminal can be allowed to short to the chassis.) The power supply for the output stage is separate from the one that feeds the low-level stages, and only the output supply fluctuates with the signal.

Acoustat did have some problems closing a conventional feedback loop with this configuration, so the company developed (and has patents pending on) a unique and rather elaborate feedback topology. The inspiration for the technique came with the realization that signal gain and error gain are not inversely connected and that it is possible to eliminate distortion without reducing gain to unity (as is customary in bipolar emitter-follower output stages).

The TNT-200's first stage is a "transconductance amplifier"—that is, one in which the output current is proportional to the input voltage (and, implicitly, one in which the output voltage does not affect either). The next stage is a "transresistance amplifier"—one whose output voltage is determined by its input current (and is unaffected by its input voltage). There is a point between the two stages where whatever voltage is present represents output error (since if the amplifier were perfect, no voltage would exist at that point), current represents signal, and the two are independent of each other. Voltage feedback, from this point to the input tends to "precorrect" the output and load nonlinearities (in effect, anticipating the behavior of the output stage and its load), thus creating the low output impedance and low distortion of a unity-gain stage while maintaining the desired output-stage voltage gain.

In actuality, there are three feedback paths in the Acoustat topology. One, which carries voltage feedback from the output to the input, is conventional in every respect. The second, from the node between the transconductance stage and the transresistance stage to the input, is a positive feedback loop that serves to precorrect the system, as described above. (Acoustat calls this complement feedback.) The third, called the anisotropic loop, carries negative feedback from the output to the interstage node.
You'll be sold on our DRS 900 amplifier after just one peak.

Our new DRS 900 amplifier will bring you as close as you can get to concert hall sound without buying a ticket. How? Power and lots of it. And after all, who knows more about high power amplifiers than Phase Linear? We became known for them back in the days when everyone’s idea of good stereo was loud stereo. If you could blow the windows out of your home, you had a good stereo. And nothing could blow out windows like an amplifier from Phase Linear. Well, the volume era is over. The quest for purity is on. The trouble is, you just can't get pure sound reproduction out of a low power amplifier. You need lots of power...power for purity. Advances in recording technology like direct-to-disc and digital audio disc recordings require enormous amounts of peak power. Without it, the amplifier simply clips the peaks leaving you without the full musical experience. For example, accurately reproducing the final cannon shot from a digitally recorded version of Tchaikovsky's 1812 Overture can require 900 watts of peak power! And that's at reasonable volume levels. That much power is needed because the dynamic range (the ratio of the loudest note to the residual noise) of a digital audio disc is about four times that of a conventional record.

Our DRS 900 handled the previously mentioned cannon shot. No clipping, no distortion. Yet, the DRS 900 is conservatively rated at 150 watts per channel RMS (see specifications). You see, efficient power is the key. The DRS 900 has a dual voltage power supply. It operates at an efficient 150 watt capability. Then, when the music approaches a peak requiring more dynamic headroom (more power to keep it from clipping), the secondary supply kicks in, instantly providing up to 900 watts of peak power per channel! A conventional 150 watt amplifier has a peak power rating of just about 300 watts. Keep that in mind the next time you're comparing amplifiers. Don't go by RMS alone. You have to compare dynamic headroom, too. When you do, you'll be sold on our DRS 900.

See the entire line of Phase Linear audio components at your Phase Linear Dealer, today. For the address of the dealer nearest you, call us toll free at (800) 323-4815. In Illinois call (800) 942-8833. Or write us at 4134 N. United Parkway, Schiller Park, IL 60176. Oh, and remember to give us your address so we can send you a copy of "The Phase Linear Report: Power for Purity." It's an exciting analysis of audio amplification in the eighties. We think it should be required reading for anyone serious about audio.
beyond the range of audibility, does THD however, even with the traces of third and is not high enough to be audible on music, granted with top-of-the-line power amps. It was greater than we have come to take for bench, although distortion at rated power

Diversified standards and FTC regulations, respectively.

ing and setting specifications (per IHF stan-

ers for a generation now. Not so Radio Shack’s Realistic brand, which has always tried for a synthesis of the most popular performance points and features at the lowest possible price. Realism, in this case, is a matter of devising a product for which the demand is already in evidence. Realistic products are, to that extent, quite the opposite from the sort whose rugged individualism may or may not be carving a track to the future at any price. There is a place for both approaches, of course, and Radio Shack has steadfastly maintained the Realistic niche for a generation now.

The STA-2200 is a digital AM/FM receiver with six presets for each band, muting (which influences the sensitivity of

FET decreases with increasing temperature, rather than the other way around, so FETs are not prone to potentially destructive “thermal runaway” the way bipolar are. As a result, they do not require the extensive protection circuitry that, in some conventional configurations, requires as many components as the amplifier itself, if not more. To the extent that activation of the protection circuitry induces short-term, but severe, distortion when driving the complex load impedance presented by some loudspeakers, avoidance of such circuits will yield audibly superior results with at least those “difficult” speakers. It also ensures that the amplifier will deliver its rated power into reactive loads, as well as into the purely resistive loads used for testing and setting specifications (per IHF standards and FTC regulations, respectively).

The TNT-200 acquitted itself well on Diversified Science Laboratories’ test bench, although distortion at rated power was greater than we have come to take for granted with top-of-the-line power amps. It is not high enough to be audible on music, however, even with the traces of third and fifth harmonic that were present. Only at high frequencies, where the harmonics lie beyond the range of audibility, does THD approach 0.25%. Twin-tone intermodulation distortion remains below 0.1% all the way out to 20 kHz.

Frequency response is dead flat across the audio band and beyond, with bandwidth extending almost to radio frequencies. Noise is adequately low, and sensitivity is typical of amplifiers in its class.

A dynamic headroom of 1½ dB suggests a short-term “music-power” rating of 24½ dBW (275 watts) per channel into 8-ohm speakers. With 4-ohm loads, the music power is probably well over 25 dBW (320 watts) per channel (the point at which the power-line fuse blew in the continuous-power test).

The TNT-200 is protected by six 5-ampere slow-blow fuses: two for the power transformer, the others for the tripped complementary MOS FET output stages. A spare pair is provided with the unit, and between DSL’s bench tests and our listening tests, we went through those and another box besides. Occasionally, one of the power-line fuses blew on turn-on even when no signal was present. Acoustat advised that they may change the power-line fuses to 7-amp slow-blow types to avoid this problem. We finally decided to take that risk with our sample, to avoid the nuisance of removing the cover plate to reach the troublesome fuses. Once the swap was made, we had no more difficulties.

With the exception of the fuses, the TNT-200 has no internal protection for itself or the loudspeakers connected to it. On the bench, it did produce turn-on and turn-off transients, although these were not bothersome in the listening tests. One could connect external speaker-protection fuses, but these would diminish the amplifier’s extraordinary damping factor.

In addition to determining the damping factor at 50 Hz, DSL also measured it at higher frequencies, where it remained uncommonly high—well over 100 to beyond 10 kHz. This suggests an unusually high capacity for maintaining uniform frequency response into loudspeakers as well as laboratory resistors. (The frequency responses of amplifiers are sometimes influenced by reactive loads, especially if they are highly capacitive, as are most electrostatic loudspeakers and some specialty “low-inductance” speaker cables. This is similar to the effect that high-inductance cartridges have on the RIAA equalization of some phono preamps.) In fact, Acoustat claims that because of the TNT-200’s novel feedback circuit, impedance “looking out” of the amplifier is even lower than that “looking into” the output terminals. This would imply even greater ability to handle unusual loads than DSL’s tests suggest, but we could come up with no way to measure such a low impedance accurately in that direction.

Whether because of its extraordinarily low output impedance (the importance of which is a matter of debate) or some other undefined subtlety, the Acoustat TNT-200 is one of those rare power amps that does indeed sound very slightly different from more other amplifiers. Bass seems tighter, treble more crisply defined—extremely subtle differences, to be sure, but gratifying nonetheless.

Circle 96 on Reader-Service Card

A Realistic Receiver with a Fancy Touch

HIGH FIDELITY

34
Sony is about to widen your ideas of audio tape.

Sony's revolutionary UCX-S has the widest dynamic range of any high-bias tape. It has expanded recording capacity. We call it Wide Fidelity Sound™.

With UCX-S you can record at higher volume levels with less distortion than any other high-bias tape.

UCX-S has unsurpassed frequency response in the low and middle ranges. And at the very delicate high frequency ranges, its enhanced responsiveness gives exceptionally beautiful high notes.

The incredible specifications include Retentivity and Squareness higher by far than any other high-bias tape. Retentivity: 1800 Gauss. Squareness: 93%, an astounding figure.

But the real test comes when you lean back and listen. You'll hear everything with more clarity than you've ever heard before on a high-bias tape. On Sony UCX-S, with Wide Fidelity Sound.
FM SENSITIVITY & QUIETING

25
FM tuner section

Realistic STA-2290 AM/FM receiver. Dimensions: 191/2 by 36 inches (front panel), 15 inches deep plus clearance for controls and connections. AC convenience outlets: one switched, one unswitched (100 watts max. each). Price: $50. Warranty: "limited," two years parts and labor. Manufacturer: made in Korea for Radio Shack Division of Tandy Corporation, Fort Worth, Texas 76102.

Stereo response & channel separation

There are two full tape loops—each, atypically, fitted with a DIN input/output connector in addition to the usual arrays of pin jacks. Switching for dubbing and monitoring is unusually comprehensive and straightforward; during dubbing you can monitor either the playback or the recording deck—a function you're denied on many receivers fitted with dubbing selectors. There are two phono inputs, which share a single preamp; if you want to use one for a low-output moving-coil pickup, you will need an outboard step-up transformer or head amp. The phono impedance is complex, as its capacitance varies with frequency. Experience suggests that some pickups might benefit from this version, though we could find nothing amiss with the cartridges in our listening setup.

Vinyl's high frequency response, the bass and treble controls produce maxima of ±28 1/2 dB at 30 Hz and about ±35 dB at 15 kHz, respectively. These levels are higher than we normally encounter. Indeed, Diversified Science Laboratories had to run these tests at unusually low levels because +30 dB with respect to the usual testing level of 0 dBW, or 1 watt, would result in power levels 30 dB higher—in the kilowatt range—if all the downstream amplification stages had enough reserve to meet the demands imposed by the tone controls. (They don't, of course.) The cut positions measure -17 dB at 20 Hz and -21 dB at 20 kHz. With only moderate boost or cut, the bass and treble supply a desirable shelving response characteristic. The midrange control (which is centered on 1.5 kHz and thus might be called a low-treble control) operates over a more typical range with extremes of +8 1/4 and -7 1/2 dB. In our view, you'll get the best results by staying close to the center positions of all three. (At extreme boost settings, situations could arise where you might blow a speaker.)

The loudness compensation is more than sufficient. At DSL's standard test level, boost exceeded 15 dB in the extreme bass and 10 dB in the extreme treble. When DSL turned the volume down by 10 dB at which point its test setting was close to that used for moderate levels in our listening tests—bass boost approached 20 dB at 20 Hz. Thus the compensation is evidently designed to match acoustic levels with exceptionally inefficient loudspeakers.

In most respects, the tuner section is fairly typical of those in today's receivers. Sensitivity is somewhat lower than we're used to, perhaps, particularly toward the high end of the FM dial. But the STA-2290 holds its own on weak stations in our listening room when compared to tuners that measure several dB more sensitive. The blend feature (which many tuner sections don't have at all) is of marginal effectiveness, allowing rather than reducing the hiss on weak stereo stations. Selectively, in the usual alternate-channel figure shown in the data, is good and remains distinctly better than average even in the adjacent-channel measurement of 3 1/4 dB. Pilot and subcarrier suppression are among the best we have ever measured.

The power amplifier is rated at a hefty 90 watts (19 1/2 dBW) per channel by Radio Shack and actually puts out another 1 1/4 dB into 8 ohms on both a continuous and a dynamic basis, bringing the effective output with this load to about 120 watts. (Power output into 4 ohms is even higher, by a considerable margin.) Distortion at the 0-dBW testing level is below 0.01%, except at the extreme top of the frequency band, and consists exclusively of the relatively benign second-order products. At rated power, distortion increases most in the midband, where the third harmonic dominates the THD measurements, but is still well below the threshold of audibility.

We haven't seen many receivers with this much power or so many features for this price. And, though it's a small matter once you've become acquainted with the receiver, the owner's manual is quite easy to follow. The STA-2290 is not cheap, of course—no receiver this powerful could be—but it represents the kind of value we have come to expect from Radio Shack.

Circle 99 on Reader-Service Card
The Kyocera D-801
Cassette Deck with 3 motors
and a direct driven dual capstan...

With only 0.02% WRMS wow and flutter.

If you think 3 motors impress you,
think of what they can do for tape
performance. One drives our dual
capstans to insure constant and
highly accurate speed with remark-
able low wow & flutter of 0.02%. A
second motor drives both the take-up
and feed reels while the third motor
gently positions the record/playback
head against the tape surface. An
innovative approach resulting in
accurate head-to-tape positioning
and optimal head azimuth alignment.

But motors alone do not insure top
performance. That's where both
Dolby* B and C noise reduction
circuits come in, along with a Sendust
alloy tape head, electromagnetic
braking on both take-up and feed
reels; selectable bias and equaliza-
tion for all types of tapes, 30-20,000
Hz response range; full LED function
indication, feather-touch controls,
APMR for automatic program search,
auto stop, auto repeat, memory and
a full bank of operational controls
concealed behind a flip-down access
panel; plus the convenience of a
4-digit LED electronic timer/counter
for precise elapsed time, remaining
time, stopwatch and memory stop
and registering time and/or counter
reference of recorded programs...

But our most impressive feature
awaits at your local audio retailer...
a demonstration of the D-801...it's
just one of a very impressive list of
distinguished audio components and
systems from Kyocera...where the
future is now!

* Dolby is a reg. T.M. of Dolby Laboratories, Inc.
Record and Tape Care Products That Really Do Work

Somewhere on that dazzling display rack are at least ten well-wrought devices worth considering.

by Robert Long
Consulting Technical Editor

It must be written somewhere that there are plenty of bucks to be made from record and tape care accessories. Everybody and his brother-in-law seems to have jumped into the field, either as manufacturers or simply as merchandisers for products made elsewhere. But let the buyer beware: That wall of gadgetry near the checkout at your neighborhood equipment or record outlet usually contains as many ill-conceived products as legitimately useful ones. In the hope that you can avoid some of the misfortunes I've encountered, here is a synopsis of ten products—or types of products—that, in my experience, have proven truly useful.

Record Cleaning

Right off the bat, let me say that I look askance at any product that leaves a residue on records. (There is one exception, which I'll get to in due course.) All of the really gummy "antistatic" record sprays that I know of have been taken off the market, which is fortunate: From time to time I examine ruefully the early LPs I've ruined with such products and renew my vows never to make that mistake again.

Even more albums in my collection have suffered from an excess of old-fashioned moisture—or rather from the fungal damage that has resulted from leaving the records where they were unprotected from condensation, steam vents, or leaky pipes. Which is one reason why the Discwasher approach strikes me as eminently the sanest one around: Use minimum moisture, with minimum impurities in the moisture, and remove it as quickly as possible.

Don't expect miracles, however. The Discwasher's D-4 fluid and brush are designed to work together to remove most record pollutants safely and efficiently. Note the line of lint on the brush pad. Discwasher system is not adept at removing the sort of heavy soil that should never get on your records if you take adequate care of them. So if Kojak comes to listen and leaves his lollypop lying on the Brahms quintet, you'll probably have to resort to more radical measures. There's the old Ivory Liquid technique (wash in lukewarm suds, rinse thoroughly, blot moist, and dry in the most dust-free air you can find.) Safer and more convenient, though vastly more expensive, would be something like the Keith Monks or VPI record-washing machines, which use an alcohol solution as a cleaning agent and vacuum it away for quick drying.
The Q-Tip Solution

When it comes time to clean the grime (mostly oxide flakes) from tape heads, many recordists use Johnson & Johnson Q-Tips. They’re good, though they’re among the most expensive of their kind on the market. The garden-variety cotton swab usually holds its shape well—and may have a longer shaft, which can be either a help or a hindrance in reaching awkward spots in your recorder’s tape path, depending on its design. Some of the cheap brands tend to leave lint behind, so be sure to test them out before getting down to business.

While you’re in the drugstore, you might want to buy some pure isopropyl alcohol (accept no substitutes or additives) to use with the swabs. Most headgap materials are essentially insoluble in it. This is important: Should you dissolve the headgap filler along with the crud, you’ve ruined the head. If you’re in any doubt, buy a head-cleaning solution from the company that made your deck, though, on an ounce-for-ounce basis, that is usually more expensive.

Cotton swabs and a bottle of pure isopropyl alcohol (not rubbing alcohol) can serve as a nearly universal head-cleaning kit for tape decks.

No Warps, Please

When considering a place to store your record albums, think smooth, unbroken surfaces. Failure to observe this rule results in warpage, which in turn leads to mistracking and undue record wear. Whatever housing you buy should support the record in its jacket evenly across the entire surface. That lovely rack with the filigree ends that Aunt Eunice gave you is out; gadgets with wire dividers are even worse. The material of the housing—which can be wood, acrylic, styrene, even corrugated board—is less important than its stability and evenness.

Two examples of what not to do. Stacking records in this way only encourages warp age, and a wire rack doesn’t provide adequately firm or even support.

Boxed In

There are few cassette storage options as effective as the regular old two-piece Philips-style plastic box. It does a pretty good job of keeping out dust—particularly when the joint at the back is fitted with a labeling liner—and you can see in to identify the contents. In addition, it immobilizes the cassette hubs, preventing the formation of loose tape loops, which can cause snarls when you try to play the tape. The primary disadvantage of Philips-style boxes is that they break fairly easily. Admittedly, the empty boxes that are sold separately aren’t up to the quality standard of the better blank-tape brands, but they’re infinitely better than nothing. I’d recommend that any serious cassette recordist always have a few spares on hand.

The standard Philips-style plastic box that most cassettes come in also serves as an excellent storage container for the tapes.
Setting the Pickup Straight

Even when tonearms are correctly designed (which is by no means always the case), the instructions for mounting the pickup are often all too vague. The solution is a pickup-alignment "protractor," which lets you get a positive fix on the correct adjustment of your phono cartridge. These devices are available from ADC and DB Systems, among others; every serious audiophile should have one.

Cartridge alignment protractors, such as this one from DB Systems, enable you to install your phono pickup accurately in almost any tonearm.

Those Underthings

Acoustic-feedback problems [see "Retsiff's Remedies," October] can be among the most troublesome in audio, and I wish I could suggest a single product as a universal cure. Unfortunately, what's just the ticket for one system may make the problem worse in another. It all depends on what's causing the problem; the nature of the interactive masses and compliances involved, the physical design of the turntable, and so on. Various mounts and mounting feet are made specifically for this problem (Audio-Technica's Audio Insulator System, for one) and can be very helpful. There are also more mundane measures that may be just as effective, easier to find, and less expensive. Among the ones I've used over the years are rubber pads intended to prevent housemaid's knee when you're scrubbing floors, felt pads that are sold to keep office machines quiet, rubber or foam weatherstripping with adhesive backing, dabs of GE silicone glue, and so on. Don't be shy: Improvise. A thoughtful stroll through the neighborhood hardware store should suggest all sorts of additional possibilities.

The Big Blanker

To prevent noise pollution in reused tapes, there's nothing like the hand-held degaussers or "bulk erasers" that are sold by Nortronics and others. They're generally rated for tape packs as much as a 1/4-inch thick—regular open-reel audio tapes—and if correctly used will get any cassette, including metal, as clean as brand-new tape. The heavy-duty professional models rated for tape packs as much as two inches thick are far more expensive, so if you want to erase 1/2-inch video cassettes, try a hand-held model first. Mine does quite a respectable job.

Many cases of acoustic feedback (or "howl-back," as it's sometimes called) can be easily cured with a set of isolation feet under the turntable. Audio-Technica's are adjustable and come with a small spirit level.

A hand-held bulk-tape eraser, like this model from Radio Shack, can quickly and effectively return cassette, open reel, and sometimes even video tape to virgin quality.
Weight a Moment

If you've never tried a record hold-down device, you might be surprised by the degree to which they can improve the clarity of record reproduction in some systems. The choice of specific type or brand will depend on your equipment. There are two types. The most common looks like a hockey puck with a hole in the center and uses dead weight to damp vibration in the record. (Some turntables may wheeze a bit in trying to drive the extra load.) The alternative uses friction instead of weight and must be able to grip center the spindle: if your turntable's spindle is too short, this approach may not work.

Tall Tales

Tape editing is so fascinating that I'm surprised more recordists (at least those using open reels) don't get hooked on it. When the day comes that you need to splice two bits of tape together—as it surely will—nothing is an adequate substitute for a (preferably metal) Editall block (named after its inventor, Joel Tall) of the correct size for your tape format. In addition, you'll need a sharp single-edge razor blade and a roll of splicing tape a tad narrower than your recording tape. You can also buy splicing tabs in premeasured lengths. My favorite for 1/4-inch tape is the BASF dispenser rolls, available through Gotham Audio in New York.

Don't use wide tape and then try trimming down the overhang. That makes your splices more audible than they need be—which also is true of the indented cuts applied automatically by some splicing gadgets. And don't, under any circumstances, use mending tape: it will ooze adhesive, neatly gluing the tape layers together in the pack and depositing goo in your recorder when you play the tape.

Taking the Static

At the beginning, I said that I didn't approve of anything that would leave a residue on records—with one exception. That exception is Stanton's Permostat. It's the only record treatment I can think of for which all the tests I've examined have shown positive results. (And when I say "treatment," I mean products that are designed to leave a residue on the record's surface.) The mere absence of negative side effects is not the real point, of course; Permostat really does prevent the accumulation of static electricity, and the dirt it attracts, to a startling degree.

Stanton's Permostat leaves an ultrathin layer of antistatic compound in the record grooves. It comes in a spray bottle with a pad for distributing the solution.
Is Your Stereo System Obsolete?

The whens, whys, and hows of upgrading your present audio system by Peter W. Mitchell

One of the satisfying things about owning a high-quality music-reproduction system is the secure feeling that you have invested in something stable and lasting. Alas, permanence is illusory. Certain components in a stereo system are, by their very nature, evanescent: It is their destiny to be consumed in the process of providing listening pleasure. Moreover, if you read many advertisements and sales brochures for stereo equipment, you may get the impression that any product more than a couple of years old is seriously deficient and in need of replacement.

How rapidly do stereo components wear out or become obsolete? When is it wise to replace them, and why? Not surprisingly, the answers are different for each component category. They also depend on how much you value small improvements in sound quality and on how dissatisfied you are with the performance of your present audio system.

That's something only you can know, but we can provide some strictly equipment-related guidelines that may help you to decide whether, and when, to buy new gear. They are based on two considerations: how much your present components have deteriorated because of aging and the significance of the improvements made in newer equipment.

Cartridges

Let's begin with the smallest audio component: the phono cartridge. Its stylus slides along at an average speed of three-quarters of a mile per hour, so if you play records for just one hour each day, the stylus travels through more than a million feet of grooves per year. Every foot of the way, it rubs against the groove walls with an average pressure of several thousand pounds per square inch. Even diamond cannot withstand that kind of punishment. And unless you keep your discs scrupulously clean, the stylus tip also grinds against dust particles in the groove, which makes things even worse. After 500 to 1,000 hours of use, the tip begins to develop flat spots with sharp edges. This leads to increased distortion and, eventually, to record damage.

