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MUSIC

CLASSICAL  Brave New Label.  A warm welcome for England's Virgin Classics—its first 15 releases herald a noteworthy newcomer to the recording scene. /DAVID HURWITZ  56

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For a long time now, we have opened the year with a special issue featuring ten test reports—nearly twice the usual number. And over the course of 1989 we will perform full laboratory evaluations on approximately 70 pieces of audio and video equipment.

Test reports are important for the obvious reason that they help you distinguish excellent products from the merely good, the undistinguished from the unacceptable. They also unravel the trade-offs made in every product among performance, features, and price. In short, they help you decide what to buy. But a good test report, especially of a component incorporating new technology, can do more than that: It can help you understand development in audio and video and what they really mean to you. Over time, careful reading of our reviews can give you a better perspective on what is important in equipment design and what isn't—which can help you out even when you're considering a piece of equipment we haven't had the opportunity to test.

Nonetheless, not everyone feels that we approach the task in the best way. The last decade has seen a great increase in the popularity of what is commonly known as "subjective testing": evaluation by means of the ear alone. The argument for this method usually is that the ear can discern subtleties of performance that defy quantification and that those of us who base our reviews in large part on instrument testing are led astray by the results, missing sonic distinctions between superfically similar electronic components that would become obvious if we would just shake off the blinders of technology.

This view is not merely wrong, but destructive as well. I say this not because I believe listening is irrelevant or unimportant. We listen to every audio component we review, and in the case of loudspeakers, most of our conclusions about product quality are based on what we hear, not on what we measure. Loudspeaker testing has not yet reached the stage where one can determine exactly how a product will sound just by looking at a set of numbers and curves. It can help confirm or explain what we hear, and it can tell us a great deal about things such as how loud a loudspeaker can be expected to play without excessive distortion, how much power it will require to deliver reasonable playback levels, and whether it will make any unusual demands on the amplifier used to drive it. But the measurements can't tell us everything we need to know.

On the other hand, laboratory testing (properly done) can tell us pretty much everything we need to know about the performance of a typical piece of electronics: an amplifier, a preamp, a tuner, or even a Compact Disc player. We know what the important characteristics are, how to measure them, and how to interpret the results. And we know what we know by virtue of carefully controlled listening tests that have demonstrated the adequacy of these test methods. We still listen, just in case something has slipped by on the bench. But we don't believe in magic, and we don't go on snipe hunts.

I said earlier, in effect, that abandoning laboratory testing is dangerous, for two reasons. One is that this would make it much harder to objectively define a component's performance envelope—things like how much power an amplifier can deliver into various loads, how effectively a tuner can pull in distant stations, and so forth. In many cases, this information is key to making a good buying decision. The other reason is that relying on the ear alone throws open the door to bias and charlatanism. Human beings are very suggestive creatures (as witness some of the stories in Ken Kantor's October 1988 article, "Audio Fetishes"). It is easy to believe that an 18-bit, eight-times resampling CD player must be better than a "lesser" design, until you see what a top-notch 16-bit, four-times player like the Revox B-226S reviewed in this issue can do. Specifications may not be sexy, but they tell an important tale. And they help keep manufacturers honest.
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HFI/89

LETTERS

AUDIO FETISHES AND OVERSAMPLING

My congratulations to Ken Kantor for "Audio Fetishes" [October 1988]. It was a superb, and much-needed, debunking of a phenomenon that can be described as a combination of placebo effect, Hawthorne Effect, first-on-the-block syndrome, and just plain gullibility.

Interestingly, there is a prime example in the same issue of the kind of advertisement that tends to perpetuate this phenomenon. It claims that in conventional speaker cables skin effect causes discontinuities in the electrical currents carried by the conductor — which leads in turn to distortion, poor imaging, and other ills. Well, I was a Senior Member of the Institute of Radio Engineers (before it became the IEEE), and I recommend looking up the subject in the texts of Glasgow or Terman. Skin effect increases continuously with rising frequency and is negligible at audio frequencies. (The 1930s-era remedy was to use Litzdraht, or "litz" wire, for RF circuits in which low losses were desirable. This wire was a woven or braided bundle of fine, individually insulated wires in which no single strand was permitted to remain inside the bundle for any appreciable length along the wire.)

Charles H. Chandler
Malden, Mass.

I just had to write and tell you how much I enjoyed Ken Kantor's "Audio Fetishes" article. My stomach still hurts from laughing! Quite often I've had friends over (including several audiophiles, some of whom do testing for product reviews) and played "Is it CD or tape?" on my modest stereo setup. More than 70 percent of the time, they can't tell or guess.

Anyway, further striking examples of how beliefs alter perception are contained in the same issue, in "Currents" on page 12 and in an ad on pages 33 and 34: the fetish that some have for tube amplifiers. Despite the measurements and statistics, there are those who insist that these amps somehow sound better than transistor models. Well, they can go right ahead and shell out $17,500 for a pair of Carver Silver Selens, while I enjoy my $799 Carver M-4.0t. And a new car. And maybe some new furniture....

Stu Chisolm
Roseville, Mich.

As owner for the last ten years of a small "mid-fi" audio store (specializing in Luxman and Allison) and classical-record shop, and as a music lover for the last 30 years, I don't know which I enjoyed most in your October issue: Gordon Brockhouse's interview of Bob Carver with the Van den Hul silver cables anecdote, Ken Kantor's "Audio Fetishes" article, or David Ranada's excellent exposé "The Overselling of Oversampling." In any case, I applaud you wholeheartedly and encourage you to keep up the great work.

Rick Oakley
Electric Gramophone
Sudbury, Mass.

I read with great interest David Ranada's article "The Overselling of Oversampling" [October 1988]. For a layman who had suspected the truth all along, it couldn't have been more enlightening or informative. With articles like that, you have a subscriber for life.

Gloria Shapiro
Little Neck, N.Y.

Here's to your October issue for saving me hundreds, if not thousands, of dollars. My equipment, of fairly high quality, is getting on in years (Phase Linear 400 power amplifier, Apt Holman preamp, AR 9 speakers, and a Technics SLP-3 CD player). For some time I've been reading about all the advantages of oversampling: two times, four times, and now eight times. My little CD player doesn't oversample at all and even has an analog filter. I was considering buying a new player to replace it.

Then I read your October issue. The incomparable David Ranada has done it again. He explains things so I can understand them and reminds me that I can't hear the difference between 0.1 and 0.01 percent distortion; as my mother used to say, "Good is good." After reading Mr. Ranada's "The Overselling of Oversampling," I sat in front of my system, played a good CD, and heard it sounding better than it had in months.

Thank you, David Ranada—and High Fidelity.

Edward Buxbaum
Brooklyn, N.Y.

I was amused by Ken Kantor's article "Audio Fetishes." His conclusion seems to reiterate the well-known fact that subtle psychological factors may influence the reception of recorded music. There is nothing new in this idea; after all, depending on the listener's mood, the same recording played on the same system may sound very different on different days. We don't hear much anymore about "listener fatigue," but that phenomenon suggests that cumulative effects may also be important (and may further suggest that the usual A/B comparisons used in evaluating...
Discuss effects that call perception, it would be preferable to capacitors than to glibly assume that a trivial fetish is involved?

I would like to turn the issue around. Rather than discussing technical effects that have little chance of influencing musical perception, it would be preferable to discuss effects that do influence that perception. In recent years, we have read in High Fidelity and similar publications that "all CD players sound the same." This may or may not be so, but what about factors that do influence CD sound? I recently was amazed to discover, through a local audio dealer, the beneficial effects of using CD stabilizers. The improvement in articulation, and the reduction in harshness noted on some discs, is immediately obvious. The improvements may be enough, finally, to push CD sound past that of good analog LPs. But from you, nary a peep on the subject.

Edward C. Olson
Urbana, Ill.

The point of "Audio Fetishes" was to explain the art of critically appraising claims made for audio products or techniques and why such evaluative skill is necessary. The examples given are ancillary to that goal.

However, we don't feel the capacitor example is a poor one. Yes, capacitors do cause distortion; virtually any component causes at least a tiny bit (David Hadaway of DB Systems has measured the distortion of various types of resistors). But it is small and normally irrelevant except in the context of the product in which the part is used—particularly where feedback or feed-forward is used to reduce distortion below the levels that would be generated by some of the constituent parts if operated without such a corrective mechanism. In other words, it doesn't matter if some part, on its own, produces even several percent distortion so long as the product in which it is used generates levels that are inaudibly low (say, less than 0.1 percent or so). We have not noticed that changing the type of capacitors used in a well-designed audio product makes any sonic difference.

Regarding CD players, we have never said that they all sound the same—only that they will sound the same if certain minimum conditions are met. Frequency-response errors occasionally result in small audible differences between players, and it is possible in some extreme cases that poor low-level linearity may cause audible distortion in very soft music passages. We have not commented on CD stabilizers because we have not found that they provide any benefit. Moreover, the explanation usually given for why they should help—error reduction—doesn't hold water.

One of the great benefits of the Compact Disc system is its ability to reproduce exactly what is on the master tape used to create it. If you routinely prefer the sound of LPs, it probably is because your phono cartridge or the RIAA de-emphasis network in your preamp is introducing an appealing coloration. In particular, many cartridges put a small dip in the mid-treble that softens the sound a little. (See "CD vs. LP: Little Things Matter," March 1984.—Ed.

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HDTV: The FCC Edict
When, last September, the Federal Communications Commission laid down guidelines for wide-screen high-definition television (HDTV), most experts thought that, while the FCC didn’t define a specific system as a U.S. standard, it did effectively rule out Japan’s MUSE, the leading contender. Only nine days later, Japan’s NHK, the government-owned broadcasting network that developed MUSE, came up with a system that met FCC requirements.

It’s been like that lately with HDTV, as members of Congress, broadcasters, the cable industry, and consumer-electronics manufacturers become increasingly aware of the problems of picking a system for use in the United States. To that end, the Telecommunications and Finance Subcommittee of the House of Representatives held hearings and saw demonstrations of rival systems from five would-be suppliers (NHK, Philips Laboratories, Faroudja Laboratories, the New York Institute of Technology, and Thomson/NBC/RCA/GE), with papers from Zenith and Del Rey Associates describing yet another two.

Subcommittee chairman Edward Markcy (D., Mass.) made it clear that he favors an “American-based, American-owned” system compatible with the nation’s 160 million existing TV receivers and 70 million VCRs—one that will maintain terrestrial broadcasting (as opposed to direct-satellite broadcasting or cablecasting) as the backbone of home video in North America. Michael Sherlock, technical vice president of NBC, representing French-based Thomson Electronics, and Mark Rochkind, president of the Dutch-owned Philips Laboratories, took exception to Markcy’s statement, pointing out that while their parent companies may not be American, their HDTV technology is, and that jobs resulting from the technology would be in the U.S. Neither Markcy nor the FCC gave any indication whatsoever in their statements that the quality of the technology or the resulting video images were a concern, leading some to believe that Congress and the FCC might well opt for an inferior system simply because it is American.

Speaking for the chairman, Senior Counsel for Mass Media Larry Irving said that the optimum technology for North America is very much a consideration, but that Congress must be concerned about jobs and the U.S. balance of trade, which could both be affected severely by whatever system is selected. He added that Congress is particularly concerned about over-the-air broadcasting because it is the only signal-delivery medium for which the government, through the FCC, has direct responsibility.

 Asked what would happen if an unregulated delivery system, such as videodisc, VCR, satellite, or cable were to introduce a system of its own first, Markcy replied that there are numerous examples of the power of Congress to delay implementation of competing systems until Congress has had time to act. Counsel Irving explained that Representative Markcy was not threatening to delay introduction of high-definition via nonbroadcast media until terrestrial-broadcast problems have been solved, but simply saying that Congress has the power to do so.

Besides NHK’s two NTSC-compatible systems (MUSE-6 and MUSE-9), the other new kid on the HDTV block is Zenith’s
innovative Spectrum Compatible system, which uses one TV channel for conventional NTSC broadcast and a second for low-powered transmission of a digitized, incompatible enhancement signal. According to Zenith, the lower power of the second-channel signal would permit it to be broadcast on the so-called “taboo” channels (such as Channel 3, and Channel 8 in metropolitan areas having local signals on Channels 2, 4, 7, and 9). This goes along with the FCC desire for broadcasters to negotiate among themselves matters of signal coverage and interference. Markey called the FCC suggestion “totally unprecedented” and a possible violation of the 1934 Communications Act. Zenith, incidentally, did not demonstrate a high-definition picture using its system. As of this writing, it exists only on paper.

**Optomechatronic News**

Minolta’s 60-year involvement with what it calls optomechatronics (a neologism short for optics, mechanics, and electronics, and reminiscent of Disney’s audioanimatronics) is said to be responsible for the features in its most advanced VHS-C camcorder, the Master Series-C 50 ($1,450). The unit’s principal claim to fame is its autofocusing system. Specifically designed for shooting action, the Multi-Dimensional Autofocus system allows continuous focusing from the front lens surface to infinity (when the 9-to-54mm, 6:1 zoom lens is set to its 9mm focal length). The through-the-lens, phase-detection autofocus system is based on technology used in Minolta Maxxum SLR cameras and can automatically compensate for the subject’s movement to the left or right. A dual-area autoexposure system monitors the 300,000-pixel CCD image sensor in two ways: the entire image area and only the central portion of that area. Exposure is continuously calculated and adjusted according to the ratio of these two light levels, with greater emphasis placed on the light level measured in the central area. The autoexposure system can be locked, allowing the videographer to keep the desired exposure setting for pans and zooms, regardless of changes in lighting conditions. For creative lighting control, the automatic white-balance system can also be locked.

Like most new camcorders models, the Series-C 50 comes packed with features. Among them are a 1/1000-second shutter speed, VHS HQ’s increased white-clip level and detail-enhancing circuits, a 10-sec-

**Small 8mm Camcorder**

Weighing in at 2.4 pounds without battery (2.87 pounds with), Canon’s E77 8mm camcorder has a 3/8-inch, 270,000-element CCD image sensor, a 6:1 macro-zoom lens, and a switchable 1/300-second shutter. Exposure control is via a center-weighted system similar to that used in Canon 35mm cameras. The infrared autofocus system enables the 14-element zoom lens to focus as close as 3.9 feet and down to 4 millimeters in macro mode.

Other features include a switchable time and date stamp, an infrared remote control, a 10-second self-timer (to let you get into the picture yourself), a backlight-compensation function, switchable automatic white balancing, and an interval timer (that switches the unit into record for 0.5 seconds in intervals of 10, 20, or 60 seconds). The supplied battery pack will drive the E77 for up to 4.5 minutes’ continuous recording.

For your $1,700 you get several other accessories, including an 8mm videocassette, AC-power and RF adapters, and a shoulder strap. Overall dimensions of the camcorder are 4½ by 11½ by 4½ inches. Canon U.S.A., Inc., 900 Canaan Plaza, Lake Success, N.Y. 11042.

(Continued on page 88)
Bad Tape Channel

When I record from my receiver, one of the meters on my cassette deck reads much lower than the other. Why does this happen and what can I do about it?

Stuart H. Lange
LaPlace, La.

You need to determine whether the fault is in the signal source, the recorder, or the shielded cables between them. First, interchange the left- and right-channel cables between the tape-out jacks of your receiver and your deck's input jacks at one end only. If the problem switches channels, either the signal source or one of the cables is defective. Substituting a different cable on the problem channel may cure the difficulty. If the imbalance does not switch channels, then the deck is at fault. If your deck has front-panel bias controls for tape type, try readjusting the bias according to your deck's instruction manual. You may find, as I did recently, that with proper bias adjustment the weak channel will regain its strength. Also, if you have them, don't be afraid to use your deck's balance or dual-channel level controls. That's what they are there for.

Power Supply Capacitance

Why is power-supply capacitance so important in stereo power amplifiers? Most manufacturers make a point of it in their advertising literature, and it is frequently mentioned in test reports. What relationship does power-supply capacitance have to better sound?

Roosevelt A. Anderson, Jr.
Las Vegas, Nev.

In my youth, amplifier power-supply capacitors were called "filter condensers." As far as I knew at the time, their sole job was somehow to eliminate 60-cycle AC ripple from the high-voltage DC provided by the rectifier tube. If the filter condensers were inadequate or defective, an overlay of hum was heard along with the music. In general, the best power-supply filter circuits used two capacitors (usually separated by an iron-core inductor) at the output of the rectifier tube. The British electronics magazines of the day referred to the capacitor at the output of the filter circuit as the "reservoir condenser"—which perhaps should have given me a clue that something more than simple filtration might be going on, as indeed there is.

Power is voltage times current, and, aside from the limitations of an amplifier's output transistors, the major factor determining its maximum output power at any instant are the voltage and current available from its power supply. As output demand rises, the current drawn from the power supply increases and, at a certain point, the voltage available will fall as the reservoir capacitors are depleted.

When an amplifier is driven into clipping, it usually means that the desired output-signal level exceeds the available power-supply voltage level.

The original (and still-used) brute-force method of maintaining an adequate power-supply voltage during high-wattage operation is to employ heavy-duty (meaning massive) power transformers. This minimizes the voltage drop within the transformer during large signal demands. However, today such an approach seems both overly expensive and inefficient, particularly considering some of the very clever alternate designs that have appeared in the last decade or so. The simplest output-enhancing approach is to use very large capacitors at the output of the power-supply filter. Under high-output current drain, these provide a reserve storage capacity by maintaining the supply-voltage level for a short time beyond the point when it would normally have fallen off. The dynamic headroom specification in the current amplifier-test standard is specifically intended to acknowledge the musical relevance of such a design approach.

Incidentally, some of today's power-supply/output circuits are capable of providing as much as 6 dB or so of dynamic headroom for periods extending well beyond the 20 milliseconds specified in the test standard. An amplifier needs more than just extra microfarads of power-supply capacitance to achieve short-term power capabilities exceeding four times its rated continuous power, but the figures provide a good idea of the direction of future amplifier design.

Nondirectional Sound

I've read that low-bass frequencies are nondirectional, yet when listening to my system I can localize the sound of a kettle drum as easily as the sound of a flute. Can you clarify this for me?

Marjorie Butterfield
Wilkes-Barre, Pa.

Bass frequencies below 200 Hz or so are nondirectional (meaning you can't tell where they are coming from), and a speaker reproducing low-frequency test tones is virtually impossible to localize by ear. However, when a kettle drum is struck, it produces high-frequency transients at the moment of impact that provide directional cues. Low-frequency tones produced by nonpercussive musical instruments usually have substantial harmonic content in the higher frequencies that the ear uses for localization.

The fact that low frequencies cannot be localized does not, however, provide justification for combining the low frequencies of two stereo channels and feeding the monized bass to a single subwoofer. Although the ear is not able to localize well at the low end, it is very sensitive to low-frequency interchannel phase effects. If you were to feed a
40-Hz sine wave through one channel and 42 Hz through the other, the sound over a two-subwoofer system would be quite different from that over a single-subwoofer setup.

**Budget Recording Studio**

I and a group of musician friends have been considering setting up a small recording studio to make demo tapes and to learn more about the recording process. Aside from our budget limitations, we realize we don’t know enough about the construction of such a studio to get started. Any suggestions?

Fred Pearl

The second edition of Everest and Shea’s excellent *How to Build a Small Budget Recording Studio from Scratch...* with 12 Tested Designs recently crossed my desk, and it seems tailor-made for your purposes. The 295-page paperback costs $14.95 and is available in technical bookstores or directly from the publisher: Tab Books, Inc., Blue Ridge Summit, Pa. 17294-0850; phone: 1-800-233-1128. If you contact Tab, it would also be a worth your while to ask for the company’s free catalog, since it lists a number of other titles that might relate to your project.

**Tape Restoration**

I’ve been an open-reel tape enthusiast for nearly 30 years. Now I’m finding that an occasional old tape develops a squeal and sort of chatters as it passes over the heads of my deck. I suspect that some of these old tapes weren’t of the best quality and that probably their lubricant is drying out. But since some of my favorite music is on them, is there anything I can do to make them playable again?

Charles W. Harman
Coral Gables, Fla.

Not only the lubricant (if any), but also the plasticizer used in your old tapes, may have dried out. At one time there were silicone-based commercial “head lubricants” available in audio shops, but even if you could find some, it probably wouldn’t help much. Instead of attempting to salvage the tapes themselves, why not try for a final squeal-free play that will allow you to dub the material onto modern tapes? Try sealing one of your squealing reels in a plastic bag or container with a damp sponge. Allow a day or so for the moisture to penetrate the tape. Upon removal, you might be able to get a squeal-free dub of your treasured “oldie” before the tape has a chance to dry out again.

You can also take a look at Bob Long’s two recent Tape Tracks columns on tape squeal (July and October 1988).

**System Lisp**

I have a high-power integrated amplifier feeding a pair of good-quality, floor-standing speakers. When I play my system at, say, 40 watts’ output, some deejays and vocalists sound as if they lisp. Any ideas as to what’s going wrong?

Robin Longworth
Flushing, N.Y.

Exaggerated sibilance, or harsh “ssss” sounds, can occur for any of a large number of reasons. Since you didn’t make it clear whether your problem occurs only with your tuner or with all program sources, the following list of possible causes (and some cures) covers most possibilities.

Lots of things can go wrong with L.P.s. Right at the beginning, a fault may occur somewhere in the record-masking or -pressing stages that will ultimately be heard as a sibilant high-frequency breakup. Sometimes, a cartridge with superior tracking ability can help, if the harshness arises from an inability to track high-velocity, high-frequency recorded material. Other possibilities: The stylus assembly in your phono cartridge may be worn or defective, you may be using too low a tracking force, there may be some fault in the record player’s tonearm, or the records you’re listening to are excessively worn.

Since you seem to have adequate power, your amplifier isn’t likely to be the source of your high-frequency problem except for possible overload of its phono input. A high-output cartridge playing a “hot” record can sound “spitty” or “raspy” when it is fed to a phono input circuit with inadequate dynamic range.

At the speaker end of things, a defective or peaky tweeter, excessive high-frequency boost from your amplifier, or mis-set tweeter-level controls can also cause a spitty quality in the sound. And, finally, with regard to your deejays: Your F.M. tuner may need alignment, the specific station you listen to may be overmodulating or otherwise putting out a distorted signal, or your reception may be troubled by multipath distortion. Try your records on a friend’s system and check his tuner to determine if his deejays are troubled by the same sort of speech impediment.

**Old Discs, New Cartridge**

If I play records that are in poor condition with a new, expensive cartridge, will they excessively wear the new stylus? I have heard that a bad record can damage a tip with a single play. Is that so?

Peter Simons
Corona, N.Y.

Not likely, unless the record has an excessive amount of highly abrasive grit in its grooves or obviously stylus-threatening defects: cracks, visible pits. In addition to causing an increase in noise, dirt will act as a compounding compound to cause faster wear on your new stylus than would normally occur. However, even if the old records reduce stylus life by a third (an extreme case), I see no reason not to play them — assuming that they are listenable — considering the relative cost of replacing your discs versus that of replacing your stylus. In any case, why not consider making tape copies of your old discs the next time you play them and then store these against the day when you may have to make additional copies.

Over the years, readers have reported (with amazement) that new cartridges have actually cleaned up the sound of their old discs. This sometimes happens because the new stylus may ride on a different portion of the record groove walls, and hence play less, or even none, of the damaged groove area. Today’s phonograph cartridges are also less likely to have peaks and resonances that emphasize noise and distortion.

We regret that the volume of mail is too great for us to answer all questions.

JANUARY 1989 15
The Brains.
Carver's new CT-Seven Remote Control Preamplifier/Tuner with Asymmetrical Charge Coupled FM Detection and Sonic Holography.*

The Brawn.
Your choice of four high power advanced Magnetic Field amplifier designs.
Power and finesse. They've always been important factors in a serious listening system. Now there's a new way to achieve both without over powering your budget.

Our new CT-Seven preamplifier/tuner combines a Sonic Holography* preamplifier and Asymmetrical Charge-Coupled FM Detection tuner into one convenient component.

It makes beautiful music with our whole line of Magnetic Field Power amplifiers. Including the new M-4.0t with the same transfer function and power output as Bob Carver's $7,500 00 ultra-otic Silver Seven monoblock amplifiers.

**The CT-Seven as an audiophile preamplifier:** Like Carver's fine separate preamplifiers, the CT-Seven is designed as a 'straight wire with gain,' capable of perfectly passing input signals without adding or subtracting any musical nuances.

It includes a meticulously engineered, ultra-low noise phono stage that flawlessly duplicates the theoretical RIAA equalization curve.

**The CT-Seven as a complete sound control center:** From the comfort of your listening chair you can choose from six sound sources including dual tape monitors, CD input and video/auxiliary inputs (suitable for video sound or D/A). Unlike most remote volume adjustments which use distortion-inducing electronics, the CT-Seven employs a motorized volume control for smooth control and smoother sound quality. Also included are useful 5-band tone controls, mono switch, loudness equalization and a studio-quality headphone amplifier.

**The CT-Seven as your passport to musical reality:** The CT's Sonic Holography Generator is capable of redefining your perception of music by recreating the sound stage and 3-dimensional spatial characteristics of a live performance. According to some of America's top reviewers, Sonic Holography* ... seems to open a curtain and reveal a deployment of musical forces extending behind, between and beyond the speakers. The effect strains credibility... And you can create it from any stereo record, tape CD or even FM broadcast. With your existing speakers. At the touch of a remote button.

**The CT-Seven as a high performance quartz synthesized FM tuner:** You've simply never heard FM until you've heard it through the Carver Asymmetrical Charge-Coupled FM Detector circuit. Multipath distortion, interference and distant station noise are dramatically reduced. Weak stations emerge into dramatic clarity. Yet stereo separation, space, depth, and ambiance were not only retained, but seemingly enhanced by the lack of background noise.

Choose 8 FM and 8 AM presets by remote control. Scan the broadcast band automatically or manually. With the CT-Seven's ACCD circuit on, you'll discover "new" stations which were previously unlistenable!

**The CT-Seven's power partners:** Only Carver gives you four high power amplifier choices from 140 watts to 375 watts per channel. Each is perfectly matched to the CT-Seven. And each uses Carver's cool-running Magnetic Field Technology which disperses with bulky power supplies and power-wasting external heat sinks... yet which is so rugged it's used in the world's largest touring professional sound systems.

Choose from the new "modestly-powered" M-0.5t (140 watts per channel RMS 20-20kHz both channels driven into 8 ohms with less than 0.1% THD), the M-1.0t (200 watts/ch. per channel RMS 20-20kHz both channels driven into 8 ohms with less than 0.15% THD), M-500t (250 watts per channel RMS 20-20kHz both channels driven into 8 ohms with less than 0.15% THD), or the new M-4.0t (375 watts per channel RMS 20-20kHz both channels driven into 8 ohms with less than 0.5% THD).

**Hear brains and brawn together at your Carver dealer.** Switch the CT-Seven and the most expensive tuner in the room to hear Asymmetrical Charge-Coupled FM Detection work its magic. Put on your favorite CD, press the CT-Seven's Sonic Holography* remote button and feel the sound room "disappear." Turn up the volume to live performance levels and discover the impact of true dynamic headroom.

And then get ready for another pleasant experience when you discover what a super value the CT-Seven and Carver power amplifiers are.
A Few Lines About IDTV

By David Ranada

Last October's convention of the Society of Motion Picture and Television Engineers (SMPTe) was abuzz with talk and demonstrations of high-definition television (HDTV), which is being touted as the next great leap forward into home video's radiant future. Practically absent, mainly because the SMPTE is a convention for video professionals, was mention of the next best thing to HDTV: improved-definition TV (IDTV). In two important ways, in fact, IDTV is superior to HDTV. First, since IDTV involves progress only in home-receiver technology, it does not have the political and technical mess now accompanying the setting of HDTV broadcast-signal standards (see "Currents," p. 12). Second, talk of IDTV is in the present tense—not in the future-indefinite, like that about HDTV. Indeed, High Fidelity has given one of its Product of the Year awards for 1988 to a couple of the first IDTV sets on the market (see last month's issue).

