

Stereo Review

SEPTEMBER 1990 \$2.50

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CAR STEREO REVIEW
November/December 1989

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CIRCLE NO. 90 ON READER SERVICE CARD



by Rebecca Day and
William Livingstone

LASERDISC UPDATE

In a recent Nielsen survey of one thousand adults, only 34 percent of the sample were aware that laserdisc players are available, 28 percent believed combi-players cost more than \$1,000, and 25 percent said laserdiscs cost more than \$50. Moreover, 62 percent felt that the format would be obsolete in a few years.

In support of the growing format, the Laser Disc Association reports that thirteen companies are now selling laserdisc players, the major movie studios are releasing their big titles on laserdisc (most of them simultaneously with videotape releases), 4,500 videodisc titles are currently available in the U.S., generally for \$24 to \$34 each, and many companies—including Pioneer, Kenwood, RCA, Sony, Yamaha, Philips, Magnavox, Panasonic, and Denon—have combi-players that sell for less than \$1,000. Sony's new MDP-333 lists for \$600. This month Pioneer is introducing the CLD-980 with a suggested retail price of \$500, and scheduled from Radio Shack in the fall is the Realistic MD 1000, expected to sell for \$499.95.

EQUIPMENT NOTES

Denon's new TU-860NAB tuner (\$475) receives all major stereo broadcast formats, including FMX and C-Quam, a stereo AM format developed by Motorola that has been widely adopted by broadcasters. . . . Citing revised projections, PSB Speakers has dropped the suggested retail price of its New Stratus speaker by \$100, to \$1,400. . . . Although designed to safeguard computers and office equipment, Avdex's PC Lock (\$130) can also be used to secure audio and video equipment. For more information, write to Avdex, 115 Henry St., Freeport, NY 11520. . . . Bose has been named the official supplier of professional sound systems for the sixteenth Winter Olympic Games in France in 1992.

MUSIC ON S-VHS TAPES

For owners of Super VHS vcr's, new releases from Super Source Video in San Francisco include Tchaikovsky's *Swan Lake* (\$49.95) performed by the Bolshoi Ballet of Moscow and "The Voyager Odyssey" (\$34.95), a music video featuring outer-space photography and works by such composers as Respighi, Hovhaness, Liszt, and Richard Strauss. Both were recorded in digital video and digital hi-fi stereo. For ordering information call 1-800-331-6304.

DISC EXCHANGE

The Compact Disc Exchange is an on-line cd buying and selling service for people with computers and modems. Subscribers pay \$10 a year for the ability to list or order discs, which are then mailed through the exchange. Handling fees are \$1.95 for sellers and \$2.75 for buyers of discs priced \$15 or less and 15 percent of the price for discs over \$15. The service has an electronic bulletin board for the exchange of information about artists or discs as well as live "chat sessions" every night, with each 4-hour session devoted to a particular musical category. The service can also be accessed through the Data-Tel communications gateway for a \$1-per-call charge. For a free 15-minute browse through the system, call by modem 1-415-824-7603.

MUSIC NOTES

On September 12 at 8:00 p.m. Eastern time, PBS presents "Amazing Grace with Bill Moyers," a 90-minute documentary on the well-known hymn with such varied singers as Judy Collins, Johnny Cash, and Jessye Norman. On September 14, PBS will repeat a program of Evening at Pops with the late Sammy Davis, Jr. as soloist with the Boston Pops Orchestra under John Williams. . . . Davis is among the Americans featured on new postage stamps from Tanzania honoring black entertainers. Others include Michael Jackson, Gladys Knight, Smokey Robinson,

and Stevie Wonder. . . . That's Entertainment Records, an English company that specializes in musical-theater recordings, is now marketing its cd's in the U.S. under the TER logo. The first releases are two American shows with English casts, Wright and Forrest's *Kismet* and Stephen Sondheim's *Pacific Overtures*, on two cd's each. . . . RCA/Novus has released for the first time on cd "Whites Off the Earth Now," an early album by Cowboy Junkies. Coming next month from RCA is the soundtrack album for the film *Mr. and Mrs. Bridge* (with Paul Newman and Joanne Woodward). The score was composed by Richard Robbins.

HAIL AND FAREWELL

At this year's Tchaikovsky Competition in Moscow the winning singers were the American soprano Deborah Voigt and the Korean-born baritone Hans Choi. An eighteen-year-old girl from Japan, Akiko Suwanai, placed first in the violin division. . . . Among older artists now curtailing their appearances is the Spanish soprano Pilar Lorengar, who has announced that her performances in *Tosca* in Berlin this summer were her farewell to the operatic stage. The phenomenal Australian diva Dame Joan Sutherland sings her last staged performances in opera this month in Sydney in Meyerbeer's *The Huguenots*. Dame Joan told *The Australian Magazine* that she looks forward to gardening and to becoming a listener again.



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CIRCLE NO. 61 ON READER SERVICE CARD

Stereo Review

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EASY

TALK

LETTERS

Home Theater

The whole audio industry seems to be attacking a major problem with music reproduction backward. The problem is that when we play back a recording at home in a small room it won't sound like Carnegie Hall (or wherever). One obvious but impractical solution is to put your stereo system in a room with the acoustics of Carnegie Hall. What the audio industry has tried to do is nearly as impractical. People have tried to design speakers that will distort the sound so that when they are played in a small room they will give the illusion of a large room. The cost of some of these speakers is so great you might as well build your own auditorium!

The most practical solution is not different speakers but more of them. That was tried with quad, but it never developed. Now with the birth of video we have Dolby Surround (which is really a lot like quad) and Lucasfilm's THX system. If a system like THX were developed for home use and the recording industry used it properly (not for special effects), it should be possible to get good

spatial localization and ambience. Since the recording engineers would know the characteristics of the playback system, they could make a recording that would sound exactly how they wanted it to.

LESTER A. SHALLOWAY
Miami, FL

Home THX is here. See "The State of the Speaker" on page 71 and "Show Stoppers" on page 85.

Stereo Imposition

It is fine for Ian Masters to praise the availability of hi-fi everywhere ("Stereo to Go," June), from lawn to bathroom to elevator to surfboard to desert island. But is anyone still aware that the ubiquitous diffusion of sound can also constitute an unfair imposition? Loudspeakers blaring in a park or in a neighbor's yard, even if they meet hi-fi specs, are not always a welcome addition to the "quality of life," because inescapable sound can also disturb, distract, annoy, and desensitize, not just uplift.