Of course, "everyone knows" that phono styli must be replaced after a year or two of regular use, so you don't need to be reminded here. Then again, maybe you do. Try this test: Search through your sales receipts to find out exactly when you bought your present cartridge or stylus assembly. If you are like most people, you may be surprised to discover how long it has been.

Even if you don't play records every day, you may not get much more life out of
difficult reception conditions, some design back to knob-and-dial manual tuning. You have lived with it, you won’t want to go tuning of your favorite stations; after you decide, however, that the cost of a new digital tuner is entirely justified by the marvelously different from those of a few years ago: They include frequency-synthesis tuning, digital displays, many pushbuttons, and no knobs. But these changes do not signify large improvements in audible performance. Digital tuning, for instance, greatly enhances ease of operation, but has little or no effect on the sound. You may well decide, however, that the cost of a new digital tuner is entirely justified by the marvelous convenience of instant dead-accurate tuning of your favorite stations: after you have lived with it, you won’t want to go back to knob-and-dial manual tuning.

If you have to cope with particularly difficult reception conditions, some design improvements may be genuinely useful to you. For example, if you live within a mile of a powerful transmitter that interferes with your reception of other stations, you will be happy to know that within the last two years a new generation of FETs (field-effect transistors) has substantially lessened many tuners’ susceptibility to front-end overload. On the other hand, if your problem is that you can’t get sufficiently noise-free reception of weak or distant stations, or if you cannot install a decent antenna to pull in clean FM signals, be informed that new tuners from NAD, Tandberg, and Carver have significantly better stereo quieting than anything previously available.

For most listeners in most locations, though, tuners of ten years ago are sensitive and selective enough and have low enough distortion and wide enough stereo separation, so that further improvements in these areas are unimportant. If your tuner was made within the last decade, the odds are that it has a MOS FET RF (radio-frequency) stage, a high-gain IC (integrated circuit) with ceramic filters in its IF (intermediate-frequency) stage, and a PLL (phase-locked-loop) stereo multiplex decoder. With these building blocks, its performance would likely be virtually indistinguishable from most of this year’s models in a direct A/B listening comparison. So before you buy a new tuner, try feeding your present one a stronger and cleaner signal from a better antenna. Even if you already have a good radio antenna, its lead-in wire may be badly weathered if it has been in place for several years. Replace the lead-in with new shielded twinlead or coaxial cable having heavy-duty insulation.

Amplifiers

No fundamental improvements have been made in the basic design of stereo amplifiers since about 1966, when the industry changed from germanium to silicon transistors. So if your amplifier was made within the last decade, and if it was correctly designed and well-built in the first place, there probably isn’t much reason to replace it. Should you want a more powerful amp, remember that you have to at least double the power to hear a significant difference. As for deterioration due to aging, solid-state amplifiers generally maintain their performance until something—usually an electrolytic capacitor—breaks down, and then replacing the bad part restores the original performance.

Note the important reservation in the preceding paragraph: “If it was correctly designed.” One of the important technological advances in recent years is that output transistors have gotten progressively better at handling with speaker impedances that are low and “reactive,” which require the amplifier to deliver high-current peaks that may be out-of-phase with the driving voltage. [See “The Uneasy Symbiosis,” October 1980.] Early transistors could easily be destroyed by these current demands, a problem that many amplifier designers tried to solve by adding elaborate current-limiting protection circuits. Often the result was an amplifier that worked beautifully in lab tests driving 8-ohm resistors, but produced less power or more distortion when connected to loudspeakers. Designers who recognized this problem used larger output transistors, or several wired in parallel, to provide the unrestricted current flow needed for the best sound.

With today’s output transistors (and especially with MOS FETs, which need no protection at all), it is much easier for a designer to avoid the problems of “tight” protection circuits. So if your old amplifier has restrictive output protection, it may be that a new amp with greater output-current capability would sound noticeably better, even if its 8-ohm power rating were no different. (The power rating at 4 ohms, if you can find it listed, is usually a good index of output current. Except in the case of amplifiers such as the Apt Model One, which takes an unorthodox approach to this problem, the 4-ohm rating should be appreciably higher than the 8-ohm rating—the more so the better.)

This is one of several areas in which amplifiers have generally gotten better over the years. Others include lower preamp noise, more common inclusion of effective infrasonic filtering, and the reduction of many subtle forms of electronic misbehavior. Individually, these improvements usually are not dramatic, and it is quite possible that in a direct comparison between your old amplifier and a new one you would not hear a difference. On the other hand, they might add up to a cumulative benefit worth paying for. The only way to tell is to conduct a direct comparison, either by bringing your amplifier into the store or bringing a new amp home on trial.

Loudspeakers

Loudspeakers occasionally deteriorate with age. For example, ten to fifteen years ago some manufacturers used urethane
foam for the compliant surrounds around the edges of their woofer cones. With long-term exposure to air and pollution, that foam underwent a progressive chemical change, losing its springiness and in some cases virtually rotting away. (Later foams don’t have this fault.) In some speakers made with Bextrene cones during the same period, the glues fastening the cones to their suspensions gradually separated. Sometimes you can discover such problems by visual inspection after removing the grille, and sometimes they show up in the sound—as increasingly boomy bass, for example, or in the harsh buzzing of an off-center voice coil.

These cases represent a small minority, fortunately. But even if your old speakers are as good as new, there has been substantial progress in loudspeaker manufacturing during the past decade that may have rendered them obsolete. Note that I say manufacturing, not design. Loudspeaker engineering theory is well established, and most design “breakthroughs” fade into obscurity a few years after they are announced. But speaker makers have surrounded many of the practical obstacles that once separated the actual behavior of mass-produced loudspeakers from the theoretical ideal.

For instance, today’s loudspeaker designers have better materials to work with: cone materials with fewer pronounced resonances and breakup modes to color the sound, silicone and magnetic ferrofluid to improve power handling and provide resonance damping, and a great variety of useful coatings and glues. Established but obscure theories (such as how to mate a woofer with a bass-reflex enclosure for accurate bass) have been clarified so that most working speaker engineers now understand them. And sophisticated instruments (such as microcomputers and realtime spectrum analyzers) for making thorough measurements of speaker behavior are much less expensive than they used to be, which means that speaker design is now on more solid ground. Equally important is the fact that such instrumentation is affordable enough to be used on the production line, giving every speaker the equivalent of a lab test to ensure that its performance matches that of the engineering prototype.

This does not necessarily mean, however, that your old speakers are obsolete. The best loudspeakers of five or ten years ago can still hold their own with many of today’s models. But excellence is no longer as rare as it used to be, and there are now many more fine speakers to choose from. To put in another way: Today’s best speakers are somewhat better than those of yesterday, but today’s average speaker is dramatically better than its counterpart of a decade ago. The improvements are mainly of four kinds: smoother frequency response with less coloration, better integration of woofer and tweeter response in the crossover region, much better stereo imaging (largely due to more uniform sample to sample quality control), and less distortion at high power levels. So if your present speakers were of average quality when you bought them, a new pair could provide you with substantial rewards in greater listening pleasure.

Cassette Decks

Apart from the fact that they are far more prone to mechanical wear and failure, cassette decks are in much the same boat as speakers. The best ones of ten years ago were really quite good—comparable to today’s best in many respects—but the quality of middle-of-the-road and budget recorders has risen appreciably. However, you should also take into account four important developments that have occurred across the board: wider use of materials such as sandcast, ferrite, and hardended permanent for low-wear heads; the almost universal adoption of peak-reading meters; introduction of easy-to-use manual and automatic tape-matching systems; and widespread incorporation of noise reduction systems that are more aggressive than Dolby B.

Whether you need a deck with Dolby C or DBX noise reduction depends largely on what kind of material you intend to record. For music with wide dynamic range, they are clearly beneficial. But if you plan mainly to dub popular LPs, which rarely have a dynamic range of more than about 20 or 30 dB, Dolby B will usually be adequate.

Dolby HX Professional is also beginning to show up in a few decks. It is not a noise reduction system, but works instead to increase high-frequency headroom. This improves frequency response at high music levels and helps prevent compression of high-frequency transients, such as from cymbals. It can be used in conjunction with any noise reduction system or with no noise reduction at all, and tapes made with HX Professional do not require any complementary processing on playback. In effect, HX Professional can give you the performance of Type 4 metal tape with considerably less expensive Type 1 ferric and Type 2 chrome and ferricobalt formulations.

Regardless of what noise reduction system you use, you cannot get optimum results unless your deck’s bias and record equalization are properly adjusted for the tape you are using. (And if you are using Dolby B or C, it is also important that the Dolby recording circuits be calibrated to the sensitivity of the tape.) A few relatively expensive machines are able to perform these adjustments automatically for nearly any tape you happen to pop into them. Some other decks include controls and test tones that enable you to do the same thing manually at least as well and at less expense. Some include trimmers for all three parameters—bias, EQ, and sensitivity (Dolby recording level)—but for most purposes you can get by quite nicely without the equalization adjustment. (It’s nice, however, to have test-tone oscillators included: A bias knob by itself is not as useful.) The alternative, of course, is to stick with the tapes for which your deck was set up at the factory (or to have it adjusted by a technician for your favorite brands), a good deal of which is already unheard-of a few years ago. However, you should also take into account four important developments that have occurred across the board: wider use of materials such as sandcast, ferrite, and hardended permanent for low-wear heads; the almost universal adoption of peak-reading meters; introduction of easy-to-use manual and automatic tape-matching systems; and widespread incorporation of noise reduction systems that are more aggressive than Dolby B.

When you should upgrade depends partly on the type of component.

Turntables

Turntables have also improved over the years, but not so dramatically. Recent trends to lower-mass tonearms, which work better with today’s high-compliance cartridges, and improved acoustic isolation have certainly been beneficial. And there are now turntables with selection-sequence programming and other such microprocessor-controlled conveniences that were simple unheard-of a few years ago. However, in the absence of serious mechanical failure or any dissatisfaction on your part with the performance of your present turntable, there is little reason to abandon it.

How to Shop

When you decide to upgrade, you will naturally want to be sure that the new equipment you buy is a good value and won’t become obsolete quickly. Test reports in HIGH FIDELITY and other magazines can help, particularly if you read them with care. Virtually all of today’s stereo gear is competently designed and well made, so most product reviews are positive in tone. Nevertheless, there is a substantial differ- (Continued on page 96)
A premium tape...is a premium tape, right? Not anymore.

Breaking away from a world cluttered with audio tape comes Fuji FR Metal.

And crisp, clear sound is only the beginning. It's like nothing you've ever heard before, especially if you think you've heard everything.

And it's just one standout in a new Fuji tape line that offers phenomenal sound in a variety of superior formulations. With new FR II, FR I, ER and DR, we've got the perfect tape for your every need.

So give a listen and let your ears decide. Then tell all your friends the good news.

**If your friends tell you all premium tapes sound alike, listen to this...**

**THEN MAKE NEW FRIENDS.**

If it's worth taping, it's worth Fuji.
If you have $18,000 to spare, you can commission furniture designer Ron Seff to build you a porphyry-lacquered media center with matching polished copper trim (top left). For more realistic budgets, there are scores of ready-made audio/video cabinets to choose from. Pictured above (from top to bottom) is a cabinet with glass doors from Mariani Audio and Video Furniture, a wall unit comprised of Custom Woodwork and Design's stackable modules, and a media "bench" purchased by an HF staffer at a department store closeout sale. (Similar units are available from Workbench and other modern-furniture outlets.)

Blending the Practical with the Aesthetic

Consider some of the components that comprise the much-publicized "home entertainment center": speakers, receivers, turntables, cassette decks, television sets, video game units, VCRs, video disc players, and personal computers. Chances are, you own about half of those. But since you don't live in a mansion, you haven't put them in your sleek "media room." Rather, most of your equipment resides in your living room, which, as a result, ranges in decor from early technological nightmare to late patch-cord eclectic.

Industrial designers are devising ever more attractive components with logically placed control groupings, but when it comes to carving out an environment for them in the home, most electronics buffs greatly favor simple expediency over aesthetic or even practical criteria. An audiophile friend recently invited me over to see his specially designed listening room, which was complete with acoustically treated walls. His mind-boggling assortment of very expensive, very sophisticated componentry was all stacked on a card table that he had discovered in the garage. The room sounded great, but between the mound of equipment and the tangle of patch cords and speaker wire, it looked pretty terrible. Not to mention the fact that the card table's legs could have buckled at any moment.

This may be an extreme example, but the fact is that most of us have a hard time integrating aesthetic form with electronic function. People will spend weeks searching for the right cassette deck and receiver and then mount them so high on a bookshelf that their controls are unreadable (not to mention unreachable). Then there are those who forget the special requirements of their componentry. That pretty little glass and chrome wall unit may match the depth of the turntable's base, but it doesn't have the extra inch or two needed for the dust cover to open. And the glass-doored cabinet purchased to show off the high-tech assortment of equipment contained within often takes on all the visual appeal of a barroom jukebox when placed in a traditionally decorated room.

Although I cannot provide hard and fast rules in an area that is largely dependent on personal taste, I will be suggesting in (Continued on page 48)
Vertical Driver Alignment provides the most useful horizontal and vertical sound dispersion patterns.

S-Stop Overload Protection Circuitry makes the 105.2 virtually damage-proof, even with the highest power amplifiers.

LED Listening Window/Peak Power Indicator provides a visual indication of optimum listener positioning and signals when peak input levels are reached.

Directable, phase-compensating mid-range treble enclosure is adjustable in both horizontal and vertical planes to provide further control of dispersion.

Every 105.2 individual driver is computer matched to within 1/2 db to its mate and to the other drivers in the enclosure to guarantee absolute unit-to-unit and side-to-side consistency.

3-point shock-mounted bass driver prevents any possible twisting of the basket or transmission of unwanted vibrations to the speaker enclosure.

Each 105.2 full system is matched to its mate to within 1/2 db to assure absolutely precise stereo imaging. (A slight variation at one frequency spreads, or smears the sound.)

Each separate piece of the carefully selected woods on every 105.2 is precisely matched to its mate to achieve a level of cabinet finish rarely found on the finest furniture.

The Compleat* Loudspeaker.

"In Olde English, the word "compleat" is used to connote the most exhaustive, comprehensive study of a given subject.

Unlike manufacturers who would try to convince you that one form of technology or product feature solves all acoustic problems, KEF engineers address every minute aspect of loudspeaker design. The result is a level of balanced performance that exceeds the overall quality level thus far achieved by any loudspeaker currently on the market. This explains why KEF is the favorite choice of professional musicians, equipment reviewers, and serious music lovers worldwide. They don't listen to sales pitches; they listen for music that sounds real. And they know that there is no substitute for thorough engineering.

MODEL 105.2

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Circle 13 on Reader-Service Card
Why are we always the last ones called?

Because our prices have become the standard of comparison. And with good reason: we are one of the largest sellers of video equipment with Sony, JVC, Panasonic, Hitachi, Advent, and over 25 other major lines in stock. And because we carry one of the largest inventories of video equipment, we must sell at below competitive prices. So, if you are looking for video tape recorders/players, blank and pre-recorded video tapes, color and black-and-white video cameras, video games, home computers, color televisions, video discs, projection (giant screen) televisions and video accessories of any kind, call the others first, get their best price. Then call us last. We won't match it... We'll beat it!!

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Beaverton, OR 97005

Gusdorf Corporation
6900 Manchester
St. Louis, MO 63143

O'Sullivan Industries Inc.
19th & Gulf Street
Lamar, MO 64759

Bush Industries
312 Fair Oak St.
Little Valley, NY 14755

Apres Audio Ltd.
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Modern Furniture Outlets
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SCAN Co-op Contemporary Furnishings
8406 Greenwood Place
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(Brochure free)

Workbench
470 Park Avenue South
New York, NY 10016
(Catalog $2.00)
Latest video news and products by the Editors

An intervalometer on Akai’s new VC-X2 color video camera enables you to create Disney-esque “unfolding flower” special effects. This time-lapse feature is also useful for security surveillance. Intervals between recording periods range from ten to ninety seconds, enabling time-lapse recording over a ten-day period with a T-160 tape. The f/1.4 lens has a macro setting and a 6:1 two-speed power zoom for focal lengths from 11.5 to 70mm. According to the manufacturer, the 300-line resolution of the Saticon imaging tube is the highest of any VHS camera. Automatic features include focus, iris, white balance, and fade-in/fade-out for both video and audio. A four-position switch permits interfacing with VCRs produced by other VHS manufacturers. The VC-X2 also has a four-state positive/negative polarity reversal system, which can be used to convert slide and film negatives to video positives. The electronic viewfinder has a 1¾-inch screen. Price of the lightweight (5.3 pounds) VC-X2 is $1,195.  

Circle 80 on Reader-Service Card

Video monitor/receivers have entered the big time as RCA weighs in with five models that have direct video and audio inputs for VCRs, video disc players, and video games. There are four 25-inch sets, which achieve compactness through the use of a 110° picture tube. They range in price from $1,030 for a unit in an oak veneer cabinet to $1,900 for a set in a pecan armoire that has storage space for video products; the sleek model VGM-2023S, shown here, sells for $1,295. All five sets have 127-channel tuning capability through an infrared remote control and a complement of two video inputs, two audio inputs, a video and audio output, and external speaker jacks. A CCD (change-coupled device) comb filter for better color separation and picture crispness is featured in all five models.

The Pentax entry in the portable VCR sweepstakes, the PV-R020A ($1,269), has four heads to provide special effects (forward and reverse visual search, single frame advance, slow motion, and still frame) in both the SP and EP modes. In addition to sound-on-sound recording, audio and video dubbing are also possible with this eleven-pound (including rechargeable battery) VHS deck.

Pentax’s companion tuner-timer, the $530 PV-U020A, can be programmed for as many as eight events over a twenty-one day period. The unit’s sixteen presets can be assigned to any of 105 channels, including mid- and superband cable frequencies. The tuner-timer is capable of charging two batteries at once for the recorder. In case of a power failure, an internal battery will keep the tuner’s programmed instructions in memory for as long as one hour.  

Circle 77 on Reader-Service Card

Canon brings its photographic expertise to video with the VC-10A color video camera. The f/1.4 lens features variable-speed power zoom, with a focal length that ranges from 11 to 70mm and a macrofocusing capability of 0.16 inches. The camera is equipped with Canon’s Solid-State Triangulation system for automatic focusing and a Saticon imaging tube. A character generator and an internal timer are built into the electronic viewfinder, and a fader switch is said to produce smooth fade-in/fade-out effects automatically. The VC-10A camera is designed to work with Canon’s VR-10A portable VHS recorder, and all VCR transport functions can be controlled from the camera. Price of the camera is $1,295; suggested list for the recorder is $860 and for the VT-10 tuner/timer, $475.  

Circle 76 on Reader-Service Card

A new head-cleaning cassette from Koss houses a premoistened cleaning cartridge that is disposable, eliminating the possibility of contaminating the heads with debris from a previous cleaning cycle. Koss says the V.I.P. (Video Improvement Process) head cleaner is nonabrasive, uses a residue-free solvent, and avoids heat build-up during cleaning. The V.I.P. Scrubs the pinch roller, the tape guides, capstan, and heads, and then shuts off automatically after the cycle is completed. Available for both Beta and VHS decks, the cassette comes complete with three disposable Clean ‘n’ Toss cartridges for $20; packets of three replacement cartridges are $4.00.

Circle 78 on Reader-Service Card

Fisher’s 46-inch PT-900 projection television receiver includes a stereo amp rated at 7½ watts per channel and a pair of speaker systems incorporating 6½-inch woofers and 2-inch tweeters. There’s also a matrixing circuit to produce pseudostereo from television sound. The three-tube, three-lens video system is said to have a picture brightness of 70 footlamberts; automatic color correction is performed by a vertical internal reference (VIR) circuit. A seventeen-key infrared remote control can tune 105 channels, including mid- and superband cable channels. Two pairs of video inputs and three pairs of audio inputs with associated switching enable the PT-900 to act as a monitor for VCRs, video disc players, and electronic games. Housed in a hutch-style cabinet, the PT-900 sells for $3,800.

Circle 79 on Reader-Service Card

Canon, which may not be a name you associate with video, brings its photographic expertise to video with the VC-10A color video camera. The f/1.4 lens features variable-speed power zoom, with a focal length that ranges from 11 to 70mm and a macrofocusing capability of 0.16 inches. The camera is equipped with Canon’s Solid-State Triangulation system for automatic focusing and a Saticon imaging tube. A character generator and an internal timer are built into the electronic viewfinder, and a fader switch is said to produce smooth fade-in/fade-out effects automatically. The VC-10A camera is designed to work with Canon’s VR-10A portable VHS recorder, and all VCR transport functions can be controlled from the camera. Price of the camera is $1,295; suggested list for the recorder is $860 and for the VT-10 tuner/timer, $475.

Circle 76 on Reader-Service Card
Laser vs. CED Video Disc Players

A special feature-by-feature comparison of two top-of-the-line stereo models—Pioneer’s LD-1100 laser player and RCA’s SGT-250 CED player

The newest video disc players from Pioneer (left) and RCA are capable of stereo playback with CX noise reduction. Picture quality from both is superior to that of most VCRs, and audio playback on the LD-1100 compares quite favorably to that of stereo LPs. Maximum viewing time is the same for both players—one hour per side.

RESEARCH ON PLAY-ONLY VIDEO media dates back two decades to the ill-fated optical-film-based EVR system (with which I was loosely associated at CBS Laboratories). After many such false starts, two systems—both disc formats—have made it to the marketplace. (A third disc format, JVC’s VHD system, has been developed, but will initially be available solely to the business market in Japan.)

Reviewed here are the top-of-the-line models from the two currently available video disc camps, the RCA SelectaVision SGT-250 ($450) and the Pioneer LaserDisc LD-1100 ($800). The two operate on different technical principles and thus are incompatible in terms of software. But both offer the same viewing time (one hour per side) and can reproduce stereophonic sound with CBS’ CX noise reduction from appropriate discs. (The SGT-250 is RCA’s first stereo system; previous models were mono only.)

What makes the two systems incompatible are the recording and playback techniques they use. The RCA-developed CED (Capacitance Electronic Disc) player resembles a conventional audio disc-playback system in that a diamond stylus tracks a spiral groove. But the pickup is anything but ordinary: It senses information as variations in capacitance (rather than groove velocity, as in an audio disc). Because there is physical contact between disc and stylus, both are subject to a certain amount of wear and tear. However, the vertical tracking force is only about 0.0065 of a gram, compared to the 1-gram-plus VTF typical of audio disc playback systems, and stylus life is rated at “several years” by RCA. Replacing the stylus is quite simple. The cartridge simply lifts out of its carrier and is discarded, a new one is inserted in its place. A new pickup costs $77.

As its name implies, the LaserDisc system uses a low-power laser beam to read information encoded as a series of pits beneath the transparent surface of a disc. The laser beam is focused on the pits and the varying amount of light reflected from them carries the information. The reflected beam is detected by a photo diode, which converts the light to an electrical signal. Because there is no physical contact, there is no wear. And because the laser beam is focused beneath the clear surface of the disc, scratches, fingerprints, and dust are, for the most part, “out of focus” and have no effect on signal quality. Thus, you can handle a LaserDisc and load it into a player just as you would an ordinary audio record.

In contrast, the CED disc is extremely sensitive to dust and fingerprints, because the information is physically molded into the surface. To prevent damage, the disc is packaged in a cardboard sleeve called a caddy, which you insert into the player and then withdraw, leaving the disc in the machine. When the side is over, you remove the caddy and withdraw it with the disc once again inside. Then you simply flip the caddy over and reinsert it to play the opposite side.

It might sound as if the LaserDisc system is easier to use, but quite the opposite is true. Although the optical disc is as simple to handle as an ordinary record, the CED disc/caddy system is even easier. This reflects a key difference between the systems—the market for which they are apparently intended. Bearing in mind that both players are top-of-the-line models, RCA’s SGT-250 seems to place greatest emphasis on operational simplicity, while Pioneer’s LD-1100 exploits the unique features of the optical disc technology.

The SGT-250 has only seven buttons on the front panel: POWER, LOAD/UNLOAD, PAUSE, a pair for VISUAL SEARCH in either direction, and another pair for RAPID ACCESS in either direction. Operation is intuitively evident, even without reading the owner’s manual. In fact, the manual contains more on how to hook up the system than on operation.

To load or unload a CED disc, you press LOAD/UNLOAD. A blinking “L” in the display tells you the system is ready to accept a disc. You insert the caddy and then withdraw it; the disc placement mechanism whirs for a second and then appears on the front-panel display. About eight seconds later, picture and sound appear on your TV screen. The display then runs at the end of
Slipping a caddy-protected CED disc into the RCA player (top) is faster than loading an optical disc into the Pioneer unit. With both players, the discs must be removed and turned over to play the second side. Considering the time it takes for an optical disc to stop and then come up to full speed again, starting play on side two can take as much as a full minute; total turnover time for a CED disc is less than twenty seconds.

Infrared remote controls are standard equipment with both players. Most functions on the Pioneer remote work only with CAV (constant angular velocity) discs, which provide a maximum of thirty minutes of viewing per side. Since most LaserDiscs are in the CLV (constant linear velocity) format, which gives the same playing time as CED discs (sixty minutes per side), Pioneer and RCA special features are just about equivalent for entertainment use.

The real-time counter shows where you are on a side. Other controls include PAUSE, which stops the program and blanks the screen. VISUAL SEARCH accelerates motion in either direction in full color and with remarkable clarity. RAPID ACCESS scans ahead or backward at an even higher speed, but without a picture. There is no sound in either SEARCH or ACCESS. The real-time counter shows where you are on a side. Front-panel lamps indicate which side is being played and whether the SGT-250 is in the stereo mode. A three-position slide switch on the rear panel selects NORMAL (stereo) operation or either the “A” or “B” channel alone (for discs with single, isolatable channel options). Another rear-panel switch selects the output channel (3 or 4). There are 75-ohm coax fittings for the TV antenna and for connection to the TV itself. (Although the SGT-250 does not record off the air, the signal from the TV antenna is routed through it.) Connection to an external stereo amplifier and speakers is via a pair of pin jacks. (The audio that is fed to the TV set via the RF link is mono.) Another pin jack enables you to feed direct video signals to a TV monitor.

Input and output connections on the Pioneer LD-1100 are similar to those on the RCA player, except that a coax fitting is used for the direct video output. Both video disc players have infrared remote control. RCA’s operates PAUSE, RAPID ACCESS, and VISUAL SEARCH. Pioneer’s remote unit is unusual in that it is the only means of accessing certain special features.

Since you cannot access specific frames on a constant linear velocity (CLV) optical disc, locating a particular point on a side takes some hunting. As with CED discs, you must use timing to find the spot. With a CLV disc in the player, the time elapsed since the side began is displayed when you press FRAME. You can advance or back up to any desired minute by pressing SEARCH and entering the minute on the keypad. If you’re not sure what minute you want, SCAN lets you race through the program in either direction with a black and white picture that is at least recognizable. (It’s not stable enough to be called accelerated motion.)

By comparison to the remote, the player’s on-chassis control panel is sparse. Only PLAY, SCAN, PAUSE, and the two audio defeat switches are on the main panel. In addition, there is a CX selector button, a slow-speed control, and a power switch. The REJECT serves two purposes: It stops the disc and, with a second press, opens the lid.

Judging by these two machines, we can see why the two formats co-exist. The RCA SGT-250 is a machine for the masses. It’s very easy to use, it’s less expensive than the LaserDisc player, and it works well. Picture definition at least equals that of any of the best video tape recorders operated at their highest speeds and is much better than that of an average VCR. Color quality is also first rate, and you get wide-bandwidth stereo sound if you hook the player up to an external stereo amplifier and speakers. (The frequency responses of the stereo VCRs we’ve reviewed have been mediocre.)

In terms of sheer technical excellence, however, LaserDisc beats SelectaVision. Video definition with the laser player is superb—better than we’ve seen on any VCR—and color is excellent, too. The LD-1100 generated a more stable picture than the SGT-250, which produced a small amount of horizontal jitter that was noticeable mainly as the picture credits rolled by. And once up to speed, the LD-1100 tracked perfectly every disc we played. Our RCA player occasionally skipped a few frames, but not that frequently (perhaps one to three times per side) or that noticeably (only one skip was bad enough to be caught by a casual viewer).

On a well-recorded CX-encoded laser disc, the sound is excellent—at least equivalent to that of a very good audio record. The CED sound, although extended in bandwidth, seems less smooth. Whether this is due to CX mistracking, we have no way of knowing; the RCA player lacks a CX switch, and the circuit is presumably always active. Despite the CX noise reduction system, the CED player at times was prone to static-like noise, which we assume was due to dropouts. On the other hand, the LaserDisc system was so noise-free that we could hear the mechanical whir of the disc. (Admittedly, that in itself can get annoying, and it would be a plus if Pioneer could quiet the player a bit more.)

So we see good reason for both systems. The RCA CED player is utterly simple to use and provides quite acceptable performance that should satisfy most viewers. The Pioneer LaserDisc player might appeal more to the videophile. It takes more getting used to, but it rewards you with superb performance. And with CAV discs, it’s a mass storage medium of endless potential.
VIDEO
TubeFood

New video programming: cassette, disc, pay and basic cable  by Susan Elliott

(Check local cable listings for availability and schedules.)

November Arts Cable Highlights

PERFORMER PROFILES
ABC Arts: Jon Vickers in Sansson and Delilah (Saint Saëns).

OPERA
CBS Cable: The Mikado (Sullivan) with William Conrad, Clive Revill, Derek Hammond-Stroud. Stafford Dean, Kate Flowers, Anne Collins; conducted by Alexander Paris (London Symphony, Ambronio Opera Chorus).

SYMPHONIC & CHAMBER MUSIC

DANCE
CBS Cable: Tasha Zhura: Confessions of a Cornerman (Bach, Springsteen). Davidboulliantane (Schumann) with N.Y. City Ballet principals; choreographed by George Balanchine. May O'Donnell: Dance Energies (Dorsey, Goodman, Miller, Herman) with O'Donnell Dance Co. Romeo and Juliet (Prokofiev) with Yuri Zhdanov and Galina Ulanova; choreographed by Lev Lavgovskiy (Bolshoi Ballet, 1954 film).

JAZZ and POPULAR SONG
ABC Arts: Dave Brubeck: Live at the Vineyards.
CBS Cable: Cabaret: Margaret Whiting with 6-piece band at Ted Hook’s On Stage. Eileen Farrell: The Diva Sings Pop (Gershwin). Elisabeth Swados: Songs of Innocence and Experience (Swados).

Pay Service Premieres

Cinemax: The Last Time I Saw Paris; Southern Comfort; Love Me or Leave Me; Blume in Love; St. Ives.
Home Box Office: Ghost Story; Paternity: Prince of the City; So Fine; True Confessions; I Go Pogo.
Showtime: True Confessions; Paternity; Rich and Famous; Prince of the City; Ghost Story; Southern Comfort; So Fine; The High Country; Happy Birthday to Me; Blood Beach; Dunkirk; Montenegro; Prisoner of War; Invitation General; Soldiers Three; Faerie Tale Theater: Hansel and Gretel: Mark Twain Theater: Huck, the Hero: Legend of the Wild: A Challenge for Robin Hood: Hot Ticket: Frank Sinatra: Concert for the Americas: Hot Ticket: Rick Springfield in Concert.

The Movie Channel: Rich and Famous; Prince of the City; True Confessions; Ghost Story; So Fine; Paternity; Love and Money; Just Before Dawn; Good Riddance; Southern Comfort; The Bronte Sisters; The Three Musketeers.

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The Movie Channel: Rich and Famous; Prince of the City; True Confessions; Ghost Story; So Fine; Paternity; Love and Money; Just Before Dawn; Good Riddance; Southern Comfort; The Bronte Sisters; The Three Musketeers.

Video Discs

FEATURE FILMS
RCA SelectaVision (CED): Swept Away; And Justice for All; Neighbors: Murder on the Orient Express; Bananas; Revenge of the Pink Panther; In Praise of Older Women; Wholly Moses; Semi-Tough; Pretty Baby; Tom Jones; Key Largo; The Searchers; 42nd Street; The Heritage of the Bible.
Vestron Video (Laser): Tribute; Fort Apache; the Bronx; Cannonball Run; The Changeling; Till Marriage Do Us Part.

Q.&A.

Your video questions answered by Edward J. Foster

Q. I read with interest your answer to the owner of a Heath GR-2000 TV receiver who had a problem with images from his Sony Betamax SL-5800 tearing. Although my picture does not tear, I have a similar problem. I recently purchased a Sony Betamax SL-5600, and when I play back tapes on it I cannot eliminate the "herringbone effect" that appears on my TV's screen. I have a 25-inch RCA Model 2000 TV receiver that I bought in 1969, and I get perfectly good broadcast reception on it. But I have been told that eliminating the "herringbone" would be extremely costly and that I should replace the set instead. I can't believe that. Does my problem have a solution as simple as the one you gave Mr. Watkins?—Hal M. Rogers, San Jose, Calif.

A. I'm afraid you and Mr. Watkins have different problems. As far as I can tell from your description, yours is caused by interference between the signal generated by the VCR's RF modulator and some Channel 3 signal in your area. The "tearing" in Mr. Watkins' picture was due to a loss of sync and could be fixed by modifications to his TV's synchronizing circuit.
My best advice is to tune the TV set carefully to a signal from the VCR with the receiver's automatic fine tuning (AFT) switched off. (You can use either a prerecorded tape or the VCR's own tuner as a source.) This may help clear up the interference, but you may also find that it returns when you switch the AFT back on. If so, turn the circuit off when using the VCR. I'd also check all connections between your VCR and your TV, as well as the antenna connections. If you're using regular twinlead as lead-in wire, try replacing it with shielded twinlead or coax (using the appropriate impedance-matching balun transformers, of course.)
If these suggestions don't work, a new TV set may be in order. Yours appears to have served you well, but many improvements have been made since you purchased it—including the use of comb filters in some models for greatly improved color definition and reduced interference. This may be a good excuse to upgrade.
The one thing we never change.

During the last fifteen years, we've made a lot of improvements on our Advent speakers. 137 to be exact. We've redesigned woofers and tweeters. Crossover networks and phase plates. Cabinets and mounting hardware. Even screws. But there's one thing we haven't changed. That's the value. The ability of an Advent speaker to out-perform many speakers that cost more. How? By making changes that sound good not just look good. While other speaker companies have spent their time adding all manner of dials, knobs and wild grilles, we've quietly gone about the business of perfecting the two-way speaker.

For example, our newest change is the Advent "Direct Report" tweeter. It is a parabolic rather than hemispheric design. And the special phase plate for the tweeter has been tapered to improve dispersion. Stereo Review liked it as much as we did. They said, "We cannot recall ever having measured a front-radiating dome tweeter whose dispersion equaled that of the new Advent design."

We think you'll agree with Stereo Review. The new tweeter is indeed exceptional. The change substantially improved the sound quality. But it hasn't substantially changed the price. You see, value has always been a part of the Advent legend. And that's something we haven't changed... never will.

For the location of the Advent dealer nearest you, call toll free 800-323-1566. (In Illinois call 800-942-0502.)
Brahms’s Duo Sonatas: An Embarrassment of Riches

New, varied performances run the gamut of these widely divergent masterpieces. Reviewed by Harris Goldsmith

Appropriately enough, for a master of absolute music, Brahms showed a lifelong interest in the problems of sonata form. Although his earliest surviving works in that genre are for piano alone, in later life, for whatever reason, he preferred to use his own beloved instrument exclusively in ensemble situations—at least when it came to sonatas.

Undoubtedly, there were numerous attempts at duos long before the E minor Cello Sonata, begun in 1862 when Brahms was twenty-nine, but this notoriously self-critical burgeoning master is known to have destroyed great quantities of music. Only the short, stormy Scherzo he wrote in 1853 for the F-A-E Sonata (of which more presently) seems to have survived his wrathful edict.

The fruit of his creativity—like that of his great forebears Bach, Haydn, Mozart, and Beethoven—tended to grow in clusters. The evidence to support such an assertion is both abundant and conclusive: the three early Piano Sonatas, Opp. 1, 2, and 5; the first two Piano Quartets, Opp. 25 and 26; two Clarinet Sonatas, Op. 120; the first two String Quartets, Op. 51; and the last two Sonatas for Violin and Piano, Opp. 100 and 108 (both obviously sequels to the First, Op. 78, completed seven years earlier).

This generalization, however, does not apply to the first two compositions under consideration: Brahms’s two sonatas for cello and piano were separated by more than twenty years, and though they are often juxtaposed on records for convenience, each is a loner—a self-contained entity with an aesthetic personality all its own. Before pondering the many dissimilarities between the two masterpieces, let us note the few particulars common to both: Each is, of course, masterfully scored—a bona fide duo in which neither cello nor piano predominates. Then, too, as so often with Brahms, the emotional burden is unevenly distributed in both. In the E minor Sonata, the focal point occurs in the last movement—a towering fugue structure. The F major, on the other hand, reverses matters: its pleasing, almost too carefree, finale can easily sound anticlimactic in performance after the emotionally (and physically) draining first three movements. Finally, Brahms specifies in each work a repeat of the first-movement exposition, which he does nowhere else in his mature sonatas. (One must not, however, infer that he looked unkindly on the double bar of classical tradition; three of his four symphonies include repeats, as do many of the larger chamber works.)

Oddly, the earlier E minor Sonata is the one most recognizably tinged with that autumnal introspection usually associated with the composer’s Indian-summer period. The F major, which was a product of those years, is by contrast a relatively stormy, extroverted affair—full of ardor and thrust. Whatever the reason for the paradox, the E minor Sonata is in many respects a stylistic sibling of the much later Fourth Symphony—also in E minor.

For all its consistent expertise, Brahms’s cello writing varies enormously in the two scores. In the F major, it leaps about boldly, using the difficult higher register audaciously (and, for less-than-virtuoso players, cruelly). But the conservative, even cautious, scoring of the E minor also poses a built-in challenge—to make it seem varied andaurally interesting. Scored almost exclusively in the instrument’s “safe” lower range, it takes a master’s touch to keep it lithe and to avoid the dual hazards of drabness and awkwardness. Not to mention pedantry. The last movement, for instance, resembles the mirror fugues of Bach’s Art of Fugue (a further point of similarity with the Fourth Symphony, which utilizes another great baroque form, the passacaglia, for its finale); it can easily sound learned and dryly literal.

The three latest recorded editions represent different philosophies of both performance and engineering. Lynn Harrell and Vladimir Ashkenazy go all out for lushness and nuance. They are abetted by Decca’s engineering, except in the opening movement of the F major, where the recording made at St. George the Martyr in London, suggests instead an airplane hangar or the Paris sewer. The resonant ambience works against the fast-moving tremolando that begins that work, and Harrell’s predilection for throbbing vibrato and slow shifts makes things pretty excruciating. Elsewhere, he plays much better, recalling the patrician restraint of his first solo appearances (while still a principal of Szell’s Cleveland Orchestra). In fact, the E minor and the rest of the F major get knowing, aristocratic treatment. Ashkenazy’s playing combines refinement with passionate lyricism.

Still in all, I prefer everything—the more probing interpretations, the more characterful classicism, the sharper, cleaner recorded sound—in the Hungaroton edition. Miklós Perényi and Zoltán Kocsis stress sinew and tension in performances that suggest what a Casals/Rudolf Serkin collaboration from the early 1950s might have sounded like in this music. Indeed, in comparison to the 1938 Casals/Horszowski F major that was recorded (CBS M5 30069), Perényi and Kocsis show a strikingly similar interpretive approach; Perényi’s tempo in the first movement is even a hairbreadth faster than the notably unsentimental reading of his onetime mentor, and in the last, slightly slower than Casals’ admirably spacious, poised pacing. Perényi is lean, searing, and intense rather than dirgelike in the opening movement of the E minor. In his way, he lavishes as much color as there is to do, but the sound is drier, more focused. The second movement in the Hungarian performance is a graciously flowing intermezzo that makes an admirable launching pad for the fiery, rapidly paced fugue. I like Hungaroton’s direct, compact acoustic—which nonetheless avoids the harshness of some of its earlier recordings.

Having heard an unsatisfying rendition of the F major from the German-born, Starker-trained Christoph Henkel some years ago, I am happy to report that the Bis album attests to a remarkable artistic transformation. In basic sonority, the Scandinavian recording has much in common with the Hungaroton. What ultimately keeps these fine performances a notch below their Hungarian counterparts is a slight obsession: At the beginning of the F major, for example, Henkel tends to overaccentuate the sixteenth-note upbeats in his opening theme militaristically (one can almost
Turning to the three violin sonatas, we find in the G major, vintage 1879, a well-nigh perfect edifice written at the high noon of Brahms's creativity. Its nobility of scale suggests the masterful expansiveness and grandeur of the contemporaneous Violin Concerto, Op. 77, and the easy, lilting (or rather, soaring) momentum of its first movement has much in common with that of the Second Symphony. There is a Beechmann's characteristic charm in the scherzolike third movement. In sharpest contrast to the A major, the F minor-a sportive, joyous resolution of the A major, chicks agitato finale—a fiery culmination that, similar in mood to the youthful F-A-E Scherzo, brings the wheel full cycle.

When Toshiya Eto first recorded two of these sonatas, HF's Paul Affelder called him "one of an increasing number of Oriental musicians . . . quite capable of giving a valid interpretation of Western music," although "in the faster movements one looks for greater inner tension, and perhaps a bit more variety of nuance throughout." Eto, who returned to his native Japan to become an honored guru for a whole generation of younger violinists, sounds like a far more confident Brahmin in 1977 than he did in 1961: if—somewhat lacking in nuance—his tone still strikes some as glaring and intense, many modern fiddlers the world over share that trait.

Much of the improvement undoubtedly stems from the substitution of William Masselos for the earlier recording's Brooks Smith (not "as expressive as he might have been," according to Affelder). Masselos, a noted specialist in avant-garde performance, is in fact a Romantic to the manner born—and he comes by his heritage honestly as a one-time disciple of Clara Schumann pupil Carl Friedberg. The piano parts here, quite the masterfully inspired—Schumann's second and fourth movements are lyrical and wistful, and the fiery incursion by the fledgling Brahms (using an assertive motto à la Beethoven's Fifth to impressive effect) works well in the context. Superbly played by Eto and Masselos, with high-powered engineering and suave processing from Nonesuch, this caps a major release—quite the finest edition of these pieces to appear in some time.

We owe a debt of gratitude to Richard Mühlfeld, clarinetist par excellence, for without his incentive, the aging Brahms would probably never have composed his Op. 114 Trio, Op. 115 Quintet, and Op. 120 Sonatas. The sonatas, among Brahms's very last works, are magnificently wrought: the melding of instruments is in many ways the most sophisticated and subtle of all the duos. Much has been made of Op. 120's benign, autumnal qualities, but these are handsomely complemented by other, less-publicized ingredients. The F minor's first movement is full of molten, spirtive passion; the E flat's second movement, though also energetic, smolders rather than blazes. And then there is the finale of the F minor—a sportive, joyous resolution of the work's earlier anguished drama. In both of these related yet diverse works, Brahms's mastery of motive manipulation reached its zenith.

(Continued on page 95)
Mozart's Struggles: The String Quartet

One of the rare tidal waves of Mozart quartet recordings shows the progression from raw talent to true genius. Reviewed by R.D. Darrell

In contrast to the steady mushrooming of the Mozart opera, symphony, concerto, sonata—and to a lesser extent the mixed-ensemble—discographies, that of the precious legacy for string fouromes has grown much more slowly and sporadically. So it's cause for rejoicing, and not only by chamber-music specialists, to encounter one of the rare periodic tidal waxings of Mozart string-quartet recording activity. And the current flurry of releases is particularly welcome for its generous representation of mostly relatively young artists of varied nationalities and its up-to-date audio technologies—including, for the first time in this repertory, digital recording.

There's an exceptionally well-defined choice between the two latest versions of the deservedly best-known and most often recorded Mozart quartets: the set of six dedicated to Haydn—major milestones in chamber music history as well as in the maturation of the composer's own genius. Musical prodigy though he certainly was, Mozart was by no means a born composer of string quartets, a form that Haydn and Boccherini were just beginning to give a distinctive identity at the time of Mozart's birth, January 27, 1756. His early attempts were far less spontaneous and imaginative than his early essays in other forms. Most of the initial baker's dozen of string quartets were written on his travels—first an isolated trial, then a set of six on his third Italian trip (1772–73), when he was only sixteen or barely seventeen and writing under strong Italian influences, especially that of Sammartini. The next set of six was written in a rush later in 1773, during the visit to Vienna in which he first met Haydn and was stimulated to imitate (more than emulate) the older master's Opp. 17 and 20 Quartets.

Indeed, all the early Mozart quartets seem to have been products of external forces (primarily father Leopold's insistence on having some ensemble works to impress prospective patrons and publishers—all to no avail, as it turned out) rather than of any genuine creative urge. It's significant, too, that none of these early quartets is discussed by either father or son in their correspondence of the time.

It was a quite different kind of external influence with much more potent consequences—a galvanic lightning stroke—that electrified the twenty-six-year-old Mozart into returning to the form he had gratefully abandoned for nine years. This was his encounter, in Vienna in 1781 or early 1782, with evidence of Haydn's revolutionary advances in his Op. 33 (Sun) Quartets. This shock and the fiery ambition to match such an achievement were so great that, perhaps for the first time in his life, Mozart found creativity no easy task.

He had always written music as effortlessly and copiously "as"—in his own vivid if coarse simile—"sows p..." But now it took him more than two years to produce what, in his dedication to Haydn, he termed, "il frutto di una lunga, e laboriosa fatica" (the fruit of long and laborious endeavor). To be sure, the final results show no sign of the sweat and uncertainties that went into them, or of the exceptional number of material revisions and rejections. And even though he worked on more than one of the quartets at a time, each of the six is individually distinguished in its own right.

Even collectors who already own one or more of the several admirable previous Haydn sets (from the famous 1953 Budapest/Odyssey [Y3 31242] mono and 1963 Juilliard/Epic [out of print] stereo milestones) may well find new illuminations and rewards in both the 1977–78 DG version (available earlier on separate discs, now integrated) by the Melos Quartet of Stuttgart (established 1965) and the Vanguard Bach Guild American release of a 1980 CRD recording by the younger British Chilingirian Quartet (formed in 1971). The former set already commands many admirers, and if my own response is more dubious, I'm probably unduly biased due to a strictly personal distaste for first-violinist Wilhelm Melcher's (or the recording engineers') occasional high-register tonal stridency as well as for the whole ensemble's frequent vehemence and exaggerated dynamic contrasts. Even I, however, can't dispute the group's virtuosity; At its best, the playing is brilliantly assured, and throughout, it is distinguished by Peter Buck's truly outstanding cello part.

Less bravura, the Britshisters are also
MOZART: Haydn Quartets (6).

Chilingirian Quartet. [Simon Lawman, prod.]. BACH GUILD HM 80/2, $23.94 (three discs, manual sequence).

Melos Quartet. [Rudolf Werner and *Wolfgang Millehn, prod.]. DEUTSCHE GRAMMOPHON 2740 249, $32.94 (three discs, manual sequence).


MOZART: Quartets for Strings: No. 17, in D, K. 575.

Panocha Quartet. [Eduard Herzog and Toru Yuki, prod.]. DENON XD 7100N-ND, $15 (digital recording) (distributed by Discwasher. 1407 North Providence Road, Columbia, Mo 65205).

MOZART: Quartet for Strings, No. 20, in D, K. 499 (Hoffmeister); Prussian Quartets (3).

Prague Quartet. [Jaroslav Rybař and Jan Vrana, prod.]. SUPRAPHON 1111 2601/2, $32.94 (two discs, manual sequence).

Quartets for Strings (Prussian): No. 21, No. 22, in B flat, K. 589, No. 23, in F, K. 590.

MOZART: Quartets for Strings (Prussian): No. 22*; No. 23*.


MOZART: Early Quartets (4).

Sequoia Quartet. [Judith Sherman, prod.]. NONESUCH D 79026, $11.98 (Maya recording).

Quartets for Strings. No. 3, in G, K. 156; No. 4, in C, K. 157; No. 8, in F, K. 168; No. 13, in D minor, K. 173.

This set also was written with great difficulty, although here the problems were less internal than external: his wife's as well as his own illness, ever more stringent money troubles, the pressing demands of Cosi fan tutte and other projects. The need to please a cello-playing royal patron was of course no problem at all — and the many prominent cello passages make them particularly well suited to the Melos' Buck. But his colleagues also are at their best here, with fewer idiosyncratic mannerisms than in their earlier Haydn set, and the recording is no less brilliant and vivid.

The latest complete Prussian triptych also includes the isolated, underappreciated K. 499 Quartet, named for Mozart's friend and sometime publisher, Franz Anton Hoffmeister. Completed August 19, 1786, a year-and-a-half after the last of the Haydn six, this Hoffmeister Quartet may well have been responsive to the public complaints about the earlier music's 'difficulty.' But ingeniously, it only seems to be less intricate, although it is indeed more overtly genial and humorous.

Fine as the Prague Quartet invariably is, this older Czech foursome, active since 1949, strikes me as just a bit too tense and serious in these last four of the Mozartean quartet legacy. The tautly dramatic readings do have distinctive attractions, however, and they are powerfully, fairly closely recorded (in 1977 and 1978) by two different production/engineering teams. Anyone who shares my slight reservations about the performances will find good alternatives in the 1976 Vucciards/CBS budget-priced set (MG 33976) and in two 1978 Telefunken single discs by the Alban Berg Quartet (6.41999, 6.42042).

What a far cry any of these last quartets are from the early ones! The nine-year gap between No. 13 and No. 14 (first of the Haydn six) saw an extraordinary aesthetic and technical quantum leap. For a single box but completely convincing example, play first what are probably the highest moments in the early quartets, the fugal finales of Nos. 8 and 13 — then the fugal finale of No. 14. Weigh for yourself the difference between a considerable talent and true genius.

Cocking one's ears especially for the contrapuntal writing throughout the last ten quartets can be an incalculably illuminating "learning" experience when one remembers Paul Henry Lang's skeleton key for unlocking one of the secrets of Mozart's quartet style: "the uncanny and unparalleled ability with which he steps in and out of homophony to polyphony and vice versa, the dividing line is of gossamer fineness, and this 'obscure clarity that falls from the stars' (The Cid) cannot be grasped by any known sort of analysis." (HF. July 1978."

(Continued on page 96)
"You're sighing, my lady."

"Happiness oppresses my soul. I can't think of it without trembling in spite of myself. Claudio! Claudio! So I'm going to be yours."

This brief recitative exchange between Héro (the very evening she's to be married) and her confidante Ursule precedes their Duo-Nocturne, which ends the long first act of Béatrice et Bénédict and is by common consent the opera's most beautiful number. The Nocturne is certainly beautiful, but I can't help feeling that the received view of what's actually going on in it.

In the received view, Béatrice is a miracle of lightness: the simple, untroubled comic opera with which Berlioz brought his flamboyant compositional career to a close, the ritually cited parallel being Verdi and Falstaff. That Berlioz should have produced so unclouded a work is seen as all the more remarkable in view of the mounting physical and psychological distress of this declining period of his life.

In this view, the opera is a drastic simplification of Shakespeare's Much Ado. It is assumed that Berlioz, for some reason or other, wasn't up to the job of operafying the play as such, and so contented himself with stripping it down to the battle of wits between Béatrice and Bénédict, who interrupt their wisecracking just long enough to fall in love. Most but not all commentators notice that Berlioz has left in a third principal, Béatrice's cousin Héro, but to those who do notice she functions as a simple counterpoint to the acerbic Béatrice. Héro would be the simple romantic maiden, secure in the path of true love—the composer having surgically removed all obstacles to her marriage to the dashing young war hero Claudio.

The first and most immediate problem with this view is Héro herself. Doesn't it matter that almost every time we encounter her she is either crying or, as in the recitative quoted above, on the verge of tears? Now you may choose to believe that feeble line she hands Ursule, but the haunting reflection "Claudio! Claudio! je vais donc être à toi"—which sends the girls into the Nocturne proper—strongly suggests to me that what's coming down on Héro is something more oppressive than a surfeit of happiness.

Sure enough, by the end of one stanza of the Nocturne, Héro is crying. When Ursule gently comments on this ("You're crying, my lady"), she comes up with an even looper explanation. "These tears comfort my soul, the soon-to-be bride replies. "You'll feel your flowing in your turn, the day when you see your love crowned." Whereupon the girls are launched in a sort of B section of the Nocturne—a bit quicker and harmonically more, shall we say, troubled—which shortly dissolves into a reprise of their "Serene and peaceful night." It's on this wistful and brooding note, in the form of an orchestral coda based on the Nocturne, that this long act so full of roistering and tumult ends.

You may well wonder whether it isn't reasonable for Héro to be so edgy on the brink of such a major change in her life. In which case you are already one large step ahead of the commentators who manage to reduce both cousins to something less than two dimensions.

The fact is that Héro's state of mind is sufficiently troubling to Ursule to prompt her comment, in the spoken dialogue before the Nocturne, "There's your melancholy taking hold of you again." (Héro has just said how grateful she is to her father—the Sicilian governor, Léonato—for excusing her from the nuptial banquet. "My heart is full of joy," she says. "But the noise and the crowd are unbearable for me." ) At the same time, we have seen Héro display considerable spunk, in the allegro con fuoco conclusion of her aria—the opera's first solo number, a fact that takes on particular importance in view of the score's unusual musical pattern, about which we'll talk later.

Even before this, we have seen in the opera's first spoken scene that Héro has quite particular ways of dealing with her cousin's fatiguing cynicism, based on the very real and touching relationship we can see exists between them. At any rate we might see all of this if the spoken dialogue were to be considered an integral part of the score, something else we'll talk about later.

Berlioz also allows us gradually to see beneath Béatrice's (and for that matter Bénédict's) shell of toughness. It turns out that Héro has no monopoly on tears. In her Act II monologue Béatrice recalls, perhaps for the first time since the event, the trauma of the day the army, whose victorious return was celebrated in the opera's opening chorus, left to fight the Moors. "It all comes back to me, it all comes back to me," she sings, to the tune we have heard as the antecedent of the overture.

As she allows the memory to emerge, she relives the nightmare that followed, in which she saw the triumphant Moors leaving behind a pile of Christian corpses that included a gasping, and then dying, Bénédict. She remembers screaming in her sleep, and then she remembers waking up and recovering her sangfroid. "I laughed at my agitation. I laughed at Bénédict, at myself, at my foolish tears."

And then, as the strings sound a gentle figure in repeated eighth notes, with a slight ritard, she remembers one thing more: "Alas! Alas, that laughter was bathed in tears." This is potentially the most beautiful line in the score, and we have heard it too, sounded by the horns in the overture, before the first clarinet chimed in with "Il m'en souvient, il m'en souvient." In the
Berlioz wasn't a simplifier; he focused on themes that stirred him.
apart so long?" It's clear enough to at least some of the people around them that they belong together. Consider the exchange between Don Pedro and Claudio immediately after their exasperating trio with the distraught eternal bachelor Bénédict. as the two war heroes slip into their roles as Fred Merz and Ricky Ricardo, conspiring to rope Ricky's bachelor buddy into happy wedlock.

Don Pedro: "By heaven, we've got to pull this thing off. The only woman suitable for that lunatic is Béatrice."

Claudio: "Just as the only man suitable for that madwoman is Bénédicnt."

(Extra-credit question: Just why is it so important to Fred and Ricky and the others that Béatrice and Bénédicnt stop being single? Note that Héro's immediate response to what appears to be her own considerable anxieties about marriage is to try to marry off everyone in sight—first Béatrice, then Ursule.)

In part, the general inability to grasp what's going on in Béatrice stems from an inability or unwillingness to come to grips with its form, with what's going on in either the spoken dialogue or the musical numbers, not to mention how they go together. Fairly representative of orthodox expert opinion, I think, is the view expressed in the English-language essay in DG's booklet by Julian Rushton, to whom Béatrice is: the traditional opéra comique with spoken dialogue. The action is carried on in speech and the musical numbers (here Berlioz diverges from Mozart) are dramatically static, whether they explore significant moments in the action, embellish it, or simply seek to entertain. Even the two trios, for all their shifting moods, end exactly where they started, and thus serve only to clarify their shifting moods, end exactly where they started, and thus serve only to clarify.

Why is it so important to others that Béatrice and Bénédicnt marry?

end. Instead, this acknowledgment frees an emotional blockage, and she is remembering her horrible nightmare, and finally she is remembering the tears that bathed her laughter. And having discovered that she can survive the acknowledgment of even these feelings, she entertains yet another idea, the most dangerous of all: "I love him then? I love him then?" The tempo has changed, to an allegro agitato, and Béatrice is off and running. As she discovers that she can survive even this idea, the mezzo has to be prepared to let loose in her upper extension, from F up to B flat.

Are you going to tell me that this isn't an action? You might argue that Béatrice's monologue is atypical of the score in its straightforward, linear coherance, and in a sense it is. But what would constitute a "typical" number in this strange and wonderful score? What Rushton so casually calls the traditional opéra comique with spoken dialogue seems to me traditional only in that it consists of musical numbers interspersed with spoken dialogue. For one thing, not counting the overture, the entire score consists of some fourteen discrete numbers, including (as noted earlier) only three solos. For another thing, most of those numbers are quite long—say, six to eleven minutes. For yet another, the structural logic of many key numbers isn't at all obvious. But one thing that all those numbers have in common is that they provide opportunities for characters to deal with situations too charged emotionally to be dealt with in straight speech.

The obvious corollary is that it is in almost all cases impossible to understand what the musical numbers are about without the spoken dialogue out of which they evolve, and in this regard the discographic situation is unsatisfactory. Oiseau-Lyre omitted the dialogue altogether. Philips included a certain amount, but the editing tended to reduce the dialogue to what's strictly necessary for plot purposes, and in the process a great deal of important material fell by the wayside. What's more, the dialogue was so poorly performed (with one important exception, about which more below) that it hardly mattered.

DG's solution is a running narration, and the solution isn't entirely without merit. The narrator, Geneviève Page, is a far less grating presence than the unctuous fellow who narrated DG's Merry Wives of Windsor, and this format makes it possible at least to touch on matters that are simply edited out of Philips' dialogue.

Still, I don't want to hear about what Héro and Béatrice say in the first block of spoken dialogue; I want to hear them deal with Léonato, with the Messenger, with each other. Ditto Béatrice and Bénédicnt in their botched attempt to come together in Act II, where they have to face the fact that their botched attempt to come together in Act II, where they have to face the fact that

In addition, DG's formal presentation disrupts the human logic of three big choral numbers. Only in the Philips set do we actually hear Béatrice interrupt the reprise of the opening "Le More est en fuite" chorus, and then hear Héro show her spank by e x o r t i n g the chorus by all means to resume celebrating. Only in the Philips set do we hear the first stanza of the Act II opener, Soma rone's drinking song, sung offstage, though unfortunately we don't get to hear the opening dialogue between the two waiters to explain what's going on.

Finally, only in the Philips set do we hear something like what Berlioz imagined for the rehearsal of Somarone's "Grottesque Epithalamium" in Act I. Jules Bastin is allowed most of his spoken scene before the rehearsal begins, and he makes the most of his hiliarious efforts to get his musicians ready. After the first stanza, enough dialogue is left in to set up the second (with the newly composed oboe obbligato added), during which we actually hear Somarone's stream of rehearsal comments.

What Bastin does is so nice that it's all the more frustrating to have so much left (Continued on page 94)
Reviewed by:
John Canarina  
Scott Cantrell  
Kenneth Cooper  
R. D. Darrell  
Peter G. Davis  
Kenneth Farie  
Harris Goldsmith  
Matthew Gateswitch  
David Hamilton  
Dale S. Harris  
R. Derick Henry  
Joseph Horovitz  
Nicholas Keyson  
Allan Kozinn  
Paul Henry Lang  
Irving Lowens  
Karen Monson  
Robert P. Morgan  
James R. Oestreicher  
Conrad L. Osborne  
Andrew Porter  
Patrick J. Smith  
Paul A. Snook  
Susan T. Summer

Berlioz: Béatrice et Bénédict—See page 58.

Brahms: Sonatas: for Cello and Piano (2); for Violin and Piano (3); for Clarinet and Piano (2); for Viola and Piano (2)—See page 54.

Brian: Symphonies: No. 5 (Wine of Summer)*; No. 25.

John Hoffman, baritone*; San Paulo Symphony Orchestra. Francisco Teatro, cond. Aries LP 1629. $8.98 (Aries Records, P.O. Box 126, Reseda, Calif. 91335).

Undaunted by previous notoriety (HF, August 1981), Aries fearlessly continues its Havergal Brian series with two works from opposite ends of the composer's output. The Fifth Symphony, for baritone and orchestra, bears the subtitle Wine of Summer (not Wind, as given on the jacket); it's based on a poem by Lord Alfred Douglas, noted for his association with Oscar Wilde. Though composed in 1937, it was not premiered until 1969, a fairly normal gap between creation and performance where Brian is concerned. The vocal line is reminiscent of the many works for baritone of Frederick Delius. Orchestraly, however, the piece is not Delian at all, although it does have an uncharacteristic lushness. As so often, Brian uses a large orchestra, but the inspired quirkiness of the later works is missing.

Symphony No. 25, dating from 1966, is more "Brian-esque": its finale opens with a grotesque march, à la Holst or Vaughan Williams, which Brian deserts very quickly. While he probably could have developed it into something staggering, he chooses not to, yet keeps returning to it in short snatches only to leave it again. As Brian authority Malcolm MacDonald has said, "He's teasing you."

Aries has apparently retired Colin Wilson, conductor for many of the Brian works previously issued, and high time, too. Replacing him is one Francisco Teatro, who proves to be a real find. On the basis of these performances he should be conducting and recording throughout the world, in concert halls and in "teatri" everywhere. The jacket lists the orchestra as the San Paulo Symphony, the label as the San Paulo Symphony. Whichever it is (and with Aries it could be either or neither), it delivers excellent performances under Teatro's knowing hand, with baritone John Hoffman the superbly sensitive soloist in No. 5.

Despite his obvious sympathy for the score, Teatro does have difficulty in delineating the opening theme of No. 25 clearly, and he is not helped by the rather dull and murky recording, in contrast to the relative brightness achieved on the other side. It's true that Brian gives the theme to the lower range of the violas in the midst of a generally thick orchestration, contributing to its inaudibility—still, some adjustment should have been made, either by the conductor or the producer.

But wait! ... Having just accidentally dropped the record into a bucket of sodium pentathol. I notice a strange thing occurring. The labels have become almost transparent, and there seems to be other printing underneath, which is barely legible. Under No. 5's label can be discerned the words "Brian Rayner Cook, baritone: New Philharmonia Orchestra. Stanley Pope, conductor; concert performance in Alexandra Palace, 1976." What this means I can't begin to imagine. On the reverse side it says "BBC Scottish Symphony Orchestra, 1976." The conductor's name really is hard to read, and I can only make out his initials, which are 

J.C.

Bach Postponed

The final installment of our series on the size of Bach's choruses.—Joshua Rifkin's response to Robert Marshall's rebuttal—will appear next month; production schedules proved unrealistic in view of the logistical difficulties of the project.—Ed.

Cherubini: Requiem in C minor—See page 64.


Franck: Prelude, Chorale, and Fugue—See Recitals and Miscellany.

Herbert von Karajan and Dmitri Shostakovich: a fine Tenth Symphony—See page 72.
HAYDN: Sonatas for Keyboard (6).

In several ways, this album represents the beginning of a new phase in Glenn Gould’s checkered recording career. His first digital release, it also introduces a new production team (his prior discs were made with Andrew Kazdin) and a new piano (a Yamaha). Gould appears on one of his first mono releases.

Best of all, it seems to mark at least a partial return to the more expansively lyrical style that made some of the early Gould recordings so communicative and attractive. In welcome contrast to his disastrous series of Mozart sonatas, one finds here a degree of repose and rhetorical expansiveness in the adagios and andantes—a welcoming foil for his customary sharp incisiveness and biting articulation in the faster movements.

The usual Gould eccentricities—present to be sure—remain under relatively stringent control. There is the inevitable constant vocal obbligato, along with some slow apergiation of accompanimental chords, beginning on rather than before the beat, and a certain intentional monochromaticism. (Presumably, the even touch and constricted color of his Yamaha grand supply just the hue desired by this problematical artist; though always pleasant, it is sometimes a little uninteresting.) The more intimate works are more successful here than the boldly heroic No. 62 and the wryly propulsive No. 60, both of which could use a bit more humor and more “air” between the notes. The piano-playing itself, of course, is spectacular.

CBS supplies a virtually noiseless pressing, and scholarly notes by Christa Landon in three languages. H.G.

JANÁČEK: The Cunning Little Vixen.
CAST:
Bystrouška
Lucia Popp (s)
Franík
Eva Hrubáková (s)
The Rooster / The Jay
Gertrude Jahn (s)
The Cricket
Miriam Ondrásková (s)
The Fox
Eva Randová (ms)
Paskova / The Woodpecker / Chocholka
Ivanka Mixova (ms)
Lapák
Libuše Manová (ms)
The Forester’s Wife / The Owl
Eva Zigmundová (ms)
The Frog / The Grasshopper
Peter Saray (bs-s)
The Schoolmaster / The Gnat
Vladimir Krejčí (t)

Pasek
Beno Blachut (t)
The Forester
Dalibor Jedlička (bs-b)
The Parson / The Badger
Richard Nowák (bs)
Hrašta
Václav Zítek (bs)

Bratislava Children’s Choir, Vienna State Opera Chorus, Vienna Philharmonic Orchestra, Charles Mackerras, cond. (James Mallinson, prod.) LONDON LDR 72010. $25.96 (digital recording; two discs, manual sequence).

Comparisons:
Neumann / Czech Phil. Pro Arte 2012, Gregory / Prague Nat. Theater. Sup 112 1181/2

Janáček’s The Cunning Little Vixen needs no introduction at this late date; together with Jenifa, the opera has taken a firm hold on the repertory all over the world. A product of the composer’s astonishingly productive old age, Vixen is his most enduringly lyrical opera. A moving evocation of the natural order of things, in which there is no death, only endless rebirth. The Forester grasps this miracle in the transcendent final scene as the great cycle of life majestically turns before his eyes. No wonder Janáček asked to have this gloriously affirmative music played at his funeral.

I cannot remember being quite so caught up in a new opera recording as I have been by this Vixen, the fourth entry in Decca’s superb series of Janáček operas. Apart from the musical excellence of the performance and the flawless engineering, there is an intangible quality here that I find difficult to analyze. Perhaps it arises from the intense involvement of all concerned as they bring this treasurable work to life and collaborate in creating a true phonographic event. When so many opera sets these days sound stillborn, insipid, and sheathed in plastic, London’s Vixen leaps from the speakers with startling freshness, vitality, and spontaneity—a reminder of a time when musicians made records that sounded like an artistic expression rather than a mechanical reflex.

Much of the inspiration must come from Charles Mackerras, who has loved this music for years and understands Janáček like a native. There is an uncanny rightness about his conducting as he puts every note in perspective and conjures up moods that avoid sentimentality without missing the score’s dramatic power, poetic atmosphere, or depth of feeling. He knows when to linger over a phrase, when to urge the orchestra forward, and how to weight Janáček’s unusual instrumental textures to achieve the luminous vibrancy that permeates this radiant hymn to nature.

Mackerras is fortunate to have the Vienna Philharmonic at his disposal, a virtuoso ensemble that the Czechoslovakian orchestras on three earlier Supraphon recordings can hardly match. For the first time on discs, all the sensuous sweetness of the string passages, the airy delicacy of the woodwind writing, and the rich sonority of the brass underpinning blend into a satisfyingly balanced and cogently defined musical entity.

The native cast has Janáček in its
blood, and many of these singers may be heard on previous *Vox* recordings from Czechoslovakia. No doubt they have been spurred to surpass themselves by the presence of Mackerras and the Vienna Philharmonic; the slightly lazy, provincial routine that sometimes creeps into the all-Czech versions never threatens this performance for a moment. Dalibor Jedlicka, promoted from his roles of Parson and Badger on the Gregor recording, is a warm, virile Forester—far more persuasive than Supraphon/Pro Arte's Richard Novák, here much better suited to the less demanding Parson/Badger assignments. Eva Randovič's ad- dently sung Fox has made me upgrade my estimate of this mezzo after her recent unfortunate Fricka at Bayreuth and the Met. And how typical of London to call upon the veteran Beno Blachut, one of Czechoslovakia's greatest tenors of the past, to make a cameo appearance as the innkeeper. Pásček.

Best of all, we have Lucia Popp in the title role, and she is utterly enchanting. Like so many Czech singers who have achieved international renown, Popp has been absorbed into the Austro-German operatic mainstream, and we tend to forget her Moravian heritage—and how wonderful at last to hear an important voice in this music. Not only is Popp's inflection of the text deliciously idiomatic, but her bell-pure soprano sounds ravishing on every note and in every gorgeously shaped phrase. Here is a Vixen that for once captures the ears as well as the heart.

I have already mentioned the brilliant clarity of London's engineering, which successfully reproduces the full range of Janáček's colorful orchestral palette. It only remains to mention the wise essay by John Tyrrell that accompanies the discs, and the generous selection of charming wildlife drawings that originally inspired Janáček. I might also complain mildly about Deryck Vinyé's hideous English translation, full of annoying British colloquialisms that turn Janáček's animals into a parcel of grubby cockneys. That minor drawback duly not-

MacDOWELL: First Modern Suite, Op. 10; Sonata for Piano, No. 4, Op. 59 (Keltic)—See page 74.

MOZART: Quartets for Strings (14)—See page 56.

MOZART: Overtures (9).


**Comparisons:**

Haitink/London Phil. Phil. 9500 882

Davis/Royal Phil. Sera. 5 60037

Höhn/various orch. DG Priv. 2535 229

Faerber/Württemberg Turn. QTV S 34628

For a good many years, Colin Davis' Sera- phim disc has neatly and economically answered the basic-library need for a col-

lection of the eight essential Mozart over-
tures (which is to say those listed above from Idomeneo on), to which was added the brief *Finta giardiniera* Overture, otherwise available at the moment only in the DG complete recording. Now there is competition, in the form of a Haitink/Philips disc that slipped into the catalog a while back and this new Marriner/Angel—both featuring the essential eight and the three-move-

ment, eight-minute-plus *Lucia Silla*.

Except for some grittiness in the Sera- phim string sound (it would be interesting to hear a new disc mastering of the tapes), the Davis disc remains an attractive proposition. He went on to record seven of the operas represented complete (all but *Finta giardiniera* and *Magic Flute*), and I find these earlier performances generally fresher (Continued on page 67)

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At Last, Cherubini Receives His Due

Reviewed by Paul Henry Lang

FINALLY WE HAVE A GOOD RECORDING of a masterpiece admired by Berlioz, Brahms, Wagner, and just about every musician in the nineteenth century—yet unaccountably forgotten by the twentieth. Cherubini, the enigmatic Florentine, like Handel in London, spent his entire mature life in Paris, surviving revolutions and dynasties, never budging from his principles, even when challenged by Napoleon. He was regarded with awe by his colleagues but never became popular with the public, though some of his operas were still in the European repertory in my youth. Everyone admired his incomparable mastery of the métier of composing—Haydn called him his "spiritual son"—but his music was considered cool, even cerebral.

Those who listen to this Mass will discover a work rich in sentiment, a deeply felt meditation on the dread of death and hope of eternity, expressed with infinite delicacy and reserve. It belongs in the company of the Mozart, Berlioz, and Verdi Requiems. Commissioned in 1816 by Louis XVIII to be sung for the eternal rest of the executed Louis XVI, it was performed again two years later at the funeral of Mau and subsequently taken up in many churches and by choral societies.

The C minor Requiem is unlike any other Mass for the dead we can recall, a deeply felt meditation on the dread of death and hope of eternity, expressed with infinite delicacy and reserve. It belongs in the company of the Mozart, Berlioz, and Verdi Requiems. Commissioned in 1816 by Louis XVIII to be sung for the eternal rest of the executed Louis XVI, it was performed again two years later at the funeral of Mau and subsequently taken up in many churches and by choral societies.

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Thank you.
Actually, Marriner makes a rather good case here for Lucio Silla, driving it harder than he did in his deleted Angel recording (with three other overtures and the ballet Les petits violets). Most of these performances in fact tend to the hard-driven, though this isn't necessarily a matter of tempo. Marriner's Magic Flute, for example, times out only eight seconds faster than Davis' and eleven seconds faster than Haitink's, and yet it has for me an unmistakably brisker feeling, which must have to do with a certain bluntness of attack, bordering at times on cagdeling.

The recorded sound, which is forward and highly detailed but not very warm, contributes to the impression of almost aggressive brilliance. Setting aside for a moment the question of the effectiveness of individual performances, the overall effect is a tingly, almost aggressive effect, which must have to do with that forward, more refined Haitink performance, where I hear more sense of shape and flow in the phrasing, especially as regards the winds.

Which is not to deny the attractions of the Marriner disc. In addition to Lucio Silla, the other opera seria overtures—Idomeneo and especially Clemenza di Tito—respond right smartly to Marriner's sung-ho treatment, and Figaro and Abduction can undoubtedly absorb fairly hefty energy transfers. Looking to the long haul, I'm not so sure about the skittish Magic Flute and Don Giovanni and Impresario, but the Cosi is a winner, more spacious and songful.

You'll have to decide for yourself which of these discs suits you best, but you can't go far wrong with any. You might also consider the DG Privilege disc assembled from Karl Böhm's complete recordings of Abduction, Impresario, Figaro, Don Giovanni (the earlier, and somewhat better, Prague set). Cosi, and Magic Flute, with the Symphony No. 32 ingeniously cribbed from his symphony cycle for its secret identity as the intended overture to Zaide. The performances, while uneven, have the advantage of having been conceived in connection with their operatic contexts, and some of them, notably the rousing Berlin Philharmonic Magic Flute, are quite good.

Since the Privilege disc was put together before Böhm recorded Idomeneo and Clemenza di Tito, those overtures are lacking. You can catch them, though, along with the overtures to Impresario and seven of Mozart's early stage works, on a Turnabout disc that isn't terribly polished but is on the whole more inviting than the cut-and-dried performances in the complete recordings of such works as Mitridate, Sogno di Scipione, and Lucio Silla. If you can find a copy flat enough to track, this is a useful supplement to the basic collections.

K.F.

**CLASSICAL**

(Continued from page 63) and more alive. What's more, I'd sooner have Finta giardiniera than Lucio Silla, a pretty but hardly riveting piece. (There is in any event another source for the latter. See below.)

**Reviews**

In 1863, Gustave Flaubert's exotic historical novel Salambô, issued in France only the previous year, was published in Russia, and the twenty-four-year-old Mussorgsky began work on his opera on the subject. The project occupied him on and off for three years, but was then dropped with just three extended scenes written, plus songs or choruses for three others, about half the total in orchestrated form. Themes and orchestral motifs from Salambô were cannibalized

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Stage. The pieces he wrote are with one exception either incidental or public/ritual in nature, and stuck for words, he turned to extant Russian verses from unrelated sources.

So the closest to a stageable Salammbô has been the briefly successful version by Ernest Reyher, which reached this country at the turn of the century in a scenically fantastulous production in New Orleans, and for three performances at the Metropolitan (with a cast that included Bréval, Salèza, Journet, Scotti, and a whole bunch of the wonderful second-line singers then active in the company's French wing). And the closest to popularity has been the choice of a fictitious Salammbô as the vehicle for the disastrous debut sequence in Citizen Kane. (My movie trivia informants tell me that Thais was the intended selection, but that difficulty ensued over rights. I must say that Salammbô is the perfect substitute, but can anyone tell me just which scene of Salammbô that opening fragment is supposed to represent?)

I don't mean by all this that there is nothing of consequence here. Mussorgsky was thinking in the right direction in creating for Mathô a prison monologue for which there is no equivalent in the novel! While I can't quite agree with Pesko's opinion that the result is "one of the most extraordinary monologues in all opera" (does he truly believe it ranks with those of Boris, of Florestan, of Sachs, just to stick to non-Italian examples for male voice?), it's a strong scene, for sure. Most of it is in the "realistic-declamatory" style that was to be the composer's main contribution to the line of great Russian bass and baritone scenes for such characters as Igor and Susanin, and is quite an opportunity for a first-rate singing actor. There is a beautiful melodic development as Mathô contemplates an isolated death ("Ya umru odinok"), and it is likely, to judge from other thematic fragments that make appearances, that the piece would have made greater impact as the culmination of the Salammbô/Mathô relationship that didn't get written—the missing Tent Scene. Salammbô's first appearance at the mercenaries' wild feast. Bits of Boris peep through in the orchestra.

The other really imposing section is the first part of the longest consecutive sequence, the ritual in the Temple of Moloch as the apparently doomed people of Carthage implore the god for deliverance (in the novel, it is a gruesome, brilliantly written description of mass child sacrifice). The color of this scene is rich and barbaric, with some fascinating harmonic and instru-

Perhaps half the music is worth going back to and very pleasant to have.
There are two impressive-sounding Slavic basses. Gheorghi Selëznev, the Mathiò, shows a tone both broad and deep, with a fine resonant bite to it. At times the voice is a little deficient in vibrato, but when given a more cantabile opportunity he can rise to it. He can sing softly to lovely effect, and though he is clearly not a baritone, he reaches a ringing and honestly come-by G in his monologue.

Just as commanding, and even more beautiful, is the voice of Giorgio Surjân, who as the First Priest is called upon to intone (rather startlingly, to our ears) the principle theme of Boris’ “I Have Attained the Highest Power.” He has less of a challenge than Selëznev here, but it is clear that his instrument has good size, length of range, and the capacity for a solid legato. Two to look forward to.

The Salambò, Ludmila Shëmchuk, has a mezzo of luscious timbre in the middle. She, too, has the reach in her voice (the role is very high at points), but it sounds as though it narrows above the upper-middle transition—unless, as is entirely possible, the engineers of this live event have sabotaged her on the high end. She sings with good line and dynamic control. The young American baritone William Stone renders his instrument has good size, length of range, and the capacity for a solid legato.

This is an attractive performance of a fascinating but problematic piece. The problems of L’Enfant are by no means confined to its visual element (how do you make something intelligible of the coming-to-articulate-life of all the Child’s surroundings?), but there’s no doubt that the absence of this element simplifies life for recorded performers.

What we need to do, I think, is recomplicate matters a bit. While conductors are in their element with the musical ingenuity of L’Enfant—and who wouldn’t savor the jazzy fox-trot of the Teapot and Chinese Cup, the rustic and plaintive ballet of the wallpaper figures, etc.—most of the opera’s characters are allowed to bob to the surface and sink back without leaving a ripple.

I don’t think the problem is so much the difficulty of bringing a grandfather clock or a nightingale to anthropomorphic life, although heaven knows such characters don’t exactly demand dramatic seriousness from performers constrained to provide a playlet. Still, the text zeroes in with considerable precision on the stakes of all those aggrieved furnishings and critters. Some are trying to comprehend their loss, or to get on with their existences, or to cope with their injuries, or to appeal for help. Many want something from the source of their

RAVEL: Gaspard de la nuit—See Recitals and Miscellany.

RAVEL: L’Enfant et les sortilèges.

CAST:
The Child: Susan Davenny Wynner (s)
Fire/Princess/Nightingale: Arleen Auger (s)
Shepherdess: Lynda Richardson (s)
Sofa/But-Squirrel: Jane Burbié (ms)
Shepherd/White Cat: Linda Fiinic (ms)
Mamm/Chinese Cup/Dragonfly/Owl: Jocelyne Taillon (a)
Teapot/Arithmetician/Tree Frog: Philippe Langridge (t)
Grandfather Clock/Black Cat: Philippe Hutenlocher (b)
Armchair/Tree: Jules Bastin (bs)

COMPARISON:
Maazel/Orc. National: DG 138 675

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misery, the Child: acknowledgment, humiliation, guilt, revenge.

It's probably not coincidental that the strongest impression in the new recording is made by Philip Langridge. The same thing happened with Hugues Cuénod in the Ansermet recording (a casualty of London's mass Treasury deletions), and Michel Sénéchal is no slouch with Maazel. Taking nothing away from these gentlemen, the fact is that the first two tenor roles, the strutting Teapot and the hectoring Arithmetician, are written so aggressively (a tortuously high tessitura, for one thing) that the performer has to be cooking from his first cue just to be able to sing them.

Even these roles can be made more vivid by making that crazy writing more directly express the pursuit of their needs and trusting that the result will be effective, rather than heading straight for a cute "effect." (Remember, however zany the little old Arithmetician may appear to us, he doesn't think of himself as ridiculous, or "cute." ) What, then, about all those other characters, less overtly demonstrative than the Teapot and Arithmetician?

When your entire role lasts only a few minutes, you don't have the luxury of a Rigoletto or Isolde, who may be able to steal some performance time to ease into the character. What's more, Ravel's vocal writing is rarely effective in conventional terms, making it that much easier to understand the temptation to fall back on the latent cuteness of Colette's libretto. In the process, however, we are severed from the emotional reality of the Child's fantasy as irrevocably as his assault on the wallpaper separates the Shepherd and Shepherdess.

Both the Angel and the DG performances are well conducted and recorded, and on most counts I would be hard put to choose between them. DG has one important edge in Francoise Ogea's vocally solid Child. This is the one character we have to listen to throughout the opera, and I have a hard time with Susan Davenny Wyner's hollow, unsteady tone.

I'm also partial to DG's Jeannine Collard as Maman and the Dragonfly, and she might also have been a smashing Chinese Cup if Maazel hadn't been so literal in reading Ravel's "nasal voices" instruction for the Teapot and Cup. Angel's Jocelyne Taillon is a more effective if rather matronly Cup, but a less individual Maman and Dragonfly. Jane Berbie doesn't make much of the Sofa in either recording but is a solid Shepherd (DG). Bat (Angel), and Squirrel (both)—though Ansermet's Suzanne Danco works up to a more powerful climax as the Squirrel.

Danco, however, is a surprisingly uninteresting Princess, a role that on paper looks like perhaps the opera's most affecting. Almost by default, Angel's Arleen Augé is the choice here and in the two coloratura parts, the Fire and Nightingale, that Ravel specified should be doubled with the Princess. The forlorn duet of the Shepherd and Shepherdess is another episode that somehow rarely seems to come off—too bad we can't pair DG's Shepherd (Berbie) and Angel's Shepherdess (Lynda Richardson). The lower-range male roles are so elusive that not even such sympathetic performers as DG's Camille Maurane and Heinz Rehfuss make much headway.

Neither cast, then, has a decisive advantage, with the possible exception of DG's Child. On the other hand, the DG libretto is in French only, while Angel supplies a good new translation by Felix Aprahamian. In the end, allowing for the reservations noted above, either recording should give a fair measure of enjoyment. Which leaves us with two serviceable accounts of L'Enfant and none of the more engaging L'Heure espagnole. Hint: Maazel's DG recording is rather better than his L'Enfant.

K.F.


In his autobiography, Chronicle of My Musical Life, Rimsky-Korsakov wrote, "I was wrong to call Antar a symphony. It is a poem, suite, fairy-tale—anything but a symphony. " Whatever it is, it's another one of those unjustly neglected works conductors seem to delight in passing over, a gorgeous example of Russian exoticism. Anyone who claims Scheherazade or Le Coq d'or will certainly respond to the sensuously beautiful melodies and colorful orchestration of Antar. Perhaps it's a case of Rimsky's having written the same type of music once too often—yet Antar is in no way inferior to the other works. The lack of an exciting or emotional finale (Antar's is quiet and reflective) has undoubtedly militated against frequent performances; after all, quiet endings don't elicit as much applause as loud ones. (I know Scheherazade ends softly, but most of the finale is exciting nonetheless.) Antar has fared only slightly better on records than in the concert hall. In addition to this new recording, SCHWANN lists only a version by Maurice Abravanel and the Utah Symphony (Vanguard VCS 10060). Long-deleted accounts include those by Morton Gould and the Chicago Symphony, Ernest Ansermet and the Suisse Romande, Paul Paray and the Detroit Symphony (for which Leonard Shure leaves nit-picking behind. I retain a special fondness), and Erich Leinsdorf and the Cleveland Orchestra.

Entering the not very competitive lists is the gifted American David Zinman, who displays real sensitivity for Antar's many soft lyrical episodes, largely concentrated in the opening and closing movements. The two dynamic and agitated middle sections would benefit from greater... well, dynamism and agitation, which are found aplenty in the old Paray version. (Conversely, Paray could have used some of Zinman's poetry.)

The Rotterdam Philharmonic again proves an excellent though somewhat low keyed orchestra. In the fifth measure of the opening movement the rhythm of the cello and bassoon triplet is unclear; this is the work's first inkling of a thematic statement, and it is played clearly in subsequent entrances by other sections, yet with each return to the cellos and bassoon, it is either unclear or hurried. Similarly, the second movement opens with a murmuring sixteenth-note cello passage, taken up successively by the other strings, and the fourth beat of each measure is crucial in establishing the contour of the theme; I defy anyone...
unfamiliar with the piece to discern the theme here, so little articulation is there of that fourth beat whenever the strings play it.

Gripes aside, this is a worthy presentation of Antar even without the flaws others have brought to it. And I cannot stress enough how enjoyable this music will be to those sympathetic to the idiom. (Anyone not so inclined must be an old grouch indeed.)

The more familiar Russian Easter Overture is not exactly overplayed in these discs, but a rather low-key performance, when its festive brilliance is really light up the sky with its festive and fiery brilliance. In general, I've found Zinnman's concert performances and his recordings with the Rochester Philharmonic and the Netherlands Chamber Orchestra more dynamic and characterful than his work with the Rotterdam Philharmonic.

Still, this is a most worthwhile release.

In Philips' trilingual liner notes, much space is devoted to Max Harrison's description of Antar and Rimsky's four versions of it, leaving room for only two extremely perfunctory sentences on the overture. But it's really time to stop stretching a one-side work, such as Antar, over two sides. Other versions, including the Paray (identically coupled), have been accommodated on one side. Here there would then have been room for a third work, such as Saudo. Philips is the main culprit in this chintzy practice (Mendelssohn's Reformation Symphony. Bizzet's symphony). Prices being what they are, especially for digital recordings, the buyer deserves a bit more.

SCHUBERT: Sonata for Piano, in B flat, D. 960.


Some years ago, at a New York performance, Leonard Shure played this sonata and displayed some decidedly arbitrary notions about voicing: at bar 2 of the first movement, for example, the emphasis suddenly-and inexplicably-shifted from the upper to the lower octave in the right hand, perhaps to demonstrate the discrepancy of slurs markings in the Universal Ratz edition. I mention that anomaly only to praise its absence in the present recording.

Presumably, Shure—who now seems to be using the Breitkopf edition reprinted by Dover (although he corrects the obvious misprint, C sharp in place of B natural, at the start of the slow movement that his one-time mentor Artur Schnabel dogmatically perpetrated in his recording of the work)—has left such nit-picking behind. And all to the good! In place of the stern and sometimes ungraciously intellectualism that used to pervade much of his playing, he seems all heart now. To be sure, his interpretation is succinctly organized and thoroughly intelligent in its simplicity and forward motion, but there is also a mellow expansiveness that calls attention to the beauty and emotional significance of Schubert's music as well as its construction. Indeed, one is surprised to find a few careless details (the misprint of bar 222 in the first movement recapitulation, slightly different from bar 7, is not played so here), which, however, detract not a bit from the total communication. Slightly, but only slightly, more annoying are certain pianistic failings, such as the unevenness of the pianissimo bass trills so important to the first movement, and certain wrong notes and gauchely articulated passagework (especially, heavy chordal passages, which could have more clarity). It should also be mentioned that the sonata alone, shorn of its long first-movement repeat and with no makeweights, provides somewhat short measure. (The first side runs only 14:25.)

But in terms of eloquence, pacing, and substance, this is one of the better readings of this demanding and inspiring work. The

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Although the violins sound understrength and less than ideally secure when pressed (as they often are by Sessions) into the higher positions. Most important, the performance has the necessary shape.

The 1959 Divertimento, though more substantial than the title might suggest, is a more symmetrical, accessible work than any of Sessions' symphonies. The five movements are designated Prelude, Aria, Toccata, Perpetuum Mobile, and Epilogue, and the suggestions of virtuosity therein are very much to the point—this is a wonderfully high-spirited, bouncy showcase piece for orchestra, not easy to play but surely rewarding for both performers and audi-

Sessions' music does not play itself; the shape and line take time to discover.

Roger Sessions: a recent celebration

A Chopin-esque setting, quite un-Chopin-esque in impact; this gives way to a more lyrical Allegro, then returns, to be succeeded by a spiky finale. The later sonatas are in distinct movements, the writing denser, ever more closely reasoned; studied in sequence, all three constitute an admirable introduction to Sessions' music.

I would have to add, however, that these performances are less convincing, in shape and in detail, than the alternatives presently available (No. 1, by Robert Helps, on CRI SD 198; No. 2, by Alan Marks, on CRI SD 385; No. 3, by Helps, on New World NW 307). The piano writing is of great complexity, an extraordinary com-

mand of tempo and rhythm is required to clarify the music's flow, and nothing less than a magisterial polyphonic technique is needed to sort out the many linear strands.

La Brecque's dedication to the music and her seriousness of purpose are unquestioned—but she simply is not a pianist in the class of Helps, technically speaking, so her performances don't achieve the profile or clarity (or even the required tempos) that his do. Good marks for effort, and for presentation, with a booklet of notes on the music by James McCalla and on its performance by the pianist. The final side is filled out with recorded conversation between composer and pianist, not very satisfactorily engineered or edited—though the sound of the sonatas themselves is quite good.

D.H.


Having attended the American premiere of the Seventh Symphony (1967) was commissioned for the 150th anniversary of the University of Michigan and first performed by the Chicago Symphony under Jean Martinon. Like most of the composer's symphonies, it is in three movements (fast-slow-fast), though in this case an additional slow Epilogue achieves a sense of retrospective closure. From the springy octaves and the responding oscillating patterns of the beginning, the thread of the musical argument is consistently absorbing. Among its distinctive features are a certain prominence of the darker wind colors (alto flute, English horn), a fondness for quintuple meter that is a facet of pervasive rhythmical asymmetry, and a perhaps excessive propensity to underline climaxes with the higher pitched percussion instruments. Peter Leonard and the Louisville Orchestra handle most of the musical challenges well,
the Shostakovich Tenth, by Dimitri Mitropoulos and the New York Philharmonic (October 14, 1954). I recall that one critic wrote: "Shostakovich has written an excellent symphony lasting thirty minutes. Unfortunately it takes fifty minutes to perform." Immediate purchase of the now deleted Mitropoulos recording, the passage of time, and increased familiarity with the score have demonstrated to at least one listener that Shostakovich wrote not merely an excellent, but a great symphony—and one lasting fifty minutes (close to fifty-two here).

During the same season, I first heard Herbert von Karajan and the Berlin Philharmonic, at their picketed New York debut (March 1, 1955). He seemed not so much to conduct as to preside over the performance, merely reminding the players of details agreed upon at rehearsals. My early aural impressions of his work, in subsequent concerts and recordings, were that he smoothed away the accents, the "rough spots" in Beethoven, Brahms, Berlioz, and others, and presented their scores in sleek, smooth-sounding, bland interpretations.

Again the passing of the years has brought change, not only in my perception of his work, but in the work perceived. While some of the old sleekness remains, many of his recordings of the past decade or so demonstrate greater personal involvement, a more committed, more penetrating approach to scores. The former blandness has given way to powerful statements of much of the symphonic literature. (I leave evaluation of his operatic conducting to others.)

Karajan has always been very selective in his choice of repertoire, and the Tenth Symphony is the only Shostakovich he has performed and recorded. I haven't heard his earlier recording (DG 139 020), but the new version gives ample evidence that the score is tailor-made for the Karajan of today. There is no smoothing-away here, no holding back at climaxes.

The long and mostly brooding first movement, so beautifully begun by the sensitive Berlin strings, rises to climactic moments of searing intensity: Karajan and the orchestra really throw themselves into the music, and they supply just the right touch of irony in the bittersweet waltz episodes. The whispering dervish of a scherzo (a portrait of the demented Stalin, according to the composer's memoirs) has a fury and panache comparable to Mitropoulos' pioneering version. More waltzlike music permeates the Allegretto third movement, in which the composer's musical signature, DSCH (German nomenclature for the notes D, E flat, C, B), plays a prominent part. The brooding atmosphere returns to open the finale, followed by a high-spirited Allegro that would be typical of Russian symphony finales of the 1940s and '50s, were it not for its moments of fierce combative ness and the feeling of triumph achieved not without loss, as depicted in the melancholy woodwind passages. Karajan's finale is swifter than other versions, but the orchestra's virtuosity sweeps all before it, even despite flaws in the conical staccato bass solo beginning at figure 192.

Vividly recorded, this is, in toto, a marvelously virile and exciting (as well as poignant) rendition of one of the most magnificent symphonies of our time, the stature of which increases with each hearing. Speaking personally, I can hardly imagine or remember that there was a period in my lifetime when this work did not exist. To do so is to be reminded anew of the wonder of the creative process.

J.C.

STEFFENS: Transpositions.

Peter Roggenkamp, piano**: Ursula Wust, flute†; Hans Dietrich Klaus, clarinet**: Reiner Schmidt, viola††. Northwest German Philharmonic Orchestra, Janos Kulka, cond.**. New York: Labor Records, P.O. Box 1262, Peter Stuyvesant Station, New York, N.Y. (10009).

Spielstrategien * Pluie de feu * La Femme-Fleur. ‡ Guemica. ‡ Rose oves*/ Rituelle Aktionen II (tape).

Walter Steffens, a thirty-eight-year-old German composer, has devoted his energies since the mid-1960s to a seemingly quixotic task—transforming pieces of vi-

(Continued on page 76)
Edward MacDowell: Inveterate Tinkerer, Near Master
Reviewed by Irving Lowens

We owe Charles Fierro a debt of gratitude for presenting the first recording ever of Edward MacDowell's First Modern Suite, the student work begun in 1881 under the guidance of Joachim Raff which so pleased Franz Liszt that he recommended it for performance at the forthcoming meeting of the Allgemeiner Deutscher Musikverein to be held in Zurich the following July. MacDowell himself played it, from manuscript, and reported to his mother in New York that he had scored a "great success." In 1883, the suite was published by Breitkopf and Härtel in Leipzig (again, upon Liszt's recommendation) and MacDowell was launched as a composer.

Fierro also offers the Keltic Sonata, a fiercely difficult piece from MacDowell's last creative years that is almost never heard today and has been recorded only twice previously. Thus, we have here specimens of major works from the beginning and end of the career of one of America's most gifted composers (although the story, as I will shortly explain, is a little more complicated than that). MacDowell is, of course, out of fashion these days and has been for many years, but his time will come again. I agree with Virgil Thomson, who has called him "our nearest to a great master before Ives." Although he never achieved MacDowell's Corrections and humbly asked: "May I use up the yellow covers for revisions now on hand?" We do not know how MacDowell replied, but he apparently had still further thoughts about the Sonata, because on November 5, 1902, Schmidt wrote once again and assured the composer: "I will make the correction in the Keltic Sonata..."

Thanks to the existence of a copy of the first edition that MacDowell presented to his friend and disciple W. H. Humiston, in which his corrections are indicated in red ink, we know that he changed the metronome marking on page 30 from quarter = 69 to quarter = 88, while on page 31, for the concluding codetta, the metronome marking was altered from quarter = 48 to half = 40, and the words "gradually broaden" were to be added over the last two bars of the third system. Schmidt made the correction on page 30 correctly in later printings, but unfortunately, he messed up those on page 31. Instead of half = 40, it came out quarter = 40, thus cutting MacDowell's desired tempo in half! Accordingly, everybody who plays the Keltic and uses, unknowingly, the revised edition, is farther away from MacDowell's original intention than if the first edition (where quarter = 48 appears) had been used. And to make the joke still more binding, the words "gradually broaden" are printed as "gradually broader"—over the wrong bar!

The best of the three recordings of the Keltic Sonata is that of Leon Bates, who takes the piece somewhat slower than Fierro does, uses a wider dynamic range (MacDowell ranges from pppp to ff), and has less trouble with its formidable technical problems. The Mitchell recording, coming after, is acoustically hors de combat. As to the First Modern Suite, Fierro not only has no competition, but he plays the spots off the piece. In view of the pairing (Bates backs his Keltic with Barber's Excursions and George Walker's Sonata), and MacDowell aficionados. MF

MacDowell: First Modern Suite, Op. 10; Sonata for Piano, No. 4, Op. 59 (Keltic).

Charles Fierro, piano. (Charles Fierro and Michael Frater, prod.) Nonesuch H 71399, $5.98; Tape: NS 71399, $5.98 (cassette).

Comparisons—Sonata:
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Classical

Reviews

(Continued from page 73)

visual art into music. This disc, apparently the first of several volumes, shows that visual-to-audio "transposition" (as the album title has it) can be done, if only in a limited way. But more important, the collection shows Steffens to be an inventive composer whose music works on purely musical terms, independent of artsy-philosophical rationalizations.

Steffens covers an extraordinary range of styles here, from serialism to minimalism, from dense, Romantic orchestral writing to musique concrète (literally, in fact: The source material for the tape piece Rituelle Aktionen II was gathered at a construction site). As for the "transposition" business, it really works only in the piano piece Spielstrategien (Game Strategies)—and there only because the graphic design grids that inspired Steffens lend themselves to musical games, with lines slanted in different directions representing different notes of an arpeggiated chord. Even at that, Spielstrategien offers several distinct musical reductions of the graphic, striving toward either consonance or chaos as the eighty-nine frames of the design slowly change. Both "Meditations" are conceived in a minimalist vein; the first sounds rather like Bach's famous C major Prelude with the needle stuck, the second somewhat more dramatic.

Picasso paintings provide the inspiration for two pieces: La Femme-Fleur, for flute and piano, derives from the series in which Picasso transforms a female nude into a sunflower; here a graceful flute melody evolves into something more abstract and pointillistic, and then back again, with a touch of Picasso's ironic humor. Guernica is the album's most ambitious and striking offering—not quite a concerto, but an orchestral work with a richly endowed solo viola part, beautifully played by Reiner Schmidt. Again, Picasso's specific images don't translate into sound; nor does Steffens choose to convey the chaos of the painting or its myriad details. What he does convey, through tensely emotional orchestral writing, is the tragedy of the bombing that moved Picasso to commemorate the Spanish Civil War.

The other works are more abstract. Pluie de feu, for piano, is based on Bernard Aubertin's graphic in which twenty-seven matches are lit and allowed to burn out; the pictorial score consists of twenty-four pairs of notes (one treble, one bass, connected by a line representing a matchstick) that, we are told, represent four statements of a tone row—although one doesn't quite hear that way—plus three unpitched matchsticks that Steffens calls "noise fields," representing the crown of flame over Aubertin's twenty-seven matches. The realization of the "noise fields" is left to the discretion of the pianist, in this case the adaptable Peter Roggenkamp (also heard in the more firmly controlled Spielstrategien), who creates a prepared piano, using foil strips, for the occasion. As a concept, it is interesting; as a piece of music, it doesn't amount to much.

Like Pluie de feu, the clarinet work Rose ouest has a graphic score—one oval-shaped, with notes interconnected by a series of lines. Several sequences are possible; the player is expected to impose (or improvise) a form of his own, presumably in a way that somehow represents the work's visual inspiration—a stained-glass window in the Notre Dame Cathedral. But there's a catch: Rose ouest is played simultaneously with Rituelle Aktionen II, the construction-site tape piece. Thus, the clarinetist has two quite divergent stimuli to react to, the grandeur of a Notre Dame window and the more pedestrian noise of jackhammers, et al. Hans Dietrich Klaus makes the sensible choice, ignoring the former and reacting to the rhythms and impulses of the latter. The result may not conform to the composer's intention of portraying the window, but it makes an effective piece for clarinet and tape.

The recording comes with copious notes and reproductions of either Steffens' scores or the original artworks—all of which, alas, Labor's graphic designers present in small black type on a reflective silver cover.

Recitals and Miscellany

Twentieth-Century Consort, Vol. 2.

Lucy Shelton, soprano*; David Gordon, tenor†; Lambert and Jan Orkis and James Pri-
utes a cantata for tenor, percussion, and electronic tape—hardly a novel combination. His vocal lines, though rhythmically sharp and melodically angular, express the seventeenth-century texts with concision. Yet the work's greatest appeal (and the element that made Wright's Chamber Symphony for piano and tape one of the more memorable works in Vol. 1) is the tight interaction between the tape and live participants. At the start, he provides in the tape part a husky hint of an offstage chorus. Later, with the help of a voice-synthesizing computer program (developed by Charles Dodge), that hint is realized, and the electronic voices supply both an interesting contrapuntal segment and a chorale part that runs in tandem with the tenor.

Stephen Albert, in To Wake the Dead, uses more conventional instrumental resources to couch his setting of Joyce fragments (from Finnegans Wake) in strains that, though tonal at heart, call freely and frequently on expansive dissonance. Albert also employs a lot of early-Stravinskian rhythmic figures and, depending on the text segment being set, interposes sections of childlike melody, antiquarian modality, and even some almost Schubertian sweetness. Beneath it all, carrying the work's seven movements to an operatic climax, is a dramatic momentum, which, combined with Albert's skill as an instrumental colorist, quite effectively evokes the bizarre atmosphere of the Joyce text.

The third vocal piece, Richard Wernick's provocatively ambiguous treatment of Blake's A Poison Tree, begins with a brusque, cathartic instrumental fantasia in colors similar to those Albert uses (flute, clarinet, violin, cello, and piano—without Albert's harmonium, viola, and piccolo). Wernick's setting is tense—the other, the instrumental treatment is steeped in tension, the vocal melody more innocent. Blake's poem is quick-moving, ironic, and glib, but Wernick seems to see more to it. The first time through, he conveys those seven movements to an operatic climax, which, combined with Albert's skill as an instrumental colorist, quite effectively evokes the bizarre atmosphere of the Joyce text.
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intent on injecting some passion in spite of the piece, but since the sections that lend themselves to a passionate approach are few and brief, the work's overall aridity never dissipates for long.

George Crumb is the one true pioneer in this crowd, although his unusual methods of tone production have, with repeated use, grown familiar and almost "safe" over the years. In Celestial Mechanics (Makrokosmos IV), for two amplified pianos, the amplification serves not so much to alter the piano's sound as to magnify some of the quiet, otherworldly effects Crumb draws from the instrument. Many of his signature effects are here—scratched strings, pizzicato melodies, percussive sections, and exotic, Eastern sounds; but he has a way of ordering them so that they seem entirely appropriate, not at all gratuitous or gimmicky. The piece has four sections and moves in a downward slope—from the impulsive first movement, "Alpha centauri," with its sweeping fields of sound and motion, to the static finale, "Delta orionis," with its slow, repeating chord progression punctuated by a descending "percussive" line.

The performances, as in Vol. 1, all show full commitment on the part of players and singers clearly capable of meeting both the technical and interpretive challenges of the music. The package is also quite nice: Texts and a brief yet useful essay on each work are provided. But except for the Crumb side, the processing leaves much to be desired. In several works, the Albert particularly, the sound is constricted and confined. The pressing, too, is unusually crackly and even dirty: My Discwasher took more dust and debris off these two discs, received factory-sealed, than off many an old LP I've found in a second-hand shop.

EARL WILD: The Art of the Transcription.


Earl Wild, piano. [Julian H. Kreeger,
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Sunday, November 1, 1981, was a normal and typical midseason day in New York’s busy concert life: At the Metropolitan Opera House, Vladimir Horowitz gave his annual recital. While at Carnegie, Earl Wild entertained a capacity audience with an ingeniously assembled recital of kitsch transcriptions. At the 92nd St. Y, a chamber ensemble held forth, and at Alice Tully Hall, the Beethoven Society presented Claude Frank in the Appassionata and his first public performance of the Diabelli Variations. Divided as the piano buffs’ attention might have been between Wild and Horowitz, there were more than enough to go around. (Obviously, a different kind of audience attends an all-Beethoven program, particularly one featuring the demanding Diabelli edifice.)

As it happens, both the Wild and the Horowitz concerts were recorded. The latter was discussed here recently (RCA ATC 1-4260, September), and now Audiophonic presents a handsomely reproduced account of the Wild program. Readers familiar with my views (prejudices, if you will) will realize that salon pieces are not my prime love. (In fact, I have special antipathy for the saccharine and decadent complexities of Gaspard. “Ondine” is a little prosaic and loud. “Scarbo,” a bit lacking in demonic thrust. In sum, I am not about to part with my Argerich recording (DG 2530 540). Nor do I take to Wild’s flamboyant and rhythmically extravagant approach to the Franck, despite its valid and admirable style, as Arthur Rubinstein’s poised, shapely 1970 account recently released by RCA (ARL 1-3342). Audiophonic, however, does Wild a handsome service technically.

In sum, I am not about to part with my Argerich recording (DG 2530 540). Nor do I take to Wild’s flamboyant and rhythmically extravagant approach to the Franck, despite its valid and admirable style, as much as to Arthur Rubinstein’s poised, shapely 1970 account recently released by RCA (ARL 1-3342). Audiophonic, however, does Wild a handsome service technically.

H.G.

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Critiques of new cassette and open-reel releases by R. D. Darrell

Megalophilia

The vagaries of repertory selection and release scheduling have turned this column’s recent preoccupation with music for small ensembles and solo instruments topsy-turvy. The new message is “think big,” as we lead off with the latest heaven-storming Mahlerian. Augmenting, if not superseding, the Seventies’ first wave of complete Mahler-symphony series are at least six more now in progress, four of which are represented this month by large-scale, mostly digitally recorded examples.

Special honors go to the finest yet of Klaus Tennstedt’s acclaimed London Philharmonic series: his expansively eloquent, richly Romantic, yet tautly integrated Second (Resurrection) Symphony, with poignantly moving contributions from the chorus and soloists Edith Mathis and Doris Soffel. Superbly lucid HMV digitalism copes with the apocalyptic grandeur as effectively as any audio engineering—short of quadraphony—possibly can. Even in the present ferric (rather than HMV’s chromatic analog) cassette edition (Angel Prestige Box 4XS 3916, $19.96), in direct comparison, Vaclav Neumann’s 1980 Czech Philharmonic analog version from Supraphon seems somewhat lacking in essential sonic weight and impact. Nevertheless, this performance is markedly more successful than Neumann’s earlier ones, especially for its distinctive personality projection (Pro Arte Prestige Box 2PAC 2011, $19.96).

Four symphonies—Nos. 1, 4, 5, and 6, of which I’ve heard only the last—launch the latest Mahler series, by Harold Farberman and the London Symphony for the Moss Music Group. Farberman, the first to record all four live symphonic works, never did lack ambition, and judging by his present Sixth (Tragic) Symphony, his is a refreshing, highly individual approach to score editions as well as to interpretation. Here, for example, he reverts to the composer’s earlier sequence in the middle movements (the Andante before rather than after the Scherzo) and restores the third “hammer/flow” in the Finale. The Lon- doners play beautifully for him, the digital recording is exceptional for its auditorium authenticity as well as its transparency (Max Wilcox doubles as producer-engineer), and the chromium tape edition is conveniently encompassed in a single double-play cassette (MMG D-CMG 109X, $15.98).

James Levine’s Chicago performance of the Seventh (Song of the Night) Sympho-

ny (RCA Red Seal digital/chrome Prestige Box ATK 2-4245, $31.98) brings his series with various orchestras to within two of a more-than-complete ten. Perhaps it’s because I’m still spellbound by last January’s Barclay-Crocker reel epiphany of Haitink’s c. 1971 Philips version (R 6700 036) that Levine strikes me as somewhat arbitrary and overambitious. Or it may just be that I’m more bothered than most Levine fans will be by some coarseness and imbalance in RCA’s somber.

One thing all cassette connoisseurs can agree upon is gratitude that all these sets include notes (and for the Second Symphony, texts), with first honors going—compensatorily—to Jack Diether’s for Levine’s Seventh.

Non-Mahlerian grandeur. Theoretically, even the most advanced audio technology can’t possibly capture the full size and impact of the biggest symphonic and operatic works. But in practice, the best attempts still can be inexpressibly thrilling. Witness the recording premiere of a largely unfamiliar opera that rivals the exotic stage spectacle and oriental tone coloring of Aida: Karl Goldmark’s masterpiece, The Queen of Sheba (Hungaroton Prestige Box, MK 12179/82, $39.92). This Hungarian State Opera production, conducted by Adam Fischer, can’t be better described in its tape format than by Paul Henry Lang’s accolade for the disc edition (HF, April 1981): “The performance is splendid, the cast superlative, and the sound first-class.” Yet even more spectacular technologically is the first digital/chrome Berlioz Damnation of Faust—a “sound-stage” production in the best English Decca tradition, of Georg Solti’s powerfully dramatic Chicago Symphony performance starring Frederick van Stade and José van Dam (London oversize Prestige Box, LDR5 7007. $38.94). Even my cravings for more authentically Gallic tone qualities and my undiminished admiration for Colin Davis’ c. 1974 Philips disc version tend to be swept away by the new version’s sheer volume and impact.

But there were truly great recording achievements in the past, too, as RCA’s 0.5 Series of historical-milestone reissues attests. The three latest Prestige Box, superchrome cassette editions feature Charles Munch and the Bostonians in a 1959 Berlioz Requiem that—at least until the advent of quadraphony—was long near-definitive (ATK 2-4269, $31.98); Fritz Reiner and the Chicagoans in their 1957 Mussorgsky-Ravel Pictures at an Exhibition, somewhat belittled in its own day for a lack of sensationalism, but which now seems exceptional for its poetic restraint (ATK 1-4286, $15.98); and most welcome as a prompt response to my recent plea. Reiner and the Chicago again, in the overdue return to tape of their landmark 1954 Strauss Also sprach Zarathustra, with Leslie Chase’s pioneering stereo engineering (ATK 1-4286, $15.98), which many audiophiles may still find even more rewarding than the 1962 version reissued last April in a chrome tapping by Mobile Fidelity (MFSL C 522).

Monumental releases, along with less ambitious ones, also continue to augment the open-reel catalogs, primarily that of the dominant processor, Barclay-Crocker (11 Broadway, New York, N.Y. 10004). There are two notably imposing—and valuable—current treasures. One is the long-awaited updating of Antal Dorati’s pioneering (1955, mono) complete Tchaikovsky Sleeping Beauty, this time with the Concertgebouw Orchestra in a well-nigh ideal evocation of the ballet and, of course, state-of-the-art tape processing (Philips B-C Z 6796 036, two reels, $29.95). Dorati’s theoretical expertise is undiminished, and the Dutch orchestra and its violin and cello soloists play like angels—in contrast to the less refined BBC Symphony playing in Gennady Rozhdestvensky’s Eurodisc cassette edition (500 575, April “Tape Deck”). That version remains, however, somewhat more sonically vivid and more powerfully gripping.

The other Himalayan peak is Vol. 5 of the Academy of Ancient Music’s period-instrument Mozart symphonies (Osieck-Lyre/B-C D 171D4, two reels, $33.95)—perhaps the most widely appealing set to date in this extraordinary series, since it includes such relatively familiar works as the Hoffner and Linz Symphonies, as well as Nos. 32–34, and Mozart’s own symphony versions of the Hoffner and Posthorn Serenades.

Delectably offbeat are two other Osieck-Lyre/B-C reels by the Academy of Ancient Music under Christopher Hogwood—Bach and Stamitz. For the Bach is Carl Philipp Emanuel, with his ear- and mind-opening symphonies—six for strings, Wq. 182, and two for full orchestra, Wq. 174 and 176 (6 057, double-play, $18.95). And the Stamitz is the Mannheim master Johann, with three of his then new-fashion virtuoso symphonies and a clarinet concerto, probably the first ever, here starring Alan Hacker (F 505, $9.95).

NOVEMBER 1982
Wallace overdubbing a vocal track at Kajetn.

BACK IN THE SUMMER of 1980, I was in the throes of the biggest single professional advancement of my life. After years of writing, playing, plotting and general all-round dues-paying, I was finally recording an album for a major label. Though the result, "Heroes like You and Me," sold reasonably well for a first outing, it did not exactly leave me rich and famous. But my contract with CBS/Portrait called for two albums over a two-year period, so I had another chance coming. At this writing I am a countable number of days away from finishing that second disc, currently titled "What It Is."

Every LP released nowadays starts as a sizable wad of cash, and certainly mine was no exception. Besides covering the inevitable studio and tape costs, the $100,000 budget for "What It Is" was designed to include everything from phone calls to sandwiches to taxi rides. But before I could see any of that money, before any rehearsals could be scheduled, before any tape machines rolled, I had to write an LP's worth of material.

1. The Songs

I usually write about fifteen songs (including the weird ones) a year, so coming up with ten solid ones for "What It Is" was no more than the average-sized mountain of work. The musical idea for the first real song came from a Klark Kent (Stu Cope-land) record. (I steal all the time, as I have no conscience.) The accompanying lyric line I had hooked onto was "he's the elephant man," which I eventually intended to flesh out into some sort of Sobering Statement. But when I listened to the music on tape, I realized that what it needed was not a poignant lyric but a goofy one. The melody suggested a cartoonlike hamburger-land satire, complete with dancing ketchup bottles. "Elephant Man" became "Hamburger Man," and from then on the song practically wrote itself.

No two songs of mine come into being exactly the same way, but for most of those on "What It Is" the music came first, the title second, and the words last. Ideas come from anywhere at any time; I've been known to jump out of bed at three in the morning to scribble something down before it got away. Generally, I don't write with the guitar or at the piano; unless a song is ready to be put on tape for the first time, an instrument can get in the way. I enjoy writing in many moods on many subjects, and I tend to let a lyric determine its own direction. Subjects covered in this particular writing period ranged from philosophy to buffoonery, with a little love interest in there to spice things up.

As the songs were written I would record them at home in my eight-track studio [see BACKBEAT, September 1981], playing all the parts myself. I wouldn't go for the perfect take, saving the polishing for the final this-is-it, twenty-four-track version. Listening to those rough demos enabled me to gain some perspective—to weed out the duds from the goodies. By late summer of 1981 I had my fifteen songs and, with Portrait's inevitable advice and consent, selected ten as candidates for the new LP.

2. The Rehearsals

The next step was finding a rehearsal studio. I decided on Extraterrestrial Sound in Long Island because it has an eight-track deck identical to mine (the Teac 80-8) and because it is located near the home of drummer extraordinaire and longtime musical comrade Jim Bralower. I booked two solid weeks of time, and from mid-to-late August of last year Jim and I rehearsed our hearts out. I would take the click tracks and reference parts I had recorded at home so we could work up the drum and bass parts at the
3. The Recording

The decision to use Kajem Studios, outside of Philadelphia, was partly aesthetic and partly financial. The studio is well-equipped and well-staffed and, having already spent around $3,000 on rehearsals, I wanted to keep my costs down. (I also wanted to save some dollars for promoting the LP.)

When it came time to select a producer, I was my own natural choice. From years of single-handedly recording demo after demo in my home studio and from coproducing my first album, I felt I was eminently qualified. Portrait at one point suggested several high-profile alternatives, but the verdict eventually came down in my favor.

I packed up my Teac, my rehearsal tapes, and my not-so-impressive pile of keyboards, guitars, and basses and headed to Kajem, where, on October 12, 1981, Jimmy and I started cutting the basic (bass and drum) tracks. We copied the rehearsal tapes onto eight of the twenty-four available tracks, so we could refer back to them whenever we needed to. As it turned out, one of the impromptu, never-to-be-captured-again rehearsal tracks ended up as a "keeper."

We recorded bass and drums at the same time whenever possible; there is something entirely kinetic in the exchange of two musicians playing together as opposed to one playing alone. By the end of the first week we had the basics down on four songs. A week later, we had completed four more.

Eight of the ten songs were now ready for overdubs. I sent Jimmy home for a two-week respite and got down to the business of being a one-man band. On Monday, October 27, within six or seven short hours (the average length of most of the sessions) I'd piled up a piano track, two supporting synthesizer tracks, and an electric string part on one tune, and rhythm guitar and keyboard bass tracks on another. Not every day went quite as well as that one, of course, but I do prefer to work fast. I figure if you can't get it down in five or six takes, give it up and try again another day.

The next two weeks flew by as I cut, pasted, or repaired the various drum, bass, guitar, keyboard, percussion, or lead vocal tracks for six of the ten songs. Jimmy came back for the remaining basic tracks, and I continued my layering. My routine settled into a cycle of record, play, rewind, stop, and fast forward, working five or six days and nights a week. A typical week in January follows:

**Mon.** Now's the Time: Recorded guitar, doubled it; recorded lead guitar and solo; bounced down bass tracks.

**Tues.** Take It to the Top: Recorded electric piano, Arp Omni, and reggae guitar line.

**Wed.** Now's the Time: Recorded lead vocal, synth pulse and synth solo.

**Thurs.** Now's the Time: Fixed vocal and synth solo. Wonderin': Recorded synth bass; bounced down saxes.

**Fri.** Take It to the Top: Recorded lead vocal and clarinet.

**Sat.** Take It to the Top: Recorded high harmonies and bounced them down. Now's the Time and What It Is: Recorded high harmonies.

Even at this stage, none of the tracks was immune to changes in lyric, melody, arrangement, overall sound, or even chords. Take It to the Top in particular went through several chord-pattern alterations. Still, things were slowly congealing, and I was ready to add background vocals and horn parts. I had already decided on singer/sax player Mark Rivera (currently touring with Billy Joel) and Importe/12 Records vocalist Amy Bolton (to whom I happen to be married). I wanted an "ensemble" kind of background sound, thus the use of singers other than myself and real, live saxophones—rather than the synthesized variety. As we experimented with all kinds of guitar/keyboards/vocal combinations, we left no piece of studio equipment untouched. Kajem has a lot of outboard toys*, and we had occasion to try them all, treating them as instruments in themselves.

By February 13, I had all but finished my ten songs and was still on time and on budget. No one from CBS had as yet dropped by to check on my progress, which was just as well since most label executives aren't given to identifying the eventual sound of a record under construction. I took it as a vote of confidence (for all they knew I could have been recording nursery rhymes with all that money) and enjoyed my delicious artistic freedom. But it was now time to get back in touch with CBS—it was their cash.

4. The Mix and the World of Waiting

A call to Lennie Petze, my main liaison at Portrait, revealed that the final mix-down was to take place at the Power Station in New York [see BACKBEAT, July]. Tony Bongiovi, the studio's designer/co-owner would be doing the actual mixing. I was momentarily bewildered, since I had expected (in fact, had already started) to mix at least part of the album at Kajem. In addition, the cost of mixing in New York would eat up any leftover money I would otherwise have had to contribute to Portrait's promotional campaign. But after meeting with Tony, I felt reassured that I was in good hands.

It was now the end of April and I was anxious to get started. But there wasn't a two-week block of time open at the studio until around the end of June. I had entered the World of Waiting. (Artists waiting for their records to come out have been known to go crazy.) I started thinking about the album cover and writing some new songs. (Continued on page 97)

*Partial list: MXR pitch transposer, Eventide flanger and digital delay, Sony digital reverb, EXR Aural Exciter, Pan-Scan auto panner, DeltaLab Acousticomputer, Ursa Major Space Station.
Compact, Portable Multitrack Studios

A comparison of two 4-track cassette deck/mixers, one from Tascam and one from Fostex.
by J.B. Moore

Are you the sort who buys records just to figure out how they were made? Do you stay up into the wee hours scheming outlandish ways to get great arrangements of your songs on tape? If so, chances are you've got a bad case of multitrack malaise.

There are at least two cures, one of which requires nothing more than cash. If you have a lot of it, take out your favorite record and call the studio named on the back. For a mere two-hundred or so dollars per hour (plus tape), it can translate your musical dreams into a twenty-four-track recorded reality. If, on the other hand, your resources are a bit more limited, read on.

Only a short while ago, putting even a modest multitrack home studio together had to be a major investment. A used four-track deck runs a few thousand dollars and a decent mixing board at least another thousand. And you still have a patch bay to wire, a spare room to remodel, and a variety of outboard gear to buy. Then Teac introduced the first four-track cassette deck/mixer, [see BACKBEAT, January 1980] the Tascam Portastudio Model 144 (which this writer happily owns), and the era of the compact, portable, affordable home studio began.

The latest generation of ministudios comprises the Fostex 250 Multi-Tracker and Teac's new Portastudio Model 244. I had been thinking of upgrading to the latter until I heard about the former. Both decks have most of the same features, cost the same ($1,300), and are about the same weight (the Fostex weighs 19 pounds, the Teac 23), I decided to get some user opinions before making my purchase decision. I talked with Arthur Payson, an engineer at Skyline Studios in New York, who owns the Tascam 244. Phil Ashley has a Fostex 250; Phil is a keyboard player and arranger best known for his work with Rupert Holmes. Both like their minis; both also noted various shortcomings, most of them inherent to the format.

One significant improvement that Tascam has incorporated in the 244 is the capability for bouncing to adjacent tracks. (Bouncing is the procedure for moving a track or tracks to another.) Without that capability, you can fill only two tracks before having to combine them onto the remaining nonadjacent track. With it, you can fill three tracks and bounce to a fourth for a mono consolidation of basic rhythm elements, for example. Or, later on in the recording process, you might want to do live bounces in stereo from Tracks 1 and 2 to Tracks 3 and 4, adding a particular overdub on the left and then reversing the process to get another on the right. In any case, adjacent bouncing increases the number of parts you can put on tape without having to mix down to another deck. Both decks have this capability; Ashley has gotten eleven tracks on his Fostex, though he and Payson average eight or nine.

If you are your own guitarist, drummer, keyboardist, engineer, and producer—as I am—you're going to need a footswitch for punching. (Punching is the ability to go in and out of RECORD in sync with the other tracks.) Otherwise, the only way to punch in is to hit RECORD and PLAY simultaneously and the only way to punch out is to stop the transport. Of course, doing that while playing an instrument at the same time is impossible, unless you specialize in one-handed instruments. The optional Tascam footswitch costs $25; the Fostex costs $15. A word of warning: Both machines tend to leave a small but audible click on the "out" side of a punch because of the distance between the erase and the record heads.

A handy feature in these ministudios is their pitch control, which can vary the speed and therefore the pitch of an entire track. This is particularly useful for overdubbing keyboards that are tuned slightly too high or too low or for taking the track down a key when recording high vocals. Each unit has peak overload LEDs, a 4-digit fluorescent tape counter, jacks for two headphones, and a button to bring the tape back to zero automatically.

The Tascam 244 uses DBX Type II noise reduction, while the Fostex 250 uses Dolby C. Under some circumstances, both systems tend to pump the high end (make

(Continued on page 97)
T-Bone Burnett: Trap Door
Reggie Fisher & T-Bone Burnett, producers. Warner Bros. 1-23691

"It's a funny thing about humility: 'Soon as you know you're bein' humble, you're no longer humble,'" sings T-Bone Burnett on the title track of this six-song EP. "It's a funny thing about life: You've got to give up your life to be alive." Pitty pearls of wisdom, perhaps, though not the stuff of Top 40. Not usually, at least; with "'Trap Door,'" Burnett has a shot at changing that.

Burnett long ago revealed himself to be a cunning songwriter, both as coleader of the Alpha Band, and on his own. (His solo debut of two years ago, "Truth Decay," was a critical smash but a commercial failure.) What's more, he has enough basic blues, rockabilly, and country in him—and enough good sense—to keep his music lean and rocking.

Lyrically, Burnett manages to cover a lot of ground here, including a chance encounter with an air-headed go-go dancer ("I Wish You Could Have Seen Her Dance"). what could be construed as a dig at industrialist Norton Simon and his "art museum in Pasadena" ("A Ridiculous Man"). and a version of "Diamonds Are a Girl's Best Friend" that will remind no one of Marilyn Monroe, as T-Bone recites (literally) the classic Jule Styne words in his deadpan Texas drawl. "Poetry" is ambiguous. It might be a straight love ballad or a paean to God. (Burnett is a veteran of Bob Dylan's Rolling Thunder Revue and a Christian himself.) It matters little, however, because he rarely proselytizes. Also, Burnett has a sense of humor, a rare quality in most born-again types.

As for the music, he and coproducer Reggie Fisher have given the songs a healthy pop sheen, with layers of jangling, Byrds-ian guitars. They might even have a hit on their hands with "Hold on Tight." If so, it will be a welcome turn of events for an artist who has labored in obscurity for too long.

Don Henley: I Can't Stand Still
Don Henley, Danny Kortchmar, & Greg Ladanyi, producers. Asylum E 1-60048

Arriving within weeks of former partner Glenn Frey's post-Eagles solo album, Don Henley's "I Can't Stand Still" offers strong evidence that it was Henley, the band's most powerful singer, who provided that platinum monolith with a conscience. In contrast to the warm-hearted but slight pop/soul of Frey's "No Fun At All," Henley's new songs bristle with an edgy, anxious intelligence and a brooding rock energy. Thematically, he reaches well beyond the Eagles' usual romantic concerns, covering such issues as nuclear arms, declining literacy, TV journalism, and sexual hypocrisy.

Cynics might understandably expect those investigations to wind up as creative pratfalls. But the same seasoned pop craftsmanship that enabled him and Frey to compress a deceptive richness and detail into their three- and four-minute meal tickets enables Henley to tackle these more daunting subjects with impressive success. If anything, his more caustic thrust highlights his songs' economy. This is particularly true of "Dirty Laundry, Them and Us," and "Johnny Can't Read," a deceptively breezy assessment of a teenager's vanishing potential in a world of permissive excess.

Producers Henley, Danny Kortchmar, and Greg Ladanyi focus on compact ensembles and hard-edged guitars and keyboards. If it represents a conscious step away from the aural luster of the Eagles' albums, Henley's songs still boast an ear-filling depth that showcases his own straightforward, muscular drumming. Even the selection of hired hands—familiar L.A. studio heavies, former Eagle Tim Schmidt, John David Souther, Warren Zevon, and Chief-tains Paddy Moloney and Derek Bell—proves astute throughout. Just why Henley brought such urgency to this work remains intriguing, given his credit line after a decade of Eagles hits. But what matters is that the urgency is there, providing fresh proof that Los Angeles' mid-'70s superstars haven't necessarily mellowed past their prime.

T-Bone Burnett: rock & roll meets Marilyn Monroe

Al Kooper: Championship Wrestling
Bill Szymczyk, producer. Columbia FC 38137

Al Kooper's career can best be described as uneven. As a supporting player, he consistently adds an agile touch to whatever project he's hired for, but his own work has been so spotty that when six years passed without a Kooper solo album, no one really noticed.

It has been a long time since he has had a central role on an LP of even passable quality, so the affability of "Championship Wrestling" comes as a surprise. It has some of the improvisatory feeling of his "Super Session" with the late Mike Bloomfield (to whom he dedicates this album), and some of the brassy punch of his first edition of Blood, Sweat & Tears. Perhaps realizing his limitations as a singer, Kooper has divided the vocals among himself, Valerie

SAM GRAHAM
Carter, Mickey Thomas, and Ricky Washington, and filled out the disc with a pair of propulsive big-band rock instrumentals that feature the five-piece Tower of Power horn section.

The proceedings move along at a brisk clip, thanks to the tag-team format: Kooper’s vocal on a percolating version of the blues song I Wish You Would blends into Carter’s splendid. Mary Wells reading of the Motown-flavored Two Sides (to Every Situation), which in turn gives way to a muscular instrumental, and so on. This makes the low spots easy to overlook, and the cast members are professional without sounding as though they’re punching the studio time clock. Special credit should go to the LP’s costar, guitarist Jeff Baxter, another musical utility man who has learned (in outfits like Steely Dan) how to take direction and contribute something unique.

There are a number of diverting pleasures on "Championship Wrestling": Washington’s General Johnson impression on the note-for-note replication of the Chairman of the Board’s Finders Keepers; Vince Colaiuta’s powerhouse drumming on the instrumentals Snowblind and Wrestle With This; Carter and the Tower of Power horns doing a capable ‘caucasian’ (as the credits point out) run-through of Clarence Carter’s I’d Rather Be an Old Man’s Sweetheart (Than a Young Man’s Fool). Kooper’s albums have rarely been as impressive as his resume as a sideman, but this brawny exhibition isn’t bad at all. MITCHELL COHEN

Jack Mack and the Heart Attack:
Cardiac Party
Glen Frey & Allan Blazek
producers. Warner Bros. 123733

One of Hollywood’s more improbable (and, until now, local) musical phenomena is a ten-piece band that picked the very height of the town’s infatuation with new rock to head in the opposite direction. Jack Mack and the Heart Attack isn’t the first Los Angeles ensemble to style itself after a ‘60s soul as its model. But after nearly two years of playing the club circuit, ‘60s soul as its model. But after nearly two years of playing the club circuit, I admit that I view the prospect of a major album with comparatively simple emotions of that era. The singer may verge on heartbreak, but you know he isn’t seriously alienated. Gronenthal’s composite matinee hero is gruff, sexy but courtely, and delivered with enough hyperbolic force as to be at least partially tongue-in-cheek.

As an admitted denizen of the band’s Thursday sets at Club Lingerie, I admit that I view the prospect of a major album with mixed feelings, since it will doubtless discourage me as his resume as a sideman, but this brawny exhibition isn’t bad at all.

Michael McDonald: If That’s What It Takes
Ted Templeman & Lenny Waronker, producers. Warner Bros. 23703-1

It’s hard to believe that “If That’s What It Takes” is really Michael McDonald’s first solo album. Between being the backbone of the Doobie Bross., a frequent collaborator with other artists, and the most imitated
singer in pop. McDonald has seemed like a one-man genre. SCTV caught it best in a parody that found a breathless McDonald careening from session to session in his Mercedes. He has far from worn out his welcome, however, and if this record fails to hit the highs of his best work with the Doobies, it has the distinct advantage of having his voice on every track.

With a soulful style as smooth as salted butter, McDonald's pop is the best kind of romantic corn. A suburban soul man, he doesn't push his voice to the emotional edge as much as he caresses the border. The laconic chords that open "Playin' by the Rules" cue us into another of those relationships where "love don't always rhyme." McDonald is a master at this sort of seductive scolding, and the next tune, "I Keep Forgettin'," is an album highlight that packs an ironic smack. "I keep forgettin' we're not in love anymore," sings the guy who clearly is, and the supple rhythm with which the line is delivered keeps us similarly suspended. With a voice like McDonald's, though, you can't help but think that the woman is going to melt all over again.

McDonald stretches his bluesy instincts by writing with a variety of partners—Ed Sanford on the above pair and one apiece with Kenny Loggins and Jackie De Shannon. Loggins sticks around to sing just like James Taylor on "I Gotta Try," the Doobie-est track on the album, while De Shannon cowrote the upbeat title song about being ready to please. McDonald may not mouth more than modest sentiments, but he sings them better than almost anybody. On "I Can Let Go Now," he's alone at the piano with a flock of strings hidden in the wings. It's as if we wandered into some deserted Holiday Inn bar long past midnight and found this guy playing to an audience of one. We order a bourbon but it's not really necessary—the smoky timbre of the piano man's voice warms our soul.

JOHN MILWARD

The Persuasions: Good News
Jerry Lawson, producer
Rounder 3053

In the hands, or rather, the larynxes of the Persuasions, a cappella harmony strips inspirational soul music to its essence. Basic emotions are mirrored and refracted, split into high, ecstatic wails and deep, sorrowful moans. The harmonizing acts as a fraternal support system: Lead singer Jerry Lawson celebrates the imminent arrival of a lover, and the tenor and bass echo his jubilation; he gets a Dear John letter, and they're a chorus that helps him curse his fate. There is such an intricate balance in this group, and its members have honed their sound to such a precision-point over the years, that there seems to be no genre beyond their grasp. In live performance, the Persuasions can make Kenny Rogers' The...
The Persuasions: a cappella harmony honed to a precision point

Gamblin' sound like a piece of hard-won wisdom. With good material, they are simply transcendent.

"Good News:" falls short of their greatest record, 1977's "Chirpin'." but it is a fine album nonetheless. It is revelatory in the way its arrangements and performances connect the "pop" songs originally done by Sam Cooke with the gospel music that formed his style. Ain't That Good News becomes a song about romantic reconciliation that could just as easily be about the coming of the Lord. Soothe Me, with its Jerry Lawson-Herbert Toubo Rhoad trade-off duet (in the manner of Sam & Dave, who also cut the song), makes an explicit correlation between the carnal and the spiritual, as the soul is cleansed of sin by a woman's "powerful love ."

The Cooke songs—there are two others. Cupid and I'll Come Running Back to You—set a standard that the rest of "Good News" doesn't quite reach. It misses the mark on a churchy rendition of Shirley & Lee's Let the Good Times Roll and in the exaggerated despair of I Lost Everything (I Ever Had)—even his dog gets run over by a car. Swanee River Medley (Raise 'Em High. Off Man River, and Swanee River) doesn't deliver what it promises in concept because the cultural and racial history embodied in the choice of songs is just too complex. The Persuasions bring dignity to a difficult transformation from slaves to minstrels, and the singing is exhilarating, but in the midst of an album that is predominantly a survey of contemporary soul, it's a jarring musical commentary.

It's indicative of the Persuasions' range that they can go from what amounts to a revisionist reading of Irving Berlin and Stephen Foster to a group showcase on an Everly Bros. teen-dream ballad. All I Have To Do Is Dream and the album's concluding number, I Won't Be the Fool Anymore, are the closest "Good News" comes to classic doowop and the streetcorner sound is pure and affecting. This has not been a very good year for most kinds of music, but with new albums by Willie Winfield and the Harptones ("Love Needs"), Eugene Pitt and the Jive 5 ("Here We Are"), and now the Persuasions, perhaps 1982 will be remembered as a banner year for veteran black vocal groups.

MITCHELL COHEN

Romeo Void: Benefactor
Ian Taylor, producer
415/Columbia ARC 38182

Romeo Void's most prominent identifying characteristics are the unpredictable saxophone bleatings of Benjamin Bossi, a crackerjack rhythm section, and Deborah Lyall's cynical, analytical view of sexual transactions. As the singer and lyricist for the band, she guides its nervous excursions, bluntly declaiming her impatience with sentimentality. Love, as she sang on Romeo Void's very impressive first album, is a condition independent of its object. "Songs on "It's a Condition"—Myself to Myself, Talk Dirty to Me, White Sweater—and on the four-song followup EP Never Say Never (coproduced by the Cars' Ric Ocasek), were so musically sharp and so distinctively expressive that "Benefactor" comes as something of a letdown. It is a wobbly second effort, incisive at times, cluttered at others.

Leading off with a truncated, remixed, and bowdlerized (a certain four-letter word has been obscured) Never Say Never, "Benefactor" continues the combination of rock momentum, jazzy saxophone outbursts, and Lyall's frankness. But the word-play isn't as clever, the melodies aren't as immediately captivating, and the playing that sounded terse and lively now sounds murky. There are exceptions: Flashlight shows an alertness to the tension and small betrayals that can lurk under a relationship's surface. Shake the Hands of Time, which offers matter-of-fact advice to a woman pining over a man ("There's no money in boysfriends," says Lyall), is a direct rocker; and Chasin' You captures the chaos of its San Francisco namesake.

The rest has a disconcerting effect. Lyall's determination to cut through romantic illusion is undermined by her insipid metaphors on Ventilation and S.O.S. And for all the talk about sex—sweaters tumble, shirts are lifted, passion is aroused, quickies are negotiated—the attitude is too chilly for its own good. There is a definite snap to Undercover Kept (what a tortuous construction), but, like so much of the LP, it gives off seedy signals.

Typical of Romeo Void's method is the way it covers the Isaac Hayes-David Porter song Wrap It Up, effectively subtracting the good-natured lust brought to it by Sam & Dave. Lyall, it seems, is so jaded that she takes "Wrap it up! I'll take it!" literally: for her, the song comes down to bodily necessities for barter, an appraisal and an offer. There's no absence of talent in Romeo Void, but on "Benefactor" its cheerless-ness and antiromanticism are a drag.

MITCHELL COHEN

Shoes: Boomerang
Shoes, producers
Elektra 60146-1

What comes back when you let a guitar-happy quartet loose on a dozen well-crafted pop songs? "Boomerang," the third bigtime album from the Shoes, one of the best rock-pop bands to emerge from the late '70s and the unquestionable kings of Zion, Illinois.

The Shoes are fans who made their fantasy come true. They grew up on the '60s pop stylings of the British Invasion, from the Beatles to the Zombies, and are now part of a Yankee lineage that includes early '70s groups like the Raspberries and Big Star. Instead of honing their craft before a live audience, they dabbled in front of a tape recorder and eventually came to duplicate the tricks of their chosen trade.

The result is that while the Shoes are reminiscent of everybody, they also possess their own kind of rubber sole.

The production of "Boomerang"—this is the group's first self-produced effort on Elektra—falls between the light pop of 1979's "Present Tense" and the sharper edge of last year's "Tongue Twister." Movin' displays the band's hard-rock kick, with scratching rhythm guitars and echoing voices cluttered around the hook that is its title. Curiosity, which comes complete with a cat that tempts danger, is pure pop with a
lyrical mix of acoustic and electric guitars. Between these poles sits The Tube, as lightweight as its subject of network television and just as addictive. Its tricks are a solid rock beat and production flourishes that the Beatles might have used on "Revolver."

The Shoes are a breezy pleasure but something more than frivolous. What they lack in profundity they make up for in fun, and when it comes to pop-rock, such charm can be the key to the box. It may be the chirpy Double Talk or the adolescently elegiac Tested Charms, but when you play "Boomerang" you’re likely to find yourself humming along.

**Jazz**

Tony Dagradi: Lunar Eclipse
Jonathan Rose, producer
Gramavision GR 8103 (260 W. Broadway, New York, N.Y. 10013)

Tony Dagradi’s second album as a leader conjures up any number of associations with his New Orleans home base, itself a stomping ground for strong and inventive jazz players and composers. Dagradi looms as a bright young hope in both those categories, and in its best moments, "Lunar Eclipse" blends deceptively sophisticated sources and techniques into music at once earthy and ethereal.

Far from seeking a mere showcase for his ripe lyricism on tenor and soprano saxes or his more contemplative style on bass clarinet, Dagradi has assembled a sure-footed quintet whose exhilarating interplay lends a coherence to the whole work. Acoustic bassist Jim Singleton, drummer John Vidacovich, and percussionist Mark Sanders add deft touches to their timekeeping, while Dagradi’s reeds share the front line with Dave Torkanowsky’s precise and often percussive keyboards.

Although Dagradi’s occasional use of dissonance and a gruff, squalling tone attest to his familiarity with bop and free jazz, his pieces display a traditionalist’s sense of song structure, turning up vivid lyrical mixtures right out of the ‘30s Swing idiom. His capabilities as an arranger shine on Bix Beiderbecke’s "Boisterous Bones," a Dixieland piece much like Bob Crosby’s "South Rampart Street Parade." It was such a hit that the band took to the road and toured for the next seven years with Sherwood at the helm.

Despite its considerable merits, Bobby Sherwood’s ‘40s big band left almost no mark on jazz history. This is partly because his leader had too many irons in the fire—he was an actor, a singer, an arranger, and a disc jockey. A child of vaudeville, Sherwood was onstage at the age of seven playing banjo. When Eddie Lang, the first jazz guitar virtuoso, died in 1933, a nineteen-year-old Sherwood took his place as Bing Crosby’s accompanist. As a studio musician in Hollywood, he played guitar and trumpet, in the early ‘40s he played in Artie Shaw’s band.

In 1942, Capitol Records asked Sherwood to put a big band together. The group’s first record was The Elks Parade, a Dixieland piece much like Bob Crosby’s "South Rampart Street Parade." It was such a hit that the band took to the road and toured for the next seven years with Sherwood at the helm.

The fact that he went from big band Dixieland in 1942 to pure Stan Kenton in 1946 (Sherwood Forest) is indicative of his range. This disc, the first commercial release of the band’s 1944-46 Lang-Worth transcriptions, shows a broader, more populist orientation than Sherwood’s Capitol records did. Edgar Sampson’s "Blue Lou (a Chick Webb and Benny Goodman hit) and Sherwood’s "356 in the Books" are right out of the ‘30s Swing idiom. His capabilities as an arranger shine on Bix Beiderbecke’s In the Dark, which he built around Eddie Luca’s English horn and Hal Becker’s piano, and After Hours (later retitled Theme for a Dream), is a rich pastel with Kentonian saxophones. And it’s fascinating to hear the Gershwin-Kern tune A Sure Thing—now treated as something rather precious and special—played as just another contemporary pop tune, as it was in 1944.

Though Sherwood is a strong presence on trumpet, he does not take all the solos. Rather, he gives ample space to his excellent sidemen, notably tenor saxophonist Herbie Haymer and trombonist Skip Layton, who is wonderfully broad and brash. Indeed, Sherwood was not one of the major big band leaders, but this disc reminds us that he could have been.

**Bobby Sherwood and His Orchestra:**
1944–1946
George H. Buck, Jr., producer
Circle CLP 28 (3008 Wadsworth Mill Pl., Atlanta, Ga. 30032-5899)

(Continued on page 98)
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CLASSIFIED DEPT.: HIGH FIDELITY, 825 7th Ave., 6th Floor, New York, NY 10019.
BERSO: I have to register a complaint about the puerile ruses, I have to register a complaint about the puerile ruses. (All three recordings, incidentally, seem to me to miss an opportunity here by failing to take into account that even Somarone's first stanza is an improvisation. It's just a more successful effort than the second.)

While we're on the subject of choruses, I have to be a recording engineer! New Classes quarterly. INSTITUTE OF AUDIO-VISUAL ENGINEERING, (213) 666-8003. 1831 Hyperion Dapt. C, Hollywood, CA 90027.

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BÉATRICE AND BÉNÉDICT

(Continued from page 60)

out. Not only does Berlioz intertwine speech and song; he manages to interface all the other male characters in Somarone's Act I doings, setting us up for the role that he plays in the ultimate coming together of Béatrice and Bénédict. In the Oiseau-Lyre and DG sets, Somarone is reduced to his Act II drinking improvisation, well enough sung in both cases, but reduced to a random piece of fluff. (All three recordings, incidentally, seem to me to miss an opportunity here by failing to take into account that even Somarone's first stanza is an improvisation. It's just a more successful effort than the second.)

While we're on the subject of choruses, I have to register a complaint about all three recordings: I can't make out the words. In none of the recordings does there seem to have been much effort to include words as part of what's being performed. Again, Berlioz has built a great deal of variety into the score. In the case of the epithalamium, Don Pedro in fact complains of not being able to make out anything except the first words, "Die, tender spouses," which sentiment he understandably finds rather alarming for a wedding celebration. ("He's a little ... bourgeois, the general,") the aggrieved Somarone comments in an aside.)

On the other hand, when Béatrice breaks off the opening-chorus reprise, she complains specifically about the puerile rhymes. And on purely subjective grounds, I'd like to hear no effort spared in the great Nuptial March, where Berlioz suspends all kidding to affirm his deep-seated belief that there is something uniquely rewarding at the other end of the premarital grief that Héro, Béatrice, and Bénédict are going through.

The Nuptial March is one number in which DG's Daniel Barenboim seems to me to have miscalculated somewhat. The basic outline is there, but it's all a bit limp in contour. Otherwise he gives a perfectly sound reading—not long on imagination, but reasonably responsive to what's happening in the music and generally livelier than the Davis/Philips performance, which lacked the freshness and sparkle of the Oiseau-Lyre. Would it be wildly impractical to hope for a midprice reissue of the latter, packaged with printed texts that include the complete spoken dialogue?

There's not much to choose in the smaller roles. I have to believe that a full-voiced contraalto (I'll bet Lili Chookasian could still manage it) might make more of Ursule's contributions to the Duo-Nocturne and the Act II trio than Helen Watts (Oiseau-Lyre and Philips) and Nadine Denize (DG) do. Denize sounds to me like a potentially exciting Béatrice, but Ursule's writing really lies awfully low. I'm not sure, on the other hand, that a great deal can be done with the bits of music provided for Claudio and Don Pedro (Léonato is an entirely spoken role). In the case of Claudio, the few midrange singing tones still available to DG's Roger Soyer prove surprisingly useful.

As matters stand, you almost have to have both the DG and Philips recordings, along with a complete libretto from some other source, in order to make any kind of sense of Béatrice. Pressed to a choice, I'd probably go with DG, on the strength of Minton and Domingo.

**HF**

**BERLIOZ: Béatrice et Bénédict.**

**CAST:**

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**COMPARES TO:**

Valsey, Mitchinson, Davis Oise.-Lyre (OP)
Baker, Tear. Davis Phi. 6700 121
BRAHMS'S SONATAS
(Continued from page 55)

What an embarrassment of riches we have in these performances. If I begin by singling out the young Liverpool-born clarinetist Janet Hilton, it is merely because her artistry is new to me, her counterparts Richard Stoltzman and George Pieterson are known commodities. Hilton commands a gutsy, full-throated basset horn sonority in her lower register and achieves a rapturous lyricism without either forcing or becoming kithenish. Her musical and interpretive impulses are notable for their naturalness. Peter Frankl's knowing work at the keyboard furnishes sympathetic support. The reverberant Chandro's sound, however, sometimes, lends a tacksiness to the piano in fortissimo passages (I would like more weight and definition, more solidity) and a hint of shilliness to the clarinet's high notes.

Philips provides a weightier, more appropriate sound for its team. Pieterson, the Concertgebouw Orchestra's principal clarinetist, recalls his distinguished predecessor Bram de Wilde, and Robert Marcelius of Szell's Cleveland Orchestra, with his dark, full-bodied sound and decidedly forthright style. Again there is a suggestion of the bassett horn, but Pieterson shows less flexibility and grace than do Hilton and Stoltzman. For some, these performances may be too monochromatic, yet they have an undeniably ring of authenticity. The late Hephzibah Menuhin seemed a bit timorous and prosaic in some of her performances with brother Yehudi, but this beautiful reproduced disc is a worthy memorial to her fastidious musicianship; here the lack of coloristic variety sounds purposeful—and in keeping with the ideal established by Pieterson. (Hephzibah incidentally, recorded these sonatas once before, with Gervase de Peyer on a 1959 Angel disc released only in Japan.)

Color, on the other hand, is the thing one notices most in the Stoltzman Goode collaborations. The American clarinetist, who is fast becoming another James Galway, commands an utterly bewitching palette. Or perhaps that word should be “displays...” for I sometimes have the impression that Stoltzman—something of a pied piper—is following himself, destination unknown! An improvisational gift is a wonderful thing, and I don’t mean to belittle it; yet I often feel that Stoltzman’s “sensitivities”—an almost tangible object—hovers over the music like a divine rod, responding to stimuli but never quite putting them into place. He will, of course, command a phrase slightly to make it “go,” but then he will nudge it again in a different direction. This is lovely, ravishing playing to be sure, though a bit too precious for Brahms. And as with Hilton/ Frankl and, to a lesser degree, Pieterson/Menuhin, lyricism often wins out here over drive and momentum. In his notes for this record, Michael Steinberg aptly sug-

BRAHMS: Sonatas for Cello and Piano:

Janet Hilton, clarinet; Peter Frankl, piano. [Brian Couzens, prod.] CBS 7208, $10.98. Tape: CBS D 79031, $11.98 (cassette).

Richard Goode is an uncommonly congenial pianist, as resonant as Chandos', has rounder tone and greater clarity, in its way, it is just as realistic as Philip's.

I will pass over the Nolan/Spillman performances, while honest and competent, they are not geared for comparison at the highest level. The recording, though well balanced, is flat and cramped, and Bruce Nolan, for all his carefully prepared phrases, sometimes has difficulty wrapping his tongue and fingers around the notes. Robert Spillman plays strongly and, like his partner, sincerely, yet the production betrays a pervasive amateurishness. (Why, for example, publicize the use of a Schirmer edition, ‘“edited by Eric Simon’? The other performers presumably use either the original Simrock or the Vienna Urtext.)

Everyone knows that Brahms transcribed these pieces for viola (he also made violin transcriptions, virtually never performed), yet few are aware of the many options awaiting prospective performers of the viola versions. In making the transplants, Brahms added a few double-stops here and there—and—more crucially—transposed some passages down an octave from the clarinet originals. A few of these transpositions entail minor changes of notation, since the revised figurations would otherwise exceed the low-C cutoff point of the viola's lowest range. The cult of textual fidelity has reached mammoth proportions, and all three violists here (with one or two tiny exceptions from Bernard Raslaw) play the music "as Brahms wrote it." But Brahms didn't write it that way, he hastily arranged it from the aptly conceived clarinet versions. While some of the changes suit the viola superbly, many of the transpositions—like the notorious passage in the first movement of the E flat (bars 117–19)—make for a clumsy, tonally monotonous effect. On a recording, balance per se is not necessarily a problem, as it would be in concert; even so, the piano almost swamps the viola, since both are playing in the same dark, low register. This is a classic case of misplaced purism. Some older-generation violists—William Primrose comes to mind—preserved the mellifluous quality of the viola arrangements but judiciously restored some passages to their clarinet register.

Yehudi Menuhin, though perhaps not a great violinist (his sound is a bit light and “stuffy”), is certainly a great soloist, and that cannot be said of most of today's violinists, oriented as they are toward chamber music. However one reacts to his liberties, he brings a sense of courage and conviction to this music unheard since the days of Primrose and (even further back) Lionel Tertis. Louis Kentner, too, is a real stylist at the keyboard, even if he does commit florid, juvenile excesses now and then. Interestingly, these older-generation players generally favor rapid tempos, and the resulting performances—which I certainly hope will be released domestically—have constant mobility and interest.

An entirely different but equally attractive point of view shapes the new Tree/Goode performances. Michael Tree produces a lustrous, deeply sonorous sound, and if his outlook is just a shade plebian, his deeply considered, forthright interpretations seem to have struck a more responsive chord in Goode, who here

BRAHMS  
(Continued from page 55)  
sounds more authoritative and massive than with Stoltzman. The piano sound, though a bit boomy, is commanding. These performances have a sobriety and grand clarification if less sheer temperament than those of Menuhin and Kentner.

Like Tree—a member, of course, of the Guarneri Quartet—Bernard Zaslav is also a fine quartet violist (in the Vermeer and, formerly, Fine Arts). He plays beautifully, with even a more gorgeous sound—on a Guadagni of magnificent qualities—and a more curvaceous grace than Tree’s. But the Gasparo disc, for all its warmth and musicality, suffers from a curious—and crucial—flaw: Whether because of the playing or its reproduction, one cannot clearly hear all the piano’s chordal harmonies. This incompleteness of voicing plays hob with Brahms’s carefully devised voice-leading and counterpoint, ruining the Zaslavs’ con amore teamwork.  

Anhang: As inspired by the music, all the early quartets, a representative selection will be useful for non-specialists. An apt choice is the well-varied group of four (including Nos. 8 and 13, cited above for their fugal finales) presented by the Sequoia Quartet (founded in 1972), a group of young Japanese and Americans who won the 1976 Naumburg Award. I have had qualms about the extremely cool remoteness, even impersonality, of some of the Sequoia’s earlier releases. But just such qualities neatly counter the usual tendency to romanticize or inflate this mostly lightweight, quintessentially rococo music—agreeable enough in itself, but significantly substantive only for its instructive contrasts with Mozart’s later work in the medium. Nonesuch’s digital recording is first-rate and not oppressively close, the acoustical ambiences at least lukewarm, and there are extensive jacket notes by Dr. Robert Winter of UCLA.

MOZART’S STRUGGLES  
(Continued from page 57)  
While only compleat Mozarteans are likely to want to have all the early quartets, a representative selection will be useful for non-specialists. An apt choice is the well-varied group of four (including Nos. 8 and 13, cited above for their fugal finales) presented by the Sequoia Quartet (founded in 1972), a group of young Japanese and Americans who won the 1976 Naumburg Award. I have had qualms about the extremely cool remoteness, even impersonality, of some of the Sequoia’s earlier releases. But just such qualities neatly counter the usual tendency to romanticize or inflate this mostly lightweight, quintessentially rococo music—agreeable enough in itself, but significantly substantive only for its instructive contrasts with Mozart’s later work in the medium. Nonesuch’s digital recording is first-rate and not oppressively close, the acoustical ambiences at least lukewarm, and there are extensive jacket notes by Dr. Robert Winter of UCLA.

THE AUTOPHILE  
(Continued from page 19)  
than in a home, because of the former’s small internal volume and nearly hermetic air seal. In fact, one of the problems of car stereo design is preventing excessive bass output at the vehicle interior’s major resonance frequencies.

- Different types of upholstery have a notable effect on high-frequency balance, with leather interiors being considerably brighter sounding (prior to equalization) than fabric, and vinyl slightly brighter still.

- And perhaps most significantly, proper speaker placement (as a cure for most imaging and spatial-reproduction problems) and fairly elaborate active equalization (as a cure for most frequency response problems) are two of the most versatile solutions to autosound difficulties. This suggests that two of the best investments you can make when laying out a new car stereo system are a narrow-band equalizer (preferably used with a test tape and a sound level meter) and a few hours spent evaluating potential speaker locations—using temporary cardboard enclosures if your speakers haven’t any of their own.

The Delco-GM/Bose Music System does not represent the first collaboration between sound system designers and automakers, and I’m sure it won’t be the last. I’ve heard a number of very credible sound-factory-installed sound systems in cars such as the Nissan Leopard and the Mitsu-bishi Galant, some of which will probably be offered in this country soon. Blaupunkt is also said to be at work on a super system for use as an option in various German luxury cars. The Delco/Bose effort, though, is an important step forward, because it proves out in a single project all of the virtues of collaborative design. It may also introduce millions of people who don’t know beans about high fidelity sound to the sonic delights of our avocation—audio’s first mobile ambassador at large, as it were. Meanwhile, I’m trying to finesse another week on the road with that Caddy.  

UPGRADING YOUR SYSTEM  
(Continued from page 44)  
ence between lukewarm praise and an enthusiastic rave, and you should look for that difference as you read: Some components really do stand out from the crowd.

But beware if the enthusiasm is for the first appearance of genuinely new technology. There are risks associated with novelty, and when you buy the first models of a new genre, the odds tend to favor poor reliability and early obsolescence. Looking back, the first transistor amplifiers turned out to have high crossover distortion, the first digital time-delay devices were failure-prone, the first direct-drive turntables had severe infrasonic rumble, the first high-compliance phono cartridges suffered from resonance-induced flutter, and so on. If what you want is a lasting investment in music-listening pleasure, wait for the second-generation product: It will not only be more reliable, but chances are it will also be cheaper, since the early buyers will have paid for the development cost of the new technology.

When shopping, pay attention to product features—especially those that add cost and complexity without a commensurate gain in useful performance. If an amplifi-er’s high-cut filter provides the same gradual rolloff as the treble control, why pay for the extra switch? If you listen to only three FM stations, why pay extra for a digital tuner with twelve presets? And when comparing two-way and three-way loudspeakers, don’t assume that the three-way is better just because it has an extra driver. At a given price, two good drivers and a carefully tailored crossover may yield better sound (and consistency) than three individually cheaper drivers and a complicated crossover network. Ultimately you must listen, using good recordings. If something sounds better, it is better—regardless of what the sales brochures say about the technology.

One final hint. In many localities, equipment prices vary during the year according to a predictable pattern. For instance, many new-product introductions occur during the autumn, so manufacturers choose the late summer to clear out remaining inventories of current models at bargain prices. And in product categories such as loudspeakers and recording tape, which don’t change much from year to year, inventories often build up during the slow-selling summer months and need to be unloaded. For both of these reasons, exceptional buys are commonly available in Labor Day or “back-to-school” sales. Similarly, in some areas it has become customary for stores to plan large Washington’s Birthday sales in February, coinciding with similar promotions by automobile retailers. Of course, stores tend to be crowded during those heavily advertised sales, making listening difficult, so do your comparisons early and decide in advance what you want to buy.
ANATOMY OF AN ALBUM
(Continued from page 85)

Determined to make the most of my time, I met with designer Spencer Drake who seemed to identify strongly with the rumor suggested by some of the album cuts. He thought, as I did, that the title and a few of the songs were food-oriented. The end result is a cover picture of me sitting in a Chinese restaurant (actually a photographer's studio) about to gulp down a heaping bowl full of "What It Is."

Finally it was time to start the mix. Processing and perfecting twenty-four tracks of musical information to get a two-track stereo master tape can be an excruciatingly tedious, time-consuming job. With Bongiov, however, it's anything but tedious. He mixes with a certain recklessness abandon (not unlike myself when recording) and accepts the whatever-will-be-will-be theory, occasionally allowing accidents and mistakes to be crowning moments of creation. Instead of running through the same song twenty, fifty, or a hundred times before arriving at the "perfect" mix. Tony is apt to run through it two or three times. The intros and tags might have to be mixed separately and edited in later, or a middle section might have to be inserted, but usually after only four hours—unlike the usual twelve or more—we would have our final mix. By the end of the first week, Tony (who had by now been named coproducer), Jimmy Bralow, and I had had four very productive sessions together.

Then we went on hold (again) and I received word that Portrait and Tony wanted to bump two of the cuts from the album. The prospect of having to start all over again—i.e., to write two new songs—was maddening to me. More lyrics to be conceived, more arrangements to be hammered out, more takes, both good and not-so-good. Actually, I replaced one track with a tune I had written three years ago. It was Lennie's enthusiasm for it that convinced me to put it on the album. (The lead vocal and guitar parts for it were taken directly from the demo I recorded on my eight-track, but don't tell anyone.)

The other song was brand new, which is to say that it was written on the 34th Street crosstown bus on the way to the Power Station in a frantic flurry of half inspiration and half perspiration. Admittedly, the prevailing hurry-up-and-wait climate of these last few weeks of production has tried my patience, but I just keep telling myself that it's all for the creation of the Best Possible Record.

The mix will get shoved into a vault, and the master disc will go to the CBS pressing plant in Pitman, N.J., which will not only press the records but ship them in their jackets to the distribution branch. As for me, there are several more songs to write, possible appearances with a live band, a contract to renew, and more albums to record. (There is also more waiting. The album was just bumped to a January release date. C'est la music biz.)

At this writing, we're still mixing. Once we have the two-track stereo master in hand, we'll move into the cutting room, from which we'll get a test record, or acetate. That will be listened to by me, Tony, Jimmy, my manager, label executives, and anyone else whose job it is to care. Upon approval by all interested parties, the go-ahead will be given to cut the master disc.

Disc-cutting is probably the trickiest single step in the record-making process; a master tape that sounds like a million bucks can be reduced to a real bargain-brand record with the wrong equalization or over-corrective limiting that squashes all fidelity and dynamics right out of the music. In the same way that there are different ways of producing a record, there are different styles of cutting it. For that reason, the choice of cutting room and cutting engineer can be fairly subjective. I've left the decision up to Tony, though I fully intend to show up for the actual session.

From the cutting room my master tape will get shoved into a vault, and the master disc will go to the CBS pressing plant in Pitman, N.J., which will not only press the records but ship them in their jackets to the distribution branch. As for me, there are more songs to write, possible appearances with a live band, a contract to renew, and more albums to record. (There is also more waiting. The album was just bumped to a January release date. C'est la music biz.) George — Ed.)

I'd also recommend some kind of delay: Without it, your tracks will tend to sound as if they were recorded in a small, soundproof box. There are dozens of echo/ reverb units available. On the low end (around $125) are various guitar toys (cho- ruses, flangers, phasers, etc.) that simulate tape echo. You might also consider mono spring reverb. If you do decide on reverb, I'd recommend a unit with a tone control of some kind. Reverb gets very muddy if it is too bassy and extremely strident if it has too much high end. But almost any kind of delay is better than none, since it gives the mix more depth.

You may be wondering at this point whether it's worth going the ministudio route if you have to invest in all this outboard gear. The answer is easy: You're going to need the extras in a more elaborate home setup anyway. Relatively speaking, the minis are very inexpensive; they're also self-contained, for quality recordings. Regardless of which machine might pique your interest, there are some common caveats. Although it's true that the minis are self-contained, for quality recordings you're going to need some outboard gear. For instance, such slim, slow-moving tape leaves little margin for error in recording levels, which means you'll probably need to compress the dynamic range to control those levels. Of the seven mini users I know, six of them use the MXR compressor/limiter (I paid $110 for mine) and some alternate it with a less expensive Dynacomp or similar device to get a harder sound on certain instruments, especially guitars. Payson uses a DBX 163 compressor/limiter, which is more of a pro than semipro item. But for about only $100 more than the MXR, its superior quality may be worth your investment.

The EQ bands on the minis cover very broad frequency ranges, which is fine for mixing, but for recording you'll want to be able to work within narrower, more specific bandwidths. The Roland Boss six-band graphic equalizer is a good choice, as are the MXR ten-band graphic and the Ibanez parametric.

INPUT OUTPUT
(Continued from page 86)

high-frequency sounds seem to pulse), and since the noise reduction is in at all times there is nothing that can be done about it. Both Ashley and Payson complained that there was no provision for user head alignment, a significant omission. Payson's Teac had a 6-dB difference between input and output when he bought it; he had to take it all the way back to the factory to have it adjusted.

In the metering department, the Fostex wins hands down, since it monitors record input on all four tracks simultaneously. The Tascam monitors record input on only two of its four meters. This is a prime consideration, particularly if you plan to do a lot of live recording.

On the other hand, the Tascam's wide variety of send-and-receive and panning possibilities renders it far more versatile than its competitor, especially in the mixing phase. In addition, the 244's EQ system, which Payson aptly describes as "quasi-parametric," is "sweepable," meaning the center frequencies are variable (from 62 Hz to 1.5 kHz and from 1 kHz to 8 kHz), instead of fixed as in the Fostex.

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You may be wondering at this point whether it's worthwhile going the ministudio route if you have to invest in all this outboard gear. The answer is easy: You're going to need the extras in a more elaborate home setup anyway. Relatively speaking, the minis are very inexpensive; they're also portable, easy to use, and very fast. In fact, most owners consider speed among their greatest virtues. Of course, one should have no illusions. Any decent demo studio can deliver a far better sound than either the Tascam 244 or the Fostex 250. Neverthe- less, the mini is yours twenty-four hours a day, it specializes in your music, and it teaches you all the basics of recording. And that, for the price, is not bad at all.
South Frisco Jazz Band: Oliver begot Watters begot Murphy begot South Frisco

BACKBEAT REVIEWS
(Continued from page 91)

South Frisco Jazz Band:
Live from Earthquake McGoon's
Bob Erdos, producer
Stomp Off S.O.S. 1027

Uptown Lowdown Jazz Band:
In Colonial York, Pa.
Bob Erdos, producer
Stomp Off S.O.S. 1030
(549 Fairview Terrace, York, Pa. 17403)

Both Lu Watters' Yerba Buena Jazz Band of the '40s and its successor, the Turk-Murphy band, patterned their sound on King Oliver's Creole Jazz Band of the early '20s. Not only did they follow the two-cornet lead of Oliver and Armstrong, but they also drew their repertoires from the oft-neglected works of Jelly Roll Morton, Oliver, Armstrong, and the black Chicago musicians of the '20s. Murphy's band is still active, playing at its leader's night club in San Francisco, Earthquake McGoon's. In the time since Murphy succeeded Watters in 1951, a generation of young musicians has built band styles and repertoires based on the '40s Watters-Murphy approach to the '20s Oliver-Morton-Armstrong style.

The second side is the more staid Tatum. Recorded by American Recording Artists (ARA) in the mid-'40s, this is a collection of standard tunes that, for the most part, he never went back to again. They include a striding Song of the Vagabonds, a Runnin' Wild that evokes thoughts of Teddy Wilson decorated with Tatum runs, and a Memories of You that keeps threatening to turn into composer Edward MacDowell.
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