The Philips technical paper describing its award-winning IDTV system (published in IEEE Transactions on Consumer Electronics for August 1988) lists the picture improvements the system provides: "... elimination of [scan-line] crawl, elimination of line structure visibility, reduction of line flicker, improved vertical sharpness resolution, reduction of hanging dots, reduction of dot crawl, reduction of picture interference, and 'clean up' of weak signals." This is a remarkable list of achievements, but the most impressive aspect of it is that, on the basis of some personal, hands-on experience with the Philips monitors and a visit with Philips engineers in Knoxville, Tennessee, I've found that these claims are true.

IDTV technologies from any company (Philips is one of many working on improved-definition techniques) contain one essential characteristic: noninterlaced (progressive) scanning. An interlaced TV picture is what you are used to, since it has been around since the beginning of broadcast TV. In it, each video frame is split up into two video fields, each containing half the total number of scan lines. The two fields are interlaced, that is, one field is composed of all the odd-numbered scan lines, the other has the even-numbered ones. Interlacing a 525-line, \(\frac{1}{60}\) second picture into two 262.5-line, \(\frac{1}{60}\) second fields prevents flickering, at least for the overall picture.

But on horizontal lines and borders in an image, especially stationary images, interlacing causes the first four problems on Philips's list. Progressive scanning—in which the electron beam generating the picture "progresses" down the screen, displaying every scan line of a frame in sequence—eliminates all these problems. To keep the picture from flickering in this case, twice the number of scan lines are needed to display each \(\frac{1}{60}\) second field and these lines are scanned at twice the normal rate. A total of 262.5 extra lines in each field need to be interpolated in order for each field in a frame to have 525 lines. Philips, in its IDTV sets, uses a new process, the "median filter," for generating the extra scan lines. Each interpolated line is, at any instant, the median value of the scan line immediately above it, the line immediately below it, and the line from the previous field corresponding directly to the interpolated line. (A median value is simply the value in the middle, not the mean or average.)

Watching this system operate shows just what viewers have been missing all these years. The picture is much smoother, more filmlike, than normal (thanks also to the elimination of interference between luminance and chrominance signals that is also part of the Philips IDTV system). Separate scan lines, which are visible from up close on most TV sets, are not visible with IDTV. Sometimes, with parts of the image that are in motion diagonally, distinct scan lines show up as a sort of serrated-edge effect. But I was told that the median filter, at such locations, is providing a picture no worse than a conventional picture, and that the effect merely stood out because the rest of the picture was so smooth. Vertical resolution, too, seemed improved, though a standard wedge-shaped test chart cannot show the full extent of the improvement (because wedges contain diagonal signal components).

Philips is thinking of introducing its IDTV technology into its line of projection-TV sets. I can only hope that they do, on the strength of a display at the SMPTE convention show of just what such a melding of technologies can produce. Perhaps my critical faculties were numbed by my being surrounded by acres of top-quality professional video gear (a friend, Tom, who does work for a cable station in Michigan, said it was as if he had "died and gone to heaven"), but at the convention I came across the best projection monitor I have ever seen. It was a front-projection system made by Ikegamii, a professional video-equipment manufacturer noted for its world-class studio cameras and direct-view monitors.

The Ikegamii set consists of two units: the TPP-700 front-projection system and the DSC-1050 digital progressive-scan processor that is available as an "accessory." Performing noninterlaced signal conversion and luminance/chroma separation, among other things, the latter unit made the scan lines in the TPP-700's picture invisible, unlike any other front-projection set I've seen. This, together with an absence of the curious texture that "lenticular" rear-projection screens can impose on an image, made the Ikegamii picture the smoothest I have encountered from an NTSC-based large-screen system. Even excerpts from that omnipresent video-demo film *Top Gun* took on renewed visual interest. But such picture quality comes at considerable cost—at least compared to consumer-level Philips IDTV sets. Ikegamii's front-projection set and progressive-scan processor together retail for around $46,000. Where is Santa Claus when you need him?
Traditionally, FM has been the Happy Hunting Ground for casual recordists. Because of stringent technical regulations, overmodulation is to broadcasting what "failure to keep right" is to motoring: Whatever else they may do wrong—and I'll get to that shortly—broadcasters don't often overmodulate. So even an electromagnetic duffer can set recording levels easily. Given a knowledge of station practice, tuner behavior, recording-meter and level-control calibration, and tape headroom, perfect level settings are possible without having to monitor the signal at all.

Stations use two basic approaches to prevent overmodulation. The first is to apply some form of peak limiting, possibly in conjunction with some form of compression or equalization. The second is to reduce signal levels and leave greater headroom for the peaks. This is the purist approach, because it avoids falsification either of dynamics or frequency response, but it also can spell disaster for the broadcaster on a practical (read: "mone
tary") level, since it can limit the broadcaster's ability to generate revenue through commercials or public support.

It's a question of dynamic range—particularly in stereo, with its inherently higher noise level. The farther from the transmitter, the weaker the received signal and the higher the noise "floor." At some distance or other (depending on, among other things, the quality of the receiving equipment), listeners are going to get fed up with the noise and tune to other stations.

Compact Discs, with their 90-plus dB of dynamic range, are limiting our tolerance for a medium in which a 50-dB signal-to-noise ratio is the sensitivity reference standard. And this is happening at the very time when the cost of broadcasting is going up and public assistance for noncommercial stations is dwindling. Something has to give, and in many cases it has been sonic fidelity.

But it's not only transient peaks that threaten loads. Because of the pre-emphasis used in FM broadcasting, high frequencies can overload at least as readily as the midrange, depending on the spectral distribution in the original signal. This means that, if peak limiting alone is applied, the level at which limiting occurs can vary with the musical content. Some FM processors can "fake it" by keeping the problem highs low enough to prevent overmodulation while still maintaining sonic sizzle, but that still leaves the possibility of noise-plagued quiet passages. The way around this is, of course, upward compression: squashing the dynamics so that the quietest sounds are much louder than the noise, but without increasing the loudest sounds. Yet this removes the sonics still farther from their original state. Whither fidelity? Down the tubes, that's whither.

I've read allegations that public broadcasters are better in this respect than their commercial brethren, but I don't believe it. Admittedly, there are a few public (and commercial) stations that do an exceptional job of walk ing this particular tightrope, but the vast majority of stations are underfunded and understaffed. Many have only a single qualified engineer, and he or she can't do everything. No matter how many memos get posted about setting the knob on the compressor/limiter, the message simply isn't getting through to most of the on-air "personalities" (a term I use with some reservation here).

It doesn't take many hours of listening to most provincial and even some big-city stations to hear what I mean.

The usual symptom in live-concert broadcasts is audience noise that rapidly increases each time the music quiets down. Conversely, if the sound of a soloist suddenly becomes fainter when the full ensemble enters, or if a record click dips the volume of the music momentarily, you're probably being treated to the effects of a dynamic processor. Even if the stylus doesn't remain stuck in the groove while the deejay runs out for a beer, you know you're not dealing with a sonic class act.

The one hopeful note in all this is FMX. This system was developed at CBS Technology Center before its disbandment and now is represented by Broadcast Technology Partners of Greenwich, Conn. Simply put, an FMX-encoded broadcast includes a compressed difference-channel signal that, in decoder-equipped tuners, would keep received noise in stereo just about as low as that in mono. Stereo could then be received with a satisfactory dynamic range over a much wider area than is possible with current broadcasts. This would help solve the fiscal problem. The other side of the coin is that FMX reduces the need for fidelity-inhibiting signal processing. (Unfortunately, FMX could also be used simply to expand listening area, without a sonically beneficial removal of dynamic processing.)

FMX has also been hampered by wide (if not always accurate) reporting of difficulties in car reception using an earlier version of the technique. That problem has been solved to everyone's satisfaction, I'm told, though the gossip continues. Even more inhibiting is the fact that only one company—NAD, in the Model 4300 tuner—presently supplies equipment to receive FMX. But the system's backers say they expect this to change soon. By year's end, 100 stations are expected to be on the air with the technique (which leaves the sound unaltered with conventional receiving equipment), and chips now being developed will make the incorporation of FMX into tuners and receivers both simple and fairly inexpensive.

For the sake of FM listeners in general and home recordists in particular, I hope it all happens. I don't know how things are in your part of the world, but I find that I turn to FM as a serious signal source for high-quality listening or recording less and less often. It's getting to be like AM: just a utility that is best left in the background. That's not what FM was for.
"If I Had It To Do All Over Again... And I Do...This Is How I'd Do It."

"Henry Kloss. Member of the Audio Hall of Fame. Creator of Acoustic Research in the 1950's, KLH in the 1960's, and Advent in the 1970's—the dominant speakers of their decades—now brings you Ensemble: the best-sounding speaker system of this era"

**Ensemble. By Henry Kloss.**

Ensemble is the first of a new generation of stereo loudspeaker systems. It combines two bass units, two mid- to high-frequency satellite units and something you won't find in any hi-fi store on earth:

Your living room. Which now, because of Ensembles unique “double-dedicated” design, becomes a totally integrated part of the sound propagation process giving you perfectly balanced energy throughout the full ten octaves of music.

The first speaker system that doesn't cheat you out of either bass or space.

The fundamental octaves that so much of music is built on...

The almost subaudible but palpable sounds generated by the big pipes of the organ, the bottom of the acoustic or electric bass, the low notes of the synth...

The frequencies completely ignored in the so-called “mini-speakers” now in vogue...

Ensemble provides them. With two dedicated, acoustic-suspension loudspeakers whose jobs are solely to reproduce the bottom two octaves of musical significance.

At a compact 12”x21”x4.5”, they’re small enough to be placed where they’ll produce the best sound, minimizing “standing waves”, and without visually overpowering your room.

Beneath the couch, on top of the bookshelf, or under the potted plant...wherever the ear dictates, the eye won’t be offended.

**As for the other 8 octaves of music.**

The rest of the sound spectrum, from a nominal crossover of 140 Hz, is reproduced by a stereo pair of two-way satellite units. Each incorporates a low-frequency driver, crossing over at 1,000 Hz to a direct-radiator tweeter that goes beyond audibility.

They are small enough (4”x5”x8” high) to set the sound stage wherever you want it. Finished in scratch-proof, gunmetal grey Nextel, they will look good for a lifetime.

**What Henry Kloss tells his friends:**

Every time I came out with a new speaker at AR, KLH, or Advent, my friends would ask me, “Henry, is it worth the extra money for me to trade up?” And every time I would answer, “No, what you’ve already got is still good enough.”

But today, with the introduction of Ensemble, I tell them, “Perhaps now is the time to give your old speakers to the children!”

**Overcoming the fear of paying too little.**

This is more difficult than it may sound. Because the Ensemble System sells for an introductory price of only $499. And it can be jarring to accept the notion that a product actually outperforms others costing several times more.

The second thing you must overcome is the misdirected notion that you must go to a dealer showroom and listen to the speakers.

Because the fact is, the only way to appreciate the astonishing sound reproduction of this unconventional system is to audition it in your own room environment. Therefore, we sell direct to you, not to dealers.

By phone, by mail, or by our front door. With a straightforward 30-day money-back return policy.

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To our knowledge, no other hi-fi manufacturer invites you to call, talk about, and buy the system. (“Hello, Mr. Sorry?” Try that.) In fact, the easiest way to buy Ensemble is to call us with your credit card in hand, and speak with an expert who will be happy to walk you through everything you want to know about the system. For literature, for information—or to order—the toll-free number is 1-800-252-4434, Mon.-Thurs., 9-9, Fri. and Sat., 9-6 Eastern Time. (In Canada, 1-800-525-4434.) Fax # (617) 332-9229.

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Since JVC was not known to me as a company deeply involved with concert-hall acoustics, the XP-A1000 Digital Acoustics Processor struck me as an extremely pleasant surprise: In this case, lack of visibility in the field has not precluded a mastery of its principles. And while the modus operandi of the XP-A1000 does not seem as revolutionary as when the first of the digital hall simulators appeared, the JVC unit incorporates some fascinating new twists into the process and can create acoustical environments of startling realism.

The XP-A1000 is meant to generate a sound field around the listener that attempts to approach the complexity of that experienced in a "live" listening environment, such as a concert hall. To do this, the unit generates simulations of the reflections the sound undergoes in a hall and feeds the synthesized reflections through auxiliary speakers placed around the listening room. The user must add to an already-existing stereo system either two or, preferably, four extra speakers and the necessary amplification to drive them. Although the manual is so nonspecific on the crucial topic of speaker placement as not to mention it at all, a picture in the introductory pages shows the auxiliary front speakers placed to the outside of the main pair, approximately the same distance away from the listener. The rear auxiliary speakers are about the same distance away from the listener as the front speakers—which implies that the listener will end up sitting close to the middle of the room, if it is rectangular. This is the setup used for our listening tests. When the full six-speaker configuration is used, the main system speakers receive a signal unaffected by the XP-A1000 except for its overall-level control (which is a motorized multisec section potentiometer).

Connections are through standard pin jacks on the rear panel, but there are also provisions for sending a digital bit stream directly into the XP-A1000.
Twelve different basic hall-simulation modes are provided with the XP-A1000, and the characteristics of the early reflections for each environment—the reflections' directions, amplitudes, timings, and spectral alterations—are derived from measurements of actual concert halls and other music rooms. As listed in the manual, these include three shoebox-shaped concert halls, three "vines" halls (which I take to mean fan-shaped multipurpose auditoriums, an architectural genre noted for inferior acoustics), a chamber-music room, an opera house, a Gothic cathedral, a church "with a high ceiling," a jazz club, a disco, a "pavilion" (an octagonal room also with a high ceiling), a stadium, and a hard-floored gymnasium (which, I suppose, is perfect for squeaky-shoed stereo TV broadcasts of basketball games). Five settings suited for movie-soundtrack enhancement are provided: small, medium, large, and extra-large movie theaters (with seating capacities of 100, 500, 1,000, and 1,500, respectively), as well as a "standard" movie setting that simply delays any surrounding information while sending it to the rear speakers alone. There is no Dolby Surround decoding logic, nor is there the Dolby-B chip required for accurate decoding of Dolby Stereo movies.

The manual is very tight-tipped over precisely which original spaces are being simulated, even though each is supposed to be a "famous musical performance facility." The only one I can positively identify is that provided by the Symphony Hall I setting, which is described as reproducing "the sound field of a Dutch shoe-box type hall, built in 1888, with about 2,200 seats." This hall, undoubtedly the Concertgebouw in Amsterdam (one of the three best-sounding concert halls in the world), is further described as being "famous for its good sound effects." I have a feeling that several of the other venues incorporated into the XP-A1000 are similarly prestigious—the opera house is a traditional tiered-horse-shoe type and is "located in Austria," the "huge" Gothic cathedral is in West Germany—and it is unfortunate that JVC has not chosen to come forward with their identities. Perhaps, as has happened with similar stored-acoustics devices, permission to reveal the hall names was not granted.

A JVC white paper on the XP-A1000 rightly calls the early reflections it generates "the most important factor in determining the acoustic characteristics of the performance space." But the new processor handles early reflections in two subtly different from earlier devices. First of all, the early-reflection patterns stored in the XP-A1000 take into account the distribution of the performing forces. As the white paper points out, the early-reflection pattern of a hall depends on where a sound source is located on the stage, likewise as the sound source varies between a solo instrument and a large orchestra. A control on the front panel (duplicated on the supplied remote handset, as are nearly all the other functions) switches the early-reflection patterns between those suitable for a "point" source (such as a solo instrument) and a "spread" source (like an ensemble or orchestra). It has a discernible effect on the ambiance.

The second innovation concerning the generation of early reflections actually takes into account the strong early reflections created by the listening room. The LISTENING ROOM button on the remote, when pushed, provides access to two variable settings, one of which (ROOM SIZE) controls the synthesized early reflections. The three settings of listening-room size (floor area of less than 10 square meters, between 10 and 16 square meters, or greater than 16 square meters) control the loudness of the XP-A1000's early reflections compared to the direct, or main-loudspeaker, sound. If, depending on the selected listening-room size, the early reflections of the room substantially overlap those of the hall being simulated, the generated hall reflections are reduced in level. This is an excellent idea, but most of the settings are for halls substantially larger than a typical home listening room, and in practice the necessary additional processing is minimal.

In addition to critical early reflections, and in contrast with some other units on the market, the XP-A1000 also generates reverberation for each of its settings. Reverberation can be defined as very closely spaced (temporally) reflections that start some time after the main sound (usually several tens of milliseconds) and that come from no particular direction (they are "diffuse"). Reverb also receives some unique treatment in the XP-A1000, the most important as-

### Test Reports

All measurements are for the Movie Theater 5 mode.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Main Channels</th>
<th>Surround Channels</th>
<th>Maximum Input Level (at 1 kHz)</th>
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<td>6.1 volts</td>
<td>4.9 volts</td>
<td>6.5 volts</td>
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<td>Maximum Input Level (at 1 kHz)</td>
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<td>SN Ratio (re 0.5 volt; A-weighted)</td>
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<td>+0.0 dB, 12 Hz to 42 kHz</td>
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<tr>
<td>+0.0 dB, 10 Hz to 160 kHz</td>
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<tr>
<td>Output Impedance</td>
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either via an analog pin-jack link or through a fiber-optic connector. The processor's internal analog-to-digital and digital-to-analog conversions take place only on the surround signals. It cannot substitute for your CD player's own digital-to-analog converters. So even if you take advantage of the XP-A1000's direct digital inputs to bypass an A/D conversion cycle on the surround channels, you must still supply the unit's main inputs with an analog signal.

### Technical Specifications

- **Input Impedance:** 22 kΩ
- **Output Impedance:** 660 ohms

The processor's internal analog-to-digital and digital-to-analog conversions take place only on the surround signals. It cannot substitute for your CD player's own digital-to-analog converters. So even if you take advantage of the XP-A1000's direct digital inputs to bypass an A/D conversion cycle on the surround channels, you must still supply the unit's main inputs with an analog signal.

- **Output at Clipping (at 1 kHz):**
  - Main channels: 6.1 volts
  - Surround channels: 4.9 volts
- **Maximum Input Level (at 1 kHz):**
  - 6.5 volts
- **SN Ratio (re 0.5 volt; A-weighted):**
  - Main channels: 103 dB
  - Surround channels: 97 dB
- **Distortion (THD; 20 Hz to 20 kHz; 2-volt input):**
  - <0.01%
- **Frequency Response (main channels):**
  - +0.0 dB, 12 Hz to 42 kHz
  - +0.0 dB, 10 Hz to 160 kHz
- **Channel Separation (main channels, at 1 kHz):**
  - 90 1/2 dB
- **Input Impedance:**
  - 47 kΩ
- **Output Impedance:**
  - 660 ohms
pect of which is embodied in the SOURCE REVERB control. If the reverberation recorded into the music lasts longer than the reverb time of the selected sound field—and this depends on the setting of SOURCE REVERB (which is variable in 0.1-second increments between zero and five seconds)—the processor does not add reverberation. For example, if the recorded music itself has a one-second reverb time, and the chosen sound field has a three-second reverb time, then the XP-A1000 will let the source reverberation come through alone for one second before adding synthesized reverb. The LISTENING ROOM REVERB control acts in a similar fashion, but it has only three settings (0.2, 0.4, and 0.6 seconds) and its effects were not obvious in our New York listening room.

Compared to the effects of the various listening-room settings, SOURCE REVERB can have a much more audible influence on the resulting sound quality and realism. Setting this control very low (a short source reverb time) brings the synthesized reverb in at quite a high level—sometimes too high. But a high enough setting of SOURCE REVERB will completely turn off the synthesized reverb, leaving only the early reflections. There is no indicator showing when this happens, and the setting of SOURCE REVERB at which the synthesized reverb shuts off varies with each hall setting. If you want to listen only to XP-A1000's early reflections, therefore, set SOURCE REVERB at its maximum of five seconds.

Each of the 20 preprogrammed modes has a number of parameters that can be varied at will, with the results memorized in a register of user settings. For all the hall modes (that is, all modes except the five movie-theater settings), SOURCE REVERB in effect changes the temporal spacing between the early reflections. LIVENESS raises and lowers the level of early reflections compared to the direct sound. REVERB LEVEL controls the initial overall level of the added reverberation. HIGH-FREQUENCY REVERB controls the reverb time of the high frequencies compared to the mid-frequencies, and a low-pass filter controls the degree of high-frequency attenuation applied to the reflections and reverb. The first four movie-theater settings add a fifth parameter: a delay to the rear channels (variable between 15 and 30 milliseconds) of the L-R difference-signal information. Movie Theater 5 has only this rear delay as a variable parameter.

The few measurements that Diversified Science Laboratories was able to make on the XP-A1000—mainly input and output characteristics—show performance that ranges from acceptable (impedance, gain, clipping level) to excellent (noise, main-channel response). But a device such as the XP-A1000 is best evaluated by listening, and when that is done, the JVC processor emerges as, at least, the sonic equal of other stored-acoustics devices, and often it is clearly superior.

I cannot pinpoint the specific features of the XP-A1000 that materially contribute to its superb sound quality. Surely its control of the interaction of the synthesized reflections and reverb with the listening-room acoustics and the recorded music cannot be ruled out as contributing to the natural and realistic ambience it adds to acoustic music (as opposed to that played on electronic musical instruments). Listened in isolation—with the main speakers off—the reverb the XP-A1000 adds can sometimes sound colored, and with long reverb-time settings the ambience takes on a slowly pulsing quality that is distinctly unnatural. But flip the main channels back on and that sense disappears, masked by the primary sound, and only a smooth, evenly distributed, reverberant decay remains. The noise level of the ambience channels is extremely low.

The XP-A1000 has not solved an interesting problem that seems to be inherent to its product category. It was difficult to find unmodified modes suitable for enhancement of pop music and other genres the sonic intention of which is not to sound realistic but only exciting and vivid. I don't know what discs the JVC engineers visited, but the "Disco" setting is far tamper than the best disco sound that New York has to offer. I had greater success enhancing disco and other pop music using various modifications of the Movie Theater 1 mode, whose short-delayed early reflections provided vivid-
Reports

The various movie-theater settings worked as advertised and were not as obviously theaterlike as similar settings on competing models. This, however, is an advantage, since I have always had reservations about trying to make the playback of a soundtrack seem as if it were being heard in a real movie theater. Soundtrack mixdown is typically not performed in a theater but in a very "dead" control room; the adjustments made by the mixdown engineer reflect that fact, and playback should be as clear, un-reverberated, and as control-room-like as possible. Many are the times I have experienced the masking or obscuration of crucial lines of film dialogue by the reflections and reverberations of a real theater, and I don't want this effect at home. For those interested in a rudimentary form of Dolby Surround, the Movie Theater 5 mode will suffice, but since there is no attempt to perform true Dolby Surround decoding, if you value this above all other functions, you'll find better performance elsewhere.

My experience reviewing digital ambience processors (the A1000 is the fourth unit of its kind I've investigated) has led me to the conclusion that sound quality, at this level of product sophistication, is only half the story. Of equal significance is what is variously called industrial design, human engineering, or ergonomics: whether the controls provided are actually the ones necessary or desirable, and how the device reacts to your attempts to use those facilities. The XP-A1000 has some drawbacks in this area, starting with the instruction manual, which can be thought of mainly as a cookbook guide with a few terse comments on what each button does (barely a word on why that button should be pressed or what happens internally when it is). JVC has told me that the manual will soon be either completely revised or supplemented with an additional publication in order to clarify some puzzling aspects of the unit's operating principles.

Like some other reverb devices, the XP-A1000 quite incomprehensibly provides no output-level trim controls. This, then, requires that your auxiliary ampli- fication have volume controls. The XP-A1000 has no internal signal generator to aid in setting relative levels between main and auxiliary speakers or between front and rear auxiliary speakers. Furthermore, it is almost impossible to set front/rear balance when the device is used in its four-speaker mode (in which the front auxiliary signals are fed through the main system speakers). This is because muting the main speakers and listening only to the ambience—which is helpful in setting relative levels during six-channel operation—also shuts off the front ambience signals during four-channel operation. You are left with only the rear speakers on—a condition useless for level balancing.

I also found the separate level and muting controls for front and rear ambiance speakers unwieldy. I would have preferred a front/rear balance adjustment and the ability to mute all the ambiance speakers simultaneously for an instantaneous comparison of normal and ambiance-enhanced sound. The most annoying aspect of the XP-A1000 is the "human interface" of its muting of the ambiance outputs for one second every time a setting is changed. This probably is to give the processing a chance to "change gears" without generating strange noises (which it manages to do on occasion, anyway), but it precludes ultracritical comparison of modes and settings because even so short a pause exceeds the ear's auditory memory capacity.

These aspects of the XP-A1000 irked me only in comparison to other ambiance devices, where these problems don't occur, at least in this combination. But, as happened to me, you'll probably learn to live with these characteristics, however irritating, because the unit more than makes up for them with its sound quality. While I didn't have every other reverb/ambience generator on hand for comparison, the one I did compare the XP-A1000 to nearly always came out second when it came to enhancing acoustic music with a natural and realistic ambience. The preprogrammed modes are cannily chosen so that it is nearly always possible to obtain some enhancement simply by choosing one of them, without having to modify any of its characteristics. The XP-A1000 can make practically any music sound better, but for classical music especially, there is no surer path to sonic bliss.

David Ranada
Of any tuner we’ve tested in years, the ST-G70 Technics contains, hands down, the most comprehensive inventory of features designed to help in receiving “problem” signals. If you like going after distant esoterica, if you must struggle with complex urban multipath, if you like tuning in a weak station that usually is swamped by its neighbors—or if you simply live in a fringe area where weak stations crowd the dial—this is a model you’ll want to check out. At the same time, its special features don’t intrude on routine use:

They are there when you need them, but they automatically do what you would want them to do even if you’re not faced by the sort of problems they’re designed to solve.

To the best of my recollection, the G70 is the first model we’ve tested in which you have independent, manual control over both RF (radio frequency) and IF (intermediate frequency) bandwidths. The narrower-bandwidth modes of both RF and IF exclude extraneous sources of interference but do so at some cost in inherent distortion and related characteristics. Limiting the RF bandwidth can reduce problems from over-strong stations that appear at more than one location on the dial and interfere with the station that you want to receive. Limiting the IF bandwidth can get rid of troublesome sidebands of the adjacent or alternate channels. A clean, strong signal thus is best reproduced with wide RF and IF bandwidths, and these modes are the default (called “normal” mode) here.

A graphic indicator on the left side of the display panel shows the passband in use. The IF filter reacts quickly and automatically as you tune manually across the dial with the large tuning knob, opening to the wide mode whenever there’s a reasonably strong signal with no intruding neighbor. No matter which choice the circuitry makes, however, you can reverse it by pressing the front-pan-

Dimensions: 17 by 3¼ inches (front), 10¼ inches deep plus clearance for controls and connections.
Price: $450.
Warranty: "Limited," one year parts and labor.
Manufacturer: Matsushita Electric Industrial Co., Ltd., Japan.
ably won’t be able to receive more than 20 FM stations, and this range will be blank.

The presets can be programmed manually, as well. This is preferable if you have an antenna rotator, because the mode settings (of RF and IF bandwidths, and mono/stereo) are memorized along with the frequency and will therefore be adjusted individually after you have optimized antenna orientation. Manual tuning proceeds by half-channels (0.1 MHz) on FM and full channels (10 kHz) on AM. The rotary control gives you the feeling of analog tuning—right down to the way the quartz phase-lock circuit, acting like an old-fashioned AFC (automatic frequency control), grabs a station and drags it along. In addition to the keypad and manual tuning, there is automatic scan (up or down, depending on the direction of knob rotation), lock (which prevents accidental detuning), and up/down stepping through the presets.

If you do have an antenna rotator, you’ll appreciate the numerical signal-strength readout. For all signal strengths up to an actual 27 dBf, it reads “10 dB.” From there, it advances in 2-dB increments. Diversified Science Laboratories tracked it to 95 dBf—a very strong signal indeed—and found that over this range it reads between 12 and 16 dB below the true dBf value. Having more than 35 steps in the display’s range approximates the behavior of an analog meter, making this feature vastly more useful than the usual LED indicators (which seldom offer more than five steps). The manual (which is well organized but not very clearly written on many points) gives no clue what these “dB” values refer to; but the scan sensitivity is switchable from the normal “30 dB” (43 dBf, as measured by DSL) to 40 and 50 dB (about 55 and 64 dBf, respectively, judging from DSL’s findings). These settings affect both the thresholds for up/down scan tuning and the automatic preset programming mode.

The last settings of the tuner are retained in memory, even if the power cord is unplugged, for about one week, permitting setup for timed recording. On the back panel there also is a “control input” pin jack that, the manual says, is to be used in conjunction with a timer—presumably one that we were told would be a “possible forthcoming Technics product”—though the usual power-line timer hookup should work equally well.

The antenna connections include lightweight binding posts: one for an AM wire, a pair for 300-ohm FM twinlead, and a ground with a clamp for the shield of 75-ohm FM coaxial cable, the “hot” conductor of which goes to the nearer 300-ohm binding post. A special socket nearby accepts the plug on a supplied AM loop antenna. You can mount the loop either on the back panel itself or on any surface that will accept the supplied woodscrews.

The lab measured the tuner with both RF and IF switched either to the normal wideband setting or both in the narrow mode. Setting only one of the bandwidths to the narrow mode probably would net performance figures somewhere between the two extremes, though some characteristics measure essentially the same both ways. Frequency response, for instance, is a precise match, and channel separation is very similar. Both are, in fact, excellent.

The distortion figures are good, too. As you would expect, they’re distinctly better by about 50 percent in the wideband mode, but the alternative is perfectly acceptable. In none of these respects would I expect to hear a difference in ac-
"You might use your car for pleasure, but insuring it is a business decision."

RAYMOND BURR

Here's why... With the cost of auto insurance, particularly with two or more cars, you must make informed decisions. The right insurance company with the right coverages, with the proper limits at appropriate rates. Those are business decisions that require the advice and counsel of an Independent Insurance Agent. We represent several fine companies...not just one...so you choose the right policy at the right price, with the right service. An Independent Agent — always a good business decision.

INDEPENDENT INSURANCE AGENTS OF AMERICA
...and the insurance companies they represent

INCORPORATED
Ortofon 540 Phono Cartridge

Ortofon is the only company I can think of that has been among the top purveyors of all three major types of phono cartridge: moving-coil, moving-iron, and moving-magnet. The moving-magnet 500 Series is based on the least exotic of these three principles, but it’s not stretching a point to say that it delivers anything you might reasonably want from any of them.

According to the company, a new slitted pole pin is the most important of the innovations that computer-aided design has provided to the series. Another is a lock controlled by the position of the stylus guard and designed to prevent any unwanted vibration of the stylus assembly while it’s playing a record and to allow for easy replacement of the stylus assembly when the time comes. The differences between the six models in the series stem from the design of their styli and the sort of arm they fit.

The least expensive model, the 520, has a traditional elliptical diamond stylus. Next comes the 530 with a Fine Line stylus that is similar in shape but offers a smaller scanning radius to resolve shorter wavelengths—that is, for finer high-frequency resolution, particularly toward the center of an LP. The 540 tested here is fitted with a Fritz Geiger Type II tip that more closely approximates the geometry of a cutting stylus. (Exact replication of the cutting stylus shape would cause the tip to gouge into the groove walls. So, while an exact match is desirable from the viewpoint of theoretical geometry, it would be disastrous from that of disc longevity.) The primary difference between styli is in their tracking specs, which improve progressively up the line. The three models with no suffix are the normal designs for conventional arms. Those with a “P” suffix are P-Mount models that directly plug into mating P-Mount arms. The specs are identical for the two versions of each model except that total weight of the P...
Are you hearing only 4/5ths of Beethoven's Fifth?

On data pits one millionth of an inch wide, a compact disc stores all the music information that's vital for accurate reproduction of a recording. Due to disc speed fluctuations, and internal and external vibrations, however, a CD player's laser is not able to read every pit.

Which means you're prevented from experiencing all the power, impact, and dynamics of the original performance.

Take the "Tap Test".
To demonstrate how susceptible your CDs are to vibration, take the Tap Test. Balance the CD with your finger through the center hole. Hold the disc close to your ear and tap it. You'll hear a sustained "ringing" sound and feel vibrations with your finger.

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Mounted on the outer edge of a compact disc, CD SoundRings by Monster Cable® provide rotational stability and reduced disc vibration while it is playing.

Based on a simple "gyro-stabilizer" principle (much like twirling a rock at the end of a string), CD SoundRings' carefully measured weight reduces laser to disc mistracking caused by disc rotation speed irregularities and vibrations from the player's motor, a poorly aligned spindle—even your speakers.

With the laser now able to read audio bits more accurately, digital data acquisition reaches full potential.

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With a damped and precisely spinning disc, you'll discover new depth and presence in a recording. With greater overall clarity. Extended frequency response. Smoother highs and deeper lows.

Best of all, you'll experience more natural and realistic music production. The gentle plucking of violin strings. A rock solid bass. A feeling of airiness in the vocals. And because there's greater soundstage and imaging, you'll be able to pick out individual instruments—bringing you closer than ever to the original performance.

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It's a fact. Compact disc performance at its height is unprecedented in its power, range and impact.

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*CA & WA add appropriate sales tax.

Berkeley SoundLab
2515 Benvenue Suite 402, Berkeley, CA 94704
versions is one gram heavier (to match the FP-Mount standard weight).

Ortofon specifies no recommended loading for the 500 Series. For bench testing, Diversified Science Laboratories used 47,000 ohms shunted by 250 picofarads, and I came pretty close to that (fairly typical) loading for the listening tests. We both used Ortofon’s recommended 1.5 grams of tracking force—the top of the recommended range, which runs from 1.0 to 1.5 grams.

The measurements from DSL show that the 540 did indeed successfully track all of the high-velocity bands on the lab’s test records. Distortion was notably low by pickup-cartridge norms. With the JVC test disc that has been our measurement standard for some years, frequency response is extremely smooth and quite flat, rising very gradually to about 10 kHz and then gently falling off. Channel separation remains excellent right up to 20 kHz. Ortofon’s own curves demonstrating the quality of the slit pole pin shows a rise in response at the stylus-tip resonance near 20 kHz. I suspect that the 540’s tip resonance actually is beyond 20 kHz and that the rolloff is near that frequency is simply a response sag in preparation (so to speak) for the peak to come.

Regardless of what is occurring at the top end, the highs from the 540 sound extremely smooth and natural. Unlike some other models (moving-coil designs, especially, in my experience), there is no hint of the edginess that usually accompanies a tip resonance near the top end of the audio band. In fact, for sheer nonintervention between music and listener, I don’t believe I’ve ever heard a cartridge that could be ranked above this one.

It’s not hard to find cartridges that cost considerably more and that have fans who hear “far better” sound from them than from any pickup in the $300 class. I would not presume to claim that the Ortofon 540 is every bit as good, in all possible respects, as those elite models. But if I were buying for myself a cartridge within this price range, I’d take the 540 without a moment’s hesitation.

Robert Long

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**Frequency Response & Channel Separation**

<table>
<thead>
<tr>
<th>Frequency response</th>
<th>Channel separation</th>
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</thead>
<tbody>
<tr>
<td>Left channel</td>
<td>20 Hz to 20 kHz</td>
</tr>
<tr>
<td>Right channel</td>
<td>20 Hz to 20 kHz</td>
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</tbody>
</table>

**Sensitivity (at 1 kHz)** 0.96 mV/cm/sec

**Channel Balance** ±0.1 dB

**Vertical Tracking Angle** ±2°

**Max. Tracking Level (re RIAA 0 VU; 1.5 grams)**

| lateral | > +18 dB |
| vertical| > +12 dB |

**Dynamic Compliance (vertical)**

≈ 23 x 10^-6 cm/dyne

**Recommended Effective Tonearm Mass**

| optimum | ±4.6 grams |
| acceptable | ±1.5 to ±11 grams |
| Weight | 6.5 grams |

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**RESONANCE FREQUENCY IN HZ**

**DYNAMIC COMPLIANCE IN CM/CM**

**TOTAL EFFECTIVE MASS IN GRAMS**

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**TONEmAaR/CARTRIDGE MAtCHING GRAPH**

By means of this nomograph, you can quickly and easily determine the compatibility of any cartridge and tonearm we have tested. Ideally, the arm/cartridge-resonance frequency (indicated by the diagonal lines) should fall at 10 Hz, but anywhere between 8 and 12 Hz will assure good warp tracking and accurate boss response. (It is usually okay to let the resonance rise as high as 15 Hz, although we don’t normally recommend it.)

Begin by looking up the weight and dynamic compliance shown in the cartridge report and the effective mass listed in the turntable or tonearm report. Add the weight of the cartridge to the effective mass of the tonearm to get the total effective mass.

Then find the point on the graph where the vertical line for the total effective mass intersects the horizontal line for the cartridge’s dynamic compliance. For a good match, this point should fall in the white region, between the 8- and 12-Hz diagonal lines.

You can back-figure compliances and effective masses for cartridges and tonearms tested before we began reporting these figures directly (as January 1983) for cartridges, look up the vertical resonance frequency measured in the SME 3009 Series II Improved tonearm and the cartridge’s weight. Add 15 grams (the SME’s effective mass) to the cartridge weight to get the total effective mass.

Then find the intersection of the vertical line for that frequency with the horizontal line representing that mass with the diagonal line representing the measured resonance frequency. Now you can read the compliance from the horizontal line passing through the point of intersection.

For tonearms, look up the resonant frequency as measured with the Shure V-15 Type III cartridge. Find the intersection of the diagonal line for that frequency with the horizontal line representing the tonearm’s dynamic compliance of 22.5 x 10^-6 cm/dyne. Reading down the vertical line on which the point of intersection lies will give you the total effective mass of the arm with the Shure V-15 Type III mounted in it. Subtract 6.3 grams (the weight of the V-15 Type III) to get the tonearm’s effective mass.

Because of differences in measurement techniques, manufacturers’ specifications for compliance and effective mass often differ from our findings and may therefore yield inconsistent results if used with this graph.
How to patch things up around the house.

Now's a good time to start thinking about home improvements. We're referring, of course, to that hodgepodge of switch boxes, enhancers, tuners, amps, VCRs, cassette decks, monitors and speakers you affectionately call your home entertainment center.

Which leads us to the new AVX-100U. An incredibly sophisticated 4-channel A/V control amplifier designed to make you the master of all you see and hear.

AVX-100U features 10 audio and 6 video inputs. So you'll probably run out of shelf space long before you run out of input jacks.

You'll also find either 2 or 4-channel operation. With an additional center channel to keep movie dialogue up front where it belongs.

The AVX-100U also has 8 different surround sound modes to enhance the realism of everything you play. Including Dolby Surround that puts you right in the middle of the action when watching movies at home.

A video enhancer that lets you improve the clarity of any image, regardless of the source you're watching.

RS integrated system remote control, so you can control the AVX-100U and all your RS-compatible components, from across the room.

And an on-screen display for monitoring the operation of the AVX-100U and everything else patched into it, from your video screen.

There's even a title generator that lets you add titles to your favorite videos at the push of a button or two.

Ask your local Yamaha dealer for a demonstration of the new AVX-100U.

No matter how bad a mess you've made of things, he'll have you patched up in no time.

Yamaha
Examination of the Revox B-226S Compact Disc player suggests almost that it was designed on another planet; it's so far removed from the “demands of the marketplace” as conceived by the bulk of its competitors. In fact, I even use that word “competitors” with a qualm: There simply is nothing quite like the 226 anywhere else. While other companies are racking their brains to come up with new technological fillips and added features, as well as cutting production costs (if not quality) to maintain “competitiveness,” Revox simply does what it thinks is right without reference to what anyone else is doing.

A glance at the front panel reveals terms like “cursor” and “program step” that give away a central concept of the 226—and, indeed, much of the equipment Revox has offered in recent years. More than almost any other company, it has adopted control approaches derived from the world of computers. If you are uncomfortable with computers, however, you won't necessarily feel awkward with the 226; even without the exhaustive owner's manual, you should find much of the jargon here less abstruse than that used with, say, a glitzy, feature-laden audio-video receiver.

“Programming” most other players is rather like sorting the mail: You put one track number into the first program slot, another into the second, and so on. With the 226 you can move the “cursor” (the portion of the display that blinks when you invoke this function) around among the data you've entered and alter specifics at will. The process is one of stringing together a series of commands, rather than just individual numbers, and correcting them if necessary, until you have created a list of instructions for a quasi-organic sequence—a program, in the computer sense of the term.

The capabilities at your command include programming by track number, programming by time address, skipping directly to any track or index number, multispeed scan in either direction (very slowly at first, but almost alarmingly fast if you hold the button in long enough), four-mode time display, repeat (“loop”), and A-B indexing. You can even program pause and power-off into your sequence. The ways in which all of these functions can be combined are too numerous to catalog here.

For some users, I fear, there is one
flaw in all this. If you program contiguous tracks in sequence, the 226 inserts a slight hiatus between them. If the tracks involved all represent separate movements, I doubt that you’ll notice the gap, but in continuous music—Wagner op-eras, for instance—it cannot be ignored. This player is not the most objectionable I’ve encountered recently in this respect, but it’s a glitch I would not have expected from Revox.

Offsetting this, perhaps, is a feature that I dearly love but rarely find: automatic pause at the end of the current track (or program step)—Autostop, as Revox calls it. Apparently Revox agrees with me that you don’t always want to be rushed from one piece into the next. Also, a nice prediction of behavior rhythms (mine, at least) is the way the eject works. If you toss in a disc and press PLAY without bothering to close the drawer first, the open/close button can be used to stop play and eject the disc; if you close the drawer first and then press PLAY, the drawer remains locked until the music ends or you press STOP. So, whether you’re in a mood for precise organization or are feeling casual, the 226 responds in kind.

The optional B-208 remote is designed to handle a full Revox system, so it’s unnecessarily complicated if you will be using it for the 226S alone. But it does include the major programming controls. The importance of the display to the programming process inhibits use of the handset from more than a few feet away, because some of the notations are relatively small.

The back panel has three sets of electrical outputs, all pin jacks. One is a fixed-level analog output pair, the output level of a similar pair of jacks can be controlled from the front panel. The final pair are digital outputs, marked 1 and 2. They are designed to feed out-board decoders, subcode decoders, or other digital-audio gear and, since they deliver the entire digital bitstream, let you use the 226 as a CD-ROM drive for a computer. A multipin “serial link” jack can be used in conjunction with an optional timer.

The transport is atypical of recent models in that it needs help to play the small (nominal 3-inch) CD single. Revox supplies an adapter for that purpose. Unlike most designs, the adapter doesn’t attach to the disc. (Unless they are perfectly attached, the snap-on models could cause wobble and, therefore, mistracking or, worse, a loose adapter careening around the inside of your player.) Revox’s adapter merely sits in the drawer and supports a 3-inch CD single until the drive assembly lifts the disc free of it.

In a way, the clearheadedness of this adapter sums up the whole design. Nothing, it seems, has been created without this purpose: to play CDs well. Even the complexities of the programming options reflect this single-mindedness. Internally, the straight 16-bit processing and four-times oversampling may sound a little humdrum these days, but Revox demonstrates unequivocally that, with careful design, these means can deliver results distinctly better than we often find in the “breakthrough” models that purport to supersede this approach with more bits of resolution or higher sampling rates.

The data from Diversified Science Laboratories are all very impressive, in fact. In such areas as linearity and de-emphasis, the 226 achieves a degree of precision you’ll seldom find elsewhere. Distortion is exceptionally low. The Philips tracking tests posed no problems; those on the Pierre Véran disc occasioned none until the dropouts reached 2 milliseconds or larger. You’re not likely to find significantly better behavior elsewhere in any single respect and are equally unlikely to find comparable overall performance.

Furthermore, this is one of those players that just seems to have a little extra something in the way it plays CDs. Perhaps I’m being swayed by the lure of the Revox name, but the discs that sometimes can sound a tad edgy here seem to take on a subtle sweetness, while the really dynamic ones seem to have just a little extra punch in the sfzandos. Add in the exceptional control scheme (you don’t even have to turn on the 226—as soon as you touch one of its controls, it does that for you), and this ranks as the most impressive CD player I’ve worked with to date.

Robert Long
“They provide smooth, fast and incredibly well detailed sound.”
“Polk’s RTA Tower Loudspeakers Combine Legendary Polk Performance with Contemporary Style.”

Big speaker performance with an efficient use of space.

RTA 11t

The RTA 11t is the finest conventional (non-SDA) speaker that Polk Audio manufacturers. Its extremely high power handling (250 watts) and high efficiency (90dB) provide remarkable dynamic range from both large and small amplifiers. The RTA 11t utilizes the same technologically advanced fluid-coupled subwoofer design found in Polk’s flagship model. Dual 8” sub-bass radiators are coupled to two 6½” mid-bass drivers, resulting in a fast, powerful, deep, and ultra-accurate bass response, without the boomy, undetailed sound of large woofer systems.

RTA 8t

In a slightly smaller package, the RTA 8t offers the same driver complement as the larger, more expensive RTA 11t, and thus shares its benefits of superior imaging, musicality, and detail.

Both Polk RTA series loudspeakers achieve the extremely rare combination of good looks and state-of-the-art performance. The tall, elegantly slender, and deep “tower” design cabinets allow for substantial internal volume for high efficiency and powerful bass, while requiring less than one square foot of floor space. The small baffle surface area around each driver minimizes diffraction (sonic reflections), thereby insuring outstanding imaging and low coloration.

Positioning the 1” silver-coil dome tweeter between the two 6½” trilaminate polymer bass/midrange drivers achieves what is called “coincident radiation.” This means that both the mid- and high-frequencies appear to radiate from the same place on the baffle resulting in perfect blending at the critical crossover point. (See illustration, below).

Polk RTA speakers have an uncanny ability to perfectly reproduce the human voice, pianos, guitars, and every other instrument whose faithful reproduction demands superlative midrange and high-frequency performance. Bass and percussion instruments are accurately reproduced with full visceral power and realism, without the heaviness, boominess, or lack of detail that plague lesser designs.

The discriminating listener who seeks state-of-the-art performance and design will find the quintessential combination of both in Polk’s RTA series loudspeakers.

THE PRINCIPLES OF COINCIDENT RADIATION

The perceived source of sound of two identical drivers is centered in the area between them.

In the Polk RTA loudspeaker, the tweeter is positioned at the acoustic center of the drivers.

The benefit of coincident waveform propagation resulting in precise imaging, uniform vertical dispersion and startling midrange accuracy.

Polk Audio’s RTA 8t and RTA 11t High Performance Tower Speakers
A sound investment, indeed! You can get right brand now, high-quality Compact Discs for 14—that's a good deal! And that's exactly what you get as a new member of the CBS Compact Disc Club.

Just fill in and mail the application—we'll send your 8 CDs and bill you 14 plus shipping and handling. You simply agree to buy six more CDs (at regular club prices) in the next three years—and you may then cancel your membership anytime after doing so.

How the Club works: About every four weeks (13 times a year) you'll receive the Club's music magazine, which describes the Selection of the Month... plus many exciting alternates, new hits and old favorites from every field of music. In addition, up to six times a year, you may receive offers of Special Selections, usually at a discount off regular club prices, for a total of up to 19 buying opportunities.

If you wish to receive the Selection of the Month, you need do nothing—it will be shipped automatically. If you prefer an alternate selection, or none at all, fill in the response card always provided and mail it by the date specified. You will always have at least 10 days in which to make your decision. If you ever receive any Selection without having 10 days to decide, you may return it at our expense.

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10-Day Free Trial: We'll send details of the Club's operation with your introductory shipment. If you are not satisfied for any reason whatsoever, just return every Track within 10 days and you will have no further obligation. So why not choose 8 CDs for 14 right now?

ADVANCE BONUS OFFER: As a special offer to new members, take one additional Compact Disc right now and pay only $6.95. It's a chance to get a ninth selection at a super low price!

Selections with two numbers contain 2 CDs and count as 2—so write in both numbers.

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CBS COMPACT DISC CLUB: Terre Haute, IN. 47810
The RZ-5000 is one of a series of audio-video receivers announced by Sansui last spring. Each of them tends to follow what has become the norm for such products: connections and switching for both audio and composite-video sources (albeit, for only a minimum number of the latter, by audio-only receiver standards), an AM/FM tuner section, and a power amp with a more-than-minimal rating. Here, there are a number of unusual details to spice up the formula.

FM tuning is either "automatic" (bi-directional muted scan in the stereo mode, the default to which the tuner automatically reverts whenever you give it the opportunity) or manual (in mono, without interstation muting). AM tuning is similar except for the absence of stereo and the muting defeat. Manual stepping is by half-channels (0.1 MHz) in the FM band, full channels (10 kHz) in AM. There are 30 presets, assignable to FM or AM stations in any mix; a preset scan permits a quick review of your choices. The numerical keypad area used for the presets also can be used to tune directly by frequency. If you want, you can assign a four-character alphanumeric label to each preset, using the tuning controls to step through the 47 available characters.

The supplied RS-1080 wireless remote control, which is powered by two AA cells, duplicates the numeric keypad and the basic functions of the receiver, and includes a full mute (that is, not a 20-dB attenuator) that is not on the front panel. It also includes controls for a CD player, tape deck, and equalizer (presumably for that built into the flagship of the series, the RZ-7000). Pushing the remote's volume buttons causes not only the front-panel volume knob to rotate, but blinks the knob's red index LED and fires a beeper at the same time. In fact, invoking just about any function on the receiver, even from the front panel, produces a confirming beep.

The input options include: phono (for fixed-coil and high-output moving-coil models); CD (used by Diversified Science Laboratories as the aux input for measurement purposes); an audio tape loop; a VCR loop (VCR 1); and inputs for a second video source (VCR 2). You can dub from VCR 2 to either VCR 1 or...
COMPROMISING WITH YOUR TAPE IS LIKE COMPROMISING WITH ANY OTHER COMPONENT IN YOUR SYSTEM.

Even the most advanced system is only as good as the tape you put into it. That's why Maxell has created XLII-S.

Its unique Epitaxial formula combines gammaferric oxide and cobalt ferrite for superior response at all frequency levels. The resulting superfine particles offer unprecedented clarity and brilliance. And make XLII-S the perfect tape for recording your most demanding sources.

So match your tape to the other components in your system and use only XLII-S from Maxell. Anything less is just kid stuff.

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The Tape That Delivers Higher Performance.
the audio recorder and to the latter from either video source. There are pre/main jumpers allowing the insertion of a signal processor between these two sections.

On the front panel is a headphone jack. The two speaker pairs for which there are connections and switching are wired in series—an expedient to prevent excessively low impedance loading that you rarely find in audio-only receivers these days.

The back panel is well laid out, but the antenna and speaker terminals are of a lightweight latching design. I found it difficult to get good, solid connections with them. All wires must be bared, including any 75-ohm coaxial antenna lead you might use. Heavy 14-gauge speaker wire barely fits through the insertion holes. An AM loopstick antenna is supplied, but—presumably because of the difficulty in getting good connections—I found it ineffective on my test sample, though it worked normally on a second sample.

The FM section is a bit above average for an audio-video receiver, particularly in one respect: the signal-strength indicator. Its six elements light at thresholds spaced an average of about 5 dB apart and reaching from 17½ to 44½ dB in DSL’s measurements. This indicator action can be of material aid to users equipped with antenna rotators.

In other respects, performance is generally as good as you might expect in an audio-only model with this power rating, although stereo sensitivity, channel separation, and capture ratio are not quite up to that mark. Nor is frequency response, though the midbass rise and most of the treble attenuation visible in the response traces must be charged against the preamp, rather than the tuner itself. All signal sources show similar characteristics up to 10 kHz. The rolloff above that frequency (and, in particular, the curious disparity between channels near 15 kHz) is peculiar to the FM section, however.

The nondefeatable tone controls have center detents to which they were set for these measurements. While their action otherwise is not especially symmetrical or predictable, in their primary ranges they provide increments of cut and boost that are much more regular than those of some other receivers in this price range. The bass has maximum effect of about ±8 dB in the region around 50 Hz. The treble has a similar range at 20 kHz.

The loudness-compensation function is handled in an unusually simple way. There is a knob plus a “bass-boost” button. The former is used to tailor loudness compensation to the setting of your volume control, as dictated by your listening room, speakers, and taste. This is, in fact, the only right way to do it, because a full-volume setting and the necessary compensation at lower listening levels can vary widely from one installation to another. Depending on the setting, the compensation can apply a boost of as much as 10 dB in the deep bass, though the whole bass region is elevated somewhat relative to response at 1 or 2 kHz; the extreme treble also is boosted, but not as sharply and not at all for modest degrees of compensation. Pushing bass

(Continued on page 42)
The Power To Publish.

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Boost moves the bass inflection points up by about three octaves, so that the bass boost extends to above 1 kHz and, at maximum compensation, leaves the response with a minimum at about 3 kHz. The phono section is better than average in that it does not significantly compromise the response it inherits from the overall design—though again, that isn’t as flat as you might expect in a modern receiver. Even at 5 Hz, response bears up well: too well, if your arm and pickup suffer from warps. Since there is no high-pass, or “rumble,” filter, either switchable or fixed, choice of your record-playing equipment (and care in record storage) can be critical.

The power section has comfortable headroom above its 60-watt spec. The increasing power with falling impedance suggests that it will not suffer unduly from low-impedance loads, even though the cautious rate of power increase (and the use of a series hook up when both pairs of speakers are turned on) indicates that the power supply and output transistors are not overgenerous in this respect. In other words, don’t worry about it, but don’t expect it to achieve prodigies either. There’s plenty of oomph for reasonable applications.

The slight rise in the midbass does give the receiver a slightly chesty, robust quality (unless my aural judgment is being colored by the figures—which isn’t impossible), but it’s both subtle and pleasant. More to the point, the RZ-5000’s level of performance is in some ways above par for a moderately priced audio-video receiver, and it does include some unusual features. Robert Long
to a deleterious high-end rolloff, even if long cables are used. Input impedance is adequately high, there's a prodigious amount of gain, and the frequency response of both front and surround outputs is, by and large, beyond reproach. The distortion performance, while nothing to write home about, is livable. In fact, the only important respect in which the SS Two missed its published specs was in amplifier power, which is claimed to be 30 watts per channel. DSL measured the range as 13 to 30 milliseconds), it would be nice to have an indication of how much delay you are getting as you change the setting.

Given the low output power and the rather high residual noise in the power-amp section, you might be tempted to use the line outputs for the surround signal to feed a separate power amp and speakers. However, doing so loses you the facilities of the two boost switches. The approximately 6-dB boosts they create are at the stated frequencies are available only when using the SS Two's internal power amp. Finally, both on the test bench and in the listening room, the SS Two's electronic fader and volume controls were hard to use. As you press the up or down buttons for these functions, nothing happens for a while—and then the changes occur hot and heavy. It's therefore difficult to set levels with precision on this processor.

But now we've come around full circle. The SS Two is, after all, a budget decoder that cannot fairly be expected to work with the finesse of more elaborate and expensive units. And it does perform its essential function—Dolby Surround decoding—quite well for a basic processor. So, on balance, the AudioSource SS Two is a bargain.  

Edward J. Foster

Test Reports

AudioSource

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sured less than 9 watts per channel at clipping. Then again, I'm not sure how AudioSource obtained its power rating, since the specification is given without reference to load impedance, frequency range, or distortion. As longtime readers of this magazine will realize, the same amplifier can produce such disparate measurements, depending on the rating method used.

The AudioSource SS Two is, to me, a rather quirky piece of equipment in some ways. For example, input-level and balance controls would be easier to use than the independent left and right calibration controls that are provided. As it is, you have to rebalance the system if you change the setting of either level control. And though I like the idea of variable delay (DSL measured the range of 13 to 30 milliseconds), it would be nice to have an indication of how much delay you are getting as you change the setting.

Given the low output power and the rather high residual noise in the power-amp section, you might be tempted to use the line outputs for the surround signal to feed a separate power amp and speakers. However, doing so loses you the facilities of the two boost switches. The approximately 6-dB boosts they create are at the stated frequencies are available only when using the SS Two's internal power amp. Finally, both on the test bench and in the listening room, the SS Two's electronic fader and volume controls were hard to use. As you press the up or down buttons for these functions, nothing happens for a while—and then the changes occur hot and heavy. It's therefore difficult to set levels with precision on this processor.

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Edward J. Foster

Dimensions: 16½ by 2½ inches (front), 9¼ inches deep plus clearance for connections.

Price: $250

Warranty: "Limited," one year parts and labor.

Manufacturer: Made in Taiwan for AudioSource, 1327 N. Carolan Ave., Burlingame, Calif. 94010.
Mordaunt-Short, which has been around for more than twenty years, has established an enviable place for itself among the pantheon of fine British speaker makers. If the company never has clamored quite as insistently for a hearing on these shores as have a few of its compatriots, neither has it earned the reputation for overcommercialization that attends on broad success. Call it a sleeper or a cult brand if you will, Mordaunt-Short is a purveyor of goodies, like the MS-10, that all too often go unnoticed.

The MS-10 is a two-way system consisting of a 1½-inch dome/cone ferro-fluid-cooled tweeter and a 5¼-inch paper-cone woofer with a vinyl surround and dust cap. Crossover between the drivers, judging from the near-field measurements by Diversified Science Laboratories, occurs at about 3.5 kHz, though the specs list a 5-kHz "integration frequency." The woofer enclosure is vented to the back panel via a duct. Stretch fabric mounted on a pressboard frame make up the removable grille. No extraordinary measures appear to have been taken to avoid diffraction. The sides, top, and bottom of the enclosure are covered with a wood-grain vinyl laminate that simulates black ash. Connections are made to banana-plug jacks recessed into the back panel; mating color-coded plugs that accept bared wires to about 14-gauge are supplied with the speakers, which are packed in matched pairs.

The crossover network includes what Mordaunt-Short call Positec: an overload-protection feature based on a polymeric resistor that remains essentially transparent to the signal at normal operating temperatures but increases in resistance as temperatures rise significantly above that range. When this happens, it reduces current flow through the speaker until normal temperatures have been attained once again.

This worthwhile feature posed some problems to the lab, which, in its tests, normally jacks up the level by regular increments until the speaker cries uncle (via sharply rising distortion in the steady-state tests or an altered scope waveform during pulse testing). With the MS-10, the onset of overdrive is much more gradual, and it is evidenced more by a reduction in sensitivity caused by the Positec system than by distortion as such. For example, the distortion test at "95 dB SPL" was, as usual, conducted
The advent of the Compact Disc has put a lot of pressure on independent audiophile labels, whose first claim to fame is sonic quality. One of the most successful of these small labels is San Francisco-based Reference Recordings. But the label's success with sound and music critics did not come overnight. Reference Recordings was formed in 1976 by John Tamblyn Henderson, Jr. (photo left). After obtaining a degree in music history from the University of Georgia, Henderson acted as music director for a San Francisco classical FM station. Later, he operated a retail record store and, at the same time, wrote for some audiophile publications, including one called Sound Advice (now defunct), whose owner, Ed Wodenjak, started Crystal Clear Records, a maker of direct-to-disc recordings of popular music.

Henderson decided to use the direct-to-disc technique for classical music. His first effort, a recording of duets for guitar and other instruments entitled Guitar And... , was not a success. "We pressed 500 copies just for the musicians and our own amusement, but it was never released to the public," Henderson recalls. "It's very rare. If you find a copy of RR-1, my suggestion is to keep it, but don't play it." The next three recordings didn't fare much better. "One of the pieces was a percussion number for nine bass drums," says Henderson. "It was almost impossible to cut a playable record. Those three [recordings] are now out of print. There were never more than 5,000 copies each."

The turnaround for Reference Recordings came once Keith Johnson (photo right) became the company's recording engineer. One of the audio industry's grand eccentrics, Johnson uses his own, handmade tape recorder and microphones. His recordings have been acclaimed for their natural sound quality.

GB: How did Keith Johnson get involved in the company?
TH: I met Keith through musician friends for whom he was doing some recording. Keith had also engineered some recordings for the Klawer label in Los Angeles.

GB: What are your and Keith Johnson's respective responsibilities in the company?
TH: He handles the technical aspects of a recording session. He's also involved in the LP-mastering process, because we have to take his tape machine when we make masters. That machine is what you call a one-man dog: Nobody else touches it. . . . I do everything else.

Keith's tape recorder is something of a legend. He literally built it from scratch. He built a three-channel tube machine in the late Fifties when he was a student at Stanford, then a smaller solid-state machine in the mid-Sixties. It has been refined and modified over the years, but essentially it's the same machine he built in the mid-Sixties using a transport of his own design. People always come up and ask, "Is that an old . . . ?" It isn't. It's an old Keith Johnson.

The transport is quite unusual. He calls it a "near-closed-loop transport." The capstan is at the top of the tape path, with the record head on one side of the capstan and the playback head on the other. The machine also uses an unusual equalization system that gives a better signal-to-noise ratio than the standard EQ curve. The machine makes tapes that cannot be played on any other machine. He also uses something called the focused-gap recording technique. There's a beamed-RF bias—sort of a record head within a record head. There's no way to buy that sort of thing, so he had to build it himself. Keith's general attitude is: If you can buy it, it's no good. 

An Interview with J. Tamblyn Henderson Of Reference Recordings

By Gordon Brockhouse
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Compact Disc

the Digital

After Inventing
The New Sony ES Series:
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As the inventor of the Compact Disc format, Sony continues to expand the limits of digital reproduction. Yet, while proudly leading this revolution, the Sony ES engineers have been equally conscientious about designing analog components that fully realize the potential of the digital era. This uncompromising commitment defines the entire ES Series.

The CDP-707ES:
Simply stated... "the reference against which to judge" others.—Len Feldman, Audio Magazine.

Historically, Sony ES Compact Disc players have been the benchmark for advancing the state-of-the-art. The CDP-707ES is no exception. As the world’s first CD player to incorporate dual 18 bit linear DA converters, along with a proprietary 8X oversampling digital filter, it brings the listener closer to the theoretical limits of Compact Disc performance. This advanced technology provides greater low level signal resolution and improved linearity, for more faithful reproduction of musical depth and detail.

And there’s more to the ES Series than the CDP-707ES, and its host of sophisticated features. You’ll find our advanced 8X oversampling filter technology in the less costly CDP-507ES, as well as the CDP-C15ESD, which combines 18 bit linear DA converter performance with 10-disc changer convenience for the very first time.

The STR-GX10ES:
The quality of separate components in a fully integrated design.

Traditionally, few receivers have offered the performance necessary to meet the demands of digital sources. These demands on receiver technology come at a time when the requirements for total audio and video integration have created more compromises than ever before.

To avoid those compromises, Sony created the STR-GX10ES, with 150 watts-per-channel. It, along with our full line of receivers, achieves unsurpassed musicality, thanks to a unique Spontaneous Twin-Drive amplifier stage that eliminates power supply fluctuations, regardless of current demand. Add to this such refinements as discrete outputs and a non-resonating G-Chassis™ design, and you have accurate reproduction of music detail and dynamics even under the most demanding speaker load conditions.

Yet the STR-GX10ES also brings you the convenience of total integration with a supplied Remote Commander™ unit that allows for control of virtually any infrared audio or video component, regardless of brand. And with its special high resolution S-Video circuitry, the STR-GX10ES is compatible with components you might buy in the future.

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Finally, a level of performance never before achieved in a dual-deck design.

Accurate reproduction of digital source material has placed a heavy burden on the finest analog cassette decks. A burden compounded in dual-well designs, where compromises are often made for operating convenience.

The uncompromising new Sony TC-WR11ES is a magnetic and mechanical accomplishment that rises to the digital challenge by combining superb music reproduction with ultra-sophisticated operations. A unique 210 kHz Super Bias™ circuit extends frequency response, without the beat frequency noise that’s typical of high speed dubbing decks. Even at normal speed, the TC-WR11ES, like all ES cassette decks, achieves clean, transparent recordings, plus an astoundingly uniform 20-20,000Hz (+/- 3dB) frequency response. Add to this the patented Laser Amorphous heads and 4-motor transport, and the TC-WR11ES indisputably demonstrates the technical refinement needed to triumph in the digital age.

The Sony ES Commitment.
The Sony ES Series is askillfully crafted line that not only includes the finest Compact Disc players, but superb analog components as well, all doing full justice to the ES engineers’ exceedingly high standards. Further expression of this excellence is reflected in the 3 year limited warranty that covers each and every model (see your authorized Sony ES dealer for details).

For more information on where you can audition the full line of Sony ES components, call 201-930-7156.
For a record company to deal with someone like Keith is unwise from a business point of view. We have this one analog tape recorder, and that's the only one there.

GB: So if it breaks, you can't get access to your master tape libraries.

TH: That's right. But we think that Keith's machine is superior to any other analog machine. Some of the drawbacks of commercial-studio analog recorders don't apply in our case. We get less noise as a rule. We don't use any kind of noise reduction because we don't like the side effects.

GB: What, specifically?

TH: I don't have any direct experience with those systems, but Keith does, and he doesn't like them. His machine has very little noise, and the tape we use has an acceptable noise level. It seems you can have either the lowest possible noise or the best possible retention of the recorded signal. As a record label, we have to be concerned with retaining the signal. We have masters that have deteriorated badly—to the degree that we can't re-master them. They've simply died.

Keith discovered this phenomenon quite early in his career. But it was pooh-poohed by the tape companies. It's only been widely acknowledged quite recently. We've settled on a professional tape by TDK that, unfortunately, has been discontinued. It's causing us some grief. Now we have to find another tape. This particular tape has long-term retention of the information. The quietest tape we've found is Ampex Grand Master. When you make a recording with that tape on Keith's machine, its quietness, transparency, and lucidity are breathtaking. Still, six months later, it's not worth listening to.

GB: Too bad you don't have two machines.

TH: It is. But we're getting another.

GB: I notice you're using digital recorders on recent CD releases.

TH: At all of our sessions in the past few years, we've run Keith's machine and a digital machine from the same microphone feed. We make LPs from an analog master and CDs from digital master.

GB: Why not produce CDs from the analog master, if you believe it's superior?

TH: Because of commercial concerns. There are many people who will not buy a CD if it isn't made from a digital master. Using two different master tapes means I have to edit everything twice. Digital editing is a major expense.

GB: How do the two master tapes compare? Are they different?

TH: Sure they're different. The tapes made on Keith's machine have superior resolution, better low-level detail, greater high-frequency extension, more transparency and spatial information—all things where digital recording still has difficulties. Digital has its well-known virtues (like very low noise, great dynamic range), except that it can't really resolve the lowest level of information. [A properly dithered digital recorder can audibly resolve signals that are more than 100 dB beneath maximum recording level.—Ed.]

I'm not saying that Keith's is a perfect system. We can hear the microphone signal, and we can hear what the analog machine does to that signal. There is some veiling, some loss of transparency, some addition of noise. But if we have to choose between the analog and digital master, both of us would rather hear the analog tape.

GB: Would the merits of the analog master be lost in a transfer to the CD medium? Would there be a difference between an AAD and the DDD rises you actually market?

TH: Some of our CDs are made from analog masters recorded before we started using a digital recorder. The transfer from an analog master is, to my ear, superior to a digital master. However, the buying public says, "Oh, there's hiss. Horrible, horrible. I won't buy it." So, for that reason, we've decided to make CDs from digital masters.

GB: What do you think about the long-term future of the LP?

TH: The general public is in love with CDs, especially in the classical market. I predict, as prices come down, it will take over even the popular end of the market.

However, there does seem a small group of serious audiophiles who find the sound of CDs unsatisfying. They tend to be people who have invested a great deal of money in their turntables, tonearms, cartridges, and pre-amplifiers. They still prefer the sound of a well-made analog record played on a system capable of extracting the niceties that we are able to get onto an LP. As long as those people with excellent turntable systems are around, there will be a small market for good LPs. Anybody who goes into a record store knows how the LP sections are shrinking. It's just a matter of time before they'll be gone altogether. We at Reference Recordings hope to be one of the last, if not the last, source of quality analog LPs. We have no plans to cut back our LP line.

As time goes on, I expect that we'll do most of our LP business by mail order to customers. Audio stores, as opposed to record stores, seem to be holding on to LPs a little more. People buying turntables, cartridges, and arms obviously need new records to play on them. But record stores do not want our LPs because they cost too much. They're roughly the same price as CDs. In their view, nobody in his right mind would pay that much money for an LP.

GB: What are your relative sales in LPs and CDs now?

TH: That's an interesting question. Our LP sales are better than any other record label in the United States. Going on stories I hear from other labels, their LP sales are 10 percent and down. In any event, we are happy to say that we're doing 40 to 50 percent of our business with LPs, depending on the title.

GB: By units or dollars?

TH: I'm talking about units. We are of course planning to release all new projects on LP. We're also hoping to reissue classic recordings of the past in the LP format.

GB: Have you had discussions with the copyright holders?

TH: We're in conversation with one major maker of classic analog recordings, and it looks encouraging. They are not saying no. We'll announce the
label as soon as something is firm.

GB: What about the possibility of companies like yours getting access to recording sessions conducted by majors who just want to release CDs?

TH: I would love very much to do that. I know that Wilson Audio approached one or more major labels and was told, "No way." However, I'm not going to let the idea die. There is bound to be at least one label that would be interested. I intend to pursue the idea of having us at recording sessions, preferably with our own miking. Part of the unique qualities of our recordings have to do with Keith Johnson's microphones and the way they're used.

GB: Can we talk more about that? How do you get the results you get?

TH: I can only talk in general terms, because every situation we come up against is different. Halls vary, performing forces vary, the kind of music varies.

GB: Can you explain how you made a specific recording?

TH: Let's take Copland's Appalachian Spring Suite on RR-22CD, which we did in the chamber version for 13 instruments. In this particular case we used a pair of spaced omnis. The group of 13 players was set up in a semicircle with the piano behind the winds, the high strings on the left, and the low strings on the right. We used a pair of spaced omnis about 12 feet high and 15 feet apart as the primary pickup.

We like the sound of spaced omnis for their spatial and imaging characteristics. If the circumstances are very good, you can get a good sound with just a pair of spaced omnis. But more often, the sound tends to break apart into two areas around the loudspeakers. So we like to use a pair of close-spaced cardioids for center pickup to give more solidity to the middle of the ensemble. In addition, Keith often uses a pair of microphones out in the hall to give more of the specific hall's character. We always use stereo pairs. We mix the sound from the three pairs by ear in the control room, not by any kind of theory.

GB: How long does it usually take to get the sound you want?

TH: We would always like to have more time than we have. Recording sessions are very high tension situations. Usually, we have three to four hours for a session. You're lucky if you can get the musicians ahead of time to rehearse, so you can work on your miking. With the Appalachian Spring recording, we were not able to. So the musicians arrived, and we were frantically putting things in place, then dashing to the control room to see what we had gotten, then back onstage to move things around. In this session, we had to throw things together in less than an hour.

GB: Theoretically, if there's a niche for a company like Reference Recordings, it ought to be to record obscure-repertory classical music, or minority-appeal music of other types. One would think that the major labels, with all their resources, should be able to produce better-sounding recordings.

TH: I can only hypothesize. I know that no other label would deal with an eccentric such as Keith Johnson, with his oddball tape machine. That simply isn't the way they do business. Every piece of equipment he uses he designs and builds himself. These microphones are each one-of-a-kind. He aligns each before every recording session, and major labels simply cannot do that.

GB: How, generally, have people been exposed to your recordings? Where do they first hear about you?

TH: We've had extraordinarily good luck with reviews on our recordings. It's good to see that our recordings are getting some attention for their musical merits. And we are getting quite a bit of radio exposure, particularly on our jazz titles.

GB: What's been your most satisfying session artistically, and your most satisfying sonically?

TH: It's difficult to say—I don't want to insult any of our artists. It was especially satisfying to work with Minoru Nojima, a Japanese pianist of prodigious musical gifts. We were fortunate to get Nojima to record for us [Liszt on RR-25CD]. He has refused to work with Japanese labels, who have been after him for many years. He made some recordings early in his career and did not like the way they turned out, and so he had shied away from recording. I'm especially pleased with the artistic merits of that recording. We plan to do some more work with him this fall. I'm looking for more opportunities, but orchestras are a problem.

It's also difficult to say which is the most satisfying recording sonically. One of my goals in life is to make a recording I'm happy with. We're getting better. I'm largely pleased with what we're doing, but there are always aspects that bother me. The recording that bothers me least would probably be the Gershwin records recording with Marni Nixon and Lincoln Mayorga [RR-19CD]. It's a convincing illusion of a singer and pianist performing in a real hall.

GB: If you could go back in time and re-do a specific recording, what would that be?

TH: I would do them all. The one I like the least is called Your Friendly Neighborhood Big Band [LP: RR-14]. We walked into that one thinking we could capture the sound of a 20-piece jazz band with our symphonic miking approach. If we could do that one again, we would use studio technique with many more microphones. You can't go to a live jazz performance expecting to hear real instruments. What you hear is a lousy PA system. Jazz players seem to have become so accustomed to amplification that they can no longer listen to one another. Recording producers and engineers now have to balance these ensembles electronically.

GB: You said you'd like to do some concerto recordings, but that there are problems.

TH: Paying for orchestras is a large problem. The American musicians' union seems to have as one of its primary goals the prevention of American orchestras' being recorded. Even for major labels, the expenses are simply unworkable. You will notice that fewer and fewer American orchestras have recording contracts. Even major orchestras like the Boston and Chicago are not exclusive
with one label. Conductors tend to have label affiliations, but not orchestras. For a small label like us, which cannot hope to sell as many copies, it’s difficult to justify the expense of an orchestra. For a single three-hour session for a symphony orchestra, whether it’s the Philadelphia Orchestra or the Podunk Philharmonic, union rates are the same: around $30,000 for one session—and you need at least two sessions. You have to sell a lot of records to break even. It’s an unworkable situation for labels like us.

Some orchestras will help fund a session in exchange for a royalty on sales. Sometimes they get their money back and sometimes they don’t. We are looking into those prospects. However, the orchestras that have those monies tend to want to be on major labels. Sonic concerns are secondary to them, if they’re any concern at all. They are doing this for commercial purposes and the publicity attached to it. It makes more sense for them to be on CBS Masterworks than on Reference Recordings. We are of course pursuing every possible avenue of symphonic music.

GB: As a record-company executive, where do you stand on the whole DAT/copyright issue?
TH: I think the DAT issue has been highly overpublicized. It seems foolish to think that anyone would spend $2,000 plus for a DAT and upwards of $12 to $15 for blank tape in order to copy a CD. I wouldn’t do that, and I don’t know of anyone who would. The whole thing has been blown out of proportion.

GB: That being the case, why has the recording lobby blown it out of proportion?
TH: I have no idea. They must be neurotic on the subject. The whole notion that DAT is capable of making a perfect replication of a recording is also stupid.

I would be happy if DAT went away. I’d rather not produce recordings in another format. We have so many dollars to work with. I’d rather put that money into new projects. However, we are in the record business; and we are planning to do a sampler DAT to see what the response is. I don’t know at this stage if the DAT medium is going to be a viable playback format. It seems to me that its strength is its recording capability.

GB: Is the prospect of recordable CD worrisome to you at all?
TH: No.

GB: So, for your company, the home-taping issue is a non-issue.
TH: Exactly. I think people are interested in our recordings for their sonic qualities—and they’ll want the originals.

Top Reference Recordings

Although I haven’t heard all of Reference Recordings’ releases, the best overall introduction to the label I’ve found so far is the Copland recording referred to by Henderson (RR-22CD). For sheer sonic variety within the single-composer format, this disc can’t be beat. Here, engineer Keith Johnson has had to cope with a full orchestra, a chamber ensemble, and—most problematic of all—orchestra plus vocal soloist (a difficult balance to achieve and one that is too often decided quite grossly in favor of the singer). Johnson succeeds admirably throughout.

More in the line of traditional large-orchestra sonic spectaculars is a recording of Respighi’s Vetrare di chiesa (Church Windows), quite the best-sounding version of this technicoloristically orchestrated work (RR-15CD). Also recommendable is a more familiar showpiece, Berlioz’s Symphonie fantastique (so far available only on two 45-rpm LPs, RR-11). Both the Respighi and Berlioz recordings put the orchestra in a somewhat mid-distance perspective. To my tastes, the image is just a tad too faraway, but neither recording can be faulted for the excessive reverberation and boomry orchestral sound conveyed by recordings on some other so-called audiophile labels. Indeed, the bass lines in both these recordings are especially clear and natural.

Perhaps too clean and natural is Minoru Nojima’s Liszt piano recital (RR-25CD). This disc portrays the instrument from rather nearby, so close that you can often hear the rapping of the Nojima’s fingernails on the keys (from the left channel). This can get irritating in the manner of Glenn Gould’s humming, but does not detract from the overall sound quality, which is as good a recording of a piano as I’ve ever heard. Engineer Johnson has managed to create a believable sonic image of a grand piano without its spreading from speaker to speaker and being so distant that musical details are lost in the ambient wash.

Also up-close and personal is one of the best solo harpsichord recordings: Albert Fuller’s quirky yet stylish performances of Rameau solo pieces on RR-27CD. You should be warned, however, that the recorded level on this disc, compared to that on the others in this roundup, is extremely high. The elegant solution to this is, of course, simply to turn the volume down by about 10 dB.

No round-up of Reference Recordings productions would be complete without a mention of the album Defos (RR-12CD), which consists of performances on a variety of exotic percussion instruments. Even though the CD is mastered from an analog tape, it has a dynamic range and sense of acoustic space unusual in recordings made by either analog or digital methods. For its sonic virtues, it deserves its status as the label’s best-selling recording.

David Ranada
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with an input 10 dB above that required for a sound pressure level of 85 dB. The actual output, however, was closer to 92 dB SPL. And because of this behavior, the lab omitted its usual "100 dB" test. All this means, however, is that the MS-10, like other small speakers, is best suited for moderate listening levels and fairly small rooms. Like its competitors, it loses some listening quality if pushed too hard. Unlike most others, the loss is in dynamic punch more than in distortion, which averaged only about 1 percent over most of the range in the "95-db" test—very good for a model of this size.

DSL measured the speaker on a 21-inch stand with its back 3 inches out from the wall. The curves show exceptionally close tracking between on- and off-axis curves, bespeaking excellent dispersion characteristics. There is the usual dip in the floor-reflection range around 300 Hz—here, perhaps, a little more clearly etched in our curves than usual. Aside from this artifact of room placement and the steep rolloff below about 60 Hz typical of vented speakers of this size, the curves fit within a fairly narrow window: +4½ to –3 dB on-axis. Impedance varies relatively little across the frequency band. The twin bass-resonance peaks characteristic of vented systems fall at about 40 and 100 Hz and rise no higher than 15 ohms. The highest peak is just over 16 ohms, in the crossover region. The lowest minimum is a broad midbass trough that reaches to 6.7 ohms. The manufacturer's 8-ohm nominal rating thus is spot-on, though our music-band average is a little higher. But no matter how you look at it, the MS-10 should be an easy load for any amplifier to drive—and will remain so, even if you drive parallel pairs of them.

The sound is as appealing as I've ever heard from a speaker of these dimensions. It is smooth and "round." Only when I switch back and forth between this pair and my reference speakers—which are many times the size and cost—am I forcibly reminded how tiny the Mordaunt-Shorts are. The comparison shows the MS-10 to be more forward and, thus, a little "shallower," but it's astonishing how small the difference is and how little the obviously restricted deep-bass response of the smaller model matters in some music.

I even used the MS-10s far out into the room: a placement that is encouraged by the owner's manual ("try for a minimum of at least ... 14 inches") but will probably prove impractical in most installations, where DSL's three-inch distance may be taken as the norm. The sense of solidity remained remarkable, considering that my reference speakers deliver about two more octaves of bass. The MS-10's imaging is excellent, and coloration is essentially absent by the standards of its class. You can hear some unevenness in scales and other low-treble musical passagework, but this minor roughness (which seems to fall toward the upper end of the woofer range) does not translate into significant alteration of vocal quality, for instance.

Reviewing this tiniest of Mordaunt-Shorts is rather like observing a pair of pearl earrings from among the Crown Jewels. While the effect is admittedly far grander elsewhere, the workmanship and quality are all there, in miniature. In short, I don't see how you could go wrong with the MS-10 if you're looking for a very compact speaker to use in, say, a den, bedroom, or dorm room. For an imported model, the price is modest; and the sound is exceptional by any yardstick.  

Robert Long

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**Room Response Characteristics**

<table>
<thead>
<tr>
<th>Frequency (Hz)</th>
<th>MS 10</th>
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<tr>
<td>10 K</td>
<td>100</td>
</tr>
<tr>
<td>20 K</td>
<td>100</td>
</tr>
</tbody>
</table>

**Sensitivity (at 1 meter; 2.8-volt pink noise)**

96.12 dB SPL

**Average Impedance (250 Hz to 6 kHz)**

11.2 ohms
Test Reports

Pioneer DEH-66
Car Stereo Receiver/CD Player

To be quite honest, I had misgivings the first time I looked at the DEH-66's front panel. Anything this sleek and stylish had to be a pain to operate because of the multiple duties each of the controls would have to perform, right? No way. While you may have to keep the manual around for the esoteric functions that you will seldom need—like changing the anti-theft entry code—ordinary operations with the DEH-66 quickly become as automatic as turning the key in the ignition. This Pioneer model is not alone in proving how remarkably ergonomics have improved in car stereo equipment since we started testing it almost six years ago, but it does so with a special flair.

Volume is controlled by a pair of large buttons, treble and bass by a pair of rockers nearby. Balance and fader—which normally are set-and-forget adjustments—use the volume buttons in conjunction with an adjustment-mode stepper. The bevvy of round buttons is for tuning (the pair of buttons connected by what might be called an "isthmus"), station presets, and radio-band (AM/FM-1/FM-2/FM-3) selection. There are six presets, so you can memorize 6 AM and 18 FM frequencies. Unobtrusive additional buttons along the bottom of the automatic when you insert a Compact Disc. When you're playing a CD, the radio preset buttons double as controls for the functions I don't normally bother with in a moving car: fast scan in both directions, track skip (using the tuning buttons, making this relatively useful function the easiest to operate), ten-second track sampling, repeat of the current track, random play, and elapsed/remaing time display.

The measurements from Diversified Science Laboratories show the CD response to be very flat, with a very slight ripple on the top end and a slight rolloff in the ultrabass, but nothing that could be considered a significant imperfection. The player passed the Philips tracking...
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Nothing comes remotely close.
tests without difficulty; on the Pierre Verany disc, it started balking only when the flaws built into the test tracks reached 1.5 mm—a major crater by CD-

The DEH-66’s FM frequency response has a slightly rising characteristic. Though response is only about 1 dB higher at 10 kHz than it is at 100 Hz, this was enough to subtly exaggerate the rather hard sound inherent in the test car setup. (The CD response, which if anything tilts in the opposite direction, sounded merely bright and lively in comparison.) But correcting for such effects is just what tone controls are for. In other respects, the FM tuner is representative of its type and generally comparable to the performance of home units.

Band limiting helps the AM section sound clean: As the graph shows, the bass is strongly rolled off, and there is essentially no response above 4 kHz. The fact that it does hold up well to 4 kHz, however, gives it more sonic life than some competing AM sections can claim. In all respects, the AM part of the design is distinctly above average. The adjustable local-scan sensitivity is a nice touch, too, though it isn’t as versatile as that of the FM section. As delivered, AM tuning steps in 10-kHz increments, FM by 0.2 MHz—that is, full channels in both bands, by U.S. standards. There is an option for changing to 9 kHz on AM and 0.05 MHz on FM, should you want to use the receiver in a locality where these standards apply.

The built-in stereo amplifier is rated at 20 watts per side according to Japanese industry standards, but only 10 per side on the more conservative basis of essentially full bandwidth (50 Hz to 15 kHz) and 5-percent harmonic distortion into 4-ohm loads. The lab, measuring at

- **Frequency Response & Channel Separation**
- **Sensitivity & Quieting**
- **Compact Disc Section**
- **Preamplifier/Amplifier Section**

The chart and graph show the AM sensitivity to be (for 50-dB noise suppression) 0.14% at 100 Hz, 0.23% at 1 kHz, and 0.14% at 6 kHz. The stereo sensitivity (for 50-dB noise suppression) is 0.39% at 100 Hz, 0.23% at 1 kHz, and 0.14% at 6 kHz.

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Playing CDs, with their potentially enormous dynamic range, in a moving automobile, with its wind noise, rattles, and whatnot, may seem like sonic overkill. Admittedly, the pianissimos of uncompressed symphonic recordings do tend to become inaudible unless you’re playing the music loud enough to threaten the car’s chassis welds. My answer is to play chamber music instead. No other signal source except DAT can match the sound quality of the CD, you’ll hear the difference very clearly, even at paralegal speeds. This model, which at its introduction was billed as “the industry’s first true one-piece high-powered car CD/tuner,” makes the joys of CDs conveniently available. You have to give up a built-in cassette transport, but, given the sound quality and ease of use of the DEH-66, that is a tradeoff I welcome.

Robert Long

This brawny new amplifier is something of a cross between two previous Hafler products: the DH-500 (test report, July 1982) and the XL-280 (test report, April 1987). Its physical design and power capability mirror that of the DH-500, with a few noteworthy improvements. Like the earlier (and still available) model, the XL-600 sports handles and a faceplate notched for mounting in a standard EIA rack panel, and it uses a multispeed fan to assure adequate cooling of its output transistors. However, the front panel has been redesigned for a more elegant, less industrial appearance and, to minimize noise, the fan speed is now continuously variable (depending on the temperature inside the case) instead of having only three speeds. The fan is still pretty loud at full tilt, but under normal operating conditions it is very quiet, although not quite inaudible, from a distance of a few feet or so.

Other changes are more substantial. Where the DH-500 uses 12 MOS FET (metal-oxide semiconductor field-effect transistor) output devices, the XL-600 uses 16, for higher current and power capability. And the XL-600 simplifies the procedure for converting the amplifier to bridged mono operation. You simply change the position of a back-panel switch and make the appropriate alterations to the input and output connections. Hafler rates the amp at 900 watts in this configuration, and though we did not test it in bridged mode, our stereo measurements give no cause for doubt.

The actual amplifier circuitry in the XL-600 resembles that of the XL-280. In particular, it provides for execution of Hafler’s Excelinear procedure, which enables you to adjust the amplifier for minimum distortion when driving your loudspeakers. The process is more cumbersome with the XL-600, however, since you must open up the amplifier to get to the adjustments—something Hafler recommends be done only by a technician, because of the electrical-shock hazard. Frankly, we consider this adjustment for compulsives only, given that the XL-600’s distortion is so low anyway that you wouldn’t actually be able to hear the difference on music.

The main advantage of using MOS FETs as amplifier output devices is that they are not subject to a self-destructive process known as thermal runaway, which can occur in ordinary bipolar transistors when they heat up from delivering large amounts of current to the load. Consequently, a MOS FET amp can be designed without the complex and sometimes problematic protection circuits normally necessary in audio am-

Hafler XL-600 Power Amplifier

Dimensions: 19 by 7 inches (front panel), 12 7/8 inches deep plus clearance for connections and rack handles.

Price: Assembled, $1,195; kit, not yet available.

Warranty: “Limited,” three years parts and labor.

Manufacturer: Hafler, Division of Rockford Corp., 613 South Rockford Dr., Tempe, Ariz. 85281.

Robert Long
Test Reports

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
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</thead>
<tbody>
<tr>
<td>Rated Power</td>
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</tr>
<tr>
<td>8-ohm load</td>
<td>24.8 dBW (305 watts/channel)</td>
</tr>
<tr>
<td>4-ohm load</td>
<td>26.5 dBW (450 watts/channel)</td>
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<tr>
<td>Output at Clipping (at 1 kHz; both channels driven)</td>
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<td>8-ohm load</td>
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<td>Dynamic Power (at 1 kHz)</td>
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<td>8-ohm load</td>
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<tr>
<td>4-ohm load</td>
<td>26.6 dBW</td>
</tr>
<tr>
<td>2-ohm load</td>
<td>26.6 dBW</td>
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<tr>
<td>Dynamic Headroom (at rated power)</td>
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<tr>
<td>8-ohm load</td>
<td>1.8 dB</td>
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<td>4-ohm load</td>
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<td>Harmonic Distortion (THD; 20 Hz to 20 kHz) at 24.8 dBW (305 watts)</td>
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<tr>
<td>at 0 dBW (1 watt)</td>
<td>≤ 0.01%</td>
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<td>Frequency Response</td>
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<td>≤ 0 dB, &lt; 10 Hz to 26 kHz</td>
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<tr>
<td>&gt; 2.5 V, &lt; 10 Hz to 750 kHz</td>
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<td>S/N Ratio (re 0 dBW; A-weighted)</td>
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<tr>
<td>Damping Factor (at 50 Hz; re 8 ohms)</td>
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<tr>
<td>Channel Separation (at 1 kHz)</td>
<td>75 Hz</td>
</tr>
</tbody>
</table>

This is the second-generation version of what was, at the time of its introduction, my very favorite Celestion loudspeaker: the DL-8. And it does not disappoint.

The DL-8 Series Two is an acoustic suspension system built around an 8-inch woofer and a 1-inch dome tweeter, with the crossover at approximately 3.5 kHz. Celestion is unusual in that it makes all the drivers for its high fidelity loudspeakers. The design of these drivers is, in fact, the central element in the design of the speakers. Celestion was the first manufacturer to use laser interferometry to examine in detail exactly how speaker diaphragms behave at various frequencies and drive levels. It has used the information obtained by this means to build drivers that behave as nearly as possible like ideal "perfect pistons" over as wide a range of operating conditions as possible.

The first dramatic result of this labor was the copper-dome tweeter used in the original SL-6. The DL-8 Series Two's tweeter is a variation on that theme, with an aluminum diaphragm that affords greater sensitivity and more extended treble response. It is mounted on the midline of the front baffle, above the carefully formed plastic-cone woofer. To minimize cabinet resonance, Celestion uses a figure-eight arrangement of internal braces.

The speaker is available in a black or simulated-walnut vinyl finish. A black stretch-cloth grille mounts to the front.

Celestion DL-8 Series Two Loudspeaker

The XL-600 does have a thermal breaker that will automatically trigger an output relay to disconnect the amplifier from the load if it simply begins to overheat. This relay also will trip if there is excessive DC at the output, and it comes on for several seconds whenever you power up the amplifier to prevent turn-on thumps from getting through to your speakers. There are back-panel fuses in the speaker lines, as well, but these are strictly to protect the loudspeakers. Internal fuses on the AC line and the power-supply rails will shut down the amplifier if there is a serious malfunction.

I was a little surprised to find a relatively skinny power cord with a two-prong plug on such a powerhouse amplifier, but both are adequate. Diversified Science Laboratories noted in its report that the power switch tends to crackle a bit if the amp is turned on at a crest in the AC line voltage. Although I did not notice this, DSL's experience suggests that a heavier switch might be in order as insurance against premature failure.

Speaker connections are to hefty, colored five-way binding posts that can accept anything from bare wire to spade lugs to banana plugs; the inputs are gold-plated RCA pin jacks.

The lab data indicate nothing less than spectacular performance. The XL-600 can pump out more than half a kilowatt continuously into 8 ohms, and on the pulsed signals of the dynamic-power test its output reached 460 watts into 8 ohms, 760 watts into 4 ohms, and a whopping 1,120 watts into 2 ohms. Distortion remains well below the threshold of audibility from low levels all the way up to rated output, and noise is very low. Damping factor (which reflects the amplifier's output impedance) is high not only at low frequencies, but at high frequencies as well—better than 60 at 20 kHz—where it usually is quite a bit lower. This is not a big deal in most installations, but it will help maintain flat treble response into speakers whose impedances drop very low at high frequencies, as is the case with many electrostatics.

The XL-600's frequency response is dead flat across the audio band. Although it rises to a small peak in the extreme ultrasonic range (sometimes a warning flag of instability), neither we nor the lab noted any tendency to oscillation or other untoward behavior.

Amplifiers have always been what Hafler does best; the XL-600 merely drives that point home. Its superb performance and, for the power delivered, reasonable price make it a very attractive product in its class. In keeping with company tradition, Hafler probably will make the XL-600 available in kit form, at a somewhat lower price. I would be inclined to wait for that version, myself (Hafler's amp kits come with prewired circuit boards and usually are fairly easy to build), but if soldering isn't your bag, this one will do nicely. —Michael Riggs
WHAT MAKES ONE AUDIO BRAND SOUND BETTER.

CD PLAYERS have always been susceptible to errors in converting digital data to analog audio. In fact, academic researchers recently declared that error in converting the Most Significant Bit is a primary cause of audible problems. Every Denon Compact Disc Player since 1983 has corrected this problem with the Super Linear Converter.

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baffle, completing the compact and attractive package. Amplifier connections are to special screw terminals recessed at an angle into the back of the speaker. They accept bare wire or even banana plugs—a very nice system that I'd like to see more of.

Celestion recommends that the DL-8s be placed on stands at least 18 inches away from the nearest wall, and we followed those directions for both our lab and listening tests. As you can see from the response curves, this placement extracts some penalty in deep-bass output. Pushing the speakers back against a wall extends the bass response down almost an octave. This makes the overall response slightly rougher, but the effect on sound quality actually is rather small, so you may prefer such a placement if you find the speakers lacking at the bottom. For the most part, I was quite pleased to leave them out from the wall.

Response above 125 Hz is remarkably smooth—within about ±2 1/2 dB from 125 Hz up on-axis and nearly as good off-axis. Most speakers exhibit a response dip around 300 Hz when the drive handling that range is elevated to the ear level of a seated listener. The cause is interference between the direct output from the driver and energy reflected off the floor. Celestion seems to have compensated for this effect, as it is only mildly apparent off-axis and not at all on-axis. There is a small rise between about 400 and 800 Hz and a dip in the upper treble, centered at about 12 kHz, but these are very minor deviations.

Power-handling ability is very good for a speaker of such modest dimensions. In Diversified Science Laboratories' 300-Hz pulse test, the DL-8 accepted the drive amplifier's full output, equivalent to 28.1 dBW (648 watts) peak into 8 ohms, delivering a calculated peak sound pressure level of more than 117 dB at one meter. Distortion is well contained at moderate drive levels, hanging around 1/2 percent or less over most of the range between 100 Hz and 10 kHz (the upper limit of our distortion testing) at 85 and 90 dB SPL. The distortion data do spike up a bit between 4 and 6 kHz, but we were not aware of it when listening. Distortion overall climbs as the drive is increased, and at 100 dB SPL (our highest test level), it varies between 1/2 and 3/4 percent from 100 Hz up.

Sensitivity is about average by current standards (perhaps just a shade to the low side). Impedance is relatively high for a modern loudspeaker, with peaks of 28.4 ohms at 68 Hz (the system resonance) and 27.7 ohms at 1.7 kHz. The lowest impedance is 6.3 ohms at 20 kHz, with other dips to 6.5 ohms at 200 Hz and 7.6 ohms at 4.5 kHz. Consequently, the DL-8 Series Two should be an easy load for any good amplifier, and in most cases you could run another pair of speakers in parallel without concern.

As a music reproducer, the DL-8 is simply first-rate. Tonal balance is smooth and pleasing, the only noteworthy coloration being a very slightly "cupped" or "closed" quality on some vocals. The speaker also renders the sound of violins, for example, a little darker than do models with flatter treble response. One would be hard put to say which is more "correct," however, or even preferable. The deepest bass is missing, but this is hardly surprising for a loudspeaker of the DL-8's size. Stereo imaging is excellent. A few much more expensive systems deliver a greater sense of openness and depth, but the Celestion certainly is at least equal in this regard to anything else that I know of in its price class. If you're looking for a fairly compact, high-performance loudspeaker, the DL-8 Series Two deserves to be well up on your list.

Michael Riggs
FESTIVALS '89

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- Full Logic Control
- Dolby B/C/NR
- Auto-Time W/Time Correction
- Local Dial Switch
- Preset Scan
- Clock

**Price**: CALL FOR PRICE

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- AM/FM Stereo Receiver
- 50 Watts (PMT)
- Full Remote Control
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- 7 Band EQ + Spectrum Analyzer
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Watch on the Elbe

W e've got trouble, right here in River City: New York, which has two rivers and lots of classical record labels, is about to lose its biggest label to Hamburg, which has only one river and one very important label. There's more. The man who will head the label new to Hamburg is the man who used to be in charge of A&R at the old one. Confused? They're not confused in Tokyo, where all of this got started.

By the time you read this, Günther Breest, who presided over Deutsche Grammophon's classical operation for the better part of a decade, will have left the yellow side of Deutsches Grammophon's classic operation. As a part of the deal, the Masterworks division will move its headquarters from New York to Hamburg, although CBS Records Inc. says that "a major CBS Masterworks staff and office" will be maintained in New York.

It has been a year since CBS sold its record operation to the Japanese electronics giant Sony. Since then, a lot of people at Masterworks have been waiting for the other shoe to drop. Now it has. Breest comes to Masterworks with the reputation of having made Deutsche Grammophon the preeminent classical label in the world today. He has taken big chances and reaped big rewards. But, to borrow the parlance of umpiring, he's missed as many calls as he's made.

Sony's strategy in wooing Breest away from DG (but not Hamburg) is clear in both its positive and negative aspects. Breest is a proven winner, even if his strengths, from this vantage point at least, appear to be more in the realm of artist relations and production than in management. That's the positive side. The negative side, to no one's surprise, is preemptive: By taking Breest away from DG, Sony hopes to deal a serious blow to the competition. Animals do it, nations at war do it, and big corporations do it. When you're serious, aim for the head.

Breest's long-range goal, obviously, is to lure artists and projects away from DG. It was elegantly put by Norio Ohga, chairman of CBS Records Inc., in the press release announcing the shakeup. Ohga allowed that the appointment of Breest and the transfer of operations to Hamburg "will enable us to capitalize on the tremendous opportunities that now exist to expand our artist roster and enhance our repertoire with the finest possible performances." For the code words "finest possible," simply substitute the letters DG, and you get the picture.

But it may not be as easy for Breest to induce artists to switch as Sony seems to think. And reports are already circulating that Breest has been unable to persuade some of DG's technical and production types to defect. "One man does not a label make," is the way one highly placed Polygram official put it.

Ted Libbey

A Visit from St. Hank

It's a week before Christmas, and all through the loo I'm retching o'er "Greensleeves," perhaps you are too. These saccharine carols keep filling the air And turning the season to one of despair. But there's holiday music in jazz and in rock, So you don't have to listen to all of this schlock. A Collection (from Prestige), if jazz be your yen, Joins God Rest Ye (from CBS) Merry Jazzmen. Nearly all of these versions are played with true guts: Messrs. Gordon & Blythe can sure roast those chestnuts. If you drown out the themes that they must improvise, You may find your Yule tórance beginning to rise. There are also some discs that will be all the rage With the partisans of mellow jazz and new age: A Winter's Solstice, from the Windham Hill sleigh, Has carols included to give it away.

For Rhino-sold rock: Christmas Rock on EP. (It comes on green wax in the shape of a tree.) CBS: Fishbone says, It's a Wonderful Life. (It's another EP, where both wit, funk are rife) Want more? All three discs of the Midnight Christmas Join Ze Records Christmas as some of the best: If you can't understand mutant-crazed caterwaul, Then these albums don't sound like Yule albums at all! The songs are all fresh, and no standard is heard, And in most of the lyrics, 'mas be but a word. Very Special (A&M) Christmas rocks rev'ently, But then all of the profits are marked "charity." "Christmas Carol" (Tom Lehrer's one) and more fun bits Are on Rhino's Demented Christmas Novelty Hits. (And Scrooge Brothers Christmasland sure will appeal, As sophomoric humor clears air and the hall.) From Rhino again, Christmas Gift does collect All Spector—though all sung with too much respect. Have a Merry Chess Christmas is so full of soul— From the people who really made up rock 'n' roll, With neat stuff by Moonlows, O'Jays, and Berry— This disc could go far to make Scrooge, um, merry. Atlantic's Soul Christmas has much the same thing, With songs from guys like e-Ben-Ezer (burrp!?) King. And for more, Christmas Time Again has some fine trax: Albert King, Rufus Thomas, great artists from Stax. One more Rhino, Cool Yule, will help boomers get down, With some tunes from Surfaris, as well as James Brown. And so all of the discs in this haphazard lot Will turn cold days of winter into something quite hot. I could go on like this 'til the New Year's sixth day But my poetic license Ken's just grabbed away.

Mr. Hank Bordowitz is the guy you've just read. Merry Christmas to all, and to all a good—Ed.
Brave NEW LABEL

The launching of a new label devoted to the classics is always cause for celebration, even amid the upsurge in classical music sales occasioned by the Compact Disc revolution. Unlike the established labels, which can subsidize their new releases by repackaging their back catalogs on CD, a newcomer must start from scratch. Every release in a record company’s early days should, in theory, have the potential to produce a decent return. Faced with selecting repertory to achieve this end, new labels often opt for one, or both, of the following strategies: making yet another recording of a tried-and-true standard or staking one’s claim to a unique market niche for obscure works. Between these two extremes lie various alternatives, including creative couplings, little-known works by popular composers, and recitals by up-and-coming artists.

Virgin Classics’s managing director, Simon Foster, formerly of EMI, certainly knows his options. The first 15 releases on this new English label—available on both CD and cassette—reflect a combination of astute marketing instincts and uncompromising artistic integrity, and this surely augurs success. Of course, not everything is equally recommendable, but the overall level of accomplishment leaves no doubt that a vital new voice in classical music has arrived, and music lovers on both sides of the Atlantic shall be the richer for it.

Of the five discs that contain orchestral music, only one represents the “war-horse” approach suggested above: Jukka-Pekka Saraste conducting the Scottish Chamber Orchestra in Mozart’s Symphonies Nos. 32, K. 318; 35, K. 385 (Haffner); and 36, K. 425 (Linz). This is also the least desirable offering in the label’s entire debut release. The Scottish Chamber Orchestra is not a first-rank ensemble, and the conductor—a young Finn whose name will be new to many—is being more logically and successfully introduced by RCA, in a Sibelius cycle with the Finnish Radio Symphony. Saraste’s Mozart lacks punch, and the brass and timpani parts are seriously underplayed and underrecorded. There is simply too much competition in this repertory for this new entrant to earn a recommendation (CD: VC 7 90702-2; playing time: 68:58).
At first glance, American conductor Andrew Litton’s recording of Mahler’s First Symphony with the Royal Philharmonic Orchestra seems to suffer from some of the same liabilities as Saraste’s Mozart. Even though it’s a very creditable performance—well played and beautifully recorded—it faces stiff competition from veterans such as Bernard Haitink (Philips), Riccardo Muti (Angel EMI), Jascha Horenstein (Unicorn-Kanchana), and James Levine (RCA), among others. But here is where intelligent marketing comes to the rescue: Virgin has coupled the symphony with the thematically related Songs of a Wayfarer, excellently sung by mezzo-soprano Ann Murray. Not only does this make for better value than any other performance of the First on CD, these performances offer an ideal introduction to the composer’s sound world and to the fascinating interrelationships between his songs and symphonies. A release such as this, which is certainly greater than the sum of its parts, can be warmly recommended (VC 7 90703-2; 70:59).

No self-respecting English record company should neglect its country’s diverse selection of contemporary music, and Virgin doesn’t disappoint. In fact, it must have been something of a coup for the label to persuade Sir Michael Tippett, England’s greatest living composer, to conduct his own Concerto for Double String Orchestra and Fantasia concertante on a Theme of Corelli. Both works are among his most popular and attractive. The wild, bluesy Songs for Dav, memorably sung by tenor Nigel Robson, is a substantial bonus that also reveals the composer’s most characteristic mode of address: the human voice. All three pieces on this disc are authoritatively performed by the Scottish Chamber Orchestra (which fares far better than it did in the Mozart), aided no doubt by the composer’s relaxed but always buoyant tempos (VC 7 90701-2; 70:55).

Like Tippett, Gerald Finzi was above all a composer of vocal music, but the resemblance ends there. Finzi’s restrained eloquence makes him a sort of English Fauré, and like the French master, his music has gained popularity thanks largely to recordings. Two of Finzi’s loveliest works, Dies natalis and Farewell to Arms, both for tenor and string orchestra, are very well performed by Martyn Hill and the City of London Sinfonia conducted by Richard Hickox. The balance between soloist and orchestra is especially natural, as it is in the companion piece here, Finzi’s Concerto for Clarinet and Strings, in C minor, Op. 31. Clarinetist Michael Collins does full justice to one of the most moving and lyrical works ever written for the instrument (VC 7 90718-2; 61:04).

William Walton’s splendid First Symphony has had no completely satisfactory recorded performance since André Previn’s 1960s RCA version with the London Symphony Orchestra. Virgin has remedied this situation, enlisting Leonard Slatkin, who not only plays the pants off the piece but also urges the London Philharmonic on to feats of precision not often achieved in their recent work. The strings earn special praise for handling Walton’s tricky syncopations with astonishing power and unanimity. Slatkin treats Walton’s early Portsmouth Point overture with similar tautness. Virgin’s sound is excellent, though the timpani and percussion exchanges at the end of the symphony would have benefited from more definition. This is a major release that deserves the highest possible rating (VC 7 90715-2; 49:55).
Pianist Stephen Hough has been gaining recognition since his 1987 Chandos recording of two Hummel piano concertos, which won one of Gramophone magazine’s annual awards (one of the few, in this observer’s estimation, that was well deserved). Virgin has taken the hint and has given the young virtuoso a solo turn in an all-Liszt recital. This extensive selection includes early, flashy items like the Mephisto Waltz No. 1, the “Tarentella” from Venezia e Napoli (a three-part supplement to Années de pèlerinage, deuxième année), and Rhapsodie espagnole, but focuses on the later, more austere pieces. Indeed, Hough’s control and insight into Pensions des morts and Bénédiction de Dieu dans la solitude, from Harmonies poétiques et religieuses, and St. Francois d’Assise: la prédication aux oiseaux, from Légendes, are second to none, whereas his treatment of the showier works might seem a bit lightweight to some. His technique and commitment are never in doubt, however, and the album cover, which features a Mephistophelian Hough comfortably crucified on his piano, aptly sums up the character of the entire recital (VC 7 90700-2; 75:24).

The Borodin String Quartet has long had a reputation as the finest ensemble of its kind in the Soviet Union. A new Western recording by the group of Beethoven’s quartets in C and in F minor (Op. 59, No. 3, and Op. 95) might be counted an event, but unfortunately the results are disappointing. The interpretations are prosaic, and they suffer from an aging Valentin Berlinsky’s creaky cello playing. In this instance, the superior accounts offered by such groups as the Talich, Vehg, and Smetana quartets make it pointless to settle for second best (VC 7 90713 2; 53:29). Much better, and an excellent value, too, is Domus’s recording of Brahms’s First and Third piano quartets, two works that are difficult to perform well. These four young artists elegantly clarify the composer’s thick textures and still provide a gutsy attack when necessary. Virgin deserves credit for making these rewarding but still too-little-known pieces available (VC 7 90709-2; 76:25).

Two releases mark Virgin’s entry into the often controversial, frequently out of tune, but always interesting world of original-instrument ensembles, and both are great successes. Fretwork, an English early-music consort, plays viol music from the late Tudor and early Stuart periods. William Byrd, William Lawes, Orlando Gibbons, Anthony Holborne, John Dowland, John Bull, and Alfonso Ferrabosco are all represented on a disc entitled Heart’s Ease. It’s lovely music for quiet listening (VC 7 90706-2; 59:17).

Sir Charles Mackerras’s reading of Schubert’s Ninth Symphony (dubbed the Great), with the Orchestra of the Age of Enlightenment, is one of the outstanding events in the brief history of original-instrument recordings. This is the symphony in which writing for brass instruments—trombones in particular—comes of age, and no other recorded performance has ever made more of Schubert’s glorious scoring. Mackerras intelligently opts for a large orchestra, with four horns and three trumpets, so that the piece loses none of its grandeur.

Indeed, the wind and brass detail moves the sound of the symphony into the world of Bruckner and makes light of the fact that the conductor observes all of the repeats. Best of all, Mackerras’s interpretation ranks among the finest available, regardless of instrumental choice; it is lean, exciting, carefully inflected, and never rushed. A genuine revelation (VC 7 90708-2; 59:30).

Most labels see fit to offer some crossover material, or at least to package some repertory groupings as classical “easy listening,” and Virgin’s two compilations are better than most. French Impressions features cellist Paul Tortelier conducting the English Chamber Orchestra in an assortment of tidbits including Debussy’s Prélude à l’après-midi d’un faune, two of Satie’s Gymnopédies (arranged for orchestra by Debussy), Massenet’s Méditation from Thaïs, and other goodies by Fauré, Saint-Saëns, Pierné, and Tortelier himself. It’s all very well done, charming and unpretentious (VC 7 90707-2; 54:18).

Fans of American “Irish tenor” Robert White will certainly enjoy a new collection of Irish songs, billed somewhat surprisingly as favorites of the late Princess Grace of Monaco. Apparently, the Princess collected song manuscripts and other items from the
Virgin's three vocal-music offerings run the gamut of marketing options, and once again it is the daring and unusual that earn the highest praise. At the other end of the spectrum, though, is the label's disc of Joseph Canteloube's Chants d'Auvergne. No one needs still another version of these songs, and although Arleen Augér sings well (who doesn't, in this music?) and Yan Pascal Tortelier does a fine job leading the English Chamber Orchestra, the scant playing time and absence of filler material take this account out of the running with virtually all other releases. Definitely one of Virgin's few lapses in judgment (VC 7 90714-2; 49:20).

Much more interesting is English mezzo-soprano Linda Hirst's recital of music written for Cathy Berberian (Mrs. Luciano Berio), titled Songs Cathy Sang. Diego Masson leads Hirst and the London Sinfonietta in Berio's colorful folk-song arrangements, and Hirst does a solo stint in John Cage's Aria, Henri Pousseur's Phonèmes pour Cathy, Berio's Sequenza III, and Berberian's own Stripsody—a hilarious blend of comic-strip noises. The presence of an audience adds to the fun in these last four works, and the disc makes a loving tribute to a unique artist, as well as a treat for fans of the avant-garde. Virgin's courage is to be commended, as is Hirst's vocalism (VC 7 90704-2; 58:23).

Last, but certainly not least, Virgin has made the first recording of Benjamin Britten's operetta-cum-musical Paul Bunyan. [For more on Bunyan, see Dec. 1988's "Great Britten," by Terry Teachout.—Ed.] This work, the greatest of Britten's "American" period, has until now seemed nearly as mythical as its subject. W. H. Auden's libretto is great fun, but the music is what counts, and it's sensational. Think of a sort of English Kurt Weill and you'll have a good idea of Britten's concept, although the imaginative handling of the chorus is uniquely his own. Folk ballads, strophic songs, and ensemble numbers abound in masterful array.

This two-disc set is a major addition to the Britten discography, and unlike the other Virgin releases, it is also available on LP. Philip Brunelle leads the Plymouth Music Series of Minnesota in a performance that is about as perfect as can be imagined (VC 7 90710-2; 112:40). This group has performed American premieres of countless vocal works, and one hopes that Virgin will continue the association. How about a recording of The Voyage of Edgar Allan Poe, by Dominick Argento—a Minnesotan and America's answer to Benjamin Britten? Virgin Classics has made a stunning debut. In the months ahead, there will be additional releases arriving on our shores, and with luck, the label will become a major force in classical music. One important caution: Virgin should make every effort to record a diverse and international range of artists and repertoire. For a new label planning its first batch of recordings, it is good economic and artistic practice to stay fairly close to home and tailor to the local audience. But now Virgin needs to look further. There are too many great composers and great performers the world over for a record company with such promise to develop an island mentality.

Emerald Isle and housed her collection in an Irish museum in Monaco. Though all 19 of the pieces recorded here come from her collection, most of them—including "Danny Boy," "MacNamara's Band," "Molly Malone," "My Wild Irish Rose," and "I'll Take You Home Again, Kathleen"—will be familiar to aficionados. Robin Stapleton conducts the Monte Carlo Philharmonic Orchestra in accompaniments that add to the pleasure (VC 7 90705-2; 57:33).
ELGAR, VAUGHAN WILLIAMS
STRING MUSIC: ORPHEUS
This fetching collection brings together five 20th-century gems from the glorious English tradition of string music that stretches all the way back to the 16th-century string consorts: Elgar's Introduction and Allegro, Serenade in E minor, and Eggy, and Vaughan Williams's Fantasia on a Theme by Thomas Tallis and Fantasia on Greensleeves. Although the Orpheus Chamber Orchestra works without a conductor, these young virtuosos display exemplary musical unity and produce waves of rich, burnished string tone in solidly musical interpretations. Deutsche Grammophon has provided a recording of matching quality. Playing time: 49:23.
(DG 419 191-2.)  P.M.

HONEGGER WORKS:
I MUSICI DE MONTRÉAL
It's a mystery why a chamber orchestra in so French a city as Montreal would give itself so Italian a name as I Musici—the name is not entirely Italian, though, for what might have been I Musici di Montréal is in fact I Musici de Montreal. What's not a mystery—not, at least, to anyone who has spent time with its recordings—is the ensemble's extraordinarily high quality. Formed by Yuli Turovsky just four years ago, and completely independent of Charles Dutoit's well-known Montreal Symphony Orchestra, the group already plays with a precision that rivals that of its famous namesake in Rome, and these days it's even arguable that the Canadians generate the smoother, more finely balanced sound.

I Musici de Montréal's twelfth disc on the Chandos label features splendid performances of works by Arthur Honegger. The conductor's wife, Eleanora, and Suzanne Careau are the violin and viola soloists, respectively, in the Prélude, arioso et fugue sur le nom de BACH (1936) that forms the centerpiece of this album; flutist Timothy Hutchins and English horn player Pierre-Vincent Plante augment the orchestra's 18-member string body in the Concerto da camera (1949); and James Thompson is the trumpeter who adds the touch of sonic brilliance to the glorious finale of the Symphony No. 2 (1941). Playing time: 51:51. (Chandos CHAN 8632. Distributed by Koch Import Service.)  J.W.

SIBELIUS ORCHESTRAL WORKS:
HALLE, BARBIROLLI
Sir John Barbirolli's 1966 recording of Sibelius orchestral music sounds outstandingly real and honest on this CD reissue. True, the Hallé Orchestra was never world-class, but the sound it makes here is absolutely right for the music. The slightly thin strings—which almost never get a tune, anyway—permit Sibelius's characteristic wind writing to penetrate without strain, and the brass put an appropriately ferocious edge on their tone in Finlandia and Pohjola's Daughter. This kind of pungency and commitment stand in stark contrast to the smooth, generalized blandness that typifies the recent Sibelius recordings by Simon Rattle and the City of Birmingham Symphony for this label.

Interpretively, Barbirolli directs classic performances that have been equalled but never bettered. It's hard to imagine the Karelia Suite sounding more gutsy and joyous, Pohjola's Daughter more graphically adventurous, or Lemminkäinen's Return more exciting. Finlandia has an indisputable virility, while False triste conveys wistfulness without becoming lachrymose. For newcomers to Sibelius's music, there is no finer introduction available, and veteran listeners will derive equal satisfaction. Playing time: 50:20.
(Angel EMI CDM 69205.)  D.H.

BACH SYMPHONY:
SLOVAK, GUNZENHAUSER
Ernest Bloch's provenance turned him into a cosmopolite of rare coloration. Born in Geneva in 1880, he studied under Eugene Ysaÿe in Brussels (and under Ysaÿe's pupil François Rasse, who was also a student of César Franck). In Frankfurt, his teacher was Iwan Knorr, who also taught Hans Pfitzner, Cyril Scott, and Ernst Toch. Bloch himself subsequently taught at New York's Mannes School, served as the first director of the Cleveland Institute of Music, and later, after retiring from his professorship at the University of California, settled in Agate Beach, Oregon. By the time he died, in 1959, the world had come to know him primarily for a handful of enduring works, including his powerful Schelomo rhapsody for cello and orchestra and his endearing first Concerto grosso for strings plus piano obligato.

Bloch composed the Symphony in C sharp minor at the age of twenty-three. The world since then has passed it by, but the mature composer, according to the accompanying notes, "was to point out that the symphony contains the roots of what he was to become," and that makes it of interest to sincere Bloch admirers. Richard Strauss's influence dominates, but one also hears foreshadowings of Mahler—whose music, at that time, Bloch had not yet discovered. The Slovak Philharmonic, founded in Bratislava in 1949, traditionally has ranked second to the glorious old Czech Philharmonic, but here its efforts truly pay off; it does indeed sound like a first-rate band. American conductor Stephen Gunzenhauser directs a thoroughly able performance. Playing time: 48:45.
(Marco Polo 8.223103. Distributed by Harmonia Mundi, U.S.A.)  P.M.

BACH ORGAN CONCERTOS:
PRESTON
Bach transcribed a large number of concerto grossi for solo keyboard during his career, scrupulously following the original in his arrangements. While the success of these transcriptions is mixed, it is the five surviving organ concertos (B.W.V. 592–596) that are the most convincing, perhaps because of the considerable orchestral palette available on the organ. Three of the five are based on works by Vivaldi and are, for this listener, particularly interesting. The D minor Concerto is the most dramatic, with a mysterious, hushed opening and many contrasts of mood. The A minor seems especially at home on the organ and is a fine concerto in its own right. Simon Preston gives lively performances, and his light touch and springy rhythm bring the works closer to Vivaldi than to the characteristic grandeur of Bach's organ writing. Preston plays a beautifully voiced modern instrument by the Danish builder Marcussen. Unfortunately, Deutsche Grammophon has managed to submerge the lower registers in an echoing smear without capturing any sense of church ambience. Playing time: 56:15. (DG 423 087-2.)  C.R.

HAYDN "SEVEN LAST WORDS":
HUNGARIAN STATE, FERENCISK
Hard as it may be to believe, Haydn's The Seven Last Words of Christ was quite possibly his most popular work during his lifetime. The composer himself thought highly enough of it to create three ver-
ensions: the original, orchestral work, heard here; an oratorio, and a string quartet. He also permitted his publisher to come out with a solo keyboard version. The Hungarian conductor János Ferencsik made this moving piece something of a specialty; his performance of the oratorio is available on another Hungaroton Compact Disc (HCD 12119), though Haydn's orchestral conception remains the preferred way to experience the work. Although the sequence of slow movements followed by a brief concluding "earthquake" may be trying to modern ears, it's not necessary to listen to the whole work at one sitting. But it is certainly worth tackling at some point, since this piece contains some of the most emotional music written during the Classical era. Ferencsik and the Hungarian State Orchestra play with eloquence and conviction, and the sound is fine. This is much more than a mere musical curiosity, even if it is unlikely to ever become truly popular. Playing time: 65:19. (Hungaroton 12358. Distributed by Qualiton Imports, Ltd.)

D.H.

**SCHUBERT STRING QUARTETS: NUOVO QUARTETTO**

Now that the Quartetto Italiano no longer exists, one wishes that the presence of its violist, Piero Farulli, in the Nuovo Quartetto were enough to turn that group into something as good, by way of compensation. Unfortunately, the new ensemble plays without the Italiano's tone, blend, or refined musical taste. Its account of Schubert's Quartet in A minor, D. 804, is coarse-sounding and discontinuous for much of the time, its treatment of the Andante sostenuto dubious. As for the Quartet in E flat, D. 87, the Nuovo's rough performance does not make this early work interesting to hear. Playing time: 66:25. (Denon CO 1849.)

**BACH "WELL-TEMPERED CLAVIER": JARRETT**

ECM, the jazz label whose artists include Gary Burton, Ralph Towner, John Abercrombie, and Keith Jarrett, has gotten into the classical-music business of late, releasing assorted recordings by Gidon Kremer and friends, the Hilliard Ensemble's noteworthy account of Tallis's *Lamentations of Jeremiah*, and a first-rate collection of Hindemith's viola sonatas played by Kim Kashkashian.

Now ECM mastermind and producer Manfred Eicher has lured Jarrett into the studio for an all-classical production that is about as ambitious as you can get: Book One of Bach's *The Well-Tempered Clavier*. Jarrett, chiefly known for his youthful collaborations with Charles Lloyd and Miles Davis and for his marathon solo piano concerts, plays all 24 preludes and fugues perfectly straight on this recording—no rhythm section, no improvisation, no synthesizers. If it strikes you as immodest for Jarrett to have made his classical recording debut with *The Well-Tempered Clavier*, you're absolutely right: Compared to the great keyboard masters who have taken on this towering work, Jarrett inevitably comes off sounding rather bland. His smooth playing is somewhat underarticulated and, surprisingly, more than a little bit sober-sided. Even among jazz musicians, ECM could probably have come up with a more interesting WTC. (George Shearing, for instance, is a marvelous Bach player.) The digital sound is tubby. Playing time: 105:43. (ECM 835 246-2.)

**HAYDN "PARIS" SYMPHONIES: BERLIN PHILHARMONIC, KARAJAN**

Herbert von Karajan's excellent readings of Haydn's six "Paris" Symphonies (Nos. 82-87) with the Berlin Philharmonic came as something of a surprise, as this is an area of the repertory not usually associated with this conductor. The Paris orchestra for which Haydn wrote these splendid works was one of Europe's largest, and Karajan certainly gives the music the grand treatment. It's a positive tonic after so many performances by wimpy original-instrument groups. These are big pieces, and should sound it. The moderate tempos and rhythmic solidity of these performances make it easy to hear foreshadowings of Beethoven in these symphonies, and the stately minuet tempo Karajan adopts are far more suitable here than in his more recent, unhappy versions of Haydn's "London" Symphonies. Don't miss this one. Playing time: 156:29. (Deutsche Grammophon 419 741-2.)

**BACH, HANDEL WORKS: CONCERTGEBOUW, BEINUM**

Considering how dynamic conductor Eduard van Beinum was in most repertory, it is surprising that his Bach is so sedate. In 1955, EPC issued all four of the Bach orchestral suites on a monophonic two-LP set; the readings were musically solid, if a bit slow. The Second Suite, featuring Hubert Barwahser as the expert flute soloist, has now reappeared on CD, along with Beinum's 1958 recording of Handel's *Water Music* Suite. For those who enjoy a large orchestral treatment, Beinum's is glorious and affectionately phrased. It is a delight to hear the distinctive sound of the Amsterdam Concertgebouw winds and brass in this music.

The *Water Music* Suite is also one of the most successfully engineered recordings ever made in the Concertgebouw; it wonderfully captures the hall's spacious quality but has none of the muddiness that mars many later Concertgebouw recordings. Although an error in the CD booklet indicates that the Handel, like the Bach, is a mono recording, Philips advises that it is in fact stereo and will be labeled correctly as such in future pressings. The Handel's former, stereo incarnations are an Epic LP (BC 1016), a Philips Festivo LP (6570 171), and an Epic quarter-track tape version (EC 803). While some directionality can be perceived on the CD reissue, much of the ambiance and resonance that made the original recording so pleasurable have been lost—perhaps as a result of the No Noise processing applied during remastering. If you are fortunate to own a copy of Beinum's *Water Music* Suite in any of its stereo releases, treasure it, as its sound quality will surpass the sonics on this disappointing CD. Playing time: 68:44. (Philips 420 857-2.)

**R.E.B. VAN WASSENAER CONCERTOS: AMSTERDAM BAROQUE, KOOPMAN**

The six *Concerti armonici* are hardly unfamiliar works, having masqueraded for centuries as the creations of Giovanni Pergolesi. This new recording by Ton Koopman and his Amsterdam Baroque Orchestra is the first to restore the works to their probable author, Count Unico van Wassenaer. It is easy to see why these concertos—sunny, buoyant, and thoroughly Italianate—were attributed to a Mediterranean master rather than to a Dutch nobleman. By the same token, their remarkable consistency and sophistication of argument make one wonder if they could really have been written by an amateur. No matter, these works are delicacies of the late Baroque, which receive spirited performances here. Best of all, Koopman and his players are not afraid to relax and indulge in the sweetness of the music. The recording has an excellent sense of space, but the bass is a bit muddy. Playing time: 58:12. (RCA Erato ECD 75395.)

**C.R. VAUGHAN WILLIAMS, WARLOCK VOCAL WORKS: PARTRIDGE**

Tenor Ian Partridge's surpassingly lovely recordings of Ralph Vaughan Williams's *On Wenlock Edge* and Peter Warlock's *The Curlew*—two of the most striking 20th-century works for voice and chamber ensemble—have been recoupled on a single midprice CD together with Partridge's equally accomplished performance of Vaughan Williams's *Ten Blake Songs*, for voice and oboe. The Music Group of London supplies polished accompaniments, with the late Janet Craxton playing oboe in the *Blake Songs* and English horn in *The Curlew*. Anyone interested in English vocal music should snap up this disc. Complete texts and superb liner notes by Michael Kennedy, a biographer of Vaughan Williams, Elgar, and Britten. Playing time: 61:54. (Angel EMI CDM 69170.)

T.T.
Leo nard Bernstein's Mahler remains in a class of its own. Although these releases represent his second—and, in the case of Symphony No. 2, his third—recorded thoughts on the music, they are no less noteworthy. Even now, when Mahler cycles practically leap off the shelves, Bernstein's interpretations, especially these new ones, command attention; doubtless they will serve as reference editions for generations of music lovers. To understand why, one need only compare this new Fifth with EMI's midprice CD reissue of John Barbirolli's famous New Philharmonia version of 1969.

Captured in absolutely magnificent sound, Sir John's account of the Fifth remains a very great one. Yet it belongs to a pre-Bernstein school of interpretation, one in which Mahler's uniqueness is minimized through strong emphasis on the elements he had in common with other important figures in the German symphonic tradition. For example, Barbirolli, along with Mahler's disciples Bruno Walter and Otto Klemperer, rarely makes a point of the music's almost schizoid contrasts. All three regularly ignore the many tempo changes Mahler demands. Consequently, though just ten seconds separate Bernstein and Barbirolli in their transits of the Fifth's stormy second movement, the latter conductor appears to move at half the pace simply because he takes both lyrical and agitated sections at virtually the same speed. Such consistency may indeed pay great dividends in Beethoven, Brahms, and Bruckner, but it is only part of the story in Mahler. That doesn't mean that the older generation didn't turn in the occasional excellent performance: Barbirolli, for one, often did. But it does mean that the readings of that earlier era were seldom idiomatic.

Bernstein's new Fifth is thus important for reasons that are totally independent of Deutsche Grammophon's superb sonics and the Vienna Philharmonic's resplien-
dent playing. The Fifth was one of the first Mahler symphonies Bernstein recorded; in hindsight, his view of the work at that time lacked maturity. Moreover, that recording was compromised by dated sound and by some very scruffy playing from the New York Philharmonic. But unlike Barbirolli, Walter, and Klemperer, who championed only a few select works, Bernstein was among the first to see Mahler whole. Having his latest thoughts on the Fifth so eloquently committed to disc is like finding a chapter that has long been missing from a great novel. Now the elements are all there. The Funeral March is moving and intense; the second movement has a bitterly visionary quality to it; the scherzo is a totally Viennese whirl (not too fast, as Mahler demands); the songful Adagio unfolds gracefully (not too slowly); and the finale goes as if self-propelled.

Barbirolli's Mahler vindicates his rather personal sense of the score, and it's an excellent supplementary version. Bernstein takes matters one step further, with an understanding of the music so complete and inevitable that what emerges isn't so much Bernstein's Mahler as it could be Mahler's Mahler. The same holds true for the conductor's new account of the Resurrection Symphony, a work he has recorded twice previously but never this successfully. Bernstein has always responded to the music's drama and grandeur. However, the 15 years since his last recording have tempered the frenzy somewhat, allowing him to bring to this reading the architectural strength that had been the only significant element missing from his previous encounters with this vast musical fresco. This may be the lengthiest Resurrection ever preserved for posterity, but such is Bernstein's control of tension and momentum that it never sounds slow. Moreover, the Westminster Choir, Barbara Hendricks, Christa Ludwig, and above all the New York Philharmonic give Bernstein the all-out support his interpretation requires.

If further proof of Bernstein's achievement is necessary, one need only compare this recording of the Second to Simon Rattle's, recently released by EMI, in which a struggling City of Birmingham Symphony Orchestra tries vainly to match the mindless grandiosity of the conductor's conception. Rattle's willful interpretation is a virtual caricature of how one might, if one did not know better, imagine a typical Bernstein performance would sound. Hearing the two side by side only confirms Bernstein's selfless devotion to the spirit of the music through adherence to the letter of the score. (Rattle's all-English production recently received Gramophone magazine's award for "Best Orchestral Recording"—an act of provincialism and bias sadly characteristic of that periodical.) DG's sound, bold and clear, easily surpasses the diffuse and cavernous acoustic that EMI afforded Rattle (which Gramophone, yielding to a curious urge to forfeit its respectability, went so far as to recognize with its "Engineering and Sound" award). Here at last is a recording of the Second Symphony that deserves the term "definitive." It's not just a performance, it's an event.

Bernstein's new account of the Fourth Symphony will occasion some controversy, especially in the context of what this performance isn't—namely, eccentric (except in the matter of the vocalist) or in any way disjointed. For the first three movements, Bernstein conducts as charming and as breezy a Fourth as one can find in the catalog. The first movement, featuring the extraordinary Concertgebouw woodwinds, possesses all the freshness and inevitability that distinguishes the other readings in this cycle. The scherzo flows smoothly into the trios, in which the slight ritardis and portamentos, whether written in or not, sound perfectly idiomatically. In the poignant Adagio, usually a prime candidate for the anything-you-can-play-1-can-play-slower sweepstakes, Bernstein chooses a tempo faster than usual and makes the movement a truly seamless arch. This is quite possibly the finest recorded performance of this movement yet to come our way.

In the finale, Bernstein does something surprising: He opts for a boy soprano, one Helmut Wittke, who sings with enchantingly artless abandon. Several factors argue in favor of this approach, although the success of the result will always remain a matter of personal taste. There is little doubt that Mahler would have used children's voices if possible—not only in the Fourth, but perhaps in Das Klagende Lied as well. Practical musician that he was, however, he must have felt that the absence of reliable soloists would certainly stand in the way of performances of the symphony, or at least seriously impede the presentation of an already difficult score. However quiet and unassuming, this Wunderhorn setting is still a finale, the culmination of an entire work. In addition, it is also (as was typical of Mahler's way of working) the source from which the three preceding movements had sprung. To ensure that it was taken seriously, Mahler decided in favor of assigning the solo part to a full-grown woman, but left a caution in the score that she should sing in "a simple, childlike manner, without parody." For me, the tone of the boy soprano brings Mahler's delicate orchestral imagery even more vividly to life.

A final consideration applies not only to this new Fourth but to Bernstein's Mahler in toto. Toward the end of his life, Mahler is known to have said to his associates, "If, after my death, something doesn't sound right, then change it. You have not only the right but the duty to do so."

Advice not to be taken lightly, certainly, but if anyone has earned the right to exercise this duty in fulfillment of Mahler's intentions, that person is Leonard Bernstein.

Playing times: 93:28 (DG 423 395-2); 57:07 (DG 423 607-2); 74:17 (Angel EMI CDM 69186); 75:00 (DG 423 608-2).

David Hurwitz

BACH, C.P.E.: St. Mark Passion.

Laki, Kunz, Schreier, Schmidt, Backes, Keitz, Wagner; Gäching Kantorei, Stuttgart Bach Collegium. Rilling. CBS Masterworks M2K 45211 (D. 2). When one thinks of Passions, Johann Sebastian Bach's towering archetypes immediately come to mind. Bach's second son, Carl Philipp Emanuel, was clearly interested in the genre as well. He composed no fewer than 21 known Passions, most of which have been lost; this one, based on the gospel of St. Mark, is among the survivors and is recorded here for the first time, thanks to Helmut Rilling.

Those expecting the imposing weight and complexity of the father's great St. Matthew and St. John masterpieces may be disappointed in the work of the son. The younger Bach's textures and harmonic structure are much simpler, his style more direct, and the writing ultimately less ecclesiastical in tone. What this setting lacks is the tremendous pathos and unbridled emotion of its texts. Angry words are often accompanied by polite string motifs, while deep mourning is set sweetly in major keys. Drama is certainly not wanting, but the music seems almost more operatic than sacred. The work's joyous opening is also a bit of a shock. Perhaps the style should be praised for being less fussy in its word painting, less adamanant in its rhetorical gestures, but for me it too often strikes an empty chord.
Despite these reservations, one encounters a good deal of fine music here. The orchestral writing is of a very high order, and many of the arias are attractively shaped. The alto's lovely "Wo ist das Kreuz?" is perhaps the finest example, and a clear exception to my characterization of the score as a whole. This aria is beautifully shaded by Ursula Kunz, who is among the more distinguished in a lineup of soloists not particularly suited to the music. The Evangelist, Peter Schreiter, is a touch too emphatic in recitative (he handles his arias better), and soprano Kírszitá Laki's voice sounds too large and has too wide a vibrato. Bass Andreas Schmid, as Jesus, is perhaps the most successful, but none of these singers has a voice that is really scaled for stylish Baroque performance. Rilling paces the work effectively and keeps the chorus well under control, but his string players are not of the highest caliber. The recorded sound is rather small and glaring. Playing time: 122:04.

Christopher Rothko

BACH, J. C.: Quintets (3); Sestetto in C, for Oboe, Two Horns, Violin, Cello, and Keyboard.

_English Concert: Andreas Holtschneider, prod. Deutsche Grammophon 423 385-2 (D)._

Quintets: in D, for flute, oboe, violin, cello, and keyboard, Op. 22, No. 1; in D, for flute, oboe, violin, viola, and continuo, Op. 11, No. 6; in C, for flute, oboe, violin, viola, and continuo, Op. 11, No. 1. On this disc, instrumentalists from the English Concert bring us a very fine collection of chamber works for winds and strings by Johann Christian Bach. Possessing a certain simplicity of sound, bordering on naivité, that was common to the early Classical style, the pieces are light-hearted but by no means slight. It is primarily the scoring that elevates these works from the merely pleasant to the profound. To take the Quintet, Op. 22, No. 1, as perhaps the finest example, one finds the oboe and cello almost melting together, the flute singing brightly above them. The harpsichord frequently steps out from its continuo role to punctuate the line of action, while the strings alternately throb in support or jauntily trade lines with the winds. The effect is so brilliant that it readily, and happily, calls attention to itself, making many a similar work from the period seem a mere wash of sound by comparison.

Bach's music is aided by some exemplary musicianship here. The readings are sprightly but never rushed, and show an excellent sense of ensemble among the players. The sound is quite clear in the three quintets, but a little woolly in the sextet. A winner! Playing time: 68:58.

Christopher Rothko

BARTÓK: Bluebeard's Castle, Op. 11.

_Martón, Ramey: Women of the Hungarian Radio and Television Chorus, Hungarian State Orchestra, Fischer, Jenő Simon and Georges Kadar, prods. CBS Masterworks MK 44523 (D)._

On Béla Bartók's first trip to Paris, a local acquaintance offered to send him to various musical luminaries but failed to mention Claude Debussy, whom the young Magyar provincial said he admired most of all. When his exasperated host asked whether he preferred insults from Debussy to cordial hospitality from all the other ers, Bartók answered without hesitation that he would prefer to endure insults from Debussy.

That admiration for the composer of Pelléas et Mélisande radiates from Bartók's only opera, which he finished at the age of thirty, its setting evokes, as does the music itself, Act III, Scene 2, of Pelléas. Where Goulaud takes his younger brother on that ominous visit to the castle's subterranean vaults. Only occasionally does any recognizable Hungarian music manifest itself here, but throughout the score one has the intense pleasure of hearing a young genius feel his way toward becoming one of the greatest composers in history. Time after time, his inspired orchestration and harmonic invention jolt you into sitting up and taking notice.

In only a few years, Eva Martón has established herself as one of today's leading dramatic sopranos. The occasional slightly hard edge to her voice has put me off a bit in other recordings, but as Judith here she seems ideal. Samuel Ramey, a Kansas boy, sings Hungarian with conviction and emotional nuance; from the vocal standpoint, I have never heard this exceptionally gifted bass sing more magnificently. The orchestra sounds like a first-rate ensemble, and conductor Ádám Fischer infuses the many-colored score with passion and brilliance. Of the various recordings of this work to come to my attention, none has ever even approached this one.

I have only two quibbles. The libretto provides Béla Bálaiz's original Hungarian (sung here), but instead of supplying literal translations in English, French, and German, it has unnecessarily straitjacketed all three versions into the trochaic tetramer of the original. That not only circumscribes the translations' accuracy, it also makes the English version seem to have Hiawatha's tomtom in the background. Also, it really seems little enough to expect annotator David Johnson (or his CBS editor) to know the difference between "grizzly" and "grisly." On balance, however, the impressive success of this CBS/Hungaroton coproduction leaves me hoping that many more will follow. Playing time: 62:04.

Paul Moor

BARTÓK: Concerto for Orchestra (piano transcription); Dance Suite (piano transcription); Petite Suite.

_Sándor, Georges Kadar, prod. CBS Masterworks MK 44526 (D)._

Composers have usually made piano transcriptions of their orchestral works for the most elemental of motivations, such as the indispensability of food, clothing, and shelter. Leonard Pennario once made an interesting specialty of playing the difficult, virtually unknown piano version of La Valse that Ravel transcribed; other pianists have found similar curiosities in hidden corners of the repertoire, and the advent of Compact Discs has brought an avalanche of recordings of them.

You might bridle at the very notion of a transcription for piano of Béla Bartók's superb Concerto for Orchestra, a work that more than almost any other I know exploits the individual technical and coloristic resources of each instrumental group in the modern symphony orchestra. I can only say that even after having heard every performance I could get to of that masterpiece—starting with Serge Koussevitzky's introduction of it to New York in 1944—I find György Sándor's recording a genuine revelation.

The piano version owes its existence to a Ballet Theatre project that never materialized; for rehearsals, Bartók prepared a piano score during the last ten days of January 1944. That version turned up again only in 1985, among papers passed on to the composer's son Peter, and he turned it over to Sándor to prepare it for performance and publication. Bartók himself called bars 482 to 555 in the finale "im-
possible to transcribe adequately for one piano," but unless you unfairly compare Sándor's performance with the orchestral score itself, you will hardly find it wanting.

The pianist plays it not only with his wonted virtuosity and expertise but also with a clarity that particularly illuminates harmonies and voice-lednings usually overlaid by the orchestral texture. Sándor is certainly the man for the job. He premiered the Third Piano Concerto with Eugene Ormandy and the Philadelphia Orchestra (and made the first recording with the same forces) as well as gave the first public performance of one of the shorter works heard here, the piano version of the Dance Suite. From a composer of Bartók's genius, you welcome every possible addition to the catalog of his works that you can get. Playing time: 54:24. Paul Moor

Decca's (10-inch) LP LW 5122, both justify a search, if you feel about these pieces as I do. With the current CD wave of Britten revivals, Decca/London ought to look into them. Playing time: 52:52.

Paul Moor

BRUCKNER: Symphony No. 8, in C minor.

North German Radio Symphony Orchestra, Wand, Gerhard Arnaldi, prod. Angel EMI/Deutsche Harmonie Mundi CDCB 00718 (D, 2).

This is one of the major releases of the decade. Not only does it rank among the finest recordings ever of Bruckner's Eighth Symphony, but as a performance it stands virtually unparalleled as a testimony to the conductorial art of Günter Wand. Wand's earlier Bruckner Eighth, with the Cologne Radio Symphony (still available on Angel EMI/Deutsche Harmonie Mundi CDCB 47749), was a magnificent, no-nonsense version of great architectural strength. On top of this foundation, Wand now adds a totally natural flexibility of pulse allied to a near-miraculous understanding of the work's dialectic.

The precise nature of Wand's achievement can be neatly summarized through a (Continued on page 68)
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brief look at his treatment of a passage from the scherzo. After the first big climax, the development begins with a series of episodes underpinned by two-note timpani taps, themselves reminders of the motif that began the movement. Rather than treating them as mere accompaniment, Wand has his timpanist play each of his entrances slightly louder. This in turn produces an increasingly urgent orchestral response, until the strings tumble themselves into the next passage, urged on by the conductor's all but imperceptible quickening of tempo. What distinguishes this reading from the competition is the way Wand conveys a true sense of drama, of cause and effect, action and reaction. Though only one small moment, it is typical of Wand's entire interpretation. The net result is that, huge as it is, Bruckner's Eighth has never sounded so lucid, nor has the emotional and musical development of each passage in the score been rendered with such utter clarity.

No doubt the circumstances that surrounded this recording contributed to its success. It was captured live in Lübeck Cathedral, as the culmination of the 1987 Schleswig-Holstein Music Festival. The spacious acoustic benefits the music immeasurably, and the sound is superb, barring an edit or two (the recording was pieced together from two different performances). The North German Radio Symphony, which Wand has shaped into a remarkably responsive ensemble during the six years he has been at its helm, plays magnificently—its sound is absolutely right for this music. Playing time: 86:25.

David Hurwitz

**DVORÁK: Symphonic Poems (5).**
Czech Philharmonic Orchestra, Gregor. Supraphon CO 2196/7 (D, 2). (distributed by Denon.)

**DVORÁK: Symphonic Poems (5); Symphonic Variations, Op. 78.**
Slovak Philharmonic Orchestra, Kösler. Opus 9150 1996/7 (A, 2). (distributed by Koch Import Service.)

Dvořák’s late symphonic poems are, all five of them, masterpieces of melody and orchestration. Anyone who loves the symphonies, the overtures, and the Slavonic Dances (who doesn’t?) should get hold of one of these fine sets. Both make available domestically for the first time in many years the composer’s last work in the medium, *Heroic Song.* Rumor has it—no doubt motivated by the title, and in the absence of any tradition of performance—that this piece is a bombastic exercise in orchestral futility. It is not. *Heroic Song* is a vital and confident assertion of Dvořák’s unflagging inspiration and compositional vigor.

Though all five symphonic poems date from the turn of the century, it was becoming clear as early as the composition of the Eighth Symphony in 1889 that the Czech composer’s continued artistic growth demanded expression outside the Classical forms. The music that he created around four folk ballads and one abstract program of his own gave Dvořák the opportunity to push his formal and orchestral mastery to new heights. The symphonic poems are full of innovative scoring for harp, exotic percussion, and bass clarinet—all instruments foreign to the Brahmsian tradition that Dvořák adhered to in his late symphonies. Though the symphonic poems have often been compared to Liszt’s similar efforts, there’s nothing by the Hungarian composer that even approaches Dvořák’s achievement here. Janáček, rightly enough, loved these pieces, and it was none other than Gustav Mahler who, in December 1898, led the Vienna Philharmonic in the world premiere of *Heroic Song.*

These two sets compete indirectly with recordings by Rafael Kubelík, Neeme Järvi, and István Kertész; but their readings were coupled to various symphonies, and in many cases currently languish in discographic oblivion. It therefore makes sense to acquire a complete set (*Heroic Song* is unobtainable otherwise). It’s a pity, really, that these two sets had to arrive at once, for there is much to enjoy in Bohumiř Gregor’s performances, not least the playing of the Czech Philharmonic. Zdeněk Kösler’s interpretations are slightly better of the two, however, his readings are much more flexible in rhythm and tempo than Gregor’s very straight-ac
beginning with Haydn and Mozart, fully superseded the old. Fasch was one of the innovators who put instrumental music on a fully independent footing and replaced fugal writing with modern theme-oriented composition." Georg Philipp Telemann, whom Fasch once called "my most honored and dearest friend," mounted performances of a complete cycle of Fasch's church cantatas in Hamburg. Bach himself esteemed Fasch highly, and almost certainly made (from an original organ trio) the version recorded here of the Sonata for Oboe, Violin, and Basso continuo; the Bach-Werke-Verzeichnis recognizes it as B.W.V. 585. And yet, during three decades of living in Germany and attending innumerable concerts in both East and West, I never once encountered Fasch's name. *Sie transiti gloria mundi!*

Fasch apparently came from humble origins; his talent got him accepted as a resident pupil by the choir school of St. Thomas's Church in Leipzig during Johann Kuhnau's tenure as Cantor, but he received no regular lessons in composition or the playing of instruments because he "was not able to pay for the instruction." In 1722, he himself applied for the Cantorship, but the judges passed him over—in favor of Bach. He also missed out on two other posts due to his lack of qualification to teach Latin. Those sorts of things seemed more or less the story of his life.

Fasch's music certainly merits rediscovery, especially in performances as superior as these (I admit I found Güttler's tempos in the first overture on the sedate, almost portly, side, but that proved a temporary aberrance). Peter Schreier—a Dresden, like all the other artists here—ranks among the finest and most musically tenors in the world today. The brief bass solo part in the little Mass (*missa brevis* consisting of only a Kyrie and a Gloria*) brings us none other than Olaf Baer, to my mind the greatest new lieder singer to appear on the scene in years. If you don't yet know his superb Angel EMI recordings of songs by Schumann (CD 47397), Schubert (CD 47947), and Wolf (CD 49054) with Geoffrey Parsons, you have missed something very special. [See feature review, May 1988—Ed.]

Among the fine print of Manfred Fehner's ample, first-rate leaflet, you can read: "Recording: VEB Deutsche Schallplatten, Berlin/DDR." VEB stands for Volks- gener Betrieb ("The People's Own Enterprise"). Schallplatten means recordings, and DDR stands for the German Democratic Republic. Capriccio has by now brought us a list of such offerings lengthy enough to justify the conclusion that, in the recording field, German musicology, whether East or West, remains perhaps the finest in the world. These recordings can hold their own even with the celebrated Archiv series put out in West Germany by Deutsche Grammophon. Playing time: 117:09.

**Paul Moor**

**GLASS: Powaqqatsi.**


In 1983, Godfrey Reggio's film *Koyaanisqatsi* was released, and it provoked either puzzled incomprehension or cultish devotion. Lacking in plot, actors, and dialogue, *Koyaanisqatsi* portrayed in vivid terms the dislocation of man from his environment. In the Hopi language the title translates as "life out of balance," and Reggio's vision of mankind tottering at the edge of ecological and sociological suicide was enhanced by vast, panoramic aerial views and dramatic, sped-up and slow-motion photography.

The indication of technology already apparent in *Koyaanisqatsi* comes to the fore in *Powaqqatsi*, although the sequel takes a far broader global perspective. *Powaqqatsi* means "a way of life that consumes the life forces of other beings in order to further its own life," and here the allusion is to Western society and technology, and to the havoc they wreak upon traditional cultures and landscapes worldwide.

Thus it is not surprising that Philip Glass's soundtrack for *Powaqqatsi* also takes a broader, cross-cultural view. Just as Reggio's camera travels the globe, providing us with panoramas of cultural and environmental degradation, so too Glass's score embraces the sounds of African, Asian, and South American musics. A battery of non-Western instruments, especially percussion, is combined with Western orchestra and electronics. Even "ambient sounds," such as the call to prayer of an Egyptian muezzin and a Hispanic children's chorus, are incorporated into the sonic melange.

The result, one cannot help but admit, is seductive to the point of intoxication. Instead of colliding unseasilly, Glass's Western and non-Western, acoustic and electronic, instrumental and vocal forces are cleverly integrated. The extraordinary range of timbres builds up gradually; texture and color slowly thicken while rhythm and harmony remain unchanged. Perhaps it is the very simplicity of the long pedal points and percussive rhythmic ostinatos that enables this dazzling orchestral canvas to unfurl so effortlessly.

Still, one must also admit to having doubts. Certainly Glass knows as much about non-Western music as any Western composer. Yet one cannot help but feel a bit uneasy with his clever, all too superficial appropriation of alien instrumental sounds. What the 19th century called *chinoiserie*—which amounts to employing exoticism for its own sake—is by definition somewhat dishonest as a musical technique: It finds the Western composer raiding the coffers of non-Western traditions and creating something imitative rather than innovative.

So I remain unmoved when I hear Glass's strings mimicking the melodic arabesques of the Middle East, or his percussionists chugging away at African polyrhythms. The most fascinating aspect of this composer's work has always been the influence of non-Western structure (primarily the additive rhythms of Indian music), not sound. But it is only when these expanding and contracting rhythmic patterns are clothed in Glass's familiar complement of Western instruments and electronics that one recognizes an intellectually honest and fruitful way of dealing with Eastern and other influences. In fact, the finest portions of *Powaqqatsi* are those in which the overt exoticism disappears, and Glass is freed to explore the intricacies of non-Western structure rather than the superficialities of esoteric sounds.

It seems unnecessary to remark at length on the performers, who were overdubbed in the studio and sound rhythmically precise but emotionally constrained. Only the Hispanic Young People's Chorus succeeds in remaining uninhibited in this high-tech environment. Perhaps the cool performances and staccato sonics may be considered as inadvertent—if appropriately *Powaqqatsi*-an—comment on the corrosive side effects of technology. Playing time: 73:50.

*K. Robert Schwartz*


Sam Dennison, who orchestrated the Five Pieces heard here and who helped cellist his claim for the virtues of Concerto No. 1 (1884) primarily on the argument that it is a work "more exciting" and "more warmly romantic" than comparable concertos by German cellist/composer Georg Goltermann (1824–1898).

It is true that Herbert's name remains almost a household word, while Goltermann's is emblazoned with a single paragraph in The New Grove Dictionary of Music and Musicians. Herbert's fame, however, justifiably has far more to do with Babes in Toyland, Naughty Marietta, and the forty or so other operettas he wrote between 1896 and 1924 than with the handful of "serious" compositions he produced prior to the turn of the century.

Of these early efforts, clearly the most substantial is the 1894 Cello Concerto No. 2, a work whose uninhibited lyric qualities served as an inspiration for Dvořák's Cello Concerto in B minor, Op. 104, of the following year. But in Herbert's two concertos, unfortunately, the lyrical qualities tend to burn out after a mere statement or two of a theme. Developmental passages are generally blustery and lacking in direction and focus, and major sections within movements seem disjoint, each of them arrived at after transitions that are the musical equivalents of treading water.

Both works contain melodies—especially in their middle movements—that are exquisite. These soaring, singing lines command the listener's attention in much the same way as do the tunes of Herbert's operettas and the bonbons that comprise the Five Pieces. It is only after hearing what comes next—after hearing how musical ideas that seem perfect for miniature forms are distorted by being stretched beyond their means—that the disappointment begins. Be that as it may, there is no disappointment to be had from these performances, Harrell's sensitive, often rapturous playing and the Academy's lush accompaniments make the paydirt material sound even richer than it is, and their handling of the other stuff is at least consistently animated. Playing time: 66:52.

James Wierzbicki

ROREM: String Symphony⁷; Sunday Morning⁹; Eagles⁹.

Atlanta Symphony Orchestra, Shaw⁹; Lanet. Robert Woods, prod. New World NW 353-2 (D). 86

Ned Roem makes his long-overdue debut on CD with three orchestral works performed at the Atlanta Symphony. The String Symphony is conducted by Robert Shaw, one of Roem's favored interpreters. Roem describes the titles of the five movements ("Waltz," "Berceuse," "Scherzo," "Nocturne," and "Rondo") as "Chopinesque," but the more proximate musical inspiration would seem to be the strongly colored string writing of Britten's
Frank Bridge Variations and Les Illuminations. Whatever the source, Rorem has passed it through the filter of his own highly characteristic style, and the result is a memorable work that will prove an invaluable addition to the string-orchestra repertoire. As for the performance, Rorem recalled last year in The Nantucket Diary (North Point Press) that "Shaw led the world premiere of my String Symphony in such a way that, although future performances by others may be different and even as good as, none will ever be better than." Enough said.

Sunday Morning, composed in 1977 for Eugene Ormandy and the Philadelphia Orchestra, is a more ambitious production, a "non-literal, dreamlike recollection," says Rorem in the album's liner notes, of Wallace Stevens' 1915 poem "Sunday Morning." In this work Rorem reveals himself to be not merely a gifted melodist but an extremely distinctive creator of orchestral combinations. The 1958 Eagles, an "instrumental interpretation" of a poem by Walt Whitman, provides further proof that Rorem, known chiefly for his songs and choral music, is in fact a first-class orchestral composer. These last two works are effectively conducted by Louis Lane, who served with Shaw as one of the Cleveland Orchestra's associate conductors under George Szell.

Ned Rorem has been turning out an endless stream of song cycles, acerbic essays, and gossip diaries ever since the mid-1940s. Always accessible, always tonal, his music was given short shrift during the long, ruthless reign of the academic seinitists. Now that these unappealing composers have at last fallen out of post-modern favor, Rorem has emerged at the age of 65 as quite possibly the best composer we have. "The Red Queen said you've got to run fast to stay in one place," says Rorem. "I stayed in one place. Now it's clear I've run fast." This outstanding CD, like Setting the Score, his latest collection of essays on music (Harcourt Brace Jovanovich), is a worthy reminder of just how fast Rorem has run. Playing time: 51:18.

Terry Teachout

SCARLATTI, A.: Dixit Dominus.
VIVALDI: Gloria, in D, RV 589.


Vivaldi's famous Gloria combines his accomplished vocal writing and his familiar concerto style into an exciting and inspirational package. In performing it, Trevor Pinnock and the English Concert seem most at home in the secular elements of the piece, presenting readings that will set the feet tapping but not necessarily move the soul. The orchestra is perky and vigorous, but the choir, for all its precision, seems rather reserved and lacks the least bit of emotional involvement. There are fine solo and obbligato contributions, however—most notably, soprano Nancy Argenta's and oboist David Reichenberg's ravishing account of the "Domine Deus, Rex coelestis." Despite these reservations, this is still one of the best Glorias on disc. I wish I could say that I found Alessandro Scarlatti's Dixit Dominus a more inspired piece. The writing is simply not very dynamic, with rather static choruses and conventionally shaped solo movements. In this case, the performers are not particularly helpful, either, the choir providing somewhat less steady than in the Vivaldi and the male soloists lacking distinction. Engaging orchestral parts and fine string playing prove to be the primary virtues of this offering. The sound in both works is full and detailed but has little sense of depth. Playing time: 52:32.

Christopher Rothko

WAGNER: Orchestral Excerpts from "Der Ring des Nibelungen" (arr. Maazel).


Suites from Wagner's music dramas are nothing new; Stokowski arranged and recorded such sequences more than half a century ago. This new release from Telarc, its first recording with the Berlin Philharmonic, offers Lorin Maazel's selection of excerpts from the four music dramas that comprise Der Ring des Nibelungen, presented chronologically (with one exception) and including many of the major orchestral interludes. Unfortunately, the performances are surprisingly tame. Maazel has conducted the Ring often in the past, at Bayreuth and elsewhere. I hope those performances were more impressive than the prosaic Wagner he gives us here, which, except for "Wotan's Farewell," has little drive or tension.

On most excerpts recordings, the "Entrance of the Gods into Valhalla" from Das Rheingold begins as it does in the opera, with Donner's gathering of the mists and his thunderbolt, followed by the "entrance" music as the gods slowly walk along a rainbow bridge into their castle. In Maazel's suite the sequence is botched: An excerpt from the "entrance" music appears on band 2—before the "hammering" music of the underground Nibelungs (from earlier in the opera)—after which one hears Donner's gathering of the mists (band 4) and the thunderbolt (band 5). This is followed immediately by music from Die Walküre.

Those expecting the sonic grandeur brought to the final pages of Das Rheingold by Georg Solti—in his complete Ring recording, made more than two decades ago—will not find it replicated in Maazel's treatment. This episode aside, however, Telarc's sound is excellent, surpassing most of Deutsche Grammophon's digital recordings made with the same orchestra in the same hall (the Philharmonic in Berlin). But superior performances of Wagner can be had on many other CDs, conducted by Furtwängler, Toscanini, Karajan, Klemperer, Szell, and Solti (though one should avoid Solti's digital Ring excerpts disc with the Vienna Philharmonic, London 410 137-2). Playing time: 69:40.

Robert E. Benson

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On a mid-October visit to the Rockefeller Center flagship of the Sam Goody record stores, they weren't easy to find. "They used to be over here," puzzled Clerk No. 1, "but it looks like somebody moved them." We consult Clerk No. 2, who responds, "They're over there," pointing to a pillar on which hang prominent displays of artists like Johnny Mathis and Bing Crosby. High above them, two unmarked racks are jammed with almost 40 copies of 5-inch Compact Disc Videos. In a tight-for-space marketplace, the CD-V appeared to be getting no respect.

If Sam Goody isn't certain the CD-V is a happening thing, little wonder that John and Jane Doe are skeptical, too. But a handful of record companies, led vigorously by Polygram, are determined to change that: As I write this, the launch of the 5-inch CD-V includes 34 titles from Polygram-related labels, seven from the Warner/Elektra/Atlantic axis, and one from Enigma. And by the time you read this, dozens more titles are expected.

Much has been written in HIGH FIDELITY about the nature of CD-V. To recap, the 5-inch Compact Disc Video is exactly the marriage its name implies: a music video (with Laserdisc-quality picture and digital soundtrack) wedded to a Compact Disc (usually holding four tracks, with a maximum playing time of about 20 minutes). The disc itself is colored gold to distinguish it from the silver CD. Otherwise, the 5-inch CD-V resembles its progenitor exactly—and you can play the audio-only tracks of a CD-V on your CD player. Pop one in, and the display will show the number of audio-only tracks and their total playing time, simply failing to recognize the audio and video content of the videoclip. To hear and see that, you must have CD-V hardware—which is mainly appearing as part of the so-called combi-players, machines that accommodate not just 5-inch CD-Vs but also 8-inch and 12-inch CD-Vs and Laserdiscs.

BY KEN RICHARDSON

Some of the best (above, from left): Elektra's Anita Baker, Polygram's Dan Reed Network and Men Without Hats
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As for the supply of CD-V software, many companies are still waiting and seeing. Indeed, you can’t even buy one of the best CD-Vs I’ve seen and heard. Lyle Lovett’s She’s No Lady, because it’s a promotional item distributed by MCA in an effort to test the critical and industrial waters. There are, however, 42 titles in the stores so far, all reviewed here.

We begin with the seven titles from Warner Communications, as they point up several peculiarities of the 5-inch CD-V format. Donald Fagen’s New Frontier (Warner Bros. 25679-2), taken from 1982’s The Nightfly, is the CD-V with the oldest material. No doubt Warner Bros. chose this release because it felt the classic upscalleness of the music and the cleverness of the video—which mixes computer
graphics, animation, and live action in a humorous Party During Nuclear Wartime—would sell well on CD-V. But this is also the CD-V with the shortest audio-only program, “Maxine” and a repeat of “New Frontier” clocking in at a mere 8:21. The material on Randy Newman’s I Love L.A. (Warner Bros. 25680-2) is more recent but not current, illustrating that CD-Vs have been in the works for some time and that, in many cases, the releases available today have had to draw from whatever was current at the time the titles were planned. The fact that Newman’s CD-V comes from 1983’s Trouble in Paradise is not itself a contamination; the facts that the material is relatively poor, the three audio tracks (“I Love L.A.”, “I’m Different,” “Miami”) add up to only 10:16, and the video is cute just the first time around, however, are enough to make it of low priority.

The third CD-V from the Warner Bros. family, Madonna’s Papa Don’t Preach (Sire 25681-2), has a better title videoclip (almost ruined by our heroine’s incongruous skindancing to the choruses) and a longer audio-only playing time (14:46). Yet, more than ten minutes of that time is consumed by not one but two versions of “Papa Don’t Preach”—meaning that the song appears a total of three times (broken up by “Pretender” from Like a Virgin). The same strategy is followed by another Warner Communications company, Atlantic, on its two CD-Vs. Of the four selections each on LeVert’s Casanova (Atlantic 81830-2) and Madame X’s Just That Type of Girl (81831-2), three are repeats: the title video, an audio-only version of that title song, and an extended-mix audio version of the song. The fourth track (LeVert’s “Throwdown,” Madame X’s “Flirt”) accounts for only five minutes of the audio-only time.

This strategy is misguided. The format is CD-V, not EP-V. Various mixes of the same song should be collected on easily affordable vinyl, not relatively expensive digital disc. Even a little repetition is questionable: Why, after all, does nearly every single CD-V under review here repeat its

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The 5-INCH CD-V

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12-INCHERS: Compact Disc Videos or Videodiscs?

The CD-V story does not begin and end with 5-inch discs. Also available are 12-inch titles, and on the horizon are 8-inch CD-Vs. Sound familiar? It should. Pioneer and a few other companies have been selling 8-inch and 12-inch optical discs for years. Why then are Polygram’s long-form titles called CD-Vs and not simply videodiscs? No doubt the company wishes the “CD” connection to bring success to a format that has had a difficult time competing with videocassettes.

This promotes confusion, though. “CD” hardly connotes the largeness of a 12-inch CD-V. Furthermore, “CD-V” is a good distinguishing name for the 5-inch product alone, as it accommodates just a five-minute videoclip and a 20-minute audio-only program, whereas the 12-inch disc holds as much as 90 minutes of simultaneous audio and video. Finally, there’s the false implication that Polygram’s 12-inch CD-V is somehow inherently different from Pioneer’s 12-inch Laserdisc. True, you’ll hear only an analog soundtrack if you play the digital CD-V in an old analog Laserdisc player, but otherwise the “two” 12-inch formats are identical. The question now is whether Pioneer will yield to the new nomenclature and dub its own 12-inch discs CD-Vs. Meanwhile, Polygram is pushing the CD-V designation on four 12-inchers as of press time—and like the company’s 5-inchers, these titles vary widely in quality. Sadly, the worst is Rush’s Grace Under Pressure Tour (Polygram Music Video CDV 080 103-1), a 70-minute program filmed in Toronto in 1984. When the band made the transition from concert hall to sports arena in the early ’80s, it lost a lot of its onstage power and precision, so for the most part the music here has only serviceable sound. Of no assistance are David Mallet’s cut-crazy direction (14 shots during Neil Peart’s climax to “Tom Sawyer” alone, few of them on the drummer himself) and the blinding reds, whites, and blues that often wash out the picture. The full-length version of the videoclip to “The Big Money” closes the show, but the version on Rush’s 5-inch CD-V has much crisper sound and is only 80 seconds shorter.

Eurhythmics Live (080 221-1) is a more vital concert recording than the live portion of the Rush 12-inch—yet at times the sound is so clean it’s a wonder that this 90-minute program was indeed taped onstage in Sydney in 1987. As for the actual performances, there are some synthly dead spots, but many of the songs (“Here Comes the Rain Again,” “Would I Lie to You?,” “Missionary Man”) are full of energy, fed by some eye-opening guitar work from David A. Stewart and consistent drumming by Clem Burke, still heir to Keith Moon. Geoff Wonfor directs with an admirably steady hand, and picture quality is rich and accurate.

For a discussion of Bon Jovi’s excellent Slippery When Wet: The Videos, see the other sidebar, “Bon Fire.” For an even hotter time, stay right here for Kiss: Exposed (080 101-1). A great deal of the music on this 90-minute program can’t touch Bon Jovi’s brand of metal, but Exposed will keep you entertained with seven videoclips, eight live segments from the band’s archives (including an amusingly raw “Deuce” in a tiny San Francisco club way back in 1975), and the running gag of “interviewer” Mark Blankfield getting the lowdown from Paul Stanley and Gene Simmons—a gag that, in a nice twist, turns quite serious during the program’s second half. Women, of course, are all over the place, barely clothed most of the time, bare (above the waist) a fleeting moment or two of the time—no worse, honestly, than the sex in the average British TV import. And whereas the male chauvinism of a band like Scorpions takes the form of crudely offensive images, Kiss’s fascination with women usually comes across as flirtatious or self-parody. At any rate, we’d all be better off getting Exposed than munching popcorn to the latest teenage slashfest.

K.R.
When I first saw Jon Bongiovi in a small Asbury Park club in 1980, he had straight, short hair neatly parted down the middle, wore pressed jeans and a plain shirt, and sang fair originals for a run-of-the-mill Jersey bar band called the Rest. Another nondescript rocker I figured I'd never hear from again.

So much for that prediction. Jon Bongiovi became the mauled Jon Bon Jovi and, with the new band he built and gave his new surname, sold a good number of copies of Bon Jovi (1984) and 7800° Fahrenheit (1985). Still, this wasn't monumental music—so when Slippery When Wet first crossed my desk in late 1986, all I could do was say "yawn, another Bon Jovi record" and file it away somewhere.

Which kept my clairvoyance average at a rock-bottom .000, for Slippery When Wet proceeded to sell 13 million copies, making Bon Jovi one of the world's most popular bands. Crucial to that success was the heavy rotation of various videoclips, three of which you can now buy on 5-inch CD-V. Livin' on a Prayer (Mercury 780701-2), Never Say Goodbye (780702-2), and Wanted Dead or Alive (780721-2). Like I once did, you may scoff at Bon Jovi, but these clips are undeniable sensations. Wayne Isham, who directs all three, blends road-is-heaven/road-is-hell scenes and performance footage with the skill of an auteur. No stupid concepts here, just plenty of Hard Day's Night hysteria, not to mention that inescapably infectious music.

Polygram has made these 5-inchers even more attractive by adding rare tracks. Livin' on a Prayer, besides offering the audio-only "Let It Rock" and "Wild in the Streets," includes the European B-side "Borderline." Never Say Goodbye, along with "Social Disease" and "Raise Your Hands," provides the non-LP "Edge of a Broken Heart." Best, however, is Wanted Dead or Alive. Though this second-batch Polygram CD-V seems to have a shoddily assembled audio program—"I'd Die for You" joined only by a repeat of the previous CD-V's "Never Say Goodbye" and two repeats of "Wanted"—the last version of the title song is a marvelous six-minute acoustic take, itself well worth the CD-V's price.

But if it's videos you really want, you can get the three above plus those for "Wild in the Streets," "You Give Love a Bad Name," and a live "Livin' on a Prayer," together with behind-the-scenes material, on a 12-inch CD-V, Slippery When Wet: The Videos (Polygram Music Video CDV 080297-1). Compared with its videocassette counterpart (440 041 521-3), this CD-V has a clearer picture and a better-balanced, hiss-free soundtrack—no surprise. Another comparison did yield unexpected results, though: The three 5-inch CD-Vs have even sharper pictures than that of the 12-inch, and they not only pump out the music at a higher volume but also lend somewhat more definition to that sound.

All this technology got you dizzy? How about a listen to a good ol' LP—namely, Bon Jovi's fresh studio album, New Jersey (Mercury 836 345-1). The first ten minutes are absolutely thrilling: "Lay Your Hands on Me" proves the band can play undiluted metal, and "Bad Medicine" proves it can add some of that mean streak to its pop sense. The rest of the LP isn't as compelling, but this is a solid record made under impossible follow-up circumstances.

In the end, Bon Jovi is successful because the bandmembers see themselves as just five more fans. (If it was fans, after all, who helped choose the tracks for the Slippery When Wet and New Jersey LPs and who shot the current video for "Bad Medicine,") Faced with such Jovial good times coming from both speaker and screen, even the most cynical critic should find himself wanting to leave the garret and join the party. Jon Bon Jovi is at his most eloquent when he closes the Slippery video collection with the following thanks to fans: "You kept coming back for more and telling the critics and all the authority whoever-they-are-out-there... [thumbs in ears, fingers up and waving]... no." To which I can only respond, "Touché."
Polygram's strongest metal CD-Vs aren't really metal in the strictest sense of the genre. Rush's *The Big Money* (Mercury 870 717-2), whose additional audio tracks are "Marathon" and a live "Red Sector A," has traces of the band's metal beginnings but is more concerned with progressive virtuosity. Trouble is, this material is from Rush's weakest period, not from the current rebound *Hold Your Fire*. The title video grows well, though, with an especially hyper Geddy Lee charging the band through computer graphics. Rush, too, is on 12-inch CD-V— as in Bon Jovi, whose three 5-inch CD-Vs may be very poppy metal but are nevertheless the best representations of the overall genre on the new format (see the "Bon Fire" sidebar).

If you're still hungry for metal, leave Polygram for a moment and turn to the sole Enigma CD-V, *Hurricane's I'm On To You* (Enigma 72300-2). There's too much repetition here—the title video is repeated in two audio-only versions—but we do get a previously unreleased instrumental version of "Baby Snakes" along with an earlier LP track, "The Girls Are Out Tonight." Furthermore, the title song is a gem, complete with muscular vocals, a thoughtful guitar solo, and an irresistible "naa na-na na na na" chorus.

Meanwhile, Polygram's funk-style CD-Vs, like its metal titles, are a mixed bag. At the bottom are Tony! Tony! Tony's *Little Walter* (Wing 870 732-2) and Vanessa Williams's *The Right Stuff* (870 733-2). The problem is not with the videos—even though TTT's fine a cappella start gives way to the insinuation of a human having to drum-synch to a drum machine, and even though Williams's behavior in negligence, then see-through tights, then push-up top will do little to reform the reputation of the ousted Miss America. The problem is with the audio-only portions of these second-batch Polygrams, which offer *nothing but* remixes of the title songs.

Things seem a lot more promising after hearing the title song of Angela Winbush's *Angel* (Mercury 870 700-2), which presents the singer as a more lusty Anita Baker. But the fact that Winbush's gospel yearnings are belied by the video's image of her singing from a sly bed should be a warning, because "Run to Me" and "Sexual Lover" fill what remains of the CD-V's audio-only portion with nothing more than sensual slop. Then again, that warning is subtle compared with the dead give-away in *Wipeout!* (Tin Pan Apple/Polydor 870 706-2) that the Fat Boys are fast becoming one-joke idiots. Audio raps (all hotter) are "Crushin','" "Hell, No!," and "Respect Yourself/My Nut"... Kool and the Gang demonstrate that video can turn a rather plain song into very pleasant entertainment in *Stone Love* (Mercury 870 711-2). Black-and-white scenes of New York mixed with color footage of the band performing in a loft lend great joy to the title track. This CD-V is also strengthened by the convincing soul of the audio-only "Forever," though both "Dance Champion" and the Club Remix of "Stone Love" are losers. If you want to make all judgment for yourself, cue up Cameo's *Word Up!* (Atlantic Artists 870 703-2), whose video upload is propelled by a tiresome beat and that wonderful wry vocal. The audio "Urban Warrior," "Fast, Fierce, and Funny," and "Groove with You" tend to drag, but who cares when the title material is so great? Much the same is true for Cameo's other CD-V, *Candy* (870 722-2), whose video contrasts the group's bad-boy image in "Word Up!" with multiple decked-out Cameos prancing around New York—helping you forget that the audio portion of this second-batch Polygram offers the remarkable "She's Mine" and "Aphrodisiac" plus two repeats of "Candy."

The unquestionable winner in this category, however, is the Dan Reed Network's *Get to You* (Mercury 870 730-2), full of hard funk, not junk. Metal guitars sound equally at home on "Forgot to Make Her Mine," "Resurrect," and "I'm Only Human," but the slap of "Get to You" is best—and if we're gonna see sex in a video, at least the sight here of a young lady preparing for sleep is sexy.

Polygram's remaining CD-Vs fall into an even broader category of miscellaneous pop. From Britain we have Level 42's *Something About You* (Polydor 870 712-2) and two entries from the Moody Blues, *Your Wildest Dreams* (Polydor 870 713-2) and I Know You're Out There Somewhere (Polydor/Threshold 870 726-2). The longing melody of "Something About You" is small consolation for a wasted audio portion that again gives us nearly 20 minutes of nothing but title-song remixes. The first of the two Moody Blues CD-Vs has the catchy title song that even Greil Marcus raved about and the lost-girlfriend video that masterfully tugs at the hearts of the Big Chill generation, but the three audio tracks ("Talkin' Talkin',' "It May Be a Fire," "Rock 'n' Roll Over You") don't offer much except some nice guitar from Justin Hayward at the end of the second. Hayward also plays well on the other CD-V's seven-minute "Deep." "Miracle" and "Verge Wine," though, take a distant back seat to "I Know You're Out There Somewhere," a musical and visual sequel to "Your Wildest Dreams."

From Canada we have Pop Goes the World (Mercury 870 718-2), a CD-V masterpiece by Men Without Hats. The video clip is a charmer, and its perky pop (heard also in the audio-only track "Jenny White Black") won't leave the brain. For balance, there are the power ballads "Lose
My Way” and “The End (of the World),” though “The End” should be at the end of the CD-V, as it is on the LP.

Back in the U.S.A., miscellaneous pop takes the form of the Robert Cray Band’s Right Next Door (Because of Me) (Hightone 870 714-2) and Smoking Gun (Mercury 870 715-2). That’s right, I said pop, not blues, for there’s a lot more George Benson than B.B. King in this material, especially when Cray spends most of the “Right Next Door” video posing pensively in an empty room. Furthermore, the music written by producer Dennis Walker—“Right Next Door” and “Foul Play” on the first CD-V, “Fantasized” on the second—is ultra-smooth, with only a hot fading solo on that last track giving evidence of Cray’s chops. Cray can write this easy stuff, too—hear the other audio tracks on the second CD-V, “More Than I Can Stand” and the previously unissued “Divided Heart”—but he does bring off a cool little solo and two longer, jittery runs, respectively, on his own “I Wonder” and his collaboration “New Blood,” both on the first CD-V. Deeper in the heartland live the Rainmakers, whose basic guitar rock is illustrated in the standard performance video Downstream (Mercury 870 719-2). Audio cuts include “Drinkin’ on the Job,” “Big Fat Blonde,” and the previously unissued “Carpenter’s Son.”

If the Rainmakers strike you as apprentice John Cougar Mellencamps, then by all means go straight to the master, who has three CD-Vs: Lonely Ol’ Night (Riva 870 708-2), Paper in Fire (Mercury 870 707-2), and Check It Out (Mercury 870 729-2). The first is flawless, with the title video’s excellent black-and-white footage of small-town life joined by the rocksteady audio-only tracks “The Kind of Fella I Am,” “Minutes to Memories,” and “You’ve Got to Stand for Something.” The second CD-V shows Mellencamp, like so many other successful white rockers before him, striving to Get Black. The stirring videoclip of “Paper in Fire” is a mite heavy-handed when it ends with the color-footage Mellencamp becoming one of the black-and-white stills reserved for his black onlookers, and the audio covers of “Under the Boardwalk” and “Cold Sweat” are credible and less credible. But this CD-V also has the gorgeous acoustic ballad “Never Too Old,” which like “Under the Boardwalk” and “Cold Sweat” was previously available only as a B-side. Therein lies the true strength of this title: It provides something that fans will want and collectors will need. Mellencamp’s third CD-V—a second-batch Polygram—attempts the same by including a live “Check It Out” but in so doing leaves us with three appearances of that song, counting the video and its audio-only repeat. That live track is fine, though, as are “Cherry Bomb” and another collector’s item, “Shama Lama Ding Dong.”

If we could cross Anita Baker with John Cougar Mellencamp—that is, if we could make a 5-inch CD-V whose title videoclip is not repeated in the audio-only program, a CD-V whose audio-only tracks include material previously unavailable on LP or CD or CD-3—we’d have the ideal product. Granted, the kind of hit-and-miss releases we’ve seen so far are to be expected from companies struggling with a format still in its infancy. But remember the questions asked by our editorial last October: “How many people want to pay seven to ten dollars for half-a-CD’s worth of music plus a short video? Is that lone video such a strong attraction that someone would choose a CD-V over a less expensive 3-inch CD containing perhaps as much music or a standard CD costing a few dollars more but delivering twice to three times the playing time?” No one need worry if the vision of the companies proves to be as sharp as the picture created by their shiny new offspring.
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Just as New Orleans was the cradle of jazz," Milt Gabler once said with pardonable exaggeration, "Commodore Records was the iron lung." He should know. A short, rotund man now in his seventies, Gabler started the Commodore label in the late 1930s toward the tail end of the swing era, when the music industry's interest in the hot jazz he loved had nearly disappeared. Gabler turned his father's 42nd Street store (it sold radios, among other things) into the Commodore Music Shop, the country's most important source of jazz 78s and a meeting ground for fans and musicians. One of those musicians was rhythm guitarist Eddie Condon, whose boundless energy and propagandistic fervor matched Gabler's own. In 1938, Gabler opened another store, on 52nd Street (soon to be dubbed Swing Street), and produced his first records, by Condon's Windy City Seven.

The timing of the first session, one day after Benny Goodman's famous Carnegie Hall concert, now seems fortuitous. Goodman proved that there was a market for both big-band swing and small-band jazz. But Gabler had in fact been preparing for this step for almost a decade. He was a jazz enthusiast from his teens, when he heard Ted Lewis and Louis Armstrong and listened nightly to the broadcasts of the Duke Ellington band from the Cotton Club. Even before going into the studios, Gabler had started his own reissue program, leasing from major companies unused and virtually unwanted masters of '20s and '30s jazz records (his first project involved the Vocalion sessions by the Jimmy McPartland Wolves), pressing 300 copies of each and selling them in his store. These were in fact the first jazz reissues. Gabler would later publish in this country Charles Delaunay's early jazz reference book Hot Discography (which Gabler has referred to as Discography in America), further helping to make collectors out of casual fans.

Gabler's most important work, however, began in the studios in 1938: In succeeding years, this small-businessman recorded Billie Holiday, Lester Young, Coleman Hawkins, Jess Stacy, Willie "The Lion" Smith, Fats Waller, and hundreds of other irreplaceable jazz musicians, preferring

By Michael Ullman
them to play the best standards of the '20s and '30s (though his heart was in Dixieland). Gabler also recorded swing musicians in small-band contexts. (He may have admired vocalists, too—he talks about Louis Armstrong and Bing Crosby—but his only significant vocal recordings are by Lee Wiley and Billie Holiday.) Some Commodore sessions among them Holiday’s “Fine and Mellow,” Young’s “I Want a Little Girl,” Hawkins’s “I Can’t Believe That You’re in Love With Me” and “My Ideal,” and Condon’s “You’re Somebody I Admire” and “Embraceable You”—are as good as any jazz. Now, those numbers and all other Commodore sessions from 1938 to 1943, including 67 tracks never before released, have been issued by Mosaic Records—on vinyl only—in a massive 23-LP boxed set under the name The Commodore Jazz Recordings, Vol. 1 (Mosaic MHR 23-1/2-97 Strawberry Hill Ave., Stamford, Conn. 06902). (Volumes 2 and 3 are scheduled to appear in June 1989 and June 1990.) At the same time, some of Gabler’s masterpiece are being reissued on Compact Disc in a more modest series of “Commodore Jazz Classics” distributed by Pair Records (87 Essex St., Hackensack, N.J. 07601).

The Mosaic box includes a 64-page book with a complete discography, a long and informative interview with Gabler, and provocative notes by Dan Morgenstern. I don’t always agree with Morgenstern: He believes that tenor saxophonist Bud Freeman would have received more credit if he had been black, but I feel that Freeman would have received more credit if he had his notes more creatively. Morgenstern is rarely technical, which is a good thing: Comparing Stacy’s “Stash” with Hoagy Carmichael’s “Woodchase Blues,” he says the latter “isn’t a blues,” when it isn’t a blues at all. Meanwhile, the Pair CDs present other problems: Personnel listings are obscure, and in one case—for the Condon session that produced “California Here I Come” —they are inaccurate. And though the CD sound is acceptable, some filtering of high frequencies takes away a little of the airiness I hear on the Mosaic LPs.

The Mosaic book also offers many photographs: of the paunchy and balding Gabler pulling out a Victor 78 at his 52nd Street store or introducing Condon and friends at one of the jam sessions he ran at Jimmy Ryan’s, of a serene Jack Teagarden blowing his trombone at a 1938 session, of a chubby Billie Holiday looking joyously self-involved at the April 1939 date for “Strange Fruit.” My favorite photo was shot at Jimmy Ryan’s: It shows cornetist Bobby Hackett, pianist Joe Sullivan, and trumpeter Marty Marsala, all on stage, laughing hysterically at something the eccentric, clarinetist Pee Wee Russell must have been playing.

They should have taken him more seriously. Russell is featured in Commodore sessions led by Condon, whose dates form the core of the Mosaic collection, as well as by Freeman and by trombonist George Brunies (not to mention the single date here Russell himself leads)—and he usually steals the show. Russell had a peculiar hollow tone and a variety of manners: At times he seems to root around in a phrase, searching for the right note the way a fuzzy old woman might look for a pin in her pocketbook. When he was excited, he’d pick widely spaced notes, playing with an aggressive squawk that must have come from the ‘20s clarinetist Frank Teschemacher. Russell had a curmudgeonly growl and a lazy, fluid melodic style, all sighs and delicate invention, making his solo on the 1938 “Embraceable You” one of the exquisite moments in jazz: After a gracefully tumbling solo by Teagarden, Russell enters with a casual phrase so arresting that it would soon be made into a standard itself. He barely refers to George Gershwin’s original, ending with a sinking trill that flutters anxiously downward like a bird caught in a chimney.

Russell brings out the best in his accompanists—specifically, pianists Jess Stacy (on “Meet Me Tonight in Dreamland”) and Fats Waller (whose delicate introduction to “You’re Some Pretty Doll” and arpeggios behind Russell’s solo show the serious, even romantic, musician behind the clowning Waller persona). Though Russell’s own ensemble work is less dependable, he’s magnificent (as are Hackett and Teagarden) in the last chorus of the original take of “Meet Me Tonight in Dreamland,” an ensemble chorus that Richard M. Sudhalter—in his notes to the Pair CD of Condon and Freeman bands, Jammin’ at Commodore (Commodore CCD 7001), where the song also turns up—unaccountably finds cluttered. Sometimes Russell fails. He sounds virtually paralyzed on “Peg o’ My Heart” —which is on the CD Jazz in New York (CCD 7009), featuring bands led by Hackett, Miff Mole, and Muggsy Spanier—but then he had to follow a devastatingly sentimental solo by Mole. (It should be noted, however, that this CD includes some of Mole’s best recordings, where he plays with an elegant tone, is right on pitch, and has complete control of his technique. Only his slightly square rhythm, as we hear on “Angry,” keeps him from being another Teagarden.)

Many great sessions came to Gabler because of his reputation and daring. Holiday was unable to get Columbia to record the anguished protest song “Strange Fruit,” so she approached Gabler, who recorded it and then asked her for a blues—which turned into “Fine and Mellow.” Not as elegantly accompanied as the Columbia Holiday, the Commodore Holiday is nevertheless underrated. Some of the bloom on her voice is gone, but the bitter-sweet expressiveness of the mature artist can be heard on “Yesterday.” The original masters of all her Commodore sessions, including the 1944 dates not yet reissued by Mosaic, are on the Pair CD Billie Holiday (Commodore CCD 7001).

Producer John Hammond brought Gabler three gems in 1938: recordings of Count Basie sidemen he had made for Vocalion, which rejected them. Gabler agreed to buy the masters on the condition that he be allowed to make new recordings of the group with the addition of Lester Young. And since Gabler had heard Young’s clarinet on Basie’s “Blue and Sentimental,” he insisted that Young play that instrument as well as tenor saxophone. This enlarged group recorded five
numbers, and it's an indication of the steadiness of the rhythm section, anchored by drummer Jo Jones, that the two takes of each tune are never more than two seconds apart in length. All the takes are on the Mosaic collection, and all are invaluable. Young introduces the master take of "I Want a Little Girl" wistfully on clarinet: His tone is all gently yearning. After trumpeter Buck Clayton plays the melody with direct, unaffected eloquence, Young comes back and creates a subdued, subtle, singing statement that seems both worldly wise and nakedly hopeful. In the original take, Clayton returns to sum up optimistically. The other pieces by the Kansas City Six, as this group was dubbed, are almost this stirring.

That rhythm section—the Basic rhythm section minus the leader—was the best in the business, and Jones makes the ricky-ticky sound of the Condon drummers, even that of Dave Tough and George Wettling, seem somewhat archaic. At his best, Tough was a steady, inventive, active drummer who seemed to base much of his style on Baby Dodds behind King Oliver and Louis Armstrong. Tough was undependable as a person, though, as we can hear on a session led by Bud Freeman on July 12, 1938. Tough apparently showed up drunk, and though he plays well on the two takes of "Tappin' the Commodore Till," he starts to fall apart when the band moves on to "Memories of You." On the second take of that track, he is silent until the middle of altoist Dave Matthews's solo, when he slaps at the drums thunderously as if in protest, and then subsides until the ending. After that, trumpeter (and former drummer) Marty Marsala, who happened to be visiting the sessions, takes over on drums, giving a good tough imitation.

Gabler must have been a patient man. When he offered Jess Stacy a solo date in April 1938, the pianist showed up unprepared; Gabler dabled the two disorganized improvisations that resulted "Ramblin'" and "Complainin'". When Gabler tried him again in June 1939, Stacy produced a little masterpiece, "Ec-Stacy," which has his characteristic drive: When things are going well, Stacy always sounds like he's playing "The World Is Waiting for the Sunrise." The solo is full of his devices, like the tremolo he produces with the middle fingers of his right hand, sounding like a pocketful of spare change.

Gabler was lucky with pianists. On this first Mosaic volume, we have an entire session by Teddy Wilson, pieces that he played in a simplified style to be used as instructional records. One could also learn from the decorativeness of Willie Smith's solo session and from the utterly relaxed New Orleans beat of Jelly Roll Morton, who made the classic "Mamie's Blues" in December 1939 and his last recordings, all here, the next January. The young Joe Bushkin appears on several sessions (he gets better month by month) as does a more progressive musician, Mel Powell, who leads a date with his boss Benny Goodman as sideman and who is also heard on four previously unissued solos, including two takes of "Haliejuah."

Then there is the greatest swing pianist of them all, Art Tatum, who appears, uncharacteristically, in an all-star gathering organized by Leonard Feather and led by tenor saxophonist Coleman Hawkins. Tatum plays splendid introductions to the various takes of "Esquire Bounce." He also backs up Hawkins with unusual restraint on "My Ideal," following Hawkins's solo with a less adorned chorus than usual; on the original take, Tatum prods the tenorist to a restless final statement. An earlier Hawkins session resulted in a well-known masterpiece, "I Can't Believe That You're in Love with Me," with definitive, contrasting solos by both Hawkins and alto saxophonist Benny Carter. Again the great Sid Catlett is the drummer, but the number is stolen by Carter, whose lazily descending phrases are repeated until they seem to overlap, like waves moving in with the gathering tide.

Gabler would continue to record the great swing tenors. Four of the Pair CDs are dedicated to Giants of the Tenor Sax, namely Lester "Prez" Young and Friends (Commodore CCD 7002), Coleman Hawkins/Frank West (CCD 7003), Chu Berry/Lucky Thompson (CCD 7004), and Ben Webster/Don Byas (CCD 7005). Thompson, Webster, and Byas (plus West) will appear in subsequent Mosaic volumes. The current one, meanwhile, has many other interesting dates, from a sextet set led by clarinettist Edmond Hall to a session recorded in New Orleans by the traditional band of clarinettist Ben Johnson.

Every one of these recordings is a reflection of producer Milt Gabler, who says in his notes to the Pair CDs, "All people hear music, some people listen to it. There is a difference. I prefer to listen." Mosaic's astonishing Vol. 1, whose additional takes give us some insight into the way he was capturing for posterity, demonstrates emphatically what a difference a man with strong taste and profound convictions can make. It's not only what Gabler listened to that is important: It's what he imagined as well. If he had done nothing more than record Lester Young on clarinet, he would have earned an honorable place in jazz history.
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"Don't Sit So Close to the TV!" David Ranada. Scan Lines. June.

Getting to Know Camerorders. Marc F Wielage and Rod Woodcock. Nov.

Inside Super VHS. Marc F Wielage. Nov.


Miscellaneons

All About Noise Reduction. Mark Davis. Feb.


Are We Overamplified? Michael Riggs. Front Lines. July


TEST REPORTS: Audio


NEC A-910, integrated. May.


Proton A-1150, power. Aug.

Revox B-250, integrated. July.

Cassette Decks

Akai GX-52. Aug.

Nakamichi CR-3A. Feb.

Sony TC-RX80ES bidirectional. Aug.

Technics RS-B905. Feb.

Yamaha KX-1200U. Feb.

Compact Disc Players


Harman Kardon HD-800. Sept.

Luxman D-117. April.

Mitsubishi DP-311R. Jan.


Onkyo DX-G10. March.


Sony CDP-C70 changer. July.

Sony CDP-5075SD. Oct.

Technics SL-P990. Aug.

Yamaha CDV-1000 CD/videodisc player. May.


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TEST REPORTS: Video  
JVC HR-S8000U Super VHS Hi-Fi VCR. Dec.  
Mitsubishi HS-423USU S-VHS Hi-Fi VCR. April.  
NEC DS-8000U S-VHS Hi-Fi VCR. Aug  
Sony EV-S1 portable 8mm VCR. Jan.  

TEST REPORTS: Car Stereo  
Audiovox HCC-2500 receiver/cassette deck. Dec.  
Kenwood K.RC 858 receiver/cassette deck. May.  
Phase Linear PLT-150 power amplifier. March.  
Soundstream D-100 power amplifier. May.  

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Interviews  

MUSIC  
Compact Disc Articles  
All CDs Great and Small (pop CD-Js, jazz and rock recordings on Atlantic, GPR, Pro Jazz, and Enigma labels; and reissues of Frank Zappa) Various writers. Oct.  
Coming Down Fast (The Beatles on CD: Magical Mystery Tour, Yellow Submarine, The Beatles, Let It Be, and Abbey Road). Various writers. Feb.  
Open Sesame (Angel EMI's midprice series). David Hurwitz. May.  
We Gotta Get You a CD Player (reissues of Todd Rundgren and Brian Eno; jazz recordings on Fantasy and Pablo labels; and greatest hits from seven Sixties pop groups). Various writers. April.  
The World on Compact Disc (survey of international folk and pop). Joe Blum. Nov.  

Footnoted Reviews: Classical  
Hindemith: Mathis der Maler (symphony); Trauermusik; Symphonic Metamorphosis on Themes of Carl Maria von Weber. Walther. San Francisco Symphony, Blomstedt. David Hurwitz. Nov.  
Mendelssohn: Concerto for Violin and Orchestra in E minor, Op. 64. Bell, Academy of St. Martin-in-
(Continued from page 13)

Yet More Tape

Just when you thought you had the TDK cassette lineup memorized, the company up and improves and repackages every one of its formulations—and introduces two new tapes to boot. Of the new formulations, AR and AR-X (both Type 1), is

The first incorporates TDK’s new “nonporous” ultrafine ferric particles. Because the crystalline structure of these particles does not have pores (which are formed during the dehydration step of gamma ferric oxide particle manufacturing), the magnetic energy of each particle is larger. The increased magnetic efficiency and higher packing density of the NP ferric particles gives the AR formulation the same low-frequency maximum output level (MOL) as TDK’s top metal tape (the re-formulated MA-X). A new HP-AR anti-resonance mechanism houses the tape, which is available in 60-, 90-, and 100-minute lengths.

Replacing the AD-X formulation, AR-X uses a dual layer of ultrafine cobalt-doped ferric particles to create a tape that TDK maintains has the greatest dynamic range of all of its Type-1 formulations. With a bias-noise level of ~66 dB, AR-X is /db quieter than its predecessor, and its ~6+6 dB 315-Hz MOL compares favorably with that of metal tape. While AR-X also has the HP-AR shell, it is available only in 60- and 90-minute lengths.

For those of you who, like us, get totally confused by the rampant proliferation of tape formulations (a malady not exclusive to TDK), here is a list of all nine of TDK’s cassette tapes, as well as in order of ascending price within each tape type. Type 1: D, AD, AR, AR-X. Type 2: SD, SA, SA-X. Type 4: MA, MA-X. In the product revamping, SA has received new 76- and 100-minute lengths, while MA has gotten a 110-minute size. C-46s have also been added to the SA, SD, SA-X, and MA-X formulations. TDK Electronics Corp., 12 Harbor Park Dr., Port Washington, N.Y., 11050.

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