JOHN KELLNER
E. Walpole, MA

Compact Disc Deterioration

When I began purchasing CD's about five years ago, I did so with the belief that I would be able to enjoy them for probably the rest of my life. I recently heard, however, that a chemical reaction between the aluminum and the polycarbonate layers that make up a CD will eventually render it useless. According to information supposedly published in a reputable trade magazine, by the time a CD reaches eight years of age, microscopic cracks at the interface between the layers will begin to cause errors in tracking and reading it. These errors will increase over a short period of time, making the CD unreadable.

Are you aware of this limitation in the CD format, or is it just a rumor?

FRED N. MCCNIENIAN
McHenry, IL

Editor at Large Michael Riggs replies: Essentially, it's just a rumor. Compact discs are not indestructible, but they will not normally deteriorate on their own. A manufacturing defect, a crack in the plastic on the underside of a CD (an

Noted audio critics agree about the new PS-3 Speaker System:

"The speakers that have caught my ear in the past few months have been small and remarkably compact."

"...you can hear the bass evenly throughout the room regardless of where you put the woofer."

"The sound was lively, full of punch and power, and extremely true on the nuances..."

— Howard Blumenthal,
HI-TECH HOME

"Imaging was well focused... The PS-3 also sounded startling for its diminutive size, with lots of presence and warm, rich bass"

— CD Review



"...the PS-3 satellites sound smooth and natural. They do their job with clarity..." "The woofer continues the smooth work..."

"...impressive imaging. All the instruments and voices seem to be in just the right place."

"If the PS-3 speakers were sold like magic elixirs, I would have bought a case!"

— Rich Warren,
Chicago Tribune

"...any listener would assume that another, larger system was playing. The sound in our listening room was smooth and well balanced..."

— Julian Hirsch, **Stereo Review**

Don't choose any speaker system without first hearing and seeing the new PS-3. Visit a Design Acoustics dealer near you. Write today for dealer list, full reviews, and color brochure.

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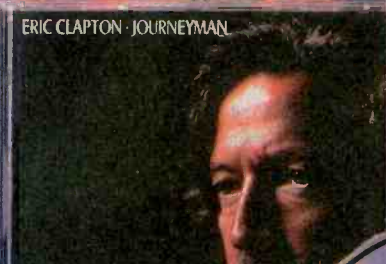
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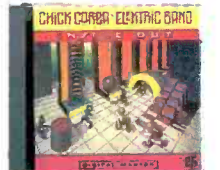
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unlikely occurrence), or a gouge or scratch penetrating the protective lacquer coating on the label side could allow air to reach the aluminum information layer, which would then oxidize. Although this sort of problem is not unheard of, it is far from common. Remember, the CD format is now about eight years old; if what you heard were true, discs would be decomposing at a furious rate right now. Our CD's from 1982 still play as they did then.

Best of the Smallest

Regarding Ken Pohlmann's article "The Best of the Smallest" in July, I would like him to comment on the use of one of the five CD portables he tested as part of a stationary audio system. I do not currently own a CD player. If these small players are as good as they sound from his article, it makes sense to use one both as a portable and for my existing home and car systems.

MORTON H. FIELD
Beverly Hills, CA

Ken Pohlmann replies: While the performance specifications of CD portables and home players are competitive in many respects, some portables have a lower signal-to-noise ratio than good home players as well as mechanically noisier transports. As a result, you might hear some noise when listening to soft passages in a quiet room.

Long Cassettes

Your June issue gives contradictory advice on the use of C-120 cassettes. On page 31, Ian G. Masters advises to "buy longer tapes . . . Handled carefully, C-120's work just fine." On page 67 Steve Simels cautions: "The longer the tape, the less reliable. . . . In other words, don't use a C-120." So which is it?

J. STOLLER
New York, NY

Executive Editor Michael Smolen replies: The longer the tape, the thinner it is, therefore the greater the chance of its stretching or breaking. Ian Masters was answering a question about making dubs for use on a trip. In general, we do not advocate the use of C-120 cassettes for recordings you'll want to keep and play over and over again. The new C-100 tapes from companies such as TDK, Maxell, and Sony are a better bet.

Wireless

I was intending to form a new company to promote the use of my Inferred Absolute Zero interconnects and cables, which would retail in the reasonable range of the competition mentioned in June's "Getting Wired." I was shocked to find from your article that there are no more adjectives left to use. My prod-

uct uses "functionally perfect" lamp cord from my local hardware store, but the secret is in the insulation. The add-on jacket and cryo-desistance system may be a kilowatt consumer, but the accuracy of sound elevates even a mid-fi system to the heights of esoteria.

I hope that if any new superlatives are invented in the near future, I will be able to register a couple of them before the competition does.

MARK VAUGHN
Plover, WI

Correction

"Audio for Video" in August stated that the Bose Video RoomMate powered speakers have a two-position volume switch; there is a continuously variable control. Also, mounting brackets are optional, not supplied, and the only supplied adaptor plug is a mini-to-RCA type. The article said the speakers have 6-inch drivers, but the drivers are 4½ inches as stated in the caption. We regret these errors. □



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to category. You name each magazine, and the next time you insert it into the changer, your title—"Sixties Classics" or "Elevator Greats"—will appear on the screen. Or if you feel like browsing, you can call up the names of every magazine in your library with a quick flick of the remote control.

As a piece of video equipment, our CD changer is pretty impressive. But we could hardly expect you to buy it on looks alone, so we gave it all the technology any right-minded audiophile would insist on. Dual 18-bit linear D/A converters. 8-times oversampling during the filtering process. And digital de-emphasis, a special circuit for accurate playback of the

high frequencies sometimes present on CDs.

Of course, the best way to get the most out of all this technology is to make it part of a Mitsubishi Home Theater System, so your audio and video components can work together as a cohesive unit. Everything in the system—from our big screen TVs and VCRs to our CD changer and Home Theater receiver—operates the same way and can be controlled by a single learning remote.

With all of this in mind, picking out your next CD changer should be as easy as playing "Chopsticks."

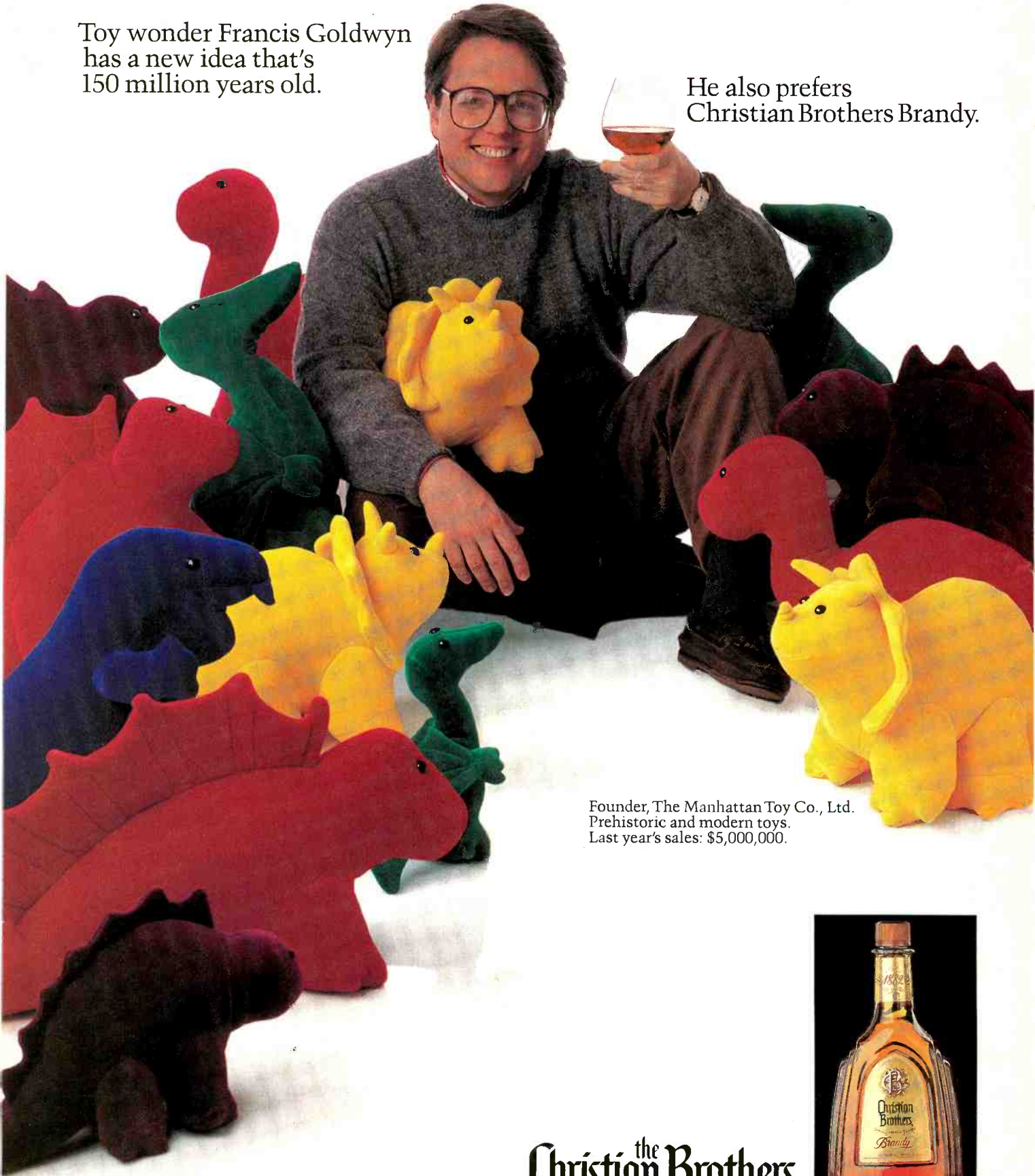
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NEW PRODUCTS



PIONEER

Pioneer's Elite CLD-92 combination laserdisc/CD player features an eight-times-oversampling digital filter and a 20-bit digital-to-analog converter. A three-line comb filter is said to provide better color definition, less video noise, and less cross-color distortion than previous models. Operating features include flip-side play, random play, intro

scan, twenty-chapter memory for laserdiscs, digital field memory for video special effects, and on-screen filing for favorite selections. The CLD-92 comes with a ten-key remote control. Price: \$2,000. Pioneer Electronics, Dept. SR, 2265 E. 220th St., P.O. Box 1720, Long Beach, CA 90801-1720.

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KLIPSCH

The Chorus II uses Klipsch's new tractrix hybrid midrange horn, which is said to improve detail in complex musical passages and to provide a more open sound. The three-way system has a rear-mounted sub-bass radiator to improve low-frequency bandwidth and output. Frequency response is rated as 39 to 20,000 Hz \pm 3 dB and sensitivity as 101 dB at 1 meter with a 1-watt input. Nominal impedance is 8 ohms. Power handling is rated as 100 watts continuous, 1,000 watts peak. Dimensions are 39 x 18½ x 15½ inches, weight 89 pounds. The cabinet is available in oiled or lacquered walnut or oak veneer, unfinished birch veneer, or satin black. Price: \$1,790 a pair. Klipsch, Dept. SR, P.O. Box 688, Hope, AR 71801.

Circle 122 on reader service card

FRIED PRODUCTS

The Fried R/4 is a three-way speaker system that incorporates full transmission-line loading of the midrange. It has a 10-inch vented-pole polypropylene woofer, a 5½-inch polypropylene midrange, and a 1-inch fluid-damped dome tweeter. Nominal impedance is 8 ohms. Frequency response is rated as 30 to 20,000 Hz \pm 2 dB, power-handling as 25 to 100 watts per channel. Crossover points are 250 and 3,000 Hz. The cabinet is finished in wood veneers with a cloth grille. The built-in pedestal tilts the speaker so that outputs from the different drivers arrive in phase. Dimensions are 34 x 12 x 10½ inches, weight 56 pounds. Price: \$1,255 west of the Rockies, \$1,195 in the East. Fried Products, Dept. SR, 7616 City Line Ave., Philadelphia, PA 19151.

Circle 121 on reader service card



JVC

The JVC SC-F007U is a Super VHS-C modular portable video system said to include the smallest S-VHS-C recorder available. Components include a Super VHS Hi-Fi recorder/player, a 3-inch active-matrix liquid-crystal color monitor with built-in speaker, a charge-coupled-device camera with microphone, and a rechargeable battery pack. The camera can be connected to the main unit directly or by a cable. Price: \$2,499. JVC, Dept. SR, 41 Slater Dr., Elmwood Park, NJ 07407.

Circle 123 on reader service card



NEW PRODUCTS



TEAC

Teac's AD-3 CD player/cassette deck has a 16-bit four-times-oversampling digital filter, dual 16-bit digital-to-analog converters, and a three-beam laser pickup. Operating features include sixteen-track programming and three-way repeat. The autoreverse cassette section has Dolby B and Dolby HX Pro, syn-

chronized dubbing, and external-timer record and play. The AD-3 comes with its own remote control, but it is also compatible with Teac's Unified Remote system. Price: \$399.95. Teac Corp. of America, Dept. SR, 7733 Telegraph Rd., Montebello, CA 90640. **Circle 124 on reader service card**



PROGRESSIVE DESIGN

Progressive Design's CD-2000 compact disc cabinet, available in either brown or black oak, holds 104 discs. It can be used as a freestanding cabinet or hung (without the base) horizontally or vertically on a wall. The cabinet measures 50 inches tall and 7 inches square, and the base is about 13 inches square. Price: \$119.95. Progressive Design, Dept. SR, 61 E. Lake St., Northlake, IL 60164.

Circle 125 on reader service card

MB QUART

MB Quart's Model 290, the successor to the Model 280, is a two-way bookshelf speaker with a 1-inch titanium tweeter and an 8-inch woofer. An integrated reflector disc in the protective grille of the tweeter is said to improve dispersion and response accuracy. A Poly-Safety switch shuts off the tweeter in case of an overload. Nominal impedance is 4 ohms, and sensitivity is rated as 89 dB at 1 meter with a 1-watt input. Frequency response is rated as 40 to 32,000 Hz. Each speaker measures 17 x 11 x 11½ inches and weighs 22 pounds. Cabinets are available in solid oak, oak or walnut veneer, or black or white lacquer. Price: \$699 a pair. MB Quart Electronics, Dept. SR, 25 Walpole Park South, Walpole, MA 02081.

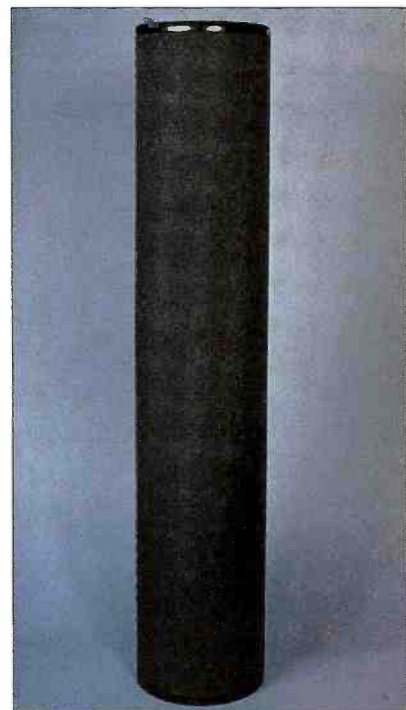
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AUDIOPRISM

The AudioPrism APPA-8500 is a multi-element indoor FM antenna whose half-wavelength phased array can be switched by a remote control among three different directions spaced 120 degrees apart. The antenna's directionality is said to reduce multipath interference to a negligible level. An omnidirectional mode can also be selected, and the three-position switchable "true-resistive" attenuation (0, 12, or 18 dB) can reduce strong signals that could overload a tuner's front end. Rated impedance is 75 ohms. The columnar antenna stands 63 inches high and is 12¼ inches in diameter; weight is 24½ pounds. It is finished in a black or beige coarse-weave fabric, and end caps are available in black or off-white lacquer or in solid oak. Price: \$250; oak end caps, \$50 extra. AudioPrism, Dept. SR, P.O. Box 1124, Issaquah, WA 98027.

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NEW PRODUCTS



CODA TECHNOLOGIES

Coda's Model 01 preamplifier uses field-effect transistors (FET's) for all voltage gain, which is said to isolate it from sources and cables and to provide "warm" sonic qualities without degradation of response. Designed to use no overall feedback, the Model 01 is claimed to remain stable with any load or interconnects. Source selectors have gold-plated contacts, and the chassis is

made of anodized aluminum. There are five line-level inputs and one phono input, which has switchable gain and loading for use with all types of cartridges. Two buffered recording loops operate independently of the source selector for listening. Price: \$2,500. Coda Technologies, Dept. SR, 9233 Wausau Way, Sacramento, CA 95826.

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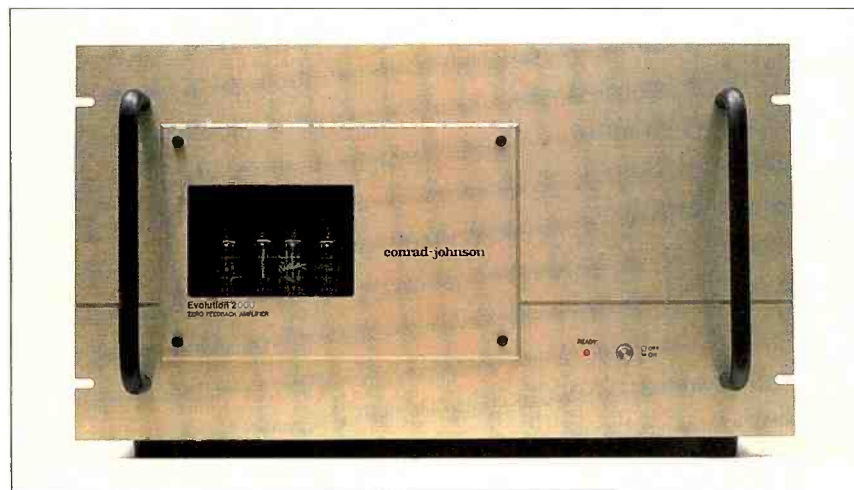


SANSUI

Sansui's RZ-9500AV audio/video receiver is rated to deliver 105 watts per channel. It offers matrix surround sound and five preset equalization curves. There are seven inputs, including three for video, and the monitor output is switchable for audio or video. The digital AM/FM tuner has thirty pre-

sets, direct-access tuning, and preset scan. The volume knob is motorized for remote operation, and the supplied remote control can also operate other Sansui components. Price: \$439.95. Sansui USA, Dept. SR, 1250 Valley Brook Ave., Lyndhurst, NJ 07071.

Circle 130 on reader service card



DUAL

The Dual Manhattan 1100 stereo system has a digital FM tuner, a dual cassette deck, an integrated amplifier, a CD player, and an active subwoofer—all integrated in a six-sided 43 x 13 x 13-inch tower. The amplifier is rated at 50 watts per channel and drives a pair of two-way satellite speakers. The tuner has automatic and manual tuning and eighteen presets, the cassette deck features Dolby B and Dolby C noise reduction, and the CD player features a three-beam laser pickup, a 16-bit D/A converter with a four-times-oversampling digital filter, and twenty-four-track memory. The remote control operates power, volume, and CD and tuner functions. Price: \$1,990 complete. Dual, Dept. SR, 122 Dupont St., Plainview, NY 11803.

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MODEL ELEVEN

BY HENRY KLOSS

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Henry Kloss created the dominant speaker models of the '50s (AR), '60s (KLH) and '70s (Advent)—as well as our highly acclaimed Ensemble and Ambiance® speakers. While packing a stereo system into a suitcase before a vacation, he realized that an amplifier, a CD player and two small speakers take up the same space required for an acoustic suspension woofer to reproduce really deep bass. That was the inspiration for BassCase, Model Eleven's bass speaker enclosure which doubles as the entire system's carrying case.

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Ambiance

BY HENRY KLOSS

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BY HENRY KLOSS

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Unlike seemingly similar systems, Ensemble uses premium quality components for maximum power handling, individual crossovers that allow several wiring options and cabinets ruggedly constructed for proper acoustic performance. We even gold-plate all the connectors to prevent corrosion.

Unlike satellite systems which use a single large subwoofer, Ensemble features separate compact bass units for each stereo channel. They fit more gracefully into your living environment, and help minimize the effects of the listening room's standing waves.

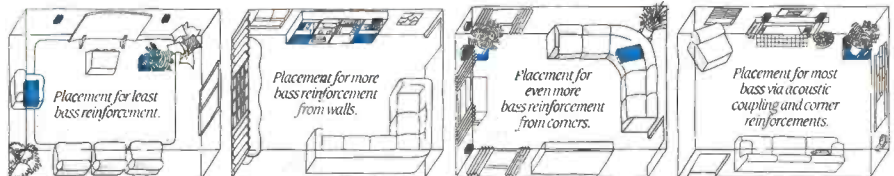
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At only \$599†—complete with all hardware and 100' of speaker cable—Ensemble is *the* value on today's speaker market. *Esquire* magazine describes them by saying, "You get a month to play with the speakers before you either return them or keep them. But you'll keep them." *Stereo Review* said "It's hard to imagine going wrong with Ensemble." For literature, reviews or to order, write us at the address in the coupon, or call 1-800-AKA-HIFI.*

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No matter how well a speaker performs, at home the listening room takes over. If you put a conventional speaker where the room can help the low bass, it may hinder the upper ranges, or vice-versa. Ensemble, on the other hand, *takes advantage* of your room's acoustics. The ear can't tell where bass comes from, which is why Ensemble's bass units can be tucked out of the way—on the floor, atop bookshelves, or under furni-

ture. The satellites can be hung directly on the wall, or placed on windowsills or shelves. No bulky speaker boxes dominate your living space, yet Ensemble reproduces the deep bass that *no* mini speakers can.



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by Ian G. Masters



Surround Speaker Positioning

Q My present system uses several pairs of speakers and a simple matrix circuit to provide a form of surround sound, but now I want to upgrade to a receiver with Dolby Pro Logic. The problem is that my listening room is very long and narrow, with a considerable distance between front and rear speakers. Is there a way to derive a mix of main and surround information and feed it to speakers halfway down the room to fill in the hole in the sound?

BUZZ BREZINSKI
Lexington Park, MD

A You needn't go to the trouble. One of the recommended speaker arrangements for Dolby Surround playback, with or without Dolby Pro Logic decoding, is for the surround speakers to be beside the listening position, rather than behind it. Assuming you usually sit about halfway down your room, simply feed the "midway" speakers the surround signal. The same material can be fed to speakers at the rear as well, but in home setups the sound will usually be better with a single pair of surround speakers.

Y-Connections

Q Just when is it possible to use Y-connectors? On inputs? Outputs? Both? Specifically, can two turntables with magnetic cartridges be connected to the same phono input, to save having to buy outboard cartridge preamps?

CHARLES MASON
New York, NY

A In general, an audio signal can be split to feed two inputs with no ill effects, but it's usually risky to combine the outputs of two components and feed them to a single input. The signal from one source would not only pass to the desired input but would feed into the output circuits of the other component as well. Since the internal impedances of most output stages are much lower than the inputs they are designed to be connected to, damage to one or other component (or both) could result from hooking them together.

Phono cartridges are slightly different. Connecting the outputs from two cartridges to a single input is unlikely to damage them, but cartridges are designed to work properly only when connected to a circuit with a very specific resistance and capacitance. Placing unexpected components, such as another cartridge, in the circuit would prevent either from performing properly.

Connecting Processors

Q The sound of my system has been much improved by the addition of an equalizer connected to a tape-monitor loop. When I listen to audio from my VCR, however, I can't use the equalizer at the same time, and without it the sound is terrible. I would like to connect the equalizer to the preamp-out/main-in jacks provided on my amplifier, but I'm worried that the high output from the preamplifier section will fry the equalizer. Should that be a real concern?

JOHN P. McDONNELL
Wurtsmith AFB, MI

A No. The image of an audio system as a chain of components in which the signal becomes progressively stronger as it goes from one part to the next is perhaps natural, but things don't work that way. At most points in the system, signals are within a relatively narrow range usually called "line level," although the term is imprecise. Both the tape-monitor circuits and the preamp outputs use line-level signals, so your equalizer will work just as well connected to the one as to the other.

Normally, the best setup is after the preamp, as that enables equalization to be applied no matter what signal source you may be listening to. The only time you may want to patch the equalizer into a tape-monitor loop is if you want to record the corrected signal.

Preventive Service

Q Except for the speakers, all my equipment was made by the same company, and all of it was purchased almost ten years ago. Since then, the manufacturer has gone out of business,

but repair service and parts replacement are still available. I have noticed no loss of quality, but would it be sensible to send everything in for an overhaul while I still can?

HELMUT AULGUR
APO, New York

A It's not really necessary, but it would certainly do no harm. Audio equipment is pretty sturdy stuff, and it's unlikely that the performance of your system has changed at all since you bought it. Most hi-fi gear doesn't slowly degenerate over time; if it breaks it usually does so obviously. Still, small things can deteriorate: Level and tone controls can become dirty, and therefore noisy, for instance. A general cleaning of contacts, knobs, and switches might well be a good idea, and some tests to make sure that your equipment really does perform to spec might be reassuring as well. But it's unlikely that a visit to the shop will result in any dramatic improvements or even forestall a breakdown later on.

Woofers Diameter

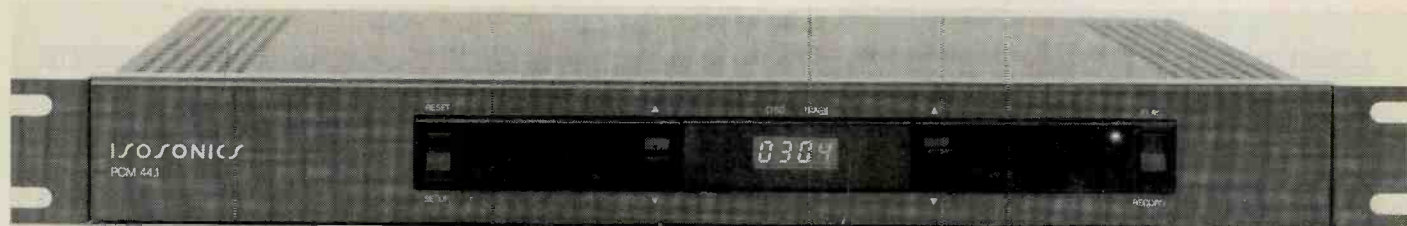
Q My subwoofer produces a large standing wave in one part of my listening room. I have taken it for granted that this is a normal characteristic of low-frequency sound, but a friend maintains that it is caused by the relationship between a woofer's diameter and the sound being reproduced. Would using a larger driver eliminate the effect?

ERNEST SWALLOW
Condado, PR

A Unfortunately, things are not that easy. We normally express the pitch of a musical note in terms of its frequency; in a speaker, that's the number of times the diaphragm moves in and out in 1 second. Since the sound radiates away from the speaker at a constant rate, regardless of frequency, pitch can also be expressed in terms of wavelength, or the number of inches or feet needed for a complete positive-negative cycle. The higher the frequency, the shorter the wavelength.

A 40-Hz signal has a wavelength of about 28 feet. If two parallel surfaces in the listening room are separated by a simple fraction of the wavelength—14 feet, say—a standing wave will be set up every time a 40-Hz note comes along. The signal will bounce back and forth, each compression and rarefaction occurring at the same place in the room. If you stand at that point, the sound will be very boomy, but at other spots you may not hear the note at all. It all has to do with wavelength, which has to do with frequency. It has nothing to do with the woofer's diameter. □

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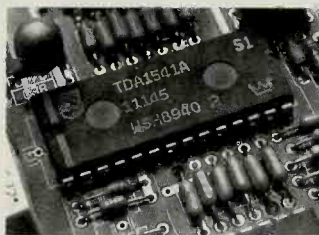
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by Ken C. Pohlmann



3-D AUDIO

YOU are sitting in your living room enjoying Super Bowl XXIV. A Coca-Cola commercial comes on—the one with the people singing together on the hilltop. The sound seems to envelop you, coming from all around the room, not just out of the stereo TV speakers.

You are flying an Air Force fighter-bomber on a training mission over the Mojave Desert, wearing your flight helmet with its built-in headphones. Suddenly you hear a warning tone behind you and to your left—enemy missile! You bank quickly to avoid the danger.

Those are examples, one actual and one anticipated, of a new generation of signal processors that will add an entirely new dimension to audio reproduction. Stereo has occupied the center stage of audio technology for more than thirty years, but its center-stage positioning is exactly the problem. While conventional stereo can reproduce a panorama of images between and just outside two speakers, it fails to spread the panorama beyond that frontal arc. Clearly, because natural sound comes from all directions and not just an arc in front of the listener, two-channel stereo cannot

provide truly accurate reproduction. In fact, if spatial fidelity were considered as important as other forms of fidelity, ordinary two-channel stereo would be condemned as a grossly distorting reproduction method.

An encompassing sound field can be conveyed with early reflections and ambience processing, but that requires additional playback channels complete with their own amplifiers and loudspeakers. Using a different approach, it is theoretically possible to encode an audio signal with spatial cues so that when it is reproduced the brain will be psychoacoustically fooled into localizing images from several directions. In fact, such a system isn't that different from conventional stereo, which creates phantom sound images where no sound sources actually exist—between two loudspeakers. But with so-called 3-D processing, those same two loudspeakers could, in theory, create images all around you.

In practice, however, it is very difficult to create the cues necessary to fool the brain into hearing sounds outside the stereo arc. Ironically, that difficulty is a tribute to the millions of years of evolution that shaped our ear-brain system, especially the long interval in our development when accurate localization of saber-toothed tigers, for example, was critical to our well-being.

Despite the difficulty of expanding the perceived sound stage, the vast potential for commercial gain has encouraged numerous companies to develop 3-D audio processing systems. Archer Communications, Audio & Design, Auris Perceptual Engineering, Crystal River Engineering, Gamma Electronics Systems, Holophonics, Hughes Electronics, and PM Productions are among the companies convinced that they are on the path toward the audio technology that will supersede ordinary stereo.

Although you may not have heard of these companies, you may well have heard their sound. Coca-Cola signed an exclusive worldwide agreement with Archer Communications to use its QSound technology in commercials. QSound, which uses a formidable array of digital

signal processing (DSP) chips and software to place images outside the stereo arc, is applied to the sound source itself; it is not available to consumers, only to those who license the process.

Hughes Electronics, a division of General Motors, has developed the Sound Retrieval System (SRS), which can be applied at the reproduction side of an audio system to synthesize a wide sound stage from any incoming signal. The SRS circuitry performs fixed and dynamic equalization and level adjustments on the sum (L + R) and difference (L - R) components of a two-channel stereo signal to fool the ear into hearing multiple sound sources. In a dramatic SRS demonstration at a Hughes laboratory, the effect blew me away. Apparently Sony was also impressed because it is offering SRS circuitry in many of its stereo TV's.

Gamma Electronics markets the Bedini Audio Spacial Environment (BASE) processor. This analog device can be used anywhere in the reproduction process. It manipulates channel timing to expand the spatial content of stereo recordings. Once the master recording is processed, no decoders are required to hear the result. When you watch *The Little Mermaid* on tape or music videos by Mötley Crüe, you're hearing BASE processing.

Other companies' efforts may not yet have reached the ears of the public, but they have high hopes. PM Productions has developed Meyers 3-D Audio, a patented technology that mathematically models the human auditory system and digitally processes signals to provide sound-localization cues. One application is a system that would give pilots aural directional cues. For example, a tone seeming to come from behind you, high and to the left, could warn you of, say, an incoming missile and tell you how to evade it.

That is perhaps a fitting application of 3-D audio technology, because it would close the circle from saber-toothed tigers to enemy missiles. One thing is sure: Natural sound localization is an important part of listening and an inherent weakness in current stereo reproduction. With new technology, that may soon change. □

EXPENSIVE SOUNDING SPEAKERS!

Speakers are the most important part of your stereo system. It is the speaker that turns amplifier signal into sound and so ultimately determines what you hear. If your speakers do not perform well, your stereo system will simply not sound like music.

The search for musically satisfying speakers, however, can lead to some very expensive products. And if you have already bought those high priced speakers, then you better not listen to Paradigms. But if you haven't, better not miss them. Why? Because from the time they were first introduced, Paradigm's sheer musical ability utterly amazed listeners... but what caused even more amazement was the *unprecedented low price*.

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The critics agree:

"... For once we wholeheartedly agree... the Paradigm is most definitely a no-compromise two-way design capable of outperforming systems costing several times as much."

- *Hi Fidelity Magazine*

"... natural, open and clear... excellent depth... lots of hall sound... big, expansive soundstage... well defined... a rare achievement for any loudspeaker, but when the price is taken into account the Paradigm's performance must be considered as nothing short of remarkable."

- *Sound & Vision Magazine*

Sound & Vision



CRITIC'S CHOICE AWARD

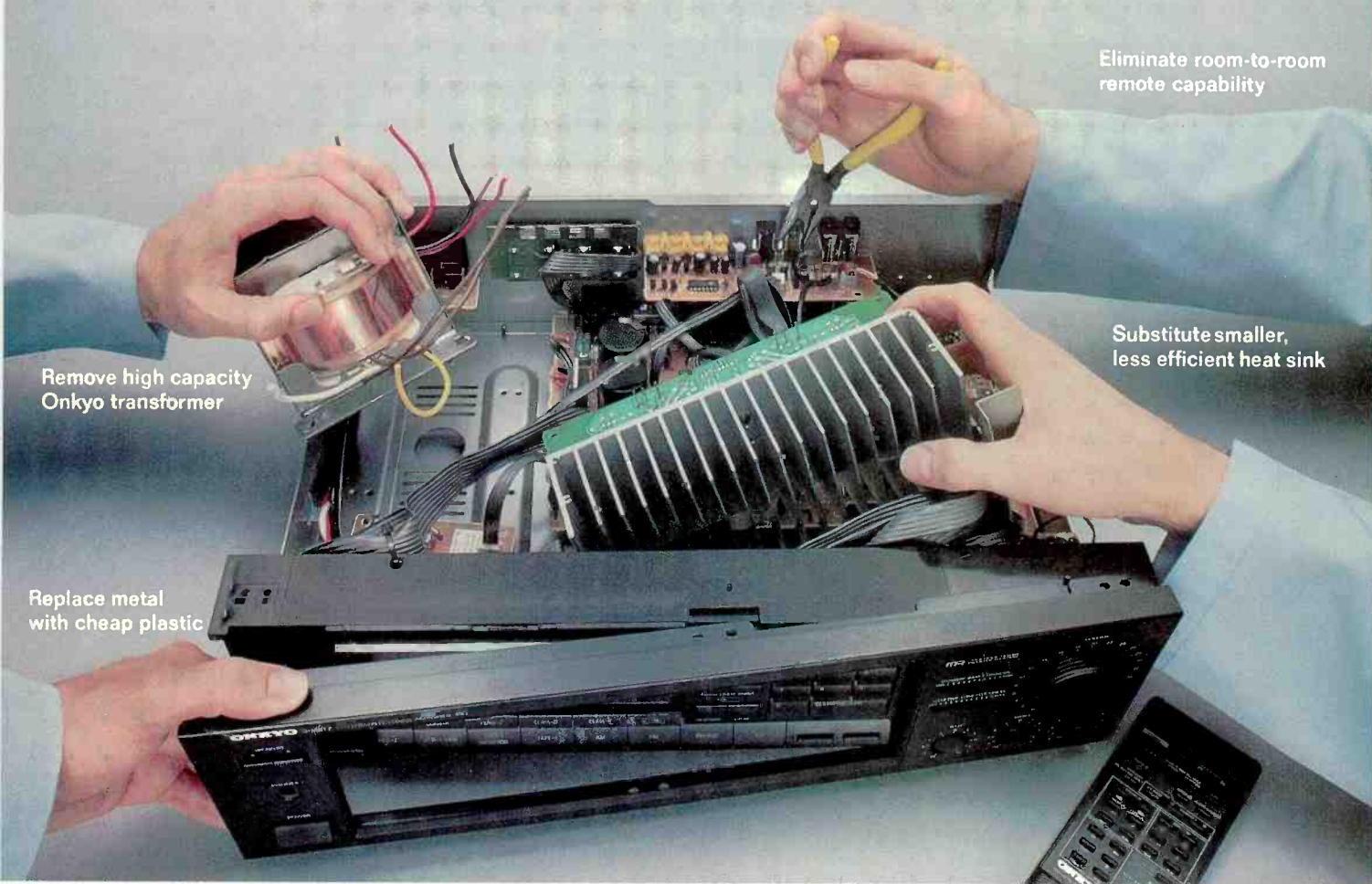
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CIRCLE NO. 97 ON READER SERVICE CARD

How to make an Onkyo receiver as good as its competition.



Remove high capacity Onkyo transformer

Eliminate room-to-room remote capability

Substitute smaller, less efficient heat sink

Replace metal with cheap plastic

If we wanted to make an Onkyo receiver as good as our competition, it wouldn't be too hard.

First, we'd remove our proprietary heavy duty transformer, replacing it with a commonly used smaller version. Unfortunately, this means less current capability, resulting in compromised low impedance performance and compressed musical dynamics. Sonic anemia.

Next, we'd substitute a much lighter, cheaper heat sink. Of course, this greatly increases the chance of thermal overload when the music's cooking, but since we'd already be using a low capacity transformer, the music would only be half baked anyway.

Room-to-room remote capability would have to be

sacrificed. After all, if we're not concerned with performance, why should we bother with convenience?

As a finishing touch, faceplates & chassis would be plastic instead of metal. True, that wouldn't give us the same structural integrity. But we'd be cutting so many other corners you'd probably never notice the difference.

Now, we could do all these things to an Onkyo receiver. But then we wouldn't have a component as extraordinary as our new TX-866, with 185 watts per channel of dynamic power, plus the ultimate in room-to-room musical control.

At Onkyo, all our receivers are built to be better. And, that's a difference you can hear—and see.



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CIRCLE NO. 47 ON READER SERVICE CARD

SPECIAL OFFER

MODERN JAZZ ON CD

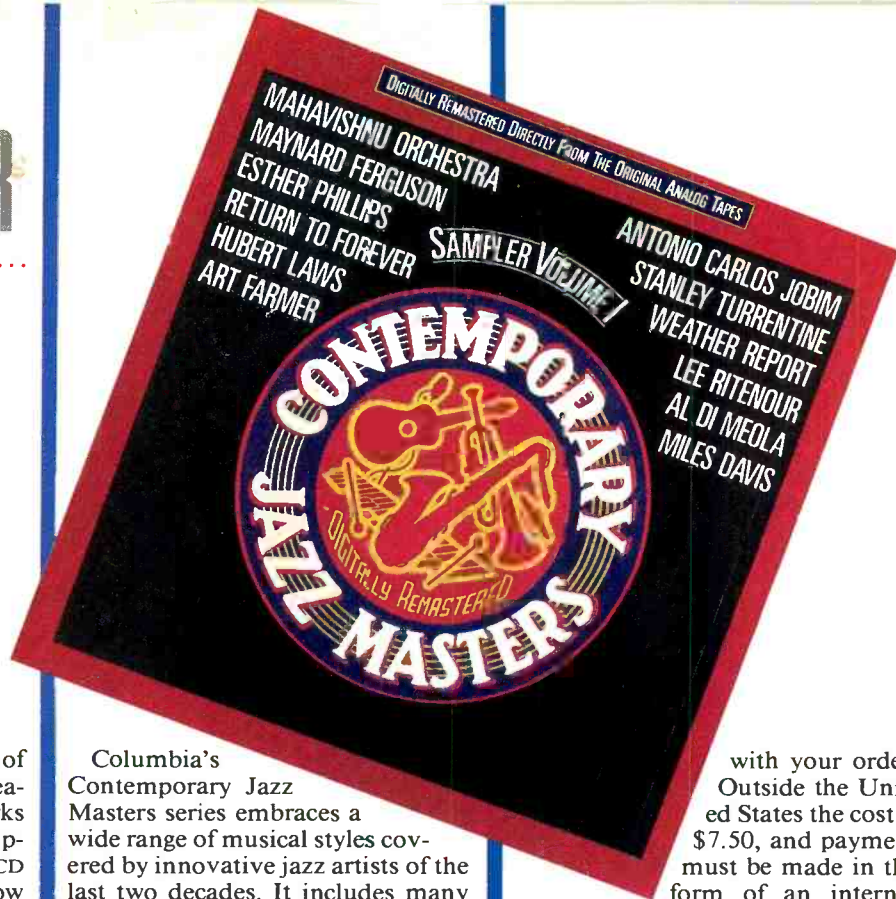
COLUMBIA Records' new series of Contemporary Jazz Masters features the most influential works of modern jazz in revitalized up-to-date digital sound. The first CD sampler from this series is now offered to readers of STEREO REVIEW below cost. To get your copy of this compact disc, fill out the coupon on this page and mail it along with \$2.50 plus \$2 for postage and handling—a total of only \$4.50 for a full 70 minutes of music.

If you are like most readers of STEREO REVIEW, you probably grew up listening to such pioneers of jazz fusion as the Mahavishnu Orchestra and Weather Report, the saxophonists Tom Scott and Stanley Turrentine, and the guitarists Al Di Meola, John McLaughlin, and Lee Ritenour. Each of these artists or groups is represented on the CD sampler by a choice selection.

Other strains of contemporary jazz to be heard on this compact disc include the lyricism of the flutist Hubert Laws and the saxophonist Paul Desmond, the abstractions of the trumpeter Miles Davis, the originality of the guitarist Allan Holdsworth, and the melodic expressiveness of horn players Art

Columbia's Contemporary Jazz Masters series embraces a wide range of musical styles covered by innovative jazz artists of the last two decades. It includes many recordings that have been unavailable for years and twenty-one that have never before been released on compact disc. The digital remastering from original analog tapes has been carried out with the same care that Columbia lavished on its earlier traditional Jazz Masterpieces series. The original cover art is used, but new liner notes have been commissioned.

To sample this series for yourself, send a check or money order for \$4.50 made out to The Jazz Masters, P.O. Box 179, West New York, NJ 07093. New Jersey residents please add 6 percent sales tax (27¢). Fill out the coupon below, clip it from the magazine, and include it



with your order. Outside the United States the cost is \$7.50, and payment must be made in the form of an international postal money order.

All requests for this new compact disc sampler must be received no later than November 1, 1990. The offer is void after that date. Please allow six to eight weeