COMPACT DISC SPECIAL!
500 New Releases

HI-FI VCRs: Best Choice for Audio Recording?

TESTED!
DBX CD Player
Rotel Amplifier
Kyocera Turntable

CAR STEREO PREVIEW!
John Huston has packed more into a lifetime than a half dozen men. Writing, painting, prize fighting, acting and directing no less than forty feature films, among them a handful of certified classics—The Maltese Falcon, The Treasure of Sierra Madre, The African Queen, The Asphalt Jungle.

Moulin Rouge, 1952.
"... drove Technicolor crazy. I wanted to get into color the ‘feeling’ of Toulouse-Lautrec. Color that looked real, not just splashy. It was a new concept and difficult for them to accept."

Moby Dick, 1956. "We made two negatives, one in color, one in black and white. The two were printed together achieving a new tonality. A hard edge. The hard, moral world of Ahab."

On acting. "It’s good for the soul of a director, once and awhile, to be on the other side of the camera."

On life. "Life fascinates me, each moment as it comes along. I don’t know that I have a philosophy, but I never do anything that doesn’t entertain me."

On television. "Well, there’s no question about it really. From now on, we’ll be seeing everything on television. It’ll keep getting better and better... until the next thing comes along."

The cinematic visions of filmmakers like John Huston challenge the manufacturer to offer video equipment capable of capturing the totality of their art in all its subtlety and nuance. Mitsubishi accepts that challenge.

For a detailed look at Mitsubishi telecommunication equipment for the home, send for our brochure, Mitsubishi: The Thinking Inside.
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On the Cover, from top: DBX DX-3 Compact Disc player, Yamaha R-9 receiver, Sony V-563 VHS Hi-Fi videocassette recorder, Sherwood CR-180 car receiver/tape deck, Harman Kardon CH-160 car receiver/tape deck.
Our finest speaker system towers above the competition. Its massive 15" woofer delivers a dramatic sonic impact that smaller speakers can't match. Whether you're listening to heavy metal or watching Discovery thunder off the pad, you can actually feel the bass! Ideal for digital audio, the Mach Two handles 160 watts of power, and liquid cooling protects the midrange and tweeter voice coils. And for great looks, the 28" high enclosure has a real walnut finish. Only $219.95 each including 5-year limited warranty. Come in and hear what you've been missing. As little as $21 monthly on Radio Shack/CitiLine credit buys a pair.
Compact Disc is King

We sometimes get letters criticizing our coverage of the Compact Disc—suggesting that we are being swept away on a sea of hype, that the CD has a pocketful of faults, and that we fail to be properly critical of this new format. But stepping back and looking at the explosion in both CD hardware and software, it would seem difficult at this point to believe anything other than that Compact Disc is King.

Take, for example, the number of CD players that are now on the market. Last year, we were able to list all of the available decks in a single article (see "CD Players—How They Compare," October 1984); this year, we simply haven’t the space. But we do describe more than 75 models in “Plain & Fancy,” which provides an overview of the current crop. In his introduction, Consulting Technical Editor Robert Long explains what each significant feature does and gives a perspective on how useful it really is. Our guide includes a slew of companies whose names are familiar but that are entering a new product category by offering Compact Disc players for the first time. One such manufacturer is DBX, whose DX-3 leads off this month’s Test Reports.

Complementing the buying guide is our comprehensive preview of the new classical CDs that record companies are planning to release this season. More than 500 titles are listed this year; in total, more than 4,000 are now available. What’s your pleasure: Georg Solti conducting Prokofiev? Fritz Reiner and the Chicago’s 1958 Pictures at an Exhibition? Marches from the University of Michigan Symphony Band? These and 12 more discs are reviewed this month by Robert E. Benson in “A CD Sampler.” And our Backbeat section includes CD reviews of the We Are the World compilation and McCoy Tyner’s Fly with the Wind.

As the Compact Disc has advanced the technology of music playback, so has another development spurred the technology of home tape recording. In fact, it is the introduction of the latest generation of VCRs that has made possible a new level of performance in audio recording. In “Tape Format Face-off,” E. Brad Meyer reports on a series of rigorous tests he conducted to sort out which of four audio and video recording formats produced the best results. The answer is not unequivocal. (Stay tuned for next month’s article on the latest VCR format, Super Beta.) Meanwhile, in “Currents,” you’ll find a special update by our new technical editor, David Rana, on the long-anticipated DAT (digital audio tape) standard. You’ll also find a story on David himself.

Completing our Audio & Video coverage this month is “Car Stereo ’86,” wherein “Autophile” columnist Jay Taylor focuses on the two hottest areas in mobile music: receiver/tape decks and, yes, CD players.
Introducing three times the power* and three times the control of ordinary car stereo. The new Panasonic component car stereo system.

Powerful. Ingeniously designed. That's the new Panasonic component car stereo system. It's an AM/FM stereo/cassette and seven-band graphic equalizer/power booster. All in the space normally taken by many ordinary car radios.

The heart of this system is a Panasonic AM/FM stereo/cassette player. With digital electronic tuning to seek and lock in stations with uncanny accuracy.

The high-performance cassette section gives you not only superb sound reproduction with Dolby** noise reduction. But it also gives you the convenience of auto-reverse. Plus metal tape capability.

The companion component is the Panasonic CY-SG60 graphic equalizer/power booster. Beyond ordinary bass and treble tone controls, it lets you shape your sound precisely over a seven-band range. And to bring all that sound to life, the CY-SG60 is also a power booster. To boost the power of your system to 25 watts per channel.†

So get yourself a system that gives you three times what an ordinary car stereo gives. From Panasonic. Just slightly ahead of our time.
DESIGNED SPECIFICALLY FOR THOSE WHO SEEK HIGHEST FIDELITY AND MUSICAL PURITY...
THE CARVER M-1.5t MAGNETIC FIELD POWER AMPLIFIER.

Recent advances in recording and playback technology have made source material with full, real-life dynamic range a reality.

Your high fidelity system must include an amplifier fully capable of reproducing all the music for you to enjoy the improvement in sound quality made possible from the finest analog recordings—and especially from compact discs. That is why you need the musical, accurate, and very powerful, Carver M-1.5t Magnetic Field Power Amplifier.

"...the equal of any power amplifier in transparency, focus and smoothness, and, of course, far ahead of any other we tested in sheer gut-shaking power and dynamic range. We especially enjoy hearing spatial detail, instrumental definition and completely natural dynamics on familiar records to a degree we did not know was extractable from the grooves when we listened through lesser amplifiers. At this level of sonic performance, the astoundingly small size and cool operation of the M-1.5t become the icing on the cake, rather than the main attraction."

Peter Aczel, THE AUDIO CRITIC

350 watts/rms/chan. into 8 ohms, 20-20 kHz with less than 0.5% THD. And most importantly, the rating that is musically significant 600 watts/chan. Long Time Period Reserve Power with 750 watts/chan. Dynamic Headroom. Weight 16 lbs.

LETTERS

OVERLOOKED "PIONEER"
I am greatly dismayed that Peter W. Mitchell overlooked one innovative loudspeaker company—Polk Audio—in his "Sonic Marvels" article [June]. It's fine to herald new advances in technology, but give credit where credit is due. The basic technology behind speaker design has remained virtually unchanged for many years. Because of this, Polk has astounded the audio world with its Stereo Dimensional Array line, making a definitive statement with the SDA-1A. In your own test reports, you have deemed the capabilities of the debut SDA-1 "astounding" and "mind-boggling" [January 1983] and have described listening to the stereo imaging of the SDA-2 as "an amazing experience" [June 1984].

It seems that Acoustic Research, Bose, and DBX are making headway in improving traditional two-monaural speaker design, but the aforementioned article should at least have referred to Polk as a pioneer in audio reproduction.

Chip Biscoll
La Jolla, Calif.

Actually, the article overlooked more than one innovative loudspeaker company. Quad comes immediately to mind, but there certainly are others. You have to stop somewhere; what we were trying to do was examine the latest developments, ones we hadn't previously covered in depth. We already had explored Polk's Stereo Dimensional Array technology in considerable detail, particularly in our test report on the SDA-1, more than two years ago. For the latest, see "Polk's Super SDA. The Signature Reference" in our August "Currents."—Ed.

REISSUES: BORN IN THE U.S.A.
Thank you for Wayne King's excellent article, "Not Fade Away" [July], on classic rock albums that have disappeared in recent years. I have found that many r&b classics (particularly on Atlantic) have been reissued in Japan (but not in the U.S.) on high-quality pressings. For example, I recently bought The Otis Redding Dictionary of Soul from YSL Records in Northridge, California, which deals exclusively in Japanese imports. Let's hope that the American record companies wake up and start reissuing these al-
First it was DC. Then DD/DC and Super Feedforward. Now Sansui astounds the audiophile with the greatest improvement in an amp. X-Balanced circuitry. It cancels out external distortion by eliminating the transformer to chassis ground; and decisively removes IHM.

You'll find X-Balanced circuitry in a wide range of superior Sansui products, like our AU-G99X amp, shown with TU-D99X quartz-PLL synthesizer tuner which incorporates our new Super Linear Digital Decoder for improved rejection of spurious signals and interference. Another version of this tuner even has AM stereo capability.

There's more worth hearing about these great Sansui components. Write: Consumer Service Dept., Sansui Electronics Corp., Lyndhurst, NJ 07071; Carson, CA 90746; Sansui Electric Co., Ltd., Tokyo, Japan.
IF YOU COULD HEAR THIS TAPE,

MEMOREX® CDX II
METAL TAPE FOR HIGH BIAS CRO, SETTING

© 1985 Memtek Products
Introducing The Memorex CDX II. You've Got to Hear It. Believe It.

Without a doubt, the new Memorex CDX II is in a very special class.

Consider these points:
- The CDX II is a metal tape that can be recorded and played at the high bias setting.
- The CDX II comes extremely close to matching the CD's capability of today's best sound sources — the Compact Disc.
- The CDX II outperforms leading high bias tapes hands down. Fact is, we compared (see Graph II) the CDX II to TDK SA-X and Maxell XLII-S. The result? When it comes to high energy recording, no one can match our levels. That's right. No one.

Graph I
CDX II peak recording matches almost perfectly with the same music on a Compact Disc.*

What Makes The Memorex CDX II Special?
A bona fide breakthrough in metal chemistry. The development of a super alloy. One which lets us turn iron, the most magnetic material there is, into a super-small particle only 12 millionths of an inch long.

This metal particle produces the highest magnetic moment of any tape we tested. Nearly twice as high as any conventional high bias tape — even higher than pure metal, until now the industry champ (see Graph III). To you, that translates into more headroom. Which means you can accurately reproduce even the most sudden bursts of high energy sound that comes with the most demanding music sources.

Graph III
CDX II has the highest magnetic moment.

A Tape This Good Demanded A Superior Cassette.

So, we spent two years designing our new five-screw cassette from the ground up. This precision-engineered system assures that the CDX II works as great as it sounds. In fact, we guarantee it for life.

Graph IV
CDX II can record at a 3-5 dB higher input level than Maxell XLII-S or TDK SA-X without reaching saturation.

It Unlimits Your Limitations.
The Memorex CDX II can record critically demanding music substantially better than the best conventional high bias tapes. At critical high frequencies, Memorex CDX II can faithfully reproduce music without saturating at a 3-5 dB higher input level (see Graph IV).

Now you can record at higher levels to minimize hiss, and still capture the loud passages, the peaks, the crescendos — without distortion or loss of high notes. In fact, you can almost capture the fantastic imaging digital discs have become famous for. But you can do it on tape. And do it with ease. Loud and clear. All at the high bias setting.

Compare The CDX II. You'll Find There's No Comparison.

We urge you to put loyalty aside and compare CDX II to the tape you're sold on now. Or, to any other tape you think can beat it. You'll never know what you're missing until you do.

Just send a dollar (to defray handling and shipping costs) to Memorex CDX II, P.O. Box 4261, Dept. A, Monticello, MN 55365, and we'll send you a new CDX II 90-minute cassette. Limit one per household. Allow 6-8 weeks for delivery (offer expires December 31, 1985).

*Comparison of CDX II performance versus Compact Disc containing high-energy electronic music. Data based on independent laboratory tests and examinations.
YOU WIND UP WISHING IT WERE MORE THAN ONE WEEKEND A MONTH.

You might find yourself in a chopper, cruising the treetops at 90 miles per hour. Or doing something more down to earth, like repairing an electronic circuit. What you won’t find yourself doing is getting bored. Because this isn’t ordinary part-time work. It’s the Army Reserve.

You’ll get valuable skill training. Then one weekend a month, and two weeks each summer, you’ll put that training to good use, while receiving good pay and benefits.

But maybe most importantly, you’ll come away with a feeling deep down that you were challenged and came through. And that doesn’t disappear when Monday rolls around.

See your local Army Reserve recruiter about serving near your home. Or call toll free 1-800-USA-ARMY.
AKAI WILL AUTOMATICALLY REVERSE YOUR OPINION ON RECORDING ACCURACY.

If, as an audiophile, you're of the opinion you can't enjoy the brilliance of sound accuracy in a 3-head system, combined with the long play convenience of a quick reverse deck—we're out to change your opinion.

Case in point: AKAI's Accurate Quick Reverse System.

How quick is quick? Less than a half-second. But the reverse story doesn't end there. To eliminate wear and misalignment, AKAI has introduced the diamond-like ceramic head stopper. A beryllium-alloyed diecast two-inch head housing, with double nut locked stainless steel azimuth screws. For added dependability, all moving parts are bonded with a tough Teflon® casting for permanent lubrication. What does all that mean to you? Simply this: AKAI's total auto reverse design has the distinction and durability, to perform over 200,000 rotations.

Now consider AKAI's Computer Recording Level Processing.

Chances are, the way you've set recording levels in the past has been based on experience, coupled with critical listening. But that's history. Today, AKAI has successfully developed the ultimate computer system for obtaining a perfect setting. Every time. And here's how that perfection works:

First, the tape is analyzed to determine optimum bias and equalization. Commonly referred to as "quick auto timing."

Next, the tape MOL (maximum outlet level) is derived by spectrum analysis at 400 Hz and 8,000 Hz. Note: this step is critical because it assures maximum tape saturation without audible distortion.

Then the energy content of the music source is sampled for ten seconds.

Finally, when all the data is obtained, the computer sets the recording levels. And all are mathematically perfect.

Which brings us to AKAI's Super GX Head.

Nowhere in the industry will you find its equal. With its single crystal ferrite, encased in mirror-polished glass, the Super GX head is so unique in its hardness, it's second only to a diamond. Sonically, it's second to none. With a playback output level as much as 7.8 db better than Sendust heads at 10kHz, it's easy to hear why.

And if all that isn't enough, consider this: the Super GX head is so resistant to wear, it's guaranteed for 17.5 years of continuous play.

The case is closed: Closed Loop Double Capstan.

By isolating the tape as it travels over the heads with two pairs of capstans and pinch rollers, tape tension and speed are stabilized, significantly reducing wow and flutter, level fluctuations and modulation noise. Result: unparalleled accuracy and highest of fidelity.

It's evident that AKAI's engineering excellence and technology has altered and influenced industry standards on recording accuracy. Which should automatically be reason enough to reverse your opinion. And, see your AKAI dealer.
Car audio is our life. There’s no way we would settle for less than the best. Why should you?

Why play with anything less than a full deck?

Toshiba has a new cassette recorder you’re going to be nuts about. It has double decks, so you can get twice the playing time. With auto-reverse in both decks, AM/FM stereo, high speed dubbing capability, detachable speakers, even a 5-band graphic equalizer. In fact, the RT-7085 has so much to offer you’d be crazy to pass it up.

Contributing Editor John Northland replies: Actually, nearly all pop and American-roots music from the last three decades is available somewhere these days, so plentiful have reissues become. It’s just not often available from major domestic labels, so the whole trick is in knowing where to look.

The single best source—in North America, if not the world—is Down Home Music, 1031 San Pablo Ave., El Cerrito, Calif. 94530. Down Home specializes in what store manager John McCord calls “tradition-based” music, primarily from America. (Sixties garage bands, however, don’t count, he says.) Otis Redding’s Dictionary of Soul is available there, as well as 10,000 other titles, most of them reissues.

Down Home is both a mail-order house and a retail store, stocking records from about 500 labels, domestic and foreign. The store publishes catalogs every two years, itemizing its inventory in the categories of Blues and Gospel, Country, Rock ‘n’ Roll, and British Isles and European Folk. The books are $3.00 each, which is credited toward the buyer’s first order. Though no comprehensive catalog exists yet for Jazz or for African or other non-European ethnic musics, such records are listed in the new-releases newsletter that Down Home mails out free every six weeks. The newsletter is, in effect, a supplement to the catalogs, offering a short description of each album, a few song titles, and some information about personnel. It’s not as good as being able to browse through album covers in a store, but it’s better than nothing.

Among the record-store chains, Tower has the most impressive selection of reissues, but most major cities have a few specialty shops catering to collectors of any type.

THIS BUD’S FOR ME

Congratulations for finally doing a test report on one of the fine loudspeakers from Bud [Irving M. Fried] (the Beta, June). It has always perplexed me that mainstream audio magazines such as HIGH FIDELITY perennially
Performance in its purest form.

We know what you're thinking: another rack system that is all looks and no sound. Hardly the sort of package you'd recommend to a friend, much less yourself.

Not so. We built our new Live Performance Series to sound like—a live performance, music in its purist form. Three decades of making sound quality our first priority could let us do nothing less.

These systems combine true component-level technology in tasteful and exciting packages that require a single shopping decision.

We invite you to evaluate these new systems with the most demanding of test equipment: your ears. Simply visit your nearest Sherwood dealer and ask for a demonstration.

This new level of performance we've engineered into our rack systems can't be explained in one sentence. That's why we've written the Sherwood White Paper on Audio Systems. For your free copy, ask your dealer, or circle the reader service number below, and we'll send you one direct.

At Sherwood, we've always made sound our first priority. It's brought us to Live Performance quality. And isn't that the purest form of sound?

One of Sherwood's new Live Performance Systems, the SS-1028 features up to 150 watts from its high-reserve amplifier, digital tuner, linear-tracking turntable, 18-band equalizer, dual-speed dubbing deck, and four-way tower speakers with ribbon super tweeters. Optional CD player is available. 13845 Artesia Boulevard, Cerritos, California 90701
ly review less exemplary speakers while ignoring products like Fried's. In fact, I have been waging a one-man crusade to introduce my friends to Fried speakers. (No, I do not work for the company.) For the money (and prices way above), there aren’t many speakers like Bud’s. Thank you for an honest audio magazine.

Basil O. Gordon
Columbia, Md.

Although a long period did elapse since our last previous review of a Fried loudspeaker (seven years, to be exact), the report on the Beta was not the first, and we’re confident it won’t be the last.—Ed.

RESTORING ROSSINI

I will not quarrel with Thomas Hathaway’s judgments concerning singers, conductors, or period instruments in his review of a new recording of Rossini’s L’Italiana in Algeri [February]. These are matters of personal taste. But his ignorance concerning the new critical edition of the opera is appalling.

Azio Corghi’s edition of the full score has been in print since 1981. It is published by the Fondazione Rossini of Pesaro. The piano-vocal score, with a lengthy preface in English translation, was published by Ricordi in 1982. If Mr. Hathaway is to comment on the text of the opera or the edition, he might consult this material.

In disapproving of the use of a valveless 18th-century horn in Lindoro’s first-act Cavatina, he comments: “(It seems especially doctrinaire to insist on Rossini’s horn when it is generally believed that the Cavatina is a later interpolation by another composer...?)” What nonsense. No one has ever supposed such a thing. The piece exists in Rossini’s autograph, was performed at the premiere, and offers no textual uncertainty whatsoever. Perhaps Mr. Hathaway is confusing “Languir per una bella” with the second-act Cavatina for Lindoro, “Ah come il cor di giubilo” (which has no horn solo). The latter is not by Rossini, but neither is it a “later interpolation”. It is one of the short pieces, in this and other operas, that Rossini sometimes farmed out to collaborators. Hayley’s “Le femmine d’Italia” is another. These pieces are perfectly authentic, even though they are not by Rossini. They were written and performed under his direction at the premiere of the opera. Questions of this kind should not be the subject of “speculation” when the evidence has been spelled out in print.

Even more disturbing is Mr. Hathaway’s cavalier attitude toward the new edition. He reduces its aim to restoring “a few things not often heard before,” while claiming that Carlo Maria Giulini and others had already “incorporated into their performances many of the corrections that are only now appearing in printed editions.” This is simply false, and it does an enormous injustice to the exhaustive work needed to restore an opera such as L’Italiana to its authentic text. It is particularly false for an opera that was largely rescored in the 1890s, with the addition of trombone parts, the replacement of Rossini’s piccolo with a flute, the insertion of extra percussion parts, etc. The scores available before Corghi’s edition were corrupt from beginning to end. I urge Mr. Hathaway to consult the original material.

(Continued on page 19)
Other Type II (high-bias) cassettes are a long way from home when it comes to reproducing the pure, dynamic sounds of digitally encoded music sources.

But, number for number, TDK HX-S audio cassettes are number one.

Their exclusive metal particle formulation reproduces a wider dynamic range and higher frequency response. This enables HX-S to capture all the crispness and purity of digital performance on any cassette deck with a Type II (high-bias) switch.

With four times the magnetic storage ability of other high-bias cassettes, HX-S virtually eliminates high frequency saturation, while delivering unsurpassed sensitivity throughout the audio spectrum.

Additionally, HX-S excels in retention of high frequency MOL, which no other high-bias formulation attains.

And HX-S superiority is not just numerical. To maintain its dynamic performance, HX-S is housed in TDK's specially engineered, trouble-free Laboratory Standard mechanism. It's your assurance of unerring reliability and durability, backed by a Lifetime Warranty.

For optimum results with Type II (high-bias) and digitally-sourced recordings, get TDK HX-S. You'll feel more at home with it, wherever you go.
Announcing

THE NATIONAL HISTORICAL SOCIETY

CIVIL WAR CHESS SET

Richly detailed portrait sculptures of great American heroes—in solid pewter, solid brass and fine enamels.

An heirloom chess set to be enjoyed for generations.

Created by the world-famous craftsmen of The Franklin Mint.

THE NATIONAL HISTORICAL SOCIETY is dedicated to bringing the excitement and power of American history—as well as its significance—to people in every part of the land.

It is in keeping with this purpose that the Society is about to issue its own Civil War Chess Set. A dramatic tribute to the heroes of both North and South—and a work all the more intriguing because the playing pieces include richly detailed three-dimensional portrait sculptures of the great Generals of Union and Confederacy, captured for the ages in solid pewter, solid brass and fine enamels.

This extraordinary new chess set will be crafted to the highest standards of quality and historical authenticity. The National Historical Society has appointed The Franklin Mint to create the sculptures, each of which will be a new and original design. Some figures will be shown standing, some seated, some kneeling, some mounted on horseback. And each figure will be painstakingly crafted of solid pewter, hand-finished, then set atop a solid brass pedestal base embellished with a circular band of richly colored enamel—blue for the soldiers of the North, gray for those of the South.

Every sculpture, moreover, will be so rich with authentic detail that only the artists and master craftsmen of The Franklin Mint, steeped as they are in the tradition of precision coinage, could have achieved it. Indeed, every nuance of facial expression, uniform and weaponry—right down to the buttons, braiding, sabers and carbines—will be depicted with meticulous accuracy.

Thus, The National Historical Society Civil War Chess Set is also a magnificent collection. A triumphant achievement of portrait sculpture—and the ultimate in micro-detailed miniaturization.

Available only by direct subscription. Issue Price: $17.50 per sculptured chess piece.

Limit: One complete set per subscriber. Please enter your subscription by October 31, 1985.
A dramatic showpiece
for your home or office

The chessmen themselves are scaled so that each one will suit the function assigned to it in the game of chess. And the handsomely crafted, pewter-finished playing board has been sized with equal care. Specially fitted, to also serve as the cover for the case which will house all 32 playing pieces, the board completes a presentation so attractive that the chess set will be played and displayed with pride and satisfaction. A Certificate of Authenticity, and specially written reference materials, will also be provided.

Exhibited on a table or cabinet in your living room, family room, den or office, this is a possession certain to evoke both admiration and respect from all who see it. A unique tribute to unique Americans. A work of heirloom quality, that will bring you endless pleasure through the years. And a chess set eminently worthy of being passed on from generation to generation.

Here, then, is a work that will bring lasting pleasure to chess enthusiasts, history buffs, collectors of military miniatures— to anyone who appreciates our nation’s heritage. Indeed, it is an unmistakably American chess set, that will make a dramatic addition to any room. And an exciting showpiece that will be displayed, enjoyed and treasured by each succeeding generation.

To acquire The National Historical Society Civil War Chess Set, no advance payment is required. But please note that the accompanying Subscription Application is dated and should be returned postmarked by October 31, 1985.

The chessmen will be issued to you at the attractive price of $17.50 each, with the specially designed playing board and protective case provided at no additional charge. As a subscriber, you will receive two sculptured pieces every other month. You will, however, be billed for only one chessman at a time—a total of just $17.50 per month. In addition, you will have the option to complete your set earlier, if you wish— but you will be under no obligation to do so.

Here, then, is a work that will bring lasting pleasure to chess enthusiasts, history buffs, collectors of military miniatures— to anyone who appreciates our nation’s heritage. Indeed, it is an unmistakably American chess set, that will make a dramatic addition to any room. And an exciting showpiece that will be displayed, enjoyed and treasured by each succeeding generation.

To acquire The National Historical Society Civil War Chess Set, no advance payment is required. But please note that the accompanying Subscription Application is dated and should be returned postmarked by October 31, 1985.
You're looking at what's ahead for the television set. At Proton, we call it “eye-fi.”

The Proton 625, above, is a video monitor/receiver. It's the evolution of American TV. Enjoy its absolutely superior performance just as it is. Enhance its great sound by making it a component part of your present audio system.

A demonstration will convince you of the startling difference between Proton and what you're used to. You'll see deep, rich black, not washed out gray. You'll see vivid color and true perspectives, instead of unreal hues and distorted angles. And above all, you'll see the whole broadcast picture, instead of one whose edges have been cropped as much as 20% due to overscanning.

While Proton has features of other sets like infrared remote control, 139 channel tuning range, and a built-in stereo tuner, our monitor/receiver goes beyond any other brand’s “state-of-the-art” technology. Even beyond, in resolution capability, the signal quality TV stations presently broadcast.

In short, Proton is what TV should be. But something this superior isn't inexpensive. Just remember what your dad always said...“You get what you pay for.” He didn't know that with Proton you get a whole lot more.

See for yourself. Call for the nearest dealer. Because if we're this careful about making a great TV, we're also careful about who sells it. Proton, clearly the best.

For technical data or dealer location, call 1-800-773-0772. In California call (800) 424-1006.
Giulini is a magnificent conductor, but there is no evidence that he did anything more in 1954 than to use the score he had readily available. A terrible score does not preclude a wonderful performance, no more than a wonderful score precludes a terrible performance. Is it too much to expect a wonderful performance of a wonderful score? Corghi's edition has been in circulation since the early 1970s. Claudio Abbado has conducted it brilliantly at La Scala on several occasions; it has been recorded on Erato, with Marilyn Horne as Isabella; it has been performed at New York's Metropolitan Opera.

Philip Gossett
Professor of Music, University of Chicago
Chicago, Ill.

Thomas Hathaway replies: I am grateful to Professor Gossett for his letter. He is right about the Cavatinas: I did misread and confuse the one in the first act with the one in the second (therefore, I'll put aside the question of whether an air Rossini contracted from someone else is as "perfectly authentic" from the audience's point of view as one of his own). He graciously permits my point about the valveless horn, but my blunder in the parenthetical remark following that was inexcusable.

When Professor Gossett goes on to speculate angrily about my attitude toward scholarly editions, I think he does me a small injustice, however. I did not belittle the work of Corghi and others. I only pointed out that comparison of Giulini's version of L'Italiana with the new CBS record did not reveal a transformation in sonority and substance approaching, for example, that in the new performing versions of Mozart's Requiem or between Mussorgsky's and Rimsky-Korsakov's Boris Godunov. Because the CBS album offered a performance less satisfactory than Giulini's, then, it could not be recommended for the sake of the edition or the period instruments alone. But that does not suggest the ideal shouldn't be great performances using correct editions.

I HEAR YOU

Congratulations to Michael Riggs! His viewpoint and apt convictions on "What You Can (and Can't) Hear" ["Basically Speaking," April] are a beneficial gust of fresh air. One would be tempted to crusade against the Babel at the audio fringe, but this would only result in contamination. Keep up the excellent work.

Carlos E. Bauza
San Juan, P.R.

Letters should be addressed to The Editor, High Fidelity, 825 7th Ave., New York, N.Y. 10019. All letters are subject to editing for brevity and clarity.
The Ford/JBL Car Stereo System: A Better Idea

As reported in August's "Currents," the Ford Motor Company and JBL have teamed up to develop a complete factory-installed audiophile-quality car stereo system. Like the Delco-GM/Bose Music System, which was introduced in 1982, the Ford/JBL Audio System is designed to be car-specific. That is, response is equalized to match the interior acoustics of a particular model. Thus, different cars will have slightly different systems. The Delco-GM/Bose design debuted in the Cadillac Seville and Eldorado, the Buick Riviera, and the Oldsmobile Toronado; the Ford/JBL system will first be offered in 1986 Lincoln Continentals and will eventually be available in other top-line Ford vehicles.

While the name JBL is familiar to most audiophiles, Ford's involvement in car audio is less well known. The company has been designing car radios for more than 50 years and began manufacturing them in 1962, shortly after acquiring Phileco, which had been one of its suppliers. Ford currently employs more than 5,000 people in all aspects of car audio, producing more than three million units a year and spending about $18 million annually on research and development. The Ford/JBL project began in 1982.

The new Audio System comprises three main elements: a tuner/tape deck, an amplifier and control computer, and a 12-driver speaker array consisting of a set of mid- and high-frequency drivers in either side of the dash, a 5¼-inch woofer in the upper front section of each front door, and a 6-by-9-inch three-driver system in (Continued on page 22)

David Ranada Joins HF as Technical Editor

HIGH FIDELITY's well-respected technical staff has added another highly qualified person: David Ranada. He will be working with Senior Editor Michael Riggs on our audio and video coverage.

David brings a unique combination of music and technology to our staff. A magna cum laude graduate of Harvard whose honors thesis was "Wagner's Tempo Modifications and 19th-Century Conducting," he worked during his college summers on Advent's speaker assembly lines and for the SCHWANN catalog.

Today, David is active in both music and technology, playing violin and piano and owning approximately 400 CDs and more than 7,000 LPs. He is a member of the EIA's Compact Disc standard test-record committee, the AES's Digital Audio Technical Standards Committee, and the IEEE, SMPTE, and Boston Audio Society. Before joining HIGH FIDELITY in July, David was technical editor at Stereo Review.
If you can't tell whether it's a Stradivarius or a Guarnieri, it isn't an Aiwa.

Precision without complication. At the very pinnacle of Aiwa's technological breakthroughs resides a new standard of performance. A new level of precision. A new achievement in human engineering. It is the Aiwa AD-F990B.

The AD-F990B's ability to meet the dynamic and textural demands of the best of both digital and analog source materials is unprecedented. The ease with which the AD-F990B makes this outstanding performance available is unbelievable.

At the touch of a single button, the AD-F990B's unique D.A.T.A. system automatically analyzes the tape you have selected. Reference signals are automatically recorded and then instantly compared to the original. Once the analysis is complete, in just 16 seconds, the Aiwa AD-F990B adjusts bias, equalization and sensitivity to optimum levels.

Through the use of Dolby HX Pro, the AD-F990B then dynamically adjusts bias levels in response to the music you record. It even adjusts the bias levels separately for each channel.

The Aiwa AD-F990B. Perfection has never been so easy to achieve.
DAT Standard Announced
With the Compact Disc at last firmly under our belts, we now must prepare for the onslaught of another, almost as revolutionary, audio technology. Standards have been announced in Japan for a rotary-head digital audio tape system (RDAT, for short) that will provide two hours of continuous recording on a cassette measuring approximately 2 1/4 by 2 3/4 by 3 1/2 inches (about three-quarters the volume of an ordinary analog audio cassette). Sources within a large Japanese audio company say the earliest models probably will first be shown in the U.S. at the January 1986 Consumer Electronics Show, after being unveiled at the Japan Audio Fair this month. Though no price range has been quoted, one can estimate from the technology involved and the potential market for the machines an initial price of anywhere between $500 and $700.

One of the new system's most innovative aspects is its harnessing of rotary-head VCR technology to strictly audio purposes. With RDAT, the spinning of the record/playback heads (mounted on a 30-millimeter-diameter head drum with a 20-degree azimuth angle) permits very high-density data storage, on the order of 114 million bits per square inch of tape surface. Such densities are necessary because the tape speed is very slow (8.15 millimeters, about 1/3 inch, per second); the tape, very narrow (3.81 millimeters, the same as analog cassette tape); and the amount of data, tremendous. The digital encoding of the audio signal is 16-bit linear PCM (pulse-code modulation), providing a maximum dynamic range of more than 96 dB and very low distortion. The mandatory sampling rate (one of several accommodated by the standard) is 48 kHz, giving a maximum audio bandwidth of almost 24 kHz. Two channels of audio will thus generate more than 1.5 million bits of information every second.

The standard's sampling-rate specification...
To find out why the top-selling compact discs are mastered on Sony Digital equipment,

play them back on a Sony Compact Disc Player.

Today, nearly everyone knows that state-of-the-art music is the Compact Disc. But did you know that 19 out of 20 top-selling pop and classical Compact Discs were mastered on Sony Digital equipment?* Why? Because music industry leaders acknowledge digital recording as the most dramatic audio breakthrough of the century...and this breakthrough was pioneered by Sony. In fact, Sony invented the Compact Disc system and introduced the first home, car and portable Compact Disc players. From third-generation home players that are the "benchmark" of the industry, to a full range of car and portable CD models, Sony sells more types of Compact Disc players than anyone else in the world. So, when you consider which brand of Compact Disc player to buy, there's no doubt you will draw the same conclusion more people reach every day... Sony. Because, after all, if the top-selling Compact Discs are mastered on Sony Digital equipment, shouldn't you play them back on Sony Digital equipment?

*19 of the 20 top-selling pop and classical Compact Discs listed in Billboard's August 3, 1985, issue were mastered on Sony Digital equipment.
cations have some interesting consequences. The 45-kHz rate is deemed mandatory because every RDAT machine will be capable of playing back and recording two-channel tape using that conversion speed. But some RDAT machines will have other, optional sampling rates available. For discrete four-channel recording, the standard recommends a rate of 32 kHz (which means that the maximum recordable frequency will be just under 16 kHz). Those willing to make such a sacrifice in
e 93 dB of dynamic range, let alone the 96
process will therefore add 3 dB of noise to
setter, you will have to first convert it into
mary requirement for direct digital dub-
to-digital copy of a CD, because the sam-
hard, if not impossible, to make a digital-
able frequency will be just under 16 kHz).

And for two-channel playback, most RDAT machines will offer a
to four hours. And for two-channel play-
date because the sam-
standard recommends a rate of 32 kHz
able. For discrete four-channel recording,
have other, optional sampling rates avail-
sequences. The 48-kHz rate is termed man-
comes to rerecord the cassette and change
rewinder ($60) to its tape-care line.

Two welcome novelties come from 3M.
This arrangement will make it very
environment applications where CD still
available fairly inexpensively. In rough-
ren is rare in the music industry and can
ly is capable.

DB of which the Compact Disc theoretical-
db which the Compact Disc theoretically

Robert Long

New Tape Accessories

New Tape Accessories

Tabe-case kits are fairly common. Something along these lines seems to be offered by every tape company (and some nontape-ones). New accessories come from con-
sciences as diverse as Kodak (among the world’s most familiar brand names), Audio-Technica (a specialist that is well
new accessory is known in our field, little known outside it),
known in our field, little known outside it),
Audio-Technica (a specialist that is well
new accessory is known in our field, little known outside it),
known in our field, little known outside it),

Robert Long
Matthew Polk’s total dedication to a philosophy of uncompromising quality results in dramatically better sounding speakers for you.

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Hear for yourself why Polk is #1

Matthew Polk’s speakers have won the Audio Video Grand Prix for the 4th year in a row and Polk has been voted the #1 loudspeaker manufacturer overall for the last 2 years. What is the secret? Polk speakers sound better! Polk builds each and every loudspeaker with the same world class standard of construction, quality and uncompromised performance accuracy. Hear for yourself, why Polk is #1.

“Vastly superior to the competition”
High Fidelity Magazine

“Mind boggling powers of sonic persuasion”
Musician Magazine

“Literally a new dimension in sound.”
Stereo Review Magazine

“Our advice is not to buy speakers until you have heard the Polks”

If you’re looking for lifelike musical sound quality, world class state of the art technology and unexcelled value, Polk loudspeakers are your obvious choice. You’ll always be glad you bought the best. Audition the revolutionary TRUE STEREO SDAs, remarkable Monitors and the other extraordinary Polks today. High Fidelity Magazine says, “You owe it to yourself.”

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Canada Call Evolution Technology for nearest dealer.
CROSSTALK

CD OVERSOLD?
I just bought a Technics SL-P7 Compact Disc player, which functions properly and sounds good. But I can't hear much (if any) improvement over my LP system. I expected a large improvement, and now I feel I've wasted my money. I think CD players have been oversold. They may improve the sound players have been oversold. Wasted my money. I think CD improvement, and now I feel I've system. I expected a large improvement over my LP.

Rialmrd L. Hoge
Skiatook, Okla.

I'd expect a number of advantages of the Compact Disc to be immediately apparent to someone with your sort of system. You'll never hear any wow (or "sourness" or "tinniness") due to eccentrically pressed records, which I encounter all the time. (You can get around this problem with a Nakamichi Dragon-CT turntable, but it will set you back $1,740.) There's no appreciable sonic deterioration within the first 10 or 20—or 100—playings of a CD due to wear or scratches or dirt that has been ground into the surface by a diamond stylus. The pops and ticks that are present in many LPs even on first playing are absent from CDs. And all the fuzzy adjustment and care considerations that surround the LP and its pickup cartridge are banished with CDs.

You may also hear greater clarity or depth or a crisper stereo image, but not necessarily. If these were the properties you were looking for, I can understand how you might be disappointed, depending on the specific records you chose in arriving at your judgment. But since I'm currently reveling in Wagner's Ring as newly released on CD by London some 20 years after it was recorded and have never encountered any LP version (including the same Georg Solti performance) that is as thoroughly satisfactory on all sonic and practical counts, I can't at all agree with your conclusion.

WHY NOT DBX, TOO?
Why do some high-end recorders have only Dolby B and C noise reduction, while others, some costing much less, have DBX as well? There is no doubt that DBX makes possible a much better signal-to-noise ratio. The S/N spec for my Technics RS-B50 with DBX is 92 dB, and after being spoiled by the ultrasonic background of the Compact Disc, I'm pleasantly surprised that I can get this kind of performance from a cassette deck. On some classical music, I have noticed a certain amount of the hiss-pumping associated with DBX in quiet passages of dubs from CD, but I believe this is a minor price to pay. However, the decks you test measure only about 80 dB in DBX S/N ratio. Is the Technics actually capable of 92 dB, or does Technics measure differently?

Thomas R. Wiles
West Fork, Ark.

We measure noise below 200 nanowahers per meter—DIN 0 dB, and the reference level of the current EIA-IHF measurement standards. Many deck manufacturers use a higher reference of one sort or another (the midrange tape-saturation point, for example), which inflates their S/N figures with respect to ours. If you choose your levels carefully and use 70microsecond equalization (meaning Type 2 or 4 tape—chrome/ferricobalt or metal, respectively), you should never hear pumping—or noise of any sort—with the vast majority of source signals at any playback level that I would call reasonable for the home. But setting levels with DBX is relatively tricky because of its large compression ratio. We get many puzzled letters about the metering recommendations that appear in owner's manuals and in our reports on DBX decks. This may be one reason some deck manufacturers avoid it or incorporate it into only a few models. Another is the much broader consumer acceptance of the Dolby name.

PICKUP IN A POKE?
I have a question about your reviews of phono cartridges as compared to those of the same or similar cartridges in other magazines. In particular, stereo imaging and separation seem to vary from report to report. Could it be that cartridge behavior is system-dependent and that better performance than you report can be achieved?

Jim Malone
Fayetteville, N.Y.

Yes, it is. One reason is variation between samples, which can be significant in phono cartridges. Another is differences in methodology. If you've been reading our test reports for a few years, you may remember how different the separation and frequency-response curves were when we changed from the CBS to the JVC test records for these measurements. So a lot depends on the records themselves, as we've often commented in our cartridge reviews. A third important factor is setup. Small changes in alignment can sometimes have disproportionate effects, especially with regard to channel separation. The chances that two people (or even one person on two occasions) will set up a cartridge exactly the same are slim, at best.

We regret that the volume of reader mail is too great for us to answer all questions individually.
Ah, the comforts of home. They're tough to leave behind. Especially when it comes to things like your compact disc player.

But even though you might not be able to take the player with you, you can take the brilliant sound quality. If you record your compact discs on Maxell XL-S cassettes.

By producing smaller, more uniform magnetic particles, we can pack more of those particles on the tape surface. Which makes it possible to record more information on a given area of tape.

As a result, AC bias noise is greatly reduced. And maximum output levels are significantly increased. In fact, the dynamic range of XL-S is expanded so much, it can capture everything from the subtle passages to the extreme bursts inherent to compact discs.

So record your compact discs on Maxell XL-S.

Then you can enjoy their sound quality wherever you feel at home.

MAXELL TAKES COMPACT DISC QUALITY OUT OF THE LIVING ROOM.

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Hitachi goes a step beyond to bring you video a world apart.

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The 22" square tube. The very latest in picture tube technology. Twenty-eight percent more picture than 19" sets. Full function remote. Famous 10-2-1 limited warranty. A complete nerve center that integrates both video and audio sources. Only from Hitachi.

Introducing HITACHI'S NEW CAM-N-CORD
Another Hitachi breakthrough. The new Cam-N-Cord, color camera and VHS recorder, all in one mini hand-held unit. The ultimate in portable video electronics. 150 minute record play time. 300 line resolution. 7 LUX, records direct from A/V output on TV, no tuner needed. Another Hitachi first.

HITACHI
A World Leader in Technology
The reason I've gone on at such length on the subject of these cables, only to put off the conclusion to another day, is that it's such a good introduction to a couple of amplifier-related topics I want to cover: Class A vs. Class AB and discrete components vs. integrated circuits.

Class A is much in vogue these days, partly because it has some technical advantages over other operating modes and partly, I suspect, because "Class A" sounds so much like "Grade A"—the best. And in a sense, it is. All else being equal, a Class A circuit should produce less distortion (particularly at low signal levels) than a Class B or AB circuit. Nonetheless, the latter (AB especially) are far more common because they're much more efficient. A high-power, pure Class A amp makes a very nice space heater. The reason is that enough bias current is used to keep the transistors dissipating the equivalent of full output all the time; as a result, they generate as much heat without an audio signal as they do with one. But this arrangement also prevents them from ever completely switching off, thereby avoiding an effect known as crossover distortion. In a pure Class B circuit, the transistors switch all the way off whenever they are not passing a signal, which greatly reduces their average power dissipation. This increases amplifier efficiency to a theoretical maximum of 78.5 percent (as opposed to 50 percent for Class A), though at the expense of higher distortion. Class AB is a hybrid that uses enough bias to keep the transistors running Class A at low signal levels. At high levels, the transistors are allowed to switch on and off, but since the absolute amount of crossover distortion does not vary with signal level in Class B operation, the percentage of distortion is much lower than it would be if a weak signal were switching the transistors. But theoretically, it still is higher than it would be for a similar Class A design.

All that said, we come to the question of how much difference there really is, and the answer turns out to be "not much." In our testing, we have not found the distortion figures for Class A amplifiers to be consistently lower than those for ordinary old Class AB jobs, regardless of signal level. Many other aspects of a design affect its performance, to the extent that they can overwhelm differences attributable to the class of operation. Given this fact, it is not surprising that we have encountered no sonic qualities peculiar to any one mode of amplifier operation: A Class AB amp can be just as good as a Class A model.

The other question is that of discrete parts—transistors, resistors, and capacitors—vs. integrated circuits, which incorporate large numbers of such components on a single, tiny silicon "chip." The argument is sometimes made that packing an entire circuit onto a sliver of crystal entails compromises that ultimately degrade the sound reproduced through it.

The performance of some of the first ICs to be used in audio equipment (the 741 operational amplifier, for example, or its cousin the 301) was perhaps marginal relative to what could be achieved with discrete circuits, but they worked and were cheap (about 25 cents each). Much better ICs are available today, making possible circuits of a complexity that would be impossible without them. And if you look at the noise and distortion figures for equipment using ICs compared with those for similar models built around discrete components, you'll see that neither category has a consistent advantage over the other. Not surprisingly, then, we have observed no characteristic sonic differences between these two types of gear, either.
A few years ago, while talking to a friend who is in many ways what I think of as a "typical" High Fidelity reader, I was shocked to discover that he was looking forward to the then-unborn age of the digital disc not because of the presumable sonic perfection of the medium, but because of the hassles and doubt he would be saved. No more vertical tracking angle, lateral tracking angle, antiskating, or tip wear. No more scratched records from hand cueing, and no more mechanically miscued starts. No more jumping up to keep the stylus from gliding into a cut you don’t want to hear immediately after one you do.

These are legitimate concerns. The pleasure we can take in listening to music is, by and large, greatly enhanced by Compact Discs, and convenience features are as much a part of that enhancement as are the engineering developments underlying the medium’s sonic benefits. In fact, the engineering and the convenience are inextricably intertwined, because the digital “addresses” that are the key to many of the operating features are built into the recorded bit-stream. Soon there even will be CDs that carry text or images to accompany the music, for display on a TV screen—opera librettos, for example.

But what you can buy already is very impressive compared with the creature comforts afforded by typical analog gear. Indeed, you may find yourself confronted with more options than you actually want or need. For example, the “Denon Audio Technical CD” (38C39-7147) has 99 tracks, but few music CDs have more than ten or so. So how many selections should you be able to program? Although one might want to set up a score of the Denon disc’s test tracks to play in succession, few music listeners will ever want to program more than 12, even allowing for repetition of a favorite track between assorted others.

As you read on, think about your tastes and needs. After all, one man’s thrill is another’s frill, and it’s not our intention to tell you what you should buy—just what’s on the market.

Programmability isn’t exactly unique to CD players, but the precision with which they can follow elaborate instructions far outstrips that of any comparable features in cassette decks or the few programmable turntables that have been marketed. When you program a track, its first note will emerge complete from a background of utter silence, which is seldom the case with the other two media. Most CD players will let you step the display to the track number, enter it, step to the next track number, and so on—for a specified number of times, which may include repeat (Continued on page 35)
Onkyo's Integra DX-200 Compact Disc Player sets a new standard of CD performance, both in sonic fidelity and user convenience.

When comparing CD players, the digital-to-analog (D/A) conversion method is the key factor, for although the sound on the disc itself is digital, the CD player must convert it to analog for output to the amplifier. If this is not accomplished perfectly, the chief benefit of digital—for greater dynamic range with a total absence of noise—will not be realized. That's why Onkyo utilizes a 16 bit D/A converter system that exactly matches the 16 bit digital code used in the recording process, along with specialized double oversampling and digital filtering techniques.

Four separate power supplies eliminate interaction between stages, and exclusive Delta Power and Super Servc circuitries maintain noise & distortion free reproduction. A precision 3-beam laser pickup assures precise tracking with fast-track access.

A full complement of convenience features includes 16 track random memory, with complete digital display for track, index, elapsed/remaining time, and memory contents, all of which can be controlled by the DX-200's wireless remote unit.

The Integra DX-200 goes beyond conventional CD performance to let you realize the promise of digital as it was meant to be heard. Discover the audible difference today.

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JBL Automotive Loudspeakers.

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

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 bi-amplification 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.
The Teac PD-300
Compact Disc Player
won't add anything
to your music.
No hiss. No pops.
No wow. No flutter.
Which means nothing
comes through but the
music, pure and clear.
Random memory
programming lets you
choose the selections
you want to hear in the
order you want to hear
them. You can repeat,
edit, search, and seek
with the touch of a
finger.
When music is your
passion, listen to Teac—
made purely for music.
All the models I've worked with that offer both it and programmability will repeat the program—selected for the desired mood—as well as the entire disc, a selected track, or a continuous segment of the disc. The choice is yours.

A couple of features are available that can help you decide what to listen to or program. The first is what we call “scan”; manufacturers sometimes call it “intro scan” or “intro skip.” It proceeds from track to track, playing the opening seconds of each. Audible cueing, which also goes by a variety of names, gives you much smaller music samples as the pickup moves across the disc (in either direction), but does so more continuously than “scan,” so that you can hear more or less what the music sounds like in all parts of each track. (The pitch does not change, as it would with a sped-up LP; the music just gets choppier.) Often the progress across the disc is in two stages: At first it is only about twice the speed of normal playback, leaving the music quite recognizable, but if you hold the key down long enough, the rate of traversal increases. The effect is rather like groove-skipping on a record, except that there's no rasping of the stylus across the disc and no possible damage from the process, and the output level is reduced automatically while the search is in progress.

A CD player's display also can help you find what you want, although many have more alternatives than I'm really interested in. The time-remaining option included in many models, which at first struck me as particularly useless, is a sign of our hurried times (no pun), I suppose. I often want to start in on music that, to occur to me, I may not have time to play all the way through before something or other happens. With a whole hour available at a clip on some CDs, this is a more immediate question with this medium than with its popular predecessors. A time-remaining counter saves you the bother of looking up the timings on the jacket and doing the math.

More important, in my estimation, is the inclusion of index numbers, even on players that can't cue or program by them. The index feature of CDs is in serious danger of atrophy. Polygram omitted them from all of its early output, no matter how urgently the music called for them. As a result, relatively few players bother with them—giving further impetus to record producers to ignore them, making player manufacturers less likely to provide for them ... and so on. Yet on the few discs I have where they're used as Polygram originally said they should be—to index the movements of short works that each constitute a track on a multiwork disc, for example—they're very useful.

If you're devoted to the stethoscopic ability of headphones to reach into the music and differentiate sonic elements that are blurred by loudspeakers and room acoustics, you'll probably be among those who prefer to get their signals direct from the CD player, instead of secondhand via the preamp or receiver. To accommodate this approach, there must be a way of controlling the output level to the headphone jack; in some models, it may also control the line output (or one of the line outputs), but make sure you can turn down the phones when you want to before you buy.

Finally, there's what may be the greatest creature comfort of all: remote control. Most remotes for all sorts of products are wireless these days; almost all use infrared light beams as the transmission medium. They come in two basic types. Probably the easiest to shop for is the kind that is player-specific and controls only the player. If you go instead for the kind that works with an entire audio system, in which the CD player is only one element, you probably will be unable to mix different brands in the system—or, at least, to control those components that come from companies other than the device's manufacturer. On the other hand, if you do want remote control of more than one element in the system, going with a separate remote for each can create an annoying clutter. How you should respond to this dilemma is something you'll have to decide for yourself. One bright spot on the horizon is GE's new Control Central, which can set itself up to mimic as many as four other infrared remotes of your choice. So for about $150, you can have it both ways.

This chart lists only those models introduced since our last guide to CD players, which appeared in the October 1984 issue. Some of the units listed there are still on the market, so you should consult both articles for a complete overview of currently available players. The information shown here was supplied by the manufacturers, and though we have tried very hard to weed out errors, we cannot guarantee absolute accuracy. (The company representatives we talked to were sometimes uncertain of or confused about the capabilities of their own products.) We are particularly suspicious of the large number of players that are alleged to be programmable by index number—a very rare feature, in our experience. So use this chart as a starting point, but remember that it always pays to try before you buy.
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A = all (repeats entire disc)
B = battery-powered portable
C = car stereo model
D = elapsed time into disc
E = elapsed time into track
F = formatted
H = home deck
I = index
L = plays Laserdiscs and CDs
M = time (minutes and seconds)
N = 3psi
P = programmed sequence
R = remaining time
S = segment (repeats between user-selected points)
T = track (band)
Z = midsize deck

HIGH FIDELITY
What do Beethoven's Ninth, the destruction of the Death Star, Mozart's laugh and rock video's latest thriller have in common?

Uncommon sounds. Sounds that make exceptional demands on your audio system. Because from the crescendo of a massed chorale to the detonation of proton torpedos, the sounds of modern entertainment reward audio high-performance as never before. And nothing performs like Yamaha.

Yamaha's sophisticated new R-9 receiver is designed to make the most of today's home entertainment possibilities. With seven audio and three video hookups, the R-9 can serve as the control panel for your entire home audio/video system. And because it has a separates-quality 125-watt-per-channel* amplifier with Auto Class A Power amplification, it provides the high power and wide dynamic range that add a whole new dimension to your home entertainment experience.

Now you can hear digital recordings and compact discs reproduced with the full clarity and resonance demanded by serious audiophiles. Experience the high-decibel impact of the sound effects that make your favorite films special. And do it through a receiver so advanced it uses discrete circuitry like that found in Yamaha's finest separate components.

The R-9's AM/FM stereo tuner features digital tuning with a unique 5-digit capability that allows you to fine-tune in increments of 0.01 MHz (FM).

This is particularly helpful in obtaining maximum signal quality when tuning relatively weak stations interfered with by stronger adjacent stations.

Combined with our new Computer Servo Lock Tuning System, it gives you the best of both digital and analog tuning capabilities.

The R-9 includes a multi-function infrared remote control. And it is just one in a complete line of advanced Yamaha receivers. Now that's entertainment.

*125 watts RMS per channel, both channels driven into 8 ohms, from 20 to 20,000 Hz, at no more than 0.015% Total Harmonic Distortion.

Yamaha Electronics Corporation, USA, P.O. Box 6660, Buena Park, CA 90622.
NEW JENSEN CLASSIC TRIAX SPEAKER SYSTEM

The technological evolution in sound continues. We invented the first car speaker more than 50 years ago and then we invented the legendary Triax® car stereo speaker system. Now we have designed the state-of-the-art car stereo speaker for today's music requirements. The new Jensen Classic Triax car stereo speaker system.

DESIGNED FOR PERFORMANCE
Each speaker handles 150 sizzling watts of peak power with a torrid 80 watts RMS. Designed for use with today's car stereo components and the new high definition digital recordings. Yet so efficient, you get plenty of volume out of a standard car radio.

DESIGNED FOR REALISM
The 40-25,000 Hz frequency response means you'll hear all the music. The new unitized array and tuned pad ring improve response so you get all the dynamic range in today's music. The bass is more clear than ever before and the new midrange and tweeter allow a smoother blending of music than you've ever experienced.

DESIGNED FOR ENDURANCE
A classic stands the test of time. So whether you invest in the most advanced audio components or explore the digital world of compact disc, Classic Triax will handle it with unparalleled fidelity—today, tomorrow, and years from now.

DESIGNED FOR SMILES
Emotion should never be underestimated. And you'll smile every time you listen. This sound is that good. In the final analysis, your sound system is only as good as your speakers. If your speakers can't play it all, you won't hear it all. So don't buy backwards. Speakers first—and begin with a Classic!

JENSEN
Try Triax-ctement!
© 1985 International Jensen, Inc.
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CHART COMPILED BY SANDRA C. FOSTER AND ANDREA K. GUTIERREZ

OCTOBER 1985

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Serious recordists (by which I mean those who tape live music) are always searching for better machinery. So when the first Hi-Fi VCRs introduced FM (frequency modulation) recording—a method previously used only in expensive laboratory instrumentation recorders—to the consumer market a little more than a year ago, the specifications of the new system naturally made us wonder what it had to offer as an audio-only medium. This report, the result of many hours of listening and lab testing, will provide some answers by comparing four machines: a high-quality audio cassette deck with metal tape and Dolby C noise reduction, a semipro half-track open-reel recorder running at 15 ips (inches per second) with DBX Type II outboard noise reduction, a VCR with an outboard PCM digital adapter, and a Hi-Fi VCR. Although Beta and VHS Hi-Fi differ in how they lay down the FM audio tracks on the tape, the two systems are almost equivalent functionally (see “How Beta Hi-Fi Works,” August 1983, and “How VHS Hi-Fi Works,” June 1984), and I used a Beta Hi-Fi deck as an example of the genre.

Because the most important consideration for a serious recordist in selecting a tape system is how it sounds, I'll describe the sounds of all four machines on different types of music and document their performance with frequency-response plots and with graphs of overload, noise, and distortion. Questions of reliability, flexibility, ease of use, and cost are tackled in the boxes accompanying the main text.

E. Brad Meyer, an avid recordist, writes frequently on audio and video topics.
Is this any way to listen to your stereo?

If you listen to an ordinary stereo, you're not hearing very well. Because most speakers distort the original sound. The reproduction you get is uneven and inaccurate. So you might as well be wearing earmuffs.

The reason why is that the average speaker depends on a conventional cone driver. Now cones may be great for ice cream, but they don't give you the true flavor of great music.

You see, sound waves are distorted by the cone's shape and come to you unevenly. In fact, they're usually biased toward the low-end of the scale.

So what you really hear is the cone's interpretation of the original. Prince's cone, for instance, instead of Prince. Or Rubinstein's version of the "Moonlight Sonata" as interpreted by the cone.

The Dynawave series from Sawafuji America Corp. gives you the real thing. These sophisticated speakers use Dynapleats, a patented driver system developed after years of research in flat-wave technology. This revolutionary system allows sound to come off evenly and simultaneously from the entire surface of the driver.

Just listen to the difference.

The flat-wave sound is virtually free of the distortion caused by cone drivers. It's a natural, full, rich sound with superb imaging, wide dynamic range and accurate reproduction throughout the frequency range. And it's about as close to the real Bach or B.B. as you can get.

These speakers look as good as they sound. Because the flat-wave drivers are slimmer and relatively light, they permit a more elegant and stylish cabinet design. A proper setting for the music you love.

The Dynawave series makes this revolutionary sound technology available at popular prices for the first time. There are three unique models to choose from. And each one gives you music the way it was really meant to be heard.

So the next time you listen to a great symphony or classic ballad, you can enjoy the unmuffled version.
PERFORMANCE
The "signal space" available with each system is shown in Figs. 1 through 4. It is the area between the overload limit at the top of the chart and the noise floor at the bottom, both displayed as a function of frequency. The middle line is a one-third-octave plot of a 1-kHz test tone. On the cassette and open-reel tapes, this signal is at cassette Dolby level (200 nanowebers per meter). For the PCM processor, I chose a level 10 dB below where the "overload" light goes on at 1 kHz; for the Hi-Fi video recorder, I used the level at which its 0-dB LED comes on.

Ideally, the tone would appear as a single spike rising out of the system's background noise. In reality, however, tape recorders add distortion and noise, which appear as elevated response at frequencies other than that of the test tone. The area between the noise floor (the lower boundary of the white region) and the plot of the test tone is the amount of noise and distortion the system generates in the presence of the signal.

In addition to the spectrum of the noise floor, I have indicated the system's overall noise level with no input as measured with an A-weighting filter, which rolls off frequencies below 1 kHz to approximate the ear's sensitivity at low levels. This is marked with an A at the left side of each graph. At frequencies up to 4 kHz, the upper boundary of the white area represents the level at which the system generates 3 percent distortion. Above that frequency, I plotted the onset of nonlinearity: the level at which the output of the system fails by 1/2 dB to track increases in the input.

The audio cassette deck's performance is depicted in Fig. 1 (left). To show this format to best advantage, I used metal tape and Dolby C noise reduction. The recorder is also equipped with Dolby HX Pro, which extends its high-frequency overload limits; other machines (and other kinds of tape) will have lower ceilings.

The test tone raises the output level over a wide frequency range. There are three reasons. First, the action of the Dolby circuit allows the background noise to rise with the signal. Like all companding noise-reduction systems, Dolby works by relying on the music's ability to mask the noise that is moving up and down with it. (See "Basically Speaking," August.) As the graph shows, Dolby C acts from about 100 Hz up, with its effect decreasing again at the very top of the audible range.

Increased output also occurs because tape produces modulation noise at frequencies near the test tone, visible as a gradual rise between 250 and 800 Hz and between 1.25 and 5 kHz. Thirdly, we see distortion components at 2 and 3 kHz, the second and third harmonic multiples of the test tone. Their combined level is 45 dB below the tone itself, representing a total harmonic distortion (THD) of 0.55 percent. The system's dynamic range is the distance from the 3 percent distortion point at 333 Hz to the A-weighted noise floor—in this case, a very good 75 dB.

This cassette deck makes very good duplicates of most prerecorded material and even does a creditable job on wide-range orchestral Compact Discs. Figure 5 (page 46) shows that its frequency response (taken with the Dolby C on) is quite flat, though with this particular brand of metal tape the noise reduction caused some alteration in response with changing level no matter how the machine was set up. The flutter of all audio cassette decks varies with the quality of the cassette, but on this machine with good tapes it is not obtrusive even on sustained piano chords.

Figure 2 (below) is for the half-track open-reel deck with DBX Type II noise reduction. Its signal space is much larger than that of the cassette system, with about 8 dB more headroom, 4 to 7 dB less modulation noise, and more than 10 dB less harmon-

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**RELIABILITY**

Reliability doesn't just mean how long a machine will operate before it breaks down. Remember, we're talking about serious recording here: The system must function without audible errors for an entire session, as retakes can be terribly expensive. And in concert recording, there are no retakes, making the requirement even more stringent.

Ordinary analog recorders (such as the cassette and open-reel machines) rarely fail outright, but if not properly maintained, they get dirty and go out of adjustment, degrading frequency response. Poor tape or dirty heads can cause dropouts (temporary loss of signal or reductions in recorded level). The two video-based systems, on the other hand, usually function perfectly unless something goes very wrong, and then the sound mutes for anywhere from a tenth of a second to several minutes. However, such calamities are a sign of poorly designed equipment or major tape defects; good Hi-Fi video and PCM systems work for hundreds of hours without audible problems. (For digital sessions, the pros use two recorders, just to be sure.)
Most video systems treat you as if you were deaf.

by Ray Charles

"Did you ever close your eyes and listen to most video systems? I've got to tell you: it's sad. What they do for your eyes they undo for your ears.

Then the Pioneer folks ask me to listen to their videodisc system called LaserDisc.

I'm a little skeptical, but I put my ear to it. And, I've got to tell you, I'm amazed. The sound is as good as anything I ever heard on my stereo. Maybe better.

I say, 'That's heaven for me, but what's the picture look like for the rest of the folks?'

And the experts tell me the picture blows every other video system away. And that since the discs are played back by a laser beam, they can't wear out the way records and tapes do.

Now I bet you're thinking, 'But I already own a stereo,' or 'I already own a VCR.' Well, whether you're watching music or movies, you still need a Pioneer LaserDisc. Because LaserDisc does what no other system can do. It brings the best picture and best sound together.

And that, my friend, sounds pretty good to me."

The model shown here is the Pioneer® LD-700 LaserDisc brand videodisc player. LaserDisc brand videodisc player is a trademark of Pioneer Electronics Corp. © 1985 Pioneer Video, Inc. All rights reserved.

PIONEER Video for those who really care about audio.
...is the choice of those who consider music to be an important part of their life. From digital-ready amplifiers and world's finest FM tuner, to the most sophisticated cassette & reel recorders, only Tandberg offers a complete family of the most respected music reproduction equipment. European-made...acclaimed world-wide. For a color poster (without advertising copy) and the name of your nearest dealer, send $2 for postage & handling to: Tandberg of America, 1 Labriola Ct., Armonk, NY 10504.
ic distortion (THD) is 0.13 percent. The DBX pulls the noise floor way down when no signal is present, giving a phenomenal overall dynamic range of 115 dB. Frequency response (Fig. 5) is wider and flatter than the cassette deck's and does not change with level.

As the signal falls from 0 dB, the noise goes down with it; the music masks the noise very well, with scarcely any audible side effects even on the widest-range material. On a live recording of Verdi's Requiem, which has fortissimo orchestral, choral, and bass-drum passages followed by dead-silent pauses, this setup has less noise in the quiet passages than any of the others, including the digital adapter. Its flutter at 15 ips is too low to hear on orchestral or vocal music, but just audible on piano.

Figure 3 (below) shows why recordists convert to digital. This consumer PCM adapter, nominally a 14-bit machine, also has a 16-bit mode, which I use for all my own recording and tested for this report. It is several dB noisier than a professional 16-bit processor and almost 20 dB worse than the open-reel system with DBX, but the background is virtually unchanged at any signal level. Except for the completely negligible 0.004 percent second-harmonic distortion, the curves with and without the test tone are within about 2 dB of each other. That's why this system sounds cleaner in loud passages than its analog competitors. It also has the flattest frequency response.

The PCM processor hits 3 percent distortion at 1 1/2 dB above where its overload light goes on; the decrease in headroom in the upper treble is due to a pre-emphasis circuit, which improves the signal-to-noise (S/N) ratio at high frequencies. Because digital systems clip abruptly when they are overloaded (instead of going into compression and gradually increasing distortion), it is trickier to take full advantage of their dynamic range than it is with analog recorders, which are more forgiving of momentary headroom violations. However, an experienced engineer can usually set recording levels high enough to get the processor's very fast peak-reading meters up to -5 dB without risking audible overload. In practical terms, the system noise is inaudible unless you are recording the widest-range music with the very best professional microphones and electronics.

The digital system also is completely free of wow and flutter. On piano or steel-string acoustic guitar, it gives the sound a rock-steady quality that analog systems cannot match. Frequency response could almost be drawn with a ruler and (unlike that of conventional analog systems) is completely independent of tape type and requires no adjustment before recording.

Now let's look at the data for the Beta Hi-Fi videotape recorder in Fig. 4 (right). Although these results superficially resemble those for the audio cassette deck, careful examination reveals important differences. First, observe the noise floor: Between 125 Hz and 5 kHz, the curves are almost identical, but below and above this range the video deck is quieter, by 20 dB in the low bass and 10 dB at 15 kHz. And unlike the cassette deck, the Hi-Fi VCR exhibits no modulation noise immediately above or below 1 kHz in the plot of the test tone. Its distortion, on the other hand, is somewhat higher, at 0.7 percent, and there are signals beyond 3 kHz that must be either high-order distortion products or some artifact of the compander.

Mention of a compander may surprise you, but Hi-Fi VCRs do use noise reduction, as Fig. 4 proves. Not only does the hiss "pump" up and down with the signal, but so do a hum at 60 Hz and its harmonics at 120 and 240 Hz, probably produced by the system's head-switching. In many situations, these are not serious defects, however. At 45 dB below the signal, the hum is well below the noise floor.
the hiss will be masked by the upper midrange of most music. Likewise, the hum is more than 50 dB down, 15 dB or so below the noise floor of any LP at that frequency. In live recording, however, both the hiss and the hum can be heard to rise and fall with the music to an unforgivable degree. The VHS Hi-Fi units I have tested, which use a different noise reduction system, have less of this problem.

Though it is not suitable for recording wide-range live music, the Beta Hi-Fi VCR does an almost perfect job on most prerecorded material, partly because of two important attributes it shares with the PCM system: Its flutter is completely inaudible on any kind of music, and it does not need to be adjusted for different kinds of tape.

CONCLUSIONS
With their wide, flat frequency response and inaudible flutter, Beta and VHS Hi-Fi VCRs are good enough to ensure against audible degradation of any video soundtrack, including the digital ones on some of the latest optical videodiscs. Their performance is superior to that of an audio cassette deck and does not vary with tape quality or recording speed. The system is reliable and cheap to operate, and available playing times (4½ hours for Beta, as much as 8 hours for VHS) make the medium a natural for archival recording of broadcast concerts or operas, especially since it can capture these unattended. It also does an excellent job of copying records, tapes, and most CDs.

For live recording, Hi-Fi videocassettes suffer from audible defects not found in digital recordings or in open-reel tape with noise reduction. Of the latter two, open-reel tape is easier to edit, whereas PCM is slightly more accurate.

FLEXIBILITY AND EASE OF USE
Audio cassette recorders are portable and simple to operate. Finding selections on a tape is fast and easy—sometimes even automatic. But although a cassette deck with metal tape and Dolby C may perform reasonably well, the medium has limitations that make it unsuitable for serious recording. You cannot edit your tapes. And because the IEC standard for playback equalization is not universally adhered to, tapes recorded on one machine may not play properly on another, especially with Dolby C, which is very machine-sensitive. Because cassette tape runs at one-eighth the speed of its open-reel counterpart, high-frequency wavelengths are very short, making tape-to-head azimuth alignment a constant problem. The performance of the audio cassette at its best is remarkably good, but the system isn't robust or accessible enough for live recording.

Unless you're willing to spend many thousands of dollars for a professional portable model, a high-speed open-reel recorder with outboard noise reduction is clumsy and difficult to lug around, as are the ten-inch reels it requires. But you can edit 15- or 30-ips open-reel tape to any desired degree of precision quickly and elegantly with about $100 worth of tools. Tape shuttling is rapid and controllable, and you can cue by ear. The tape itself is accessible, tactile, immediate, and pleasant to work with. In addition, open-reel alignment tapes are sufficiently standardized that recordings can be reliably transported from machine to machine.

Consumer PCM processors weigh about ten pounds, and there are portable industrial-grade VCRs weighing even less, making a complete package that will fit into a single canvas tote bag. The digital system is wonderful both for live concerts and for broadcasts, where the VCR's programmability makes unattended recording a snap. But editing is another, and sadder, story. Simply finding your way around on a videocassette is a tedious process because of its slow winding speed and lack of audible cueing. (Modern Beta recorders that keep track of tape time during fast winds have a major advantage over VHS decks in this department.)

You can copy a PCM tape without loss or noise buildup and rearrange entire movements or selections on your tape, but home video recorders don't start and stop with enough precision to permit cutting into the middle of the music. To do that, you must transfer your recording to a professional PCM system and rent a digital editing suite. It works, but it's expensive: around $85 an hour.

A Hi-Fi VCR, needing no external processor, is theoretically more convenient to carry around than a digital system, though portable decks are scarce. Even a tabletop model, however, is lighter than an open-reel recorder. Some Hi-Fi machines offer double-speed operation with audible cueing, making searches a bit easier, but if you need to cut and paste, Hi-Fi VCRs suffer from all the disadvantages of their PCM cousins without the option of professional editing as a backup.
Until now, advancements in car stereo technology have been defined by power knobs and buttons. Products have become a strange conglomeration of meaningless specs and glorified buzz words.

No longer.

Mitsubishi introduces the Car Audio Compact Disc Player. It represents an advancement you can actually hear. Frequency response that's flat over the entire audible range. A 60% increase in signal-to-noise ratio over cassettes. Harmonic distortion reduced to embarrassingly minimal levels. And wow-and-flutter that's hardly mentionable.

Mitsubishi's leading edge digital audio research has led to a three-beam optical pickup and linear-sliding cylinder design that eliminates susceptibility to vibration. It provides stable, error-free tracking even in a moving car.

From crisp highs to thunderous lows, the Mitsubishi Car Audio Compact Disc Player reproduces it all with undaunted clarity and faithfulness to the original.

When investing in car sound, would you rather have performance you can see, or performance you can hear?

MITSUBISHI®

DIGITAL DISC TECHNOLOGY FOR THE CAR

FOR THE FIRST TIME IN AUDIO HISTORY YOU CAN ACTUALLY HEAR THE SPECS.

Mitsubishi Electric Sales America, Inc. 799 N. Bieman Circle, Mt. Prospect, IL 60056.
Harman Kardon's striking new line of car audio products leads you to a higher fidelity on the road. Elevating car audio standards, these dynamic components smoothly outdistance the competition by reflecting the excellence so finely honed by Harman Kardon in their home audio products for over thirty years.

Three new in-dash cassette/tuners and three power amplifiers blaze new trails. Each in-dash unit incorporates the renowned Harman Kardon design philosophies that enable them to deliver an exceptional frequency response of 20Hz to 20kHz ± 3dB. Each amplifier boasts High instantaneous Current Capability, Low Negative Feedback and Ultrawidebandwidth.

The previously unexplored realms of car audio are now within reach, for those tuned to a higher fidelity. From Harman Kardon.
CAR STEREO '86

CD players and flashy flat-faced designs pace the new autosound entries.

Even in the absence of any dazzling new car stereo technologies at the recent Summer Consumer Electronics Show, excitement was evident. More companies are jumping on the Compact Disc bandwagon—which was predictable, considering the unrelenting demand for home models. However, Sony remains the sole company making an in-dash CD/tuner combination (the CDX-R7; $699). Everyone else is sticking with CD-only players as add-ons to existing in-dash tuner/cassette decks.

Still, as there exist in total only six production players and three prototypes—each offered by a separate manufacturer—it's somewhat premature to talk about a “trend.”

On the other hand, as I forecasted following the Winter CES (“Road Sounds...
"85," May), the Yamaha CD player design, which uses an insertable sleeve to facilitate disc loading, is gaining adherents. In addition to Yamaha’s new production model, the YCD-1000 ($499), both the JVC and Blaupunkt prototype in-dash CD players operate with a similar protective sleeve.

Completely encased in plastic, the disc is read by the laser through a narrow slot, which opens when the disc is inserted and closes when it is removed. Initial plans call for Yamaha’s players to be packaged with five sleeves; additional ones will cost about $5 apiece. Besides protecting the CD from dirt and mishandling, the Yamaha sleeve eliminates much of the clumsiness of handling the current “jewel box” package while driving.

Sony, which showed us a prototype of a different design earlier this year (“Road Sounds ‘85,” May), has no plans to convert its models to a particular loading system and maintains that CD packaging itself will soon evolve. There has been talk between the CD-system licensors (Sony and Philips) about developing a standard CD “caddy” package for use with all players.

Other production CD players shown at SCES were the Alpine 5900 ($600), the Kenwood KCD-9 ($659), and the Mitsubishi CD-100. The latter is offered in two configurations—one with an equalizer/amplifier ($699) and the other with both an amp and a digital tuner/cassette deck ($999). Fujitsu Ten also showed a prototype player, but neither model number nor price was set at press time.

Since all CD players have fairly comparable specs, features, and pricing, Pioneer chose to emphasize that its new CD-P1 is both reliable and shock resistant. A videotape presentation of the unit being tested on a rugged Baja road course in a Toyota 4Runner 4x4 pickup was convincing. However, the CD-XP1 complicates hookup somewhat by using DIN plugs instead of RCA input and output jacks.

FLAT-FACED FRONTS
Continuing a trend that first became evident at WCES, flat-faced, or DIN, radios are becoming more prominent in new entries, especially within the upper price range. By my count, about half of all new front ends were of this design.

Four of Alpine’s new models are flat-faced, including the top-of-the-line 7374 ($800)—a preamp-only unit with Dolby B and C and DBX. A new tape head and microprocessor-controlled transport mechanism are said to extend frequency response and reduce wow and flutter. An automatic head demagnetizer is said to eliminate any residual magnetism each time the deck is turned off. Like the 7374, the 7273 ($600)—one of three integrated pieces—has its illumination circuitry tied into a sensor that increases the intensity as the interior light wanes. The green station presets turn orange when activated. Rounding out the new line are the 7272 ($770) and the 7171 ($250). All four models use an oversized LED display.

Concord’s first DIN unit is the HPL-540 receiver/tape deck ($549), which is one of the growing number of models switching back from LCDs to LEDs. Incorporating FNR, Concord’s proprietary FM noise reduction system, the HPL-540 also provides Dolby B and C.

If the thought of losing your high-priced in-dash receiver to thieves gives you ulcers, Kenwood’s new KRC-838 ($619) may be the answer. Both it and the KRC-626 ($479) can be readily removed from a permanent in-dash housing and slid back into place just as quickly, enabling you to take the unit with you. Kenwood also offers the KRC-424 ($359), which is a standard flat-faced model.

Another company with security in mind is Aiwa, whose three new models come with a flip-down front: Closed, the door hides the unit; open, it both reveals the front panel and contains some of the controls. Prices are expected to range from approximately $350 for the CT-X300 to about $600 for the CT-X500. All have digital tuners and Dolby noise reduction.
Sony has seven new DIN decks. Leading off the line is the XR-900 ($600), a tuner/cassette player with Dolby B and C, quick-access cut selection, and impulse noise suppression (INS). At $400, the XR-780 receiver/cassette deck is rated at 20 watts for each of its four channels and includes preamp-out jacks, Dolby B, automatic music search, and dual-adjust head alignment. The XR-740 ($300) is similar to the XR-780, but lacks Dolby and INS. Expanding its standard XR Series, Sony has four units ranging in price from $430 to $225. Top model is the XR-80 receiver/cassette deck, which has Dolby B and C, automatic scan, INS, and dual-adjust head alignment. Preamp outputs permit easy connection to a separate CD player.

Also adding to its DIN line is Sansui, with one high-power and two standard receiver/cassette decks. The high-power model is the RX-610 ($779), an autoreverse model with Sansui’s proprietary Automatic Stereo Reception Controller, which is designed to reduce noise and provide a stable signal under varying driving and reception conditions. Other features include Dolby B and automatic seek and scan. The standard DIN units are the RX-4010 ($299) and the RX-3010 ($259). The 4010 has Dolby B; the 3010, a proprietary noise-filter system.

Proton offers the flat-faced Model 214 and 203 receiver/cassette decks. The 214 ($775) incorporates Dolby B and C, automatic program search, and preamp outputs. Both have Schott tuners for improved reception.

Wrapping up the DIN introductions is Marantz, with two of its three new decks: the CAR-372 ($300) and CAR-362 ($240). The 372 is an autoreverse model with Dolby B and Compuskip, an automatic music search system.

A familiar name in the car stereo field, Panasonic has a number of high-power entries. Top-of-the-line is the CQ-E650, an autoreverse model with automatic tape-EQ selection, Dolby B and C and DBX, and a reversed LCD to show operational functions sharply, even in bright daylight. Also new are the CQ-E280, CQ-E330, CQ-E370—all autoreverse receiver/cassette decks—and the CQ-E400, an automatic-repeat-play unit. Prices range from $300 to $150.

Another established company with new front ends is Pioneer, which has introduced the KP-A170 mini autoreverse tuner/cassette deck ($150) and the KP-A100 ($135). The KP-A170 has a built-in impulse-noise suppressor.

**STEREO AM**

If Compact Disc players and DIN design are the hare, stereo AM is the tortoise in car stereo trends. And emerging as the leader may take some doing. Stereo AM was supposed to electrify the car stereo market with its long-range, low-noise reception capability, yet there is a singular lack of new products incorporating this circuitry. One reason could be that four incompatible systems still are in use, though the Motorola C-QUAM design is gaining favor.

Although a number of companies (including Sansui and Sparkomatic) did introduce stereo AM models at WCES, the lone entry at SCES came from Sony, whose XR-A35 ($250) circumvents the compatibility problem with a decoding chip that switches automatically to whichever broadcasting format is being received.

**ETR, NEW Names, AND MORE**

Initial offerings in front ends come from a number of manufacturers, including EPI, which has confined itself to speakers until now. Its three models are receiver/cassette decks, which range in price from $370 to $220. Heading the new series is the LSR-34, which has Dolby B, automatic music search, a stereo FM reception optimizer, digital frequency-synthesis tuning, and preamp outputs.

New to the car stereo field is Peconic Car Audio and Communications, of Elk Grove Village, Illinois. It has introduced two shaftless and three standard designs, all with digital tuners. Top model in the 6000 (shaftless) Series is the 6700, which has pushbutton volume control and tuning, DNR, and automatic seek and scan.

Among other companies offering ETR (electrostatically tuned radio) designs is Sparkomatic, with four models from $300 to $100. Heading the line, which comprises models SR-315, -308, -314, and -338, is the SR-315—an autoreverse receiver/cassette deck with DNR, Dolby B and C, and a mono/stereo switch.

Next month, in our special speaker issue, we’ll cover car speakers, including the latest in “digital ready” models.

**WHAT’S NEW**

The 1986 crop of car stereos embraces a wide variety of front-end designs, of which these five units (described from top) are representative. Sansui’s RX-610 is typical of the many new DIN, or flat-faced, models. Pioneer is offering a mini unit, the KP-A170. Sparkomatic’s SR-315 is illustrative of the trend back from LCDs to LEDs. Among those companies offering their first front ends is EPI, with its LSR-34. Also new is Peconic, whose line includes the 6700.
TEST REPORTS

DBX DX-3 COMPACT DISC PLAYER


Although it would be unfair to say that all Compact Disc players are alike, few have features that are genuinely unique, and most are so close to one another in performance that choosing among them on that basis alone would be difficult, if not pointless. DBX’s first player is therefore unusually interesting. An acknowledged leader in signal processing, the company has brought its expertise to bear on what it sees as the special problems of CD playback. The result is a group of circuits that enable you to modify in various ways the signal coming off a disc, shaping it to your taste and listening situation.

You control these circuits with two knobs at the bottom right of the front panel. When they are pointing straight up, the signal passes to the output unchanged, or you can take the processing circuitry completely out of the signal path with a bypass switch (handy for fast A/B comparisons). The knob at the left, labeled Dynamics, activates a compressor when turned to the left and what DBX calls DAIR (digital audio impact restoration) when turned to the right.

A compressor boosts soft passages and attenuates loud ones, thereby reducing the overall dynamic range. Compressors designed for home use have been rare because until the advent of the Compact Disc there was little need for them. The push was all in the other direction: to milk more dynamic range out of signals already squeezed to the point of lifelessness in the recording or broadcast studio. Material suffering from this deficiency is still with us, but the Compact Disc has for the first time made the opposite condition a matter of real concern. It is possible to get more dynamic range than you can comfortably accommodate—especially in your car, where road noise may drown out the soft portions of the music unless you turn up the volume to the point of making the loud parts ear-splitting. The compressor in the DX-3 is based on DBX’s highly regarded professional models. You can use it to reduce the music’s dynamic range by as much as 36 dB, for background listening at home or for making tapes for car or personal-portable playback.

Turning the same control to the right of 12 o’clock activates the DAIR circuit, which is a type of peak unlimiter. When it

Report preparation supervised by Michael Riggs, David Ranada, Robert Long, and Edward J. Foster. Laboratory data (unless otherwise indicated) is supplied by Diversified Science Laboratories.
seems a fast transient, it boosts the leading edge to compensate for any limiting that may have been applied in the making of the original recording. How strong a kick it gives the signal is determined by the relative amplitude of the incoming peak and the setting of the control, up to a maximum of 10 dB. Although it might seem that CDs shouldn’t require such treatment, the fact is that they are only as good as the recordings from which they are made. Analog tape saturation, studio limiters (used for effect or to prevent tape overload), and so forth can blunt the impact of kick drums, brass, cymbals, and other instruments before the sound ever gets to disc. DAIR is designed to put back some of what’s taken out by such processes.

A common problem with such circuits is that a bass-drum whack, for example, can cause high-frequency signals to be “unlimited” along with it, which can sound quite unnatural. DBX has gotten around this potential difficulty by making DAIR a sophisticated two-band system that operates on the high and low frequencies independently. The circuit’s action in each band is shown by a pair of segmented LED displays. When the compressor is engaged, these show the amount by which soft passages are being brought up, while a third display, between them, indicates the amount by which peaks are reduced.

The last of the DX-3’s special features is controlled by the right-hand “ambience” knob. It affects the “stereo-ness” of the signal at mid and high frequencies. Turned to the left, it progressively blends the channels, reaching mono at its extreme setting. More likely, however, you will want to turn it slightly to the right, to add some extra difference information (L-R and R-L) to the signal. This tends to open up the sound, increasing its apparent spaciousness and depth.

DBX incorporated the ambience feature in response to the complaints of some audiophiles that CDs sound dry and two-dimensional compared to analog records. (It is often assumed that this is a fault of the digital system; in fact, it probably is a reaction to the absence of the spurious difference information typically produced by phono cartridges.) The circuit does not affect the low frequencies because many recordings are almost mono in the deep bass (to make the cutting of conventional records easier). Increasing a signal’s difference content correspondingly reduces its mono content and would therefore cause the bass to be attenuated on recordings with substantial bottom-end blend.

The rest of the DX-3’s features are pretty standard. It uses two-times oversampling (88.2 kHz) with digital noise filtering followed by a gentle (18 dB per octave) analog output-smoothing filter. You can program it to play as many as nine tracks in any order, and you can set it to repeat the programmed sequence or, if you haven’t entered one, the entire disc. The SCAN skims through the music in either direction at a well-chosen pace, with or without audible output, and DBX has provided for cueing (though not programming) by index number. You can set the main display to show the current track number or the elapsed time for the track being played (or, if the player is stopped, the disc’s total playing time).

Diversified Science Laboratories’ measurements show good performance in all the basic categories. Response is less flat than we’re used to seeing, because of a small bump in the top octave followed by a rolloff, but it is still much better than can be obtained from most phono cartridges. And apart from this tiny peak, there are none of the small ripples that some other oversampling players create (often down to frequencies of just a few kilohertz). The effects of the oversampling system are evident in the square-wave and impulse responses, however, with both showing excellent symmetry and freedom from ringing.

Channel balance is within a tenth of a dB of perfection, and channel separation exceeds 56 dB from 100 Hz up. Together, these ensure stereo reproduction second to none. Distortion and noise are more than adequately low, though the D/A (digital to analog) converter does show more nonlinearity at very low levels than do most. This is not normally any cause for concern, however, since these effects should be below the threshold of audibility on typical material, and we did not note any problem in our auditioning. Distortion and noise increase at some set-

<table>
<thead>
<tr>
<th>FREQUENCY RESPONSE</th>
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<tbody>
<tr>
<td>Channel (kHz)</td>
</tr>
<tr>
<td>20</td>
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<tr>
<td>500</td>
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<tr>
<td>100</td>
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<tr>
<td>200</td>
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<tr>
<td>500</td>
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<tr>
<td>1 kHz</td>
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<tr>
<td>5 kHz</td>
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<tr>
<td>20 kHz</td>
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</table>

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<tr>
<th>S/N RATIO (re 6 dB; A-weighted)</th>
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</thead>
<tbody>
<tr>
<td>Without de-emphasis</td>
</tr>
<tr>
<td>With de-emphasis</td>
</tr>
<tr>
<td>Harmonic Distortion (THD + N: 40 Hz to 20 kHz) at 5 dB</td>
</tr>
<tr>
<td>at -50 dB</td>
</tr>
<tr>
<td>MI Distortion (70 Hz difference; 300 Hz to 20 kHz) at 50 Hz</td>
</tr>
<tr>
<td>at 20 Hz</td>
</tr>
<tr>
<td>Channel Separation (at 1 kHz)</td>
</tr>
<tr>
<td>Channel Balance (at 1 kHz)</td>
</tr>
<tr>
<td>Output Impedance</td>
</tr>
</tbody>
</table>

**REPORT POLICY**

Equipment reports are based on laboratory measurements and controlled listening tests. Unless otherwise noted, test data are provided 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 review 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.
tings of the processor controls, particularly when high compression is used, but not to an undue degree. In fact, we were pleasantly surprised at the cleanliness of these circuits.

The DX-3 also performed well on the critical tracking and error-correction tests, passing at even the highest levels of difficulty. DSL did report that there may have been some very slight ticking at the 900-micrometer level of the signal-layer interruption test, but it was not sure, and, in any case, the effect was certainly very, very minor. Output level and impedance are well chosen.

We were consistently pleased with the DX-3 in the listening room. It's fast and easy to use, and if any questions do arise, you probably will find a thorough, clear answer in the unusually well-written user's manual. The signal-processing options worked exactly according to DBX's descriptions. Perhaps most obvious is the effect of the ambience control, which can indeed impart a nice sense of spaciousness to overdry recordings. We found ourselves leaving it cocked slightly to the right for much of our listening. The compressor also performs its intended function, and with few of the distracting side effects that can be generated by such circuits. About the only thing you're likely to notice is a slight increase in noise when it pulls up the bottom of the range.

Despite its name, the impact restoration is perhaps the most subtle of the three options: It does not bang you on the head to get your attention. What it does do is add a little extra life and excitement to the music. Sometimes the effect is barely noticeable, other times it yields a sense of drama only hinted at in the unprocessed sound. Perhaps the nicest thing about DAIR is how natural it sounds. We found it very hard to get anything even approaching the peculiarities that are easy to obtain with typical expanders, for example. When DAIR does something to the signal, the chances are very good that you will like it.

All in all, the DX-3 is a breath of fresh air, incorporating features unavailable in any other CD player. This, combined with its ease of use and respectable basic performance, make it a strong contender in its price class and well worth your consideration.

**ROTEL RA-840BX INTEGRATED AMPLIFIER**


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To those who remember Rotel mainly for its rather gaudy, me-too electronics of the late Seventies, the current line probably will come as something of a shock. Minimalism definitely is the order of the day. The reason is new management, bent on audiophile quality at reasonable prices, even if that means sacrificing a few frills. Indeed, Rotel argues that the extras we usually take for granted in contemporary equipment often get in the way of obtaining the best possible sound.

This philosophy is perhaps most obvi-
ious in the company's two integrated amps: the RA-820BX and the more powerful RA-840BX, under review here. Their front panels seem almost blank compared with those of most of their competitors. In fact, however, the only significant omissions are tone and balance controls, and the latter's function is picked up by the volume, which has separate, clutched elements for each channel. Thus, you can set levels independently for each channel to achieve the desired left-right balance. This is clumsier than the usual one-knob approach, but it does work and eliminates a circuit element that is not strictly necessary.

The money that ordinarily would go for more features has instead gone into better parts and higher performance. In the RA-840BX, this means close-tolerance metal-film resistors wherever practical, 1-per cent polystyrene capacitors in the phono equalization network, and high-grade capacitors throughout the signal path. Shielded, oxygen-free copper cable links the gold-plated phono input jacks to the circuit board, and heavy, low-loss wiring returns the amplified signals to the sturdy output terminals. The binding posts themselves are color-coded and will accept bare wire (even very thick varieties), spade lugs, or banana plugs.

Circuit refinements include the use of four 12-amp output transistors per channel—an extraordinary complement for a unit of this power rating and price. Rotel says this enables the amplifier to drive low-impedance or otherwise difficult loudspeaker loads without distress and to dispense with the usual current-limiting protection circuitry, which can unnecessarily restrict power output and add distortion. And though we've been harping on the RA-840BX's simplicity, it does provide such niceties as an input for moving-coil phono cartridges, a mono switch, and dual tape monitor loops with dubbed from Tape 1 to Tape 2.

Diversified Science Laboratories' measurements show that the RA-840BX handily exceeds its power specification into 8 ohms and continues to increase its output all the way down to 2 ohms, where it is capable of more than 100 watts on a short-term, dynamic basis. Noise and distortion are well contained, and overload levels are much more than adequate through all inputs. Input sensitivities and impedances are appropriate, and though the output impedances at the tape jacks are higher than we would prefer, they are not likely to be a problem unless you have a considerably longer than average cable run to your tape deck. Although the damping factor is only moderate in the bass, it drops so slightly with increasing frequency that from 5 kHz up it actually is higher than average. Channel separation is 40 dB or more below 10 kHz, which is all you need and then some.

Rotel has kept the RA-840BX's bandwidth to sensible limits, maintaining flat response across almost the entire audible band, then gradually rolling it off above and below. The effect is quite mild through the high-level inputs, which show just a tiny droop at the very bottom of the range. The phono stage appears to have an additional high-pass (low-cut) filter of its own that rolls off at about 6 dB per octave below maybe 15 Hz. This results in a very slight loss at low audio frequencies. The fixed-coil input is dead flat to 60 Hz and down just ½ dB at 30 Hz; the moving-coil input is flat to 90 Hz and 1¼ dB down at 30 Hz. In neither case would we expect significant audible consequences (we didn't hear any), except perhaps some distortion reduction from the attenuation of warping-induced infrasonic signals. A sharper filter (12 dB or more per octave) would flatten out the deep-bass response while completely squelching warping signals, but it also would raise the price.

Overall, the RA-840BX is a fine little amp, well built and capable of excellent performance. We miss the balance and tone controls, but the former is seldom used (making the substitution of a split volume knob less awkward in practice than it might at first appear) and the latter can be added by way of an external equalizer, if desired. Their importance is, in any case, very much a matter of personal taste. And all of the controls that are present have a smooth, positive action sometimes missing from much more expensive products. At its price, the RA-840BX ranks high among the integrated amps on the market and definitely warrants serious consideration. 

<table>
<thead>
<tr>
<th>RATED POWER</th>
<th>16 dBW (40 watts) per channel</th>
</tr>
</thead>
<tbody>
<tr>
<td>OUTPUT AT CLIPPING (at 1 kHz, both channels driven)</td>
<td>8-ohm load</td>
</tr>
<tr>
<td>17½ dBW (58 watts)</td>
<td>6-ohm load</td>
</tr>
<tr>
<td>19 dBW (78 watts)</td>
<td></td>
</tr>
<tr>
<td>DYNAMIC POWER (at 1 kHz)</td>
<td>8-ohm load</td>
</tr>
<tr>
<td>18½ dBW</td>
<td>6-ohm load</td>
</tr>
<tr>
<td>19½ dBW</td>
<td>2-ohm load</td>
</tr>
<tr>
<td>20½ dBW</td>
<td></td>
</tr>
<tr>
<td>DYNAMIC HEADROOM (re rated power, 8-ohm load)</td>
<td>2½ dB</td>
</tr>
<tr>
<td>HARMONIC DISTORTION (THD, 20 Hz to 20 kHz)</td>
<td>0.04%</td>
</tr>
<tr>
<td>at 15 dBW (40 watts)</td>
<td>0.045%</td>
</tr>
<tr>
<td>at 0 dBW (1 watt)</td>
<td></td>
</tr>
<tr>
<td>FREQUENCY RESPONSE</td>
<td>+0.5 dB, 10 Hz to 93.5 kHz</td>
</tr>
<tr>
<td>+0.5 dB, 20 Hz to 20 kHz</td>
<td></td>
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<tr>
<td>+0.5 dB, 1 kHz to 20 kHz</td>
<td></td>
</tr>
<tr>
<td>+0.5 dB, 10 kHz to 20 kHz</td>
<td></td>
</tr>
<tr>
<td>RIAA PHONO EQUALIZATION</td>
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<tr>
<td>SENSITIVITY &amp; NOISE (re 0 dBW, 1-color measuring)</td>
<td></td>
</tr>
<tr>
<td>sensitivity</td>
<td>1/2%</td>
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<tr>
<td>sensitivity</td>
<td>5/1%</td>
</tr>
<tr>
<td>fixed coil (MM)</td>
<td>34 mV</td>
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<tr>
<td>fixed coil (MC)</td>
<td></td>
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<tr>
<td>fixed coil (MC)</td>
<td>0.5 mV</td>
</tr>
<tr>
<td>moving coil (MC)</td>
<td>47 mV</td>
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<tr>
<td>INPUT OVERLOAD (1-kHz clipping)</td>
<td>20 mV</td>
</tr>
<tr>
<td>&gt;10 volts</td>
<td></td>
</tr>
<tr>
<td>MOVING COIL (MC)</td>
<td></td>
</tr>
<tr>
<td>OUTPUT IMPEDANCE</td>
<td></td>
</tr>
<tr>
<td>from input</td>
<td>180 ohms</td>
</tr>
<tr>
<td>from phono input</td>
<td>3.35 ohms</td>
</tr>
<tr>
<td>DYNAMICS FACTOR (at 50 Hz, re 8 ohms)</td>
<td>30</td>
</tr>
<tr>
<td>CHANNEL SEPARATION (at 1 kHz)</td>
<td>57½ dB</td>
</tr>
</tbody>
</table>

**ABOUT THE dBW**

We are currently expressing power in terms of dBW—meaning power in dB with a reference (0 dBW) of 1 watt. The conversion table will enable you to use the advantages of dBW in comparing these products to others for which you have no dBW figures.

<table>
<thead>
<tr>
<th>WATTS</th>
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<th>WATTS</th>
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<tbody>
<tr>
<td>1.0</td>
<td>0</td>
<td>32</td>
<td>15</td>
</tr>
<tr>
<td>1.25</td>
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<td>16</td>
</tr>
<tr>
<td>1.6</td>
<td>2</td>
<td>50</td>
<td>17</td>
</tr>
<tr>
<td>2.0</td>
<td>3</td>
<td>63</td>
<td>18</td>
</tr>
<tr>
<td>2.5</td>
<td>4</td>
<td>80</td>
<td>19</td>
</tr>
<tr>
<td>3.2</td>
<td>5</td>
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<td>20</td>
</tr>
<tr>
<td>4.0</td>
<td>6</td>
<td>125</td>
<td>21</td>
</tr>
<tr>
<td>5.0</td>
<td>7</td>
<td>150</td>
<td>22</td>
</tr>
<tr>
<td>6.3</td>
<td>8</td>
<td>200</td>
<td>23</td>
</tr>
<tr>
<td>8.0</td>
<td>9</td>
<td>250</td>
<td>24</td>
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<tr>
<td>10.0</td>
<td>10</td>
<td>320</td>
<td>25</td>
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<tr>
<td>12.5</td>
<td>11</td>
<td>400</td>
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<td>16.0</td>
<td>12</td>
<td>500</td>
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<td>20.0</td>
<td>13</td>
<td>630</td>
<td>28</td>
</tr>
<tr>
<td>25.0</td>
<td>14</td>
<td>800</td>
<td>29</td>
</tr>
</tbody>
</table>
KYOCERA PL-601 TURNTABLE


The Kyocera PL-601 is a classic sort of turntable in both appearance and design. A few key functions are automated, but it is essentially a belt-drive manual model in which tonearm mount and platter assembly are suspended on their own subchassis. The arm is a straight tubular design with a carbonfiber plug-in headshell. The controls are ranged along the front, where you can use them without opening the dust cover, and they include individual adjustments for each of the operating speeds (33 and 45 rpm).

To aid in setting the speed, a strobe disc is built into the top of a supplied hold-down "stabilizer" weight, one of several touches (the arm design is another) that proclaim this a turntable of the Eighties, whatever its lineage. Actual adjustment range of the two speeds is a little greater (at least on the plus side) than Kyocera's ±3-percent spec suggests: Diversified Science Laboratories' measurements show that you can raise (sharpen) the pitch by about a half-tone (6 percent) or decrease it by about a quarter-tone. The flush knobs have striated surfaces so that they can be rotated with a fingertip but are virtually impossible to misadjust accidentally.

When you move the tonearm away from its rest (which is fitted with a protective catch to hold it there when you're not actually playing a disc), the platter starts turning at the selected speed. Though the motor doesn't provide the torque of more typical turntables, it has enough to permit easy use of a Discwasher or similar device, which isn't true of some other belt-drive units. Cueing is entirely manual except for the actual up/down arm motion, whose gentle, motorized action is controlled from the front panel. When the arm is raised during play, there is no tendency toward side drift, so you can resume play exactly where you left off. When the arm reaches the leadout-groove diameter, it rises automatically and the platter shuts off.

Because recordings often run closer to the spindle hole on 7-inch discs than they do on standard 12-inchers, Kyocera supplies a switch to select the position at which the arm lifts. At the 7-inch setting, the PL-601 wouldn't raise the tonearm at the end of the LPs with which we tried it;
at the 12-inch setting, some 7-inchers wouldn't play all the way through. Resolving this conflict apparently is the switch's sole function. The arm also lifts automatically when you turn off the main power switch, so you can't back-cue with the PL-601—which is just as well, considering the damage that nonruggedized home pickups can cause to records and themselves if used that way.

The arm is essentially a low-mass design, though unless you have a lightweight cartridge as well, you must use a supplementary counterweight that raises it into the medium-mass range. For DSL's standard measurement cartridge, it would not balance without the extra weight, which therefore is reflected in the effective mass figure in our data column. This, in turn, means that you should avoid extremely compliant pickups of more than medium weight because the mass-compliance combination can drive resonance down into the warp region and make good tracking more difficult to achieve.

A further complication is the PL-601's sensitivity to external vibration, despite its sprung-subchassis suspension. With our standard listening-test pickup, which violates the rule of the previous paragraph by being heavier and more compliant than would be ideal for the Kyocera, any shock to the top plate—even a light touch on the controls or dust cover—produced audible output, and footfalls often caused mistracking. Switching to a somewhat lower-compliance pickup light enough (at 4 grams) to be balanced without the supplementary counterweight, we found the situation much improved, but the turntable was still a little touchy. The moral is that you must choose your pickup carefully and mount the turntable on a rigid, stable surface if you are to use the PL-601 successfully.

And it's worth the extra care. Flutter is low, and the rumble figures are exceptionally good. Speed accuracy is spot-on (thanks, in part, to the separate adjustments) and unaffected by line voltage (thanks to a servo DC drive motor). Stylus-gauge accuracy measured exactly as it should except at the lowest setting, which is below the normal range required by pickup cartridges and is off by only an unimportant tenth of a gram in any event.

Most important of all, however, we're impressed by the PL-601's human engineering. It has enough extra features to spare you the penalties exacted by most other manual turntables (like listening to the stylus swoosh around in the final groove while you're otherwise occupied), but it is not automated to the point of getting in your way—except, as noted earlier, if you are a dyed-in-the-disco back-cuer, in which case you presumably should be looking for a different sort of turntable altogether. We also appreciate its quiet good looks, which give the PL-601 a touch of dignity absent from many competing models.

HARMAN KARDON CH-160 CAR TUNER/TAPE DECK

Dimensions: 7 by 2 inches (chassis front), 6 inches deep; escutcheon, 7 1/2 by 2 1/4 inches; "nose," 4 1/4 by 2 inches; main shafts, 5 to 5 3/4 inches o.c.

Harman Kardon, a relatively recent entrant in the highly competitive autosound field, makes a convincing case for itself with the CH-160. It is handsome, well thought out, and an excellent performer. Its FM behavior, for example, is significantly better than that of most models that we have reviewed. But we'll get to that in due course.
First, a quibble: The treble control is a bit more awkward to use than we would have liked. It is the middle ring on a control cluster that includes the volume/balance knob and the bass-control ring. The latter has a little tab that makes it easy to manipulate. But the treble ring is both tab-less and harder to move (at least on our test sample); we found it almost impossible to adjust without also changing the volume. Also annoying at first were the tiny switches and, particularly, their legends, which are much too small to read while you’re driving. The importance of reading the labeling correctly is compounded by making two of the switches do double duty, depending on whether you’re using the tuner or the deck. But as long as you memorize the switch positions first, you’re all right. In that regard, the front panel layout is excellent—neater and more logical than average, with adequate spacing between the buttons (a result of their being so small), and including a digital clock in the LCD readout.

The cassette deck is unidirectional (which may give it an edge in reliability over mechanically more complex auto-reversing models) and ejects the cassette automatically when the ignition is shut off. It is independent of the CH-160’s power switch (activated by pushing the volume knob); you can play a tape without turning on the tuner, and you can turn off the tuner without stopping the tape. If the tuner is switched on, the radio will play whenever you remove a cassette or fast-wind it in either direction. We find this sort of intrusion annoying, but some users evidently consider it a desirable feature, and the CH-160 does give you the ability to defeat it.

You are also given options for playback EQ (for once correctly labeled as “70 microseconds,” rather than “metal”) and Dolby noise reduction (B and C, as well as OFF). Frequency response is very good, though head azimuth doesn’t agree with that of our BASF test tape as well as the curve’s treble extension might imply. Speed is only slightly fast and varies hardly at all with supply voltage (from 1.0 percent fast at 14.4 volts to 1.2 percent fast at 10.8 volts). Flutter is reasonably low for a car player; more important, road shock produced no perceptible waver in any of our tests.

The CH-160’s tuning controls (on the right side of the front panel) are large rocker buttons for up/down manual tuning and seek/scan automatic tuning. SEEK locks onto the next receivable station in the chosen direction, while SCAN just plays the station for eight seconds and then continues across the dial. The scanning direction is determined by the last end (UP or DOWN) you pressed on the manual tuning control, which, when used, steps by full channels (200 kHz on FM, 10 kHz on AM). All these tuning controls make for exemplary ease in finding listenable radio fare while you’re driving. There also are six station presets, each of which can memorize one frequency from each radio band.

AM always represents the least impressive part of a car-stereo front end, and the CH-160’s section is no exception. As in several other models we’ve tested, AM-band distortion in the very deep bass produces an apparent “hump” that doesn’t represent true response and makes it impossible to characterize portion of the response curve numerically. On the other hand, AM sensitivity is nearly as good as the best we’ve tested. We had difficulties measuring AM selectivity by our usual procedure, but the unit seemed to have typical selectivity performance. The AVC range also is average. Actual pulling power of listenable stations didn’t particularly impress us, however. In part, this was due to the CH-160’s steep low-pass filtering on AM signals, which minimizes high-frequency reception noise but tends to make stations sound tubby and dull; poor reception conditions during the test period may also have contributed to our impression.

The FM response is astonishingly flat. It would be remarkable even in a home receiver. (Our data show the stereo response; in mono it is down ½ dB at 15 kHz, instead of less than ¼ dB. But that’s still spectacular, and besides, few FM stations broadcast in mono these days, even if they play mono program material.) At the same time, sensitivity and selectivity were excellent. We were also pleasantly surprised at the CH-160’s behavior in our weak-signal/high-multi-path test, where it exhibited hardly any of the “spitting” (bursts of noise and distortion).
tortion) we’re used to. Not surprisingly, overall FM sound quality struck us as clearer than average, with good high-end sparkle.

The stereo sensitivity figure shown in our data is altogether legitimate (which, as we’ve pointed out in the past, isn’t always the case), because a healthy 17½ dB of channel separation is still maintained at the sensitivity-measurement point. As signal strength drops from this point (39½ dBf), separation decreases rapidly. The resulting noise cancellation brings quieting back below 50 dB between about 19 and 29 dBf, but because the separation is less than 5 dB in this range (and less than 1 dB at the bottom of it), it doesn’t really qualify as stereo, so the rating point stands. To keep noise low once the channels are fully blended, Harman Kardon has elected to attenuate output sharply with falling FM signal strength. In the multipath test, this caused rapid volume fluctuations, which imposed a “lumpy” quality on the sound. But again, the unit is exceptionally quiet for these conditions (high multipath, very low signal strength).

Our first encounter with Harman Kardon car stereo encourages us to look forward to more. The CH-160 is easy to install (partly because of a plug-in power wiring harness, which includes connections to switch both a power antenna and your power amplifier) as well as generally easy to use. But best of all is its sound, which is well above average among the models we’ve tested.

SHERWOOD CRD-180 CAR RECEIVER/TAPE DECK

Dimensions: 6½ by 2 inches (chassis front), 5 inches deep; escutcheon, 7½ by 2¾ inches; “nose,” 4½ by 2¾ inches; main shafts, 5¼ to 5½ inches o.c.

The relatively simple front panel of the Sherwood CRD-180 belies all its capabilities. They include Dolby B noise reduction and switchable “metal” (70microsecond) tape equalization, station scan and preset scan, a local/distant switch to adapt the threshold sensitivity of the station scan, and a clock display. In addition, it comes with an oversize faceplate that is scored on the back to make trimming easy if a smaller format would better fit your dash—the first adapting unit of this sort we’ve encountered. And the wiring harnesses, for both the power/ground and speaker connections, are fitted with connectors so that harness and chassis can be installed separately and then plugged together when the dash is reassembled.

All these features operated from a simple front panel means that some controls must do multiple duty, and until you learn your way around, they can be a bit confusing. Least obvious, perhaps, is that a clockwise twist on the tuning knob switches the tape EQ. Most problematic, however, are the tone controls. Both bass and treble are adjusted at a single

FM TUNER SECTION

frequency response & channel separation

-40 -30 -20 -10 0 10 20 30 40

20 50 100 200 500 1K 2K 5K 10K 20K
Frequency response +1 -3 dB, 25 Hz to 15 kHz
Channel separation ≥ 35 dB, 27 Hz to 8.8 kHz
Finally, car audio as good as your car.

Very few companies selling car stereos are real audio companies. With 75 years of experience reproducing sound, Denon wishes to point out the level of their home audio technology present in the new DC-series of car audio equipment.

For example, the only audio components — home or auto — offering the level of circuit sophistication found on the new Denon Car Audio DCA-3250 Power Amplifier are Denon’s own top-of-the-line receiver and separates.

Similarly, the Dynamic Range Expansion circuitry found on Denon’s new Car Audio DCR-7600 AM/FM Stereo Tuner/Cassette Deck otherwise can be found only on Denon’s DE-70 Dynamic Equalizer.

The differences between Denon car and Denon home audio equipment will become apparent the moment you sit behind the wheel. To build car audio for people who love good sound as much as fine cars, Denon created a very limited, ultra-high quality range of car audio components, specifically engineered to become part of the automobile. Controls fall to hand and information is displayed with the driver clearly in mind.

For the car lover, Denon Car Audio does more than offer true auto high fidelity — it becomes an integral part of the thrill of driving.
ring. Simply turned, it is a bass control with a detented center position. But when you push the ring in while turning it, the treble is adjusted instead, but without a center detent. Similarly, you push the balance ring to adjust the front/rear fader; there is a detent here, though it's barely perceptible when you're pushing on the ring (at least with our test sample).

Adjusting the TREBLE away from the center of its range also rotates the BASS detent. This means that when you re-adjust the BASS to its detent, the calibration line on the tone-control ring will show you whether the TREBLE has been moved away from its center, but there is no definitively "flat" setting. Diversified Science Laboratories therefore set the treble control for equal output at 1 kHz and 10 kHz through the tuner and used this position as "flat" for the remainder of the lab tests. Since this allowed considerably more cutting than boosting of the treble, it may not have been the median setting that the CRD-180's designers had in mind, but we found no better way of calibrating the response measurements.

In any case, FM frequency response is very good, as is separation at full quieting, though (as the quieting graph demonstrates) channel blending begins at relatively high antenna-input levels. The process is gradual as the signal strength weakens, thus minimizing the possibility that the stereo image will collapse and expand rapidly under "picket-fencing" conditions—a sonic phenomenon that, with some other equipment, can occasionally be downright alarming. By the time the signal strength falls to 44 dBf (the stereo-sensitivity rating point), separation has been reduced to 7½ dB—just barely stereo.

The tuner is well behaved when faced with weak, fluctuating signals and strong, fluctuating multipath. Bursts of noise and distortion cause some "spitting," but it is rather muffled and therefore distinctly less obtrusive than in many other models. The LOCAL option attenuates the antenna input by 26 dB, meaning that it is useful only for very powerful stations, since the measured sensitivity is just average (as is the capture ratio).

The CRD-180's AM section will decode C-Quam (Motorola) broadcasts, the stereo AM format that seems to be emerging as the most popular. Sherwood thoughtfully supplies a list of stations that employ the C-Quam system. Unfortunately, none was receivable in our test area with a signal clear enough for useful judgment of the stereo quality. Mono AM performance is typical for a car stereo unit.

Tuning steps on both bands are one channel wide (20kHz on FM, 10 kHz on AM), so you can't end up between channels. If you don't want to end up between stations, either, there are scan-tuning functions and six AM and six FM presets. The cassette deck shows signs of azimuth disagreement with the BASF test tape in the forward direction of tape travel, but not in the reverse. The reason the forward response looks so flat in the graph is that a peak in the tape-playback equalization compensates for the azimuth disparity. This peak is visible (and audible) in the reverse direction. But because the remainder of the curve is very flat, overall sound is good. Drive-speed accuracy (which is seldom, if ever, a problem these days) is closer to spot-on than that of many home decks. The flutter figures are less impressive, though flutter itself was inaudible. We did get some audible pitch waver from heavy road shocks, but recovery was fast.

The CRD-180's preamp/amp design allows it to be used as a self-contained system, driving a front speaker pair, to which a separate amplifier and back speaker pair can be added easily. In this configuration, the preamp outputs are controlled by the front/rear fader, and the power-antenna lead can also be used to switch on the outboard amp. (The owner's manual shows a wiring layout for adding the Sherwood SCA-240 amplifier.) Power generated by the built-in amp is, at approximately 5 watts (1 dBW) per side, about as much as you can expect from a 12-volt supply without additional circuitry or a bridged output configuration, which would complicate the wiring somewhat.

All in all, the CRD-180 is easy to install, easy to upgrade (by the addition of an external power amplifier), and easy to use. Its moderate price makes it easy to own as well.
The Fela in Masekela

The Forum, a North London theater-turned-dance-hall/beer-palace, is packed to capacity this midweek night. For hours, 2,000-plus white and black Anglos and transplanted Africans have churned and bounced through two opening acts and tapes of new African bands, and their dancing grows even more agitated with the arrival of headliner Hugh Masekela. The crowd loves the trumpet player's single, "Lady" [from the LP Waiting for the Rain, Jive Africa JL 8-8302], Written in the early Seventies by Nigerian saxman, bandleader, and nightclub owner Fela Anikulapo Kuti, the song puts down African women who imitate Western ways. Masekela's rendering tonight is especially potent; his introduction sends a wave of sympathy washing over the room because Fela has been in Lagos's Kiri Kiri prison since November, convicted of attempting to smuggle £1,500 out of Nigeria.

Fela is innocent, his supporters claim, and they charge the military government with manufacturing evidence in order to rid itself of an irritant. He has been a special target because of his popularity as a political artist (he's carrying on a family tradition of opposing colonialism) and because of his own goals. In the mid-Seventies he organized the Young African Pioneers, and in 1981 released Black-President, boldly stating his own power aspirations/fantasies. Fela is a gadfly rather than a threat, but he has made a lot of enemies. His sentence, a five-year imprisonment from which there is no legal right of appeal, has attracted the attention and commitment of Amnesty International, among other sympathizers, to correct.

Masekela, like many jazz musicians, avoids direct political confrontation, even though he voluntarily exiled himself from South Africa's apartheid in 1959. But his own compositions frequently are topical. At the Forum concert, "Coal Train (Stimela)," a song about conscripted South Africans and work camps in the coal mines, draws cheers and an immediate and spontaneous singalong. Masekela's admiration for Fela's brave stance has spurred his own activism.

Fela's lyrics would seem to be at odds with his music's embrace of Western sounds—just one of the paradoxes of the new Africa. Masekela's spirited "Lady" is a sobering reminder that the old Africa is still very much with us.

Leslie Berman

Feast and Famine: Writing on the Wall, Part 2

Some thoughts, occasioned by our annual preview of forthcoming LPs (see September's "800 Upcoming Recordings") and Compact Discs, on what is, and is not, being recorded:

In the race to grab the best-selling shares of the classical CD market, the major labels have fallen all over each other trying to offer the same thing to the consumer. As I mentioned in last month's "Medley," the worst example is the glut of newly recorded Beethoven piano concerto cycles: Telarc (Serkin/Ozawa), Philips (Brendel/Levine), Deutsche Grammophon (Pollini/Böhm/Jochum), and London (Ashkenazy/Mehta) are already in the lists, while Pro Arte (Sherman/Neumann), CBS (Perahia/Haitink), RCA (Ax/Previn), London again (De Larrocha/Chailly), and Philips again (Arrau/Colin Davis) are nearing completion or are in the works. (This does not include Anton Kuerti's cycle from CBC, which can be purchased through André Perrault.) That makes a total of nine complete Beethoven piano concerto cycles scheduled to be available soon on Compact Disc.

You want Mahler symphonies? CBS (Maaazel/Vienna Philharmonic), DG (Karajan/Berlin Philharmonic), DG again (Abbado/Chicago Symphony/Vienna Philharmonic), DG yet again (Sinopoli/Philharmonia), Angel (Tennstedt/London Philharmonic), London (Solti/Chicago Symphony), Pro Arte (Neumann/Czech Philharmonic), and RCA (Levine/Chicago Symphony/Philadelphia Orchestra/London Symphony) all have partial or complete cycles planned or now in the catalog. To get an integral Brahms cycle on Compact Disc, however, you have only one choice: Leonard Bernstein and the Vienna Philharmonic on Deutsche Grammophon. (Sony has remastered Bruno Walter's classic accounts of the Brahms symphonies with the Columbia Symphony Orchestra and George Szell's cycle with the Cleveland Orchestra, but neither is yet available from CBS—although the Walter is slated for release this fall, and both have been imported on the gray market. So far, only half of the German Harmonia Mundi cycle with Günter Wand and the Hamburg NDR Symphony has been issued on Compact Disc by Pro Arte. Fortunately, all three of these cycles will make worthy additions to the catalog.)

There are now four Ring cycles available on Compact Disc, but the rest of Wagner's oeuvre, to say nothing of the rest of the entire operatic repertoire, is not yet so well served. Many gaps need to be filled, and a great many outstanding recordings of the past decade—one thinks, for instance, of the Janáček opera series conducted by Sir Charles Mackerras on London—should be brought into the lists even if they promise only limited sales.

Ted Libbey
COMPACT DISC PREVIEW

A look at the new season's releases

ANGEL

Beethoven: Symphony No. 3; Grosse Fuge. Philharmonia O, Klemperer.
Brahms: Violin Sonatas. Perlman, Ashkenazy (d).
Vivaldi: The Four Seasons. Perlman; Israel P (d).
Wagner: Tannhäuser. König, Popp, Meier, Weikl, Moll, Jerusalem; Bavarian RSO&Ch, Haitink (d).
The Art of Beverly Sills, Vol. 2.
Angel Records, 1750 N. Vine St., Hollywood Calif. 90028

ARCHIV
(released by Deutsche Grammophon)
Bach: Partitas (6). Pinnock (2).
Handel: Alexander's Feast, Oboe Concertos (3); Sonata à 5. English Concert, Pinnock (d).
Mozart: Piano Concertos Nos. 18, 19; English Baroque Soloists, Gardiner (d).
Trevor Pinnock and the English Concert: Works by Handel, Anson, Pachelbel, Haydn, Vivaldi, Albinoni, and Purcell (d).

ARIOLA/EURODISC
(distributed by RCA)
Verdi: Rigoletto. Takács, Weikl, Popp, Aragall, Gardelli.

ARION
(distributed by Delos International)
Hindemith: The Four Temperaments; Nobilissima Visione. Rosenberger, Royal PO DePreist.
Cecidonia Romero—An Evening of Guitar Music—Works by Bach, Giuliani, Sor, Sanz.

BELLAPHON
(distributed by Delos International)
The next volumes in the series of complete organ works of Buxtehude will be released in 1985/86 with Wolfgang Rübsam playing a variety of Europe's famous instruments.

THE COMPACT Disc has come into its own, as growing numbers of classical music listeners will attest. For those who have invested in the medium, and those who are thinking of doing so, we present our annual listing of releases planned by more than 40 companies for the forthcoming year.

Please note the following use of abbreviations, alone or in combination. For performing forces: P (Philharmonic), R (Radio), S (Symphony), O (Orchestra), C (Chamber), Ch (Choir, Chorus), St (State), Op (Opera), Ac (Academy), E (Ensemble), Qr (Quartet), Qn (Quintet), Fest (Festival), or their foreign-language equivalents. For production and packaging: Where known, number of CDs in multidisc sets is given in parentheses at end of listing; other parenthetical symbols include h (historical), d (digital original), m (mono), l (live recording). Initials and first names appear only as needed.

OCTOBER 1985
BIS
(distributed by Qualiton Imports)


Barber: Jolivet: Hindemith: Saeverud: Wind Quintets; Bergen Wind Qn.

Mozart: Concert Arias. Goman; Kalmar Lians CO, Wedin.


Sibelius: Kullervo: The Origin of the Fire. Tiihinen; Gothenburg SO, Jarvi.


Stravinsky: Dances concertantes. Avanti O, Baro.

Tubin: Prelude solennel: Suite on Estonian Dances; Violin Concerto No. 1. Lubotsky; Gothenburg SO, Jarvi.

Tubin: Requiem. Lunds Studentsängare, Järvi.

Verdi: Rigoletto. Gedda, Ehring (2), h.

Vivaldi: The Four Seasons. Sparf; Drottningholm Baroque E.


German and Spanish Songs. Högman, Lindberg.


BRIDGE


New Music with Guitar: Works by Henze, Carter, Takemitsu, Del Tredici, Kolb, Bland, Lennon, Starobin.

Bridge Records, GPO Box 1864, New York, N. Y. 10116.

CAPRICCIO
(distributed by Delos International)


Dvorák: Gypsy Songs; Love Songs; Sacred Songs. Schreier (d).


Schumann: Symphony No. 1: Manfred Overture; Overture. Scherzo. and Finale Stuttgart SO, Marriner (d).


CBS MASTERWORKS

Bach: Various Works. Paris Saxophone Qr (d).


Bruckner: Symphony No. 3. Kubelik.


Glass: Einstein on the Beach (3).

Glass: Satyagraha (3).

Handel: Messiah. Mormon Tabernacle Ch.

Haydn: Cello Concertos. Ma.


Mozart: Don Giovanni. Raimondi, Van Dam, Berganza, Te Kanawa; Paris Op, Maae (3).


Mozart: Serenades for Winds. E. Wien Berne.


Musorgsky: Pictures at an Exhibition. Paratore Duo.

Prokofiev: Symphony No. 1. Maazel.


Ravel: Songs. Norman, Van Dam, Gomez; E. Intercontemporain, BBC SO, Boulez.


GREAT PERFORMANCES SERIES

Beethoven: Moonlight Sonata; Other Works for Piano.
Debussy: La Mer.
Hoff: The Planets.
Mendelssohn: Violin Concerto No. 4.
Tchaikovsky: Violin Concerto. Stern; Philadelphia O, Ormandy.
Mozart: Symphonies Nos. 40, 41, Cleveland O, Szell.
Pachelbel: Canon, Other Works.
Prokofiev: Peter and the Wolf.
Stravinsky: Firebird, Petrouchka.
Tchaikovsky: Suites: Nutcracker, Swan Lake.

CBS Masterworks, 51 W. 52nd St., New York, N.Y. 10019.

CENTAUR

Nielsen: Concerto for Flute*, Clarinet. Yeh, Stolper*; Chicago CO, Kober.
Schubert: String Quintets (continuation of cycle). Manchester Qr.
Shostakovich: String Quartets (continuation of cycle). Manhattan Qr.
Songs by Barber, Duparc. Parker, Hucky-
Song by Brahms, Copland. Parker, Hucky-

Centaur Records, Inc., Box 23764, Baton Rouge, La. 70893

DELOS

(distributed by Delos International)

Mozart: Piano Concertos Nos. 15, 22. R. Serkin; London SO, Abbado (d).
Mozart: Serenata notturna, Divertimenti, K. 251. Orpheus CO (d).
Mozart: Violin Concerto No. 1. Perlman, Vienna PO, Levine (d).
Mozart: Violin Concertos Nos. 2, 4. Perlman, Vienna PO, Levine (d).
Mozart: Piano Concertos Nos. 1, 4. Vienna PO, Bernstein (d).
Rossini: Overtures. Orpheus CO (d).
Rossini: La moglie a Bologna. Reviarilli, Valentin-Terrani, Gasdia, Araiza, Ramey, Nucci; CO of Europe, Abbado (d, d).
Schumann: Frauentliebe und -leben. Lieder, Songs. Fassbaender, Gage (d).
Schumann: Symphonies Nos. 1, 4. Vienna PO, Bernstein (d).

DELOS INTERNATIONAL


DEUTSCHE GRAMMOPHON

Bach: Concertos for 2, 3, & 4 Keyboards. Eschenbach, Frantz, Oppitz, Schmidt; Hamburg PO, Eschenbach (d).

Brahms: Piano Concerto No. 2. Zimmermann; Vienna PO, Bernstein (d).
Dvořák: Serenades, Opp. 22, 44. Orpheus CO (d).
Haydn: Symphonies Nos. 44, 77. Orpheus CO (d).
Mahler: Symphony No. 2. Lieder eines führenden Gesellen. Popp, Fassbaender; Philharmonia O, Simpeli (2, d).
Mahler: Symphony No. 5. Early Orchestral Songs. Weikl; Philharmonia O, Simpeli (2, d).

DYNAMIC

(distributed by Qualiton Imports)

Paganini: Guitar Quintets Nos. 1, 9 (d).
Wolf: Music for String Quartet.

ERATO

(distributed by RCA)

Bach: Trio Sonatas. Alain (d).
Charpentier: Neuf s<eans de tenebres. Crook, Caals, Verschaeve, de Meulenaere, Ruyi, Widmer, L. Devos (2, d).
Chausson: Virelai<e> Symphony. Basil O, Jordan (d).
Dukas: Ariane et Barbe-bi<e>. Gesinski, Bac-
quer, Paonova, Schau, R France Ch, New PO, Jordan.
Durufle: Requiem Pour Pieces. Corboz.
Faure: Requiem. Clément, Huttenlocher; Ma<ete Saint-Pierre-aux-Liens de Bulle, OS de Berne, Corboz.
Franck: Organ Works. Alain.
Handel: Rodrigo. Taiffemunik O, Curtis (d).
Haydn: Symphonies (2). Koeppen (d).
Lully: Dies Irae, Missere misi Deus. Smith.
Alliot-Lugaz, Vandersteene, Devos,/+.
Huttenlocher; E Vocal de Balance, OC de Jean-François Paillard.
Mendelssohn: Symphonies Nos. 4, 5. English CO, Leppard.
Messiaen: L'ascension. Hymne, Les Ofrandes oubliées. PO of O.R.T.F., Con-
start.
Messiaen: Trois petites liturgies de la Prés-
evne Divine. Y. and J. Loriod; Maltrise and CO of O.R.T.F., Cournard.

Contemporary piano from Toccco
Mozart: Requiem, Ameling, Scherker, Devos, Soyer; Ch&O of the Gulbenkian Foundation of Lisbon, Corboz.
Mozart: Sinfonia Concertante, K. 364, anh. 9, Amoyal, Causee, Morf; OC de Lausanne, Jordan.
Mozart: Symphonies Nos. 38, 39, Scottish CO, Conlon.
Poulenc: Concerto for Two Pianos; Organ Concerto ("Anbade"). Duchable, Colard; Rotterdam PO, Conlon.
Poulenc: Harpsichord Concerto; Organ Concerto. Koopman, Alain; Rotterdam PO, Conlon (d).
Purcell: Didon and Aeneas, Troyanos, Palmer, Stilwell, Gaie, Hodgson, Kerni, Langridge, Maxwell; English CO&Ch, Leppard.
Stravinsky: Pulcinella. E Intercontemporain, Boulez.
Tchaikovsky: Iolanta. Vishnevskaya; O National de France, Rostroovich (v).
Viola: Catone in Utica. Pansier, Schmiege, Zimmermann, Gasda, Rippey, Lemli; I Solisti Veneti, Scimone (2).
Widor: Organ Symphonies Nos. 3, 4, 6, 9, Alain.

ETCETERA (distributed by Qualiton Imports)
Britten: Cello Suites Nos. 1, 2, 3; Cello Sonatas, Op. 63, Baillie, Brown (2).
Byrd: Four-Part Missa, Choral Music. Quink Vocal E.


FANFARE (distributed by Qualiton Imports)
Best of Canadian Brass. Canadian Brass and Friends.
Ofra Harnoy: Live! Works by Gershwin, Piatti, Schubert, Schnirren, Harnoy, Bussek (1).
Kunzel on Broadway. Winnipeg PO.
The Pachelbel Canon and Other Digital Delights. Toronto CO, Davis.
The Virtuoso Trumpet of Johnny Cowell: Concerto ("Aubade"). Cowell, Jordan.
9.
Soyer; Ch&O of the Gulbenkian Foundation, Le Jeune, Rivoire, Harnoy, Duquesne (3).

FIFTH CONTINENT
See Label "X", Freestyle, Southern Cross.
Fifth Continent Music Corp., 1200 Newell Hill Pl., Suite 302, Walnut Creek, Calif. 94596.

FREQUENCY (distributed by Delos International)
FREQUENZ (Germany)
HARMONIA MUNDI (France)
HARMONICA MUNDI, U.S.A.
HARMONIC (distributed by Delos International)
HONG KONG
Gliere: Symphony No. 1; “The Sirens.” Slovak PO, Gunzenhauser.

Ippolitov-Ivanov: Caucasian Sketches; Veron, Op. 12 Queensland SO.


Liadov: Orchestral Works (complete). Slovak PO, Gunzenhauser.

Litolff: Symphonic Concerto for Violin. Nishizaki; Slovak PO, Gunzenhauser.

Rubenstein: Violin Concerto, Symphonic Poemes. Nishizaki; Slovak PO, Gunzenhauser.

Strauss: Symphony in F minor. Slovak PO, Gunzenhauser.

HUNGAROTON
(distributed by Qualiton Imports)

Bach: Cantatas Nos. 56, 82. Polgár; Capella Savaria (d).

Bach: Lute and Harpsichord Works. Szykowska.

Brahms: Hungarian Dances. Budapest Fest O, Fischer (d).

Handel: Aladdin. Farkas, Barta, Lax, Bándi, Gregor, Polgár; Szombathelyi Vocal E, Capella Savaria, McGegan (3, d).

Listz: Organ Works. Lehotka (d).

Mendelssohn: Symphony No. 4. Hebrides Overture. Hungarian ST, Fischer (d).


Schumann: Piano Sonata, in G minor; Humoreske. Rádki (d).

Vivaldi: Violin and String Concertos. Schroeder, Capella Savaria (d).

HYPERION
(distributed by Harmonia Mundi, U.S.A.)


Brahms: Clarinet Sonata. King, Benson.

Bruckner: Mass in E minor; Liberam me; Zwei arie for Three Trombones. Corydon Singers, English CO, Best.

Faure: Piano Quintet. Domus Qt.


Victoria: O magnum mysterium; Motet and Mass, Ascendens Christus. Westminster Cathedral Ch, Hill.

Vivaldi: Lute and Mandolin Works. O’Drey; Parley of Instruments, Goodman, Holman.

INTERSOUND
See Harmonia Mundi (Germany), Pro Arte, Teldec, Intersound, Inc. 14025 32nd Ave. N., Minneapolis, Minn. 55441.

LABEL “X”
(distributed by Fifth Continent)


LONDON

Addinsell; Litolff; Rachmaninoff: Works for Piano and Orchestra. Ortiz; Royal PO, Atzmon (d).

Bach: Arias. Ferrier (m).

Bach: Cantatas Nos. 80, 110. Fontana, Hamari, Winbergh, Krause; Stuttgart CO, Münchinger (d).

Bach: Cello Suites. Harrell (2, d).


Beethoven: Piano Concerto (5). De Larrocha; Berlin RSO, Chailly (4, d).

Beethoven: Piano Sonatas Nos. 21, 26, 27. Ashkenazy.


Beethoven: Mozart: Quintets for Piano and Winds. Lupu; Netherlands Wind E (d).

Belli: Norma. Sutherland, Pavarotti, Calìbalé, Ramey; Welsh National Op, Bonynge (3, d).

Belli: La Sonnambula. Sutherland, Pavarotti, Bonynge (3, d).


Bizei: Carmen. Troyanos, Te Kanawa, Domingo; Stuttgart CO, Munchinger (2, d).


Brahms: Cello Concerto Harrell, Ashkenazy.

Brahms: Ein deutsches Requiem. Te Kanawa, Weikl; Chicago SO, Solti (2).

Brahms: Symphony No. 4. Vienna P, C. Kleiber.

Britten: Peter Grimes. Pears; Britten (3).

Chopin: Nocturnes. Ashkenazy (2).

Chopin: Songs. Söderström, Ashkenazy (d).

Copland: Appalachian Spring. Stravinsky; Apollo Detroit SO, Dorati (d).

Couperin: Messe pour l’usage ordinaire des Paroisses. Hurford (d).

Couperin: Messe prope for the Cownens. Hurford (d).

Delibes: Coppélia. National PO, Bonynge (2, d).

Donizetti: L’Elisir d’amore. Sutherland, Pavarotti; Bonynge (2, d).

Dvořák: Symphony No. 8; Scherzo capriccioso. Cleveland O, Dohnányi (d).

Dvořák: Symphony No. 8. Cleveland O, Dohnányi (d).

Faure: La D. Saint-Saëns: Works for Cello and Orchestra. Harrell; Berlin RSO, Chailly (d).

Franck: Choralis. Hurford (d).

Gershwin: Porgy and Bess. Mitchell, White; Quivar; Cleveland O, Maazel (d).


Handel: Music for the Royal Fireworks; Water Music. St. Martin’s Ac, Marriner.


Haydn: Cello Concertos. Coin; Ac of Ancient Music, Hogwood.


Liszt: Années de pèlerinage. Third Year. Bolet (2, d).

Mahler: Kindertotenlieder; Lieder eines fahrenden Gesellen. Ferrier.


Mozart: Piano Concertos Nos. 8, 9. Ashkenazy; Philharmonia O (d).

Mozart: Piano Concertos Nos. 17, 18, 19, 20. Schiff; Camerata Academica, Vneg.

Mozart: Piano Concertos Nos. 18, 20. Ashkenazy; Philharmonia O (d).

Mozart: Piano Concertos Nos. 22, 26, 32. Ashkenazy; Philharmonia O.


Mozart: Symphonies Nos. 40, 41. CO of Europe. Solti (d).


Musorgsky: Pictures at an Exhibition. Royal PO, Bremner.

Puccini: The Bells; Three Russian Songs. Troitskaya, Karczykowski; Concertgebouw O, Ashkenazy (d).

Puccini: La Bohème. Tebaldi, Berenson; Serafin (2).

Puccini: Madame Butterfly. Tebaldi, Berenson; Serafin (2).

Puccini: Tosca. Te Kanawa, Aragall, Nucci; Solti (2, d).

Rachmaninoff: The Bells; Three Russian Songs. Troitskaya, Karczykowski; Concertgebouw O, Ashkenazy (d).

Rachmaninoff: Cello Sonata; Works for Cello and Piano. Harrell, Ashkenazy (d).

Rachmaninoff: Piano Concertos Nos. 2, 4. Ashkenazy; Concertgebouw O, Haitink (d).

Rachmaninoff: Preludes. Ashkenazy (2).
Galindo conducts Mozart.

Resphighi: Pines of Rome; Fountains of Rome, Suisse Romande, O. Ansermet.
Schubert: Symphonies Nos. 5, 8. Vienna PO, Solti (d).
Schumann: Symphonic Etudes; Arabesque; Papillons. Ashkenazy.
Seriahus: Piano Works. Ashkenazy (d).
Sibelius: Symphony No. 1; Karelia Suite. Philharmonia O. Ashkenazy (d).
Strauss: Concert Suite from Der Rosenkavalier. Fantasie from Die Frau ohne Schatten. Detroit SO, Dorati (d).
Stravinsky: The Firebird; Fireworks; Scherzo fantastique. Montreal SO, Dutoit (2, d).
Stravinsky: Symphony No. 1; Scheherazade. Detroit SO, Dorati (d).
Stravinsky: Symphony of Psalms; Fireworks; Le Chant du rossignol. Berlin RSO, Chailly (d).
Verdi: Un ballo in maschera. M. Price, Pavarotti, Solti (d).
Verdi: Nabucco. Solti (d).
Wagner: The Flying Dutchman. Martin, Kollo, Bailey, Solti (3).
Wagner: Tannhäuser. Kollo, Ludwig; Solti (3).
Italian Guitar Music. Fernandez (d).
Spanish Guitar Music. Fernandez (d).
Joan Sutherland: Art of the Prima Donna (2).

London will also issue nine compilations of music, each related to a particular theme. Vladimir Ashkenazy's Chopin series will be released on CD in groupings rather than as originally released on LP. Released by Polygram Classics, Inc., 810 Seventh Ave., New York, N.Y. 10019.

MOSS MUSIC GROUP

Offenbach: Operatic Works. Cincinnati Pops, Kunzel.
Rachmaninoff: Piano Concerto No. 2; Rhapsody on a Theme of Paganini. Simon; St. Louis SO, Slatkin.
Stravinsky: Death and Transfiguration; Metamorphosis. Cincinnati SO, Gelen.

Gardiner conducts Mozart.

Offenbach: Operatic Works. Cincinnati Pops, Kunzel.
Rachmaninoff: Piano Concerto No. 2; Rhapsody on a Theme of Paganini. Simon; St. Louis SO, Slatkin.
Stravinsky: Death and Transfiguration; Metamorphosis. Cincinnati SO, Gelen.

OISEAU-LYRE

Beethoven: Symphonies Nos. 1, 2. Ac of Ancient Music, Hogwood (d).
Handel: Cantatas.Kirby, Ac of Ancient Music, Hogwood (d).
Haydn: Symphonies Nos. 94, 96. Ac of Ancient Music, Hogwood (d).
Haydn: Symphonies Nos. 100, 101; Hogwood (fortepiano) (d).
Monteverdi: Madrigals Rooley.
Monteverdi: Vespers Gardiner (2).
Mozart: Concertos for Clarinet, Oboe, Piano; Figuel, Ac of Ancient Music, Hogwood.
Mozart: Così fan tutte. Drottningholm Court Theater, Ostman (performed on original instrumenta) (3).
Mozart: Symphonies Nos. 25, 26, 27. Ac of Ancient Music, Hogwood (r).

NORTH EASTERN

Grainer: Songs. Collage New Music E.
Harison: Mirahil Songs. Variations. Felty, Satz. Harison, Oppens; Collage New Music E.
Christmas Antiphonies: Works by Puhkham, Bax, Schütz, Scheidt. John Oliver Chorale.
Northeastern Records, Box 116, Boston, Mass. 02117.

PHILIPS

Bach: Brandenburg Concertos. 1 Music (2, d).
Bach: Cantatas Nos. 211, 212. Varady, Fischer-Dieskau; St. Martin's Ac, Mariner.

Nonesuch Records, 75 Rockefeller Plaza, New York, N.Y. 10019.

NONESUCH

Glass: Mishima (non-ndrtake).
Reich: Desert Music. Steve Reich and Musicians; members of Brooklyn P&Ch, Thomas (d).
Sergiu & Odair Assad: Brazilian Music for Two Guitars by Piazzolla, Pascoal, and Others, Pius Works by Ginosartos, Brouwer (d).

NORTHEASTERN


Bruckner: Symphony No. 4. Vienna PO, Haitink (d).

Busoni; Nielsen: Reinecke: Flute Concertos. Nicolet; Gewandhaus O, Masur (d).

Chopin: Scherzos (4); Polonaise-fantaisie, Op. 61. Arrau (d).

Donizetti: L'Elisir d'amore. Ricciarelli, Carreras, Nucci, Rigacci, Trimarchi; RAI SO & Ch, Scimone (3, d).

Dvořák: Cello Concerto; Silent Woods. Schiff; Concertgebouw O, C. Davis (d).

Dvořák: Piano Quintets, Opp. 5, 81. Richter; Borodin Qr (d).

Falla: Jota. Nana, Polo (d).

Falls El corregidor y la molinera: Jota. Nana, Polo (d).

Falla: Symphony No. 9 ("New World"). Minnesota O, Marriner (d).

Gershwin: Rhapsody in Blue; Piano Concerto in F; An American in Paris. Previn; Pittsburgh SO, Previn (d).

Handel: Messiah. Price, Schwarz, Burrows, Ester; Bavarian RSO, C. Davis (3, d).

Handel: Solomon. Watkinson, Argenta, Hendricks, Rogers, Jones, Rolfe-Johnson, Varcoe; Monteverdi Ch, English Baroque Soloists, Gardiner (3, d).

Haydn: Cello Concertos Nos. 1, 4. Webber; English CO, Webber (d).

Haydn: Mass No. 7 ("Paukenmesse"). Legge, Fassbaender, Ahn, Shirley-Quirk; Bavarian RSO, Bernstein (d).


Haydn: String Quartets, Nos. 21, 22. Orlendorf Qr (d).

Haydn: The Late Symphonies. St. Martin's Ac, Marriner (6).

Mozart: Piano Concertos: K 452, K. 491. Previn; Vienna PO, Previn (d).


Mozart: String Quartets, Nos. 21, 22. Orlendorf Qr (d).


Mozart: The Late Symphonies. St. Martin's Ac, Marriner (6).

Puccini: Tosca. Caballe, Carreras, Wixell, Ramey, de Palma; Royal Opera House Ch&O, C. Davis (2).

Rachmaninoff: Piano Concerto, Op. 18; Rhapsody on a Theme by Paganini. Kocsis; San Francisco S, De Waart (d).


Saint-Saëns: Symphony No. 3 ("Organ"). Widor: Tocata. Guillon; San Francisco S, De Waart (d).

Schubert: Lieder. Norman; Moll (d).

Schubert: Rosamunde (complete). Ameling; Gewandhaus O, Masur (d).


Shostakovich: Cello Concertos Nos. 1, 2. H. Schiff; Bavarian RSO, Shostakovich (d).

Telemann: Horn Concertos. Baumann; St. Martin's Ac, Brown (d).
Heifetz Plays Concertos of Tchaikovsky and Mendelssohn, and Other Works.
Munch conducts works of d'Indy, Franck, Saint-Saëns, Debussy, Boston SO, Munch.
Munch Conducts Works of Rachmaninoff. Boston SO, Munch.
Leontyne Price: Verdi Heroines.
Munch conducts works of d'Indy, Franck, Saint-Saëns, Debussy, Boston SO, Munch.
Munch Conducts Works of Rachmaninoff. Boston SO, Munch.
Leontyne Price: Verdi Heroines.
Seygma: The Intimate Guitar.
Leontyne Price: Verdi Heroines.
Haydn: Piano Concertos, Entremont; Vienna CO.
Mozart: Clarinet Quintets. Klokker, Eder Qr.
Mozart: Flute Concertos Nos. 1, 2; Andante. Kitscher, Eder.
Mozart: Clarinet Quintets. Kitscher, Eder.

THE FOLLOWING LISTINGS were inadvertently omitted from our September issue's preview of forthcoming LP and cassette recordings. We include them here, with apologies to the labels.

CENTREDISCS

Cassette Issues
Schubert: Symphony No. 3. Reiner; Chicago SO.
Auber: Symphony in C major. Bullock; London CO, Mehta.
Barber: Adagio for Strings. Stokowski; NBC Symphony.
Brahms: Symphonies Nos. 1, 2. Muti; Chicago SO.
Chopin: Sonatas. Perlman, Serkin; Columbia.
Dvorak: String Quartets, Opp. 96, 106. Schneirov; Moscow String Quartet.
Mendelssohn: Violin Concerto. Gidone, Sturrock; English CO, Somary.
Schoenberg: String Quartets. Barenboim, Friedberg, Rosemblatt, Rowland; London CO, Barenboim.
Schubert: Piano Quintet. Green, Bihari, Piatigorsky, Ehrlich, Neuwirth; Columbia.

ORION
Barbro Dahlin, piano: Three Generations of Scandinavian Composers. (Works by Larson, Eklund, Grahn.)
Juliana Osnick, piano: Ukrainian Piano Music (Works by Bortniansky, Reucky, Shitoharono, Rosenko).

CASSETTE ISSUES
Rorem: Lions. Treigle, New Orleans P.


TITANIC
Aumer, Blymen. Cellist: Works by Delig; Antoni and Others.
Titanic Records, Box 204, Somerville, Mass. 02144.

UNICORN-KANCHANA (distributed by Harmonia Mundi, U.S.A.)
Hoist: Rig Veda Hymns. Two Eastern Pictures. Royal College of Music Ch, Royal PO, Wilcocks.
Tomkin: Suites. Royal College of Music Ch, Royal PO, Wilcocks.

VANGUARD
Bocccherini: Works for Guitar and Strings. Schneider, Galimir, Tree, Soyer, Harrell, Daz.

SMITHSONIAN
Smithsonian Institution Press, 955 L’Enfant Plaza, Rm. 2100, Washington, D.C. 20560
Argerich Plays Tchaikovsky
Martha Argerich’s brilliant performance of Tchaikovsky’s Piano Concerto No. 1 with Charles Dutoit and the Royal Philharmonic is now coupled with her equally brilliant rendering of Prokofiev’s Piano Concerto No.3 with Claudio Abbado and the Berlin Philharmonic. These are analog recordings, dating from 1971 and 1967, respectively, but the sound is superb. Total playing time: 62:39. (Deutsche Grammophon 415 062-2.)

Solti/Chicago Prokofiev
Georg Solti and the Chicago Symphony can be heard on this spectacular Prokofiev CD containing the Classical Symphony as well as 17 excerpts from Romeo and Juliet. Both performances are extraordinary, and very well recorded. Total playing time: 59:57. (London 410 200-2.)

Canadian Brass
High, Bright, and Clear: The Glory of Baroque Brass is the title of an RCA collection that features the Canadian Brass playing works of Scheidt, Mouret, Bach, Purcell, Boyce, Reiche, and Clarke. Recorded in the Cathedral Church of St. James in Toronto, this disc wonderfully captures the rich, warm acoustics. Surely one of the finest CDs of its kind. Total playing time: 50:43. (RCA RCD 1-4575.)

Stravinsky Waltzes from Reiner
Fritz Reiner, one of the leading exponents of the music of Richard Strauss, was less effective with the music of Johann and Josef, as this RCA compilation of waltzes, with one polka thrown in for good measure, makes evident. These are somewhat square readings, but they are sumptuously recorded—analogue, of course, but with better sound than the majority of digital CDs currently on the market. Total playing time: 73:16. (RCA RCD 1-5405.)

Stravinsky from Dutoit/MSO
Considering the impact the Montreal Symphony and conductor Charles Dutoit have had on the audio world and the fact that they have made some truly outstanding recordings, I was surprised to find this one, of Stravinsky’s Le Sacre du printemps, disappointing (London 414 202-2). This is a very Gallic view of the score, and the orchestra has difficulty playing the notes. London’s engineering is rather veiled and unfocused; the label’s engineering is rather veiled, though it required three LPs. (Someone at Polygram is thinking!) Forget Herbert von Karajan’s Deutsche Grammophon recording, which has an inferior soprano and has been released on three CDs. Total playing time: 117:33. (London 414 214-2.)

Reiner’s “Pictures”
Fritz Reiner’s 1958 Chicago Symphony performance of Mussorgsky’s Pictures at an Exhibition has been a showpiece for a quarter century—and with good reason. The generous coupling with Reiner’s 1960 releases of Respighi’s Pines of Rome and Fountains of Rome on this CD is a somewhat dubious bonus, however. The transfer of these is atrocious, with an almost total lack of high frequencies and with a persistent low-frequency rumble. Too bad. Still, the CD is worth having just for Pictures. Total playing time: 69:28. (RCA RCD 1-5407.)

Vivaldi Lute Collection
Daniel Benko is lute soloist with the Franz Liszt Chamber Orchestra conducted by Janos Rоля in a collection of Vivaldi concertos and trios for lute and other instruments. Well played, but not so well recorded—very close up, without much space around the instruments. Total playing time: 46:04. (Hungaroton HCD 11978. Distributed by Qualiton Imports, 39-28 Crescent St., Long Island City, N.Y. 11101.)

“Zarathustra” from Solti
Georg Solti and the Chicago Symphony score high with this generous Richard Strauss coupling, offering not only Also Sprach Zarathustra, but Don Juan and Till Eulenspiegel as well. The latter two are extraordinary performances played with incredible virtuosity, the CD transfer quite superior to the LP counterpart. Zarathustra is fine once you get past the opening, with its oil-can timpani and electronic organ. Total playing time: 63:22. (London 414 043-2.)

Stravinsky Ballets by Muti
Riccardo Muti’s Angel recording of Stravinsky’s Petrouchka with the Philadelphia Orchestra offers a superb performance, indeed an orchestral tour de force. Issued on a single CD with a total playing time of only 33:24 (Angel CDC 47015), though, it is no bargain. Nor, for that matter, are other CDs that offer Petrouchka by itself. The Muti/Philadelphia account of
Stravinsky’s Le Sacre du Printemps is also available on a single CD (Angel CDC 47102), with a playing time of 34:30. Why didn’t an Angel issue both of them together on one CD? Wouldn’t it be better (and more profitable, perhaps) to release a well-filled CD that would please the consumer? If you don’t mind paying top dollar for this music, Muti’s performances can be recommended. Or else try the Claudio Abbado/London Symphony version of Petrouchka on Deutsche Grammophon. Total playing time: 57:06. (Teldec CDT 43109. Distributed by Intersound, Inc.)

Rossini Sonatas
Four of Rossini’s sonatas for strings (Nos. 1, 4, 5, and 6) are available on a Teldec CD featuring the Franz Listz Chamber Orchestra directed by Janos Rolla. Rossini’s bright, captivating music is well played, though with no outstanding sparkle. The sound is not as well defined and pleasant as on some earlier analog recordings by the same group. Total playing time: 49:43. (London 411 554-2.)

Marches from Solti et al.
London has gathered together a group of marches of one kind or another—including works by Elgar, Prokofiev, Berlioz, Meyerbeer, Mendelssohn, Tchaikovsky, and Respighi, with conductors Georg Solti, Walter Weller, Richard Bonynge, Christoph von Dohnanyi, Antal Dorati, and Charles Dutoit—that is not quite as generous a selection as one might think. These are mostly analog recordings, with variable sound quality, but the best are very good indeed. Total playing time: 34:22. (Deutsche Grammophon 400 042-2.)

Ormandy’s Bartok
Eugene Ormandy and the Philadelphia Orchestra—with their “new” sound (according to the vintage 1979 recording notes)—play Bartok’s Music for Strings, Percussion, and Celeste and the suite from The Miraculous Mandarin. The “new” sound was hardly an improvement over the best of their “old” recording sound, particularly that achieved by Columbia before the Philadelphia philharmonians switched to RCA years ago. The famed strings here are a touch steely, the dry acoustics of the recording site not providing desirable warmth. Fine performances, as one might expect. Total playing time: 50:10. (Angel CDC 41117.)

Michigan Band
The University of Michigan Symphony Band, directed by H. Robert Reynolds, can be heard here in a collection of generally familiar marches. Many collectors are doubtless looking for a CD full of rousing marches to show off their equipment. This isn’t it. Sonically it is one of the most disappointing CDs ever, with no high frequencies at all. Total playing time: 39:22. (Pro Arte CDD 007.)
If It Sounds Good, It Is Good

Craig Harris is the trombonist most suited to the intersection of tradition and experiment in today's jazz.

by Francis Davis

I have to be careful of what I say in interviews,” explains Craig Harris, “because I was once misinterpreted as saying that there were no interesting trombonists in the late '60s and early '70s, and that simply isn’t true. That’s an insult to many people I admire, including J.J. Johnson, Curtis Fuller, Jimmy Knepper, Grachan Moncur, and Roswell Rudd, not to mention the pioneers from the swing era who were still going strong. There were a lot of great trombonists; the problem was that, with the exception of Duke Ellington and Charles Mingus, nobody was spotlighting them—that’s how I should have put it. There were two or three in each of the big bands in the old days, although you hardly ever saw a trombonist in a quartet or quintet unless it was led by one. But these things move in cycles, and now you have people like Henry Threadgill, David Murray, Muhal Richard Abrams, George Russell, Anthony Braxton, Charlie Haden, Carla Bley, and Abdullah Ibrahimb (a.k.a. Dollar Brand) all forming larger groups and featuring the instrument again—which is why it seems like dozens of young trombonists like myself, George Lewis, Ray Anderson, Steve Turre, Joseph Bowie, Gary Valente, and Robin Eubanks are arriving on the scene all at once.”

Harris makes it sound as though his growing reputation is no more than the result of being in the right place at the right time. In reality, it is difficult to separate cause from effect; it could just as logically be argued that the current bumper crop of versatile young

Francis Davis is writing a book of profiles of contemporary jazz musicians, to be published by Oxford University Press.
trombonists encourages hand leaders to make room for the horn in their ensembles. However you choose to explain it, the old saw but is suddenly on the upswing, and Harris's sense of historical connections—together with his penchant for harmonic layerings, polyrhythmic long division, and rubato tone poems—makes him the trombonist most suited to a period in which traditionalism and experimentation regularly intersect and in which the most forward-looking jazz composers are also those most blessed with hindsight. He has been a dues-paying member of practically every important mid-to king-size band to convene in this decade, including the Henry Threadgill Sextet, the David Murray Octet and Big Band, Olu Dara's Okra Orchestra, Lester Bowie's Brass Fantasy, Jaki Byard's Apollo Stampers, Charlie Haden's New Liberation Music Orchestra, and short-lived levitahs led by Abrams, Cecil Taylor, Sam Rivers, and Ibrahim. Watching Harris cavort with any of these outfits (rather shy in person, he is quite the showboat once the music starts, given to fiery red jumpsuits, floor-length scarves, and pop-eyed expressions of exertion à la Louis Armstrong), it is easy to imagine him breathing into Harlem 50 years ago and throwing a scare into any of the triumvirate in the Duke Ellington Orchestra. As the mood seizes him, he can evoke Juan Tizol's cosmopolitan exotica, Lawrence Brown's romantic tenuescence, or Tricky Sam Nanton's gutbucket ralldry and winking sleight of hand. He delights in mouthing the off-color notes that two generations of tight-lipped bop trombonists almost succeeded in expunging from the horn's vocabulary over the audible objections of recalcitrant plunger specialists like Al Grey, latter-day tailgaters like Knepper and Bill Watrous, and avantgarde rebel rousers like Rudd. With their mouns, shrieks, horse laughs, war whoops, comic epithets, and good-natured raspberries, Harris's solos are like casebook illustrations of one of Ellington's favorite maxims: If it sounds good, it is good. "I wasn't around in the '20s and '30s, when jazz was still new," Harris says. "But from the records I've heard and the stories that older musicians have shared with me, I get the impression that back in that era, horn players prided themselves on developing their own unique sounds, whereas today everybody strives for the same sound. I started fooling around with the plunger in 1976, the year I graduated from college. The plunger had been out of fashion for a long time because trombonists coming after J.J. Johnson wanted that fast, clean sound he was famous for. But I wasn't trying to revive the past. I liked the contrast that mutes and plungers made possible. I was probably motivated by the same restlessness a tenor saxophonist feels when he reaches for a flute or a soprano sax. It gives him a wider range of colors to explore, and as a brass player, I wanted the same advantage.

Violin, trumpet, and drums—those are the instruments everyone wants to play in the sixth grade. Then the funny-looking instruments are passed out. I had long arms, so I got the trombone." As a teenager, Harris played in his high-school marching band and worked weekends in a local rhythm and blues cover band. He recalls, "Jazz was the furthest thing from my mind. The only jazz record my parents had was Bitches Brew, which I used to play all the time, I liked its psychedelic jacket. But I had no idea who Miles Davis was or even what instrument he played. I learned all the arrangements for my weekend gigs off of records, which I guess was good preparation for improvisation, in a way. Fred Wesley, the great trombonist with James Brown, was my favorite. But I was never really good enough to copy his solos note for note like I wanted to, which used to frustrate me."

After a year on a lacrosse scholarship at the State University of New York at Farmingdale—where he intended to major in social sciences—Harris transferred to the branch campus at Old Westbury, at the urging of bass guitarist Alonzo Gardner, a boyhood chum [whose band's eponymous Skip and the Exciting Illusions was reviewed here in July]. "Alonzo kept telling me what a fantastic Afro-American Music Department they had there, with musicians like [percussionist] Warren Smith and [saxophonists] Ken McIntyre and Pat Patrick. I studied composition, improvisation, and theory, and the three years I spent there were a series of revelations for me. I started listening to everything I could get my hands on... Taylor, John Coltrane's Om and Meditations. Johnson. My favorite cut by J.J. was "That Old Devil Moon," from The Eminent J.J. Johnson. His playing was so graceful—I

**SELECTED DISCOGRAPHY**

**CRAIG HARRIS**

Aboriginal Affairs. India Navigation IN 1060; 1983.

Black Bone. Soul Note SN 1055; 1984. (Distributed by Polygram Special Imports.)


With SUN RA

Cosmos. Inner City IC 1020; 1977.

Live at Montreux. Inner City IC 1039; 1976.

Unity. Horo HDP 19/20; 1978 (out of print).

Strange Celestial Road. Rounder 3005; 1980.

With ABDULLAH IbraHIM (DOLLAR BRAND)


With HENRY THREADGILL

When Was That? About Time AT 1004; 1982. (Distributed by New Music Distribution Service, 500 Broadway, New York, N.Y. 10012.)


With MUHAL RICHARD ABRAMS


Rejoicing with the Light. Black Saint BSR 0071; 1983.

With DAVID MURRAY

Murray's Steps. Black Saint BSR 0065; 1983 (reviewed 2/84). (Distributed by Polygram Special Imports.)

had never heard anything like it."

The summer following Harris's graduation, his former instructor Pat Patrick, who was at that time still a member of the Sun Ra Arkestra, invited him to sit in with Sun Ra "family." "People say that Ra must cast spells on his musicians to make them stay with him so long. But it's the music he writes that accounts for their loyalty—nothing more mysterious than that. We were constantly on the go, mostly in Europe, and it was a great learning experience for me. Sometimes none of his music would be written down, then the next piece would be notated in its entirety. Ra could draw from three decades' worth of music that he had written for that band. If he called a number I didn't know yet, he'd tell me to lay out, and that would be my lesson for the next afternoon. We'd practice the piece in his hotel room. Working with him, I also got free lessons in orchestration, leadership, and showmanship." Free jazz-history lessons, too, it turns out. "One series of concerts was a tribute to Fletcher Henderson. Ra made me learn parts off the pianist's original recordings from the '20s and '30s. A lot of that experience has stayed with me."

Like many contemporary musicians, Harris is something of an amateur ethnomusicologist, collecting instruments and field recordings from around the globe. A trip to Nigeria with Ra for FESTEC '77 piqued his interest in Pan-African culture. "Like most people, when I thought of African music, I thought of drums. But on that trip, I saw Yoruba vocal choirs and string orchestras from Algeria and Senegal with instruments I still haven't learned all the names of." Since 1980, the trombonist has doubled on the didjeridoo, a hollowed-out wooden tube four feet long and three inches in diameter, which he discovered on a mission to Australia with the expatriate South African pianist Ibrahim.

Lately, Harris has been turning up in some unexpected places. He played in the pit band that accompanied Lena Horne on Broadway in 1981–2, a job that he says taught him "the discipline of knowing that I had to hit all the notes exactly as they were written—no two ways about it." Last year, he made his film debut in Francis Ford Coppola's The Cotton Club, though if you blinked you probably missed him and all the other black New York musicians hired to impersonate Ellington's "Jungle" Orchestra. This summer he collaborated with the dance troupe Urban Bushwomen on a piece called Points.

Harris's best work as a sideman can be found on records by Ibrahim, Threadgill, Murray, and Abrams [see discography]. His first two dates as a leader were disappointing. The 1983 Aboriginal Affairs was an impressionistic portrait of the outback, ambitiously conceived but rather carelessly executed by a sextet that included Harris's former mentor, alto saxophonist McIntyre; last year's Black Bone was a blowing date that never came to life, despite what promised to be an exciting match-up between Harris and tenor saxophonist George Adams.

The new Tributes is the first record to capture Harris's full measure as a soloist, bandleader, and composer. The didjeridoo's eerie blues cry isn't enough to sustain interest over the length of the one track on which Harris forsakes trombone, but everything else is so fabulous, it's easy to overlook this minor self-indulgence. The choice items are a brace of pungent sweet-and-sour ballads that reveal Harris's unexpected flair for the reflective. And there is plenty of variety, with an elongated bop line, an African high life delivered in march formation (it could be titled "Henry Threadgill Meets Abdullah Ibrahim," in homage to these former employers), and an inspired bit of chanting tomfoolery dubbed "24 Days an Hour." The supporting cast is superb, with bassist Dave Holland and drummers Billy Higgins and Fadoundou Don Moye underlining the rhythmic acuity of Harris's writing and with Vincent Chancey's French horn adding just the right amount of vinegar to an all-brass front line that also includes trumpeter Junior Vega and cornetist Olu Dara.

The trombone's return to prominence is part of a larger brass renaissance in jazz: Tubas are throwing off the shackles of Dixieland, French horns are renouncing the artifice of Third Stream, and trumpets are re-embering how to growl. Harris would like to see the septet he assembled for Tributes become a permanent band, but since neither he nor any of his contemporaries works frequently enough to keep sidemen on salary, "working bands are a fantasy in this day and age." He explains, "That's why you see composition making a comeback, which is another example of how things move in cycles. The approach to improvisation hasn't really changed all that much in the last few years. The change has been in what surrounds it, the move away from conventional 12- and 32-bar forms to test new ideas—not that anything you can do is ever really new. Some of the Henderson material I played with Ra was pretty unusual in structure, even by today's standards. Now everything has to be written down, because bands don't play together enough to develop that telepathic communication. We try, but we have to start from scratch every time out."

Fortunately, Harris has been able to draw from a nucleus of musicians who have formed alliances in a number of transient bands. For example, he and Dara, who played alongside each other in the Threadgill Sextet for four years, now team up in Murray's Big Band as well as in Harris's own septet and Dara's Okra Orchestra. And Higgins is currently both Murray's drummer and Harris's. "Sure, we all know one another's moves. But it's just not the same as playing together all the time," complains the trombonist. As our afternoon together drew to a close, it became increasingly apparent that Harris would have to line up several substitutions for his septet's premiere engagements the following week; Dara, Vega, Holland, and Higgins all called to say they had prior commitments.

"We live in the era of the free agent, just like baseball," Harris sighs. "But just imagine what my band or any of the bands I've played in—David's, Muhais's, Threadgill's—would sound like if we could play together every night for six months, the way I once did on the tour of Europe with Sun Ra." It is indeed something to be imagined, for it seems unlikely to come to pass. Still, any band with Craig Harris as a member has quite a bit going for it right there.
X:
Ain't Love Grand.
Michael Wagener, prod. Elektra 60430-1.

THE KNITTERS:
Poor Little Critter on the Road.
Billy Zoom, Patrick McDonald, and John
Doe, prods. Slash 25310-1. (Distributed
by Warner Bros.)

EXENE CERVENKA/WANDA COLEMAN:
Twin Sisters.
Freeway FRWY 1057. (Distributed by Rhino.)

Rising above the volatile West Coast hard-
core scene in 1980 with their debut Los Ange-
les, X forged a new rockspace by crossing thrash's
fierce backbeat and urban outlawism with middle-American values and
white country blues. The tension this created
was spelled out in the lyrics of husband-and-
wife singer/songwriters John Doe and Ex-
ene Cervenka, who mined sharp images of
wrecked kitchens and soggy dawns out of the fights, flights, and cynicism that chal-
lenged their commitment. Their willingness
to risk intimacy with the audience made lis-
tening to an X record like overhearing next-
door-neighbor parties and brawls. Their pub-
lic love affair asked whether two headstrong
romantics could build a domesticity gov-
erned by independence and mutual respect,
as well as by the need for sex and security.

Ain't Love Grand is less biting than any
of X's four previous LPs, exhibiting a main-
stream departure some listeners will consid-
er maturation, others a self-conscious bid for
long-sought (and well-deserved) widespread
commercial success. The solidarity and the
tenderness that Doe and Cervenka express here are unusual and unusually ironic, since
the couple divorced last spring. They replace
the vivid clutter of orange nightgowns and
Florida postcards with melancholy cliches
such as "Watch the Sun Go Down" and "I'll
Stand Up for You." The strident single,"Burnin' House of Love;" is sparked by
Doe's passionate jealous-husband delivery
and Billy Zoom's sweet guitar-picking, but

Ain't Love Grand turns lackluster as often
as it stirs the emotions, even breaking into
mindless offense once on "My Soul Cries
Your Name," a catalog of Exene's body as re-
called by her ex.

True to pop tradition, the alternately
hokey and haunting melodies of these songs
complement and distract from the relative
banality of their lyrics. "Around My Heart,"
a recollection of the jaded pair's first meet-
ing at the "devil's workshop," is memorable
for its simultaneously somber and uplifting
chorus and simple, pensive electric-piano ac-
tcents. Exene, who, as critic Bart Bull de-
scribed, "has the same bony-fingered grasp
on pitch as the late Ernest Tubb," is not espe-
cially well suited for blues crooning, but "My
Goodness" resonates with a wry despair,
thanks to smooth pacing and austere echoes
and synth winds added by producer Michael
Wagener (best known for his work with the
German heavy metal band Accept). "Little
Honey," co-written by Doe and Blasters gui-
tarist Dave Alvin, is a sultry, driving rocker
spiced with cool walking-guitar rides. Ain't
Love Grand stands as a testament to Doe
and Cervenka's ability to part friends and con-
tinue their relationship outside of the
marital arena—even though the LP may be
an insight or two short of what loyal fans
have come to expect.

Following the release of 1983's More
Fun in the New World, rumors began sur-

facing about the Knitters, an acoustic group
in which Doe and Cervenka paid homage to folk's singing-family tradition. Richer in
spirit than in listening pleasure, Poor Little
Critter on the Road, the first recorded evi-
dence of the project (in which all of X's mem-
bers participate), is an uneven mix of novelty
cast-offs (like the rockabilly version of Ain't
Love Grand's "Love Shack"), hokey hoe-
downs (the title track), and sober reworkings
of traditional hymns ("Walking Cane") and
country classics ("Poor Old Heartsick Me").

Good folk relies heavily on captivating vo-
cals; the voices here (Exene's particularly)
spouting love in vain don't lack sincerity as
much as true grit. There might be a reflec-
tion of X's white-trash roots, and the Knit-
ters may expose the likes of Merle Haggard
to a new audience, but Poor Little Critter
fails to cast new light on the material or the
original band.

The most entertaining thing about Ex-
ene's side of the poetry record Twin Sisters
is the opening, in which an announcer pokes
fun at X, praises Exene for her long-stand-
ing support of L.A.'s spoken-word scene, and
suggests, "Don't be afraid to laugh; she did
when you came in." Devotees, especially po-
etry aficionados, may not find her disjointed,
adolescent free-associations funny. But
many will appreciate the introduction to
Wanda Coleman, ex-barmaid, welfare moth-
er, waitress, and medical transcriptionist who

HIGH FIDELITY
currently holds a Guggenheim fellowship. Her "nigger rhythm rhymes" celebrate, among other things, black street life and the travails of lone motherhood, L.A. freeways, unpaid bills, and run-ins with the law. (Her books, a better bet, are available from Black Sparrow Press, P.O. Box 3893, Santa Barbara, Calif. 93105.) Punk, folk, pop, poetry; X's auxiliaries deserve credit for finding lines that connect and divide these interests. Even if consumers find that the experiments don't quite pan out. Rosemary Pussantino

VARIOUS ARTISTS:
We Are the World.

Hot on the heels of Live Aid, the event-of-the-millenium-till-the-next-one, it seemed appropriate to take a second look at the event-of-the-millenium-till-that-one, USA for Africa's "We Are the World." So one recent evening at the Compassionate Digital Pleasuredome, we slipped into something comfortable and listened to the Compact Disc version of the We Are the World album.

Designated "The Historic Recording" on the cover, the familiar (but not unpleasantly so) six-month-old title chartbuster retains its modest charms and Life-magazine spectacle. It's a digitally-mixed analog recording, yet the massed chorus, which I'd hoped would be immediate and overwhelming, actually sounds rather distant and clinical on CD. The collage of individual lead-vocal fragments, however, definitely benefits from digital technology's enhanced presence as much as from the careful ministrations of producer-to-the-stars Quincy Jones. His all-night task, cited in the credits as "solo vocal choreography," remains a jigsaw delight: Dionne Warwick and Willie Nelson must be the all-time serendipitous duet combination, Tina Turner and Billy Joel the most unfortunate. Overall, though, lack of unpleasantness is still the song's salient characteristic—one it shares, not surprisingly, with ubiquitous co-writer Lionel Richie, the tirelessly bland and borderline inoffensive cheerleader-cum-ham who gives new dimensions to Easy Listening. Here, the listening is so easy that, as with a lot of yuppie media, it's nigh on impossible to distinguish promotion and advertising from editorial: the dread "advertorial" fungus.

(Continued on page 80)
(Continued from page 79)

"We Are the World" is, in fact, the most extravagant soft-drink commercial ever made. The concept alone far outstrips previous memorable achievements in the genre, such as the inane Arthra Franklin/Ray Charles radio spot of several years ago and the happy surprise of Aretha's recent TV track for the once-and-future "new" Coke. Perhaps she wasn't invited because Richied insisted on Pepsi-identification. I didn't see Bill Cosby there, either.

This collection also includes "nine new superstar songs," a very mixed bag that zig-zags drunkenly from the execrable through the acceptable to the sublime: from Chicago's creepily out-of-place (and aptly titled) "Good for Nothing" through Steve Perry's typically attractive but chronically contentless singing on "If Only for the Moment, Girl," or Prince's hypnotic but chronically crypto-scriptural "4 the Tears in Your Eyes," to Bruce Springsteen's live Jimmy Cliff cover, "Trapped," and Tina Turner's brilliantly performed "Total Control." The programming and remote-control functions of my CD player proved extremely helpful.

Except for a handful of Bruce or Prince completists, however, the overwhelming majority will have purchased the album, cassette, or Compact Disc to own the most expansive, most public-spirited jingle to date: "Do You Wanna Get Away," the first single, predictably radio-ready pop settings, the atmosphere on which pumps fire. The c&w-inspired "Why Can't We Pretend" is a promising idea needing more melodic contour and a varied chorus. Passion is lacking from this tune about a broken heart. Shannon's light-throated honey smacks sound best when squeezed snugly into muscular good-grooves, cleverly tinkered with.

ARThRA FRANKLin:
Who's Zoomin' Who?

Considering Aretha Franklin's wondrous, erratic career, there's no reason to believe that this new album will be remembered as a more substantial pleasure than lightweight treats like, say, Let Me In Your Life or Jump to It. With nothing left to prove, she seems to have staged a series of small comebacks with some good (though hardly definitive) songs, evidence that, yes, Aretha can perform a starry-eyed duet or that she can make it to the dance floor without stumbling or that her voice can still leap its customary octaves. Although Who's Zoomin' Who? tells us nothing new about her, its simple charms (a firecracker single in "Freeway of Love," the buoyant kiss-off of "Integrity") emanate from a great (or do I mean the greatest?) singer hell-bent on evading her often cumbersome myth. At least the Queen of Soul isn't straining to regain a lost empire. Aretha hasn't felt so at ease on a record in a long while, and her renewed humor has loosened up her singing: Her cries are freer, her phrasing less convoluted. The spoken in-
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The vocal cameo by Annie Lennox (on the funny solidarity chant of "Sisters Are Doin' It for Themselves") and Peter Wolf might seem the kind of celebrity sweepstakes we’ve seen pop up lots of records, but on Who's Zoomin' Who? these forays also stretch someone whose unstoppable voice has always commanded a solo microphone. And though the single-of-the-summer candidate "Freeway of Love" may be calculated right down to Clarence Clemmons's last sax honk, only a party pooper (or a highway patrolman) could resist its revelry. Lest you think all is pink cadillacs and tight pants, old fans should note that Aretha revamps Van McCoy’s "Sweet Bitter Love" with painstaking care and that, as usual, one of her own compositions, "Integrity," is a highlight—a rambling, defiant conversation that seems to drift out of a bedroom window at the end of a very long night.

Mark Moses

**BEAT RODEO:**
*Staying Out Late with Beat Rodeo.*

Don Dixon and Richard Gottehrer, prods. (L.R.S. 39027.)

Jeeze, what do you say about a band whose biggest controversy—make that only controversy—is their allegedly giving an old bass player the ejection seat because he was too ugly? But you don’t put down the Her-shey bar just because it’s without flair, and similarly you’d be wrong to get on the case of Staying Out Late with Beat Rodeo, the band’s first major-label release, just because they’re a little short in the élan department. At last: Somebody’s done something new with meat and potatoes.

With falling-in-love one boundary, and falling-out-of-love the other, it’s no surprise that this is a pop album. But make this one that goes pop! a la Marshall Crenshaw, and one that endows its themes of the heart with far more feeling than a poltroon like Sting.

**BOB DYLAN:**
*Empire Burlesque.*

Bob Dylan, prod Columbia FC 40110. (2)

Empire Burlesque is his first album to include printed lyrics, but for the first time in 22 years I don’t need to know exactly what Bob Dylan is saying. His arched-eyebrow generalities and rambling couplets reflected the assumptions of the ‘60s generation as they documented his own nonconformist experiments. Midcareer he muddled through a series of similarly you’d be wrong to get on the case of Staying Out Late with Beat Rodeo, the band’s first major-label release, just because they’re a little short in the élan department. At last: Somebody’s done something new with meat and potatoes.

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knows about. There’s a lot of twang in Almaas’s voice, and his singing could get too sweet if its lament didn’t sound so true. This is one bar band with stinging power.

The power of the songs is in their details, their not-quite-tricks. Take the ngsty opening of “Mimi”. Almaas alone with his guitar, followed by a lick half-copped from ’60s soul. Only then does the song proper commence. ("Mimi" is the one U.S. addition to this L.P., which was originally released last year in Germany, and it’s a considerable one. Too bad I.R.S. also ditched Almaas’s kinda-sorta tribute to Django Reinhardt.) Or take the hammer-and-anvil accompaniment to the guitar solo on “You’re the Only Reason,” or the sweet if its lament didn’t sound so true. This is one bar band with stinging power.

But now. None of these details would matter if Almaas didn’t throw off as much sleazy bologna than most of the straight-overrated ideal; I’d rather hear Don Henley’s "Who's Gonna Be Around." Along with 12 unfailing songs, it’s what makes Staying Out Late something worth losing a little sleep over.

RJ Smith
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section titles are sometimes direct ("Strength" features much overblowing, "Humor" has a repeated laughing figure, "Acceptance" is made up of soft, sad tones) and sometimes confusing (a section called "Belief" is in the same apocalyptic cast as "Strength," while the lighter touch of "Courage" resembles that of "Acceptance"). At any rate, though the structuring ploys that Braxton uses to organize his material may at times seem needlessly obscure, the range of the resulting music is rich and diverse. Composition 113 takes the listener through some startling and often beautiful soundscapes.

Richard C. Wolla
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right hopes. That they all mesh so well may be attributable not to the musicians, however, but to the conventional forms that Lowe draws upon. No, nothing is really too radical here: The rhythms are steady, the blues changes upfront and clear, the heads played in unison with orderly solos following. What sparks this session is the like-minded approach that most of the soloists take. The order of the day was the compact phrase, darting and dodging spurts of melody that moved against the rhythm section's even flow, causing an edgy but attractive tension.

But as good as the guests are, no one grabs me like Lowe. With his dry and vibratolos tone, bone-bare phrasing, and brutish refusal to comply with the beat, he just doesn't speak the same language as the average saxophonist. Lowe strips the blues to its essentials, and the experience can be intense.

Ehrlich is less startling, but just as invigorating. His choice of instruments and pungent attack bring Eric Dolphy to mind, but there is an important distinction: Where Dolphy was sweeping and all-but-obsessive, cramming as many notes and ideas as he could into each solo, Ehrlich delivers only the choicest of considered lines. Working simply with a flexible bass-and-drum team, he can move about freely, playing with tone and time, but like Lowe, he always resists any oligarchy. No, nothing is really too radical or stiff, but to the conventional forms that Lowe incorporates himself. The LP, though well received when it came out, seemed to me flawed by the quality of the sound and by the relative fussiness of Tyner's writing, particularly for strings; the ensemble is overly busy, but the violins are simply unnecessary.

I was curious to find out if the Compact Disc could clarify so many different voices. To some extent it does, but the band still sounds as if it's jammed onto a too-narrow stage, too close to the audience. (How do classical recordings get that sense of space in the strings?) Cobham's drums are everywhere: One tom-tom is positioned so far to the left that it's hard to believe it's part of the rest of his drum kit; elsewhere he's so spread out that the rest of the band seems to be playing in his lap. This disc improves substantially when the sound is thinnest—Tyner opening "Salvador de Samba" over Cobham's woodblocks, Cobham's duet with Carter on the same track, Laws's alto flute in bop, only Buddy DeFranco and Tony Scott kept the instrument alive.

With his two more recently arrived colleagues, Robinson has developed quite a repertoire, ranging from the wry humor of "Laurel and Hardy Meet the Three Stooges" and Morgenstern's "A Goodman's Hard to Find" (built around a recurring you-know-who riff) to Willie Nelson's "Always on My Mind" and more. Peter Drake's reworking of Oliver Nelson's "Stolen Moments" is especially rich and provocative. As an ensemble, the three clarinetists rely primarily on a low, woody-toned range, darkly mellow but edging toward solemn bird-cries. Collectively, their sound is almost familiar, but different enough to both lull and stimulate the ear. It is melodic, entertaining, accessible, and quite unlike anything else you've heard.

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John S. Wilson

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McCOY TYNER:
Fly with the Wind.

Part of Milestone's effort to present McCoy Tyner in new settings, the 1976 *Fly with the Wind* set up the pianist with a string section, a harpist, and an oboist; the rhythm section featured bassist Ron Carter and drummer Billy Cobham. Tyner shared the soloing with flutist Hubert Laws and did the arrangements himself. The LP, though well received when it came out, seemed to me flawed by the absence of Tyner's writing, particularly for strings; the ensemble is overly busy, but the violins are simply unnecessary.

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Michael Ullman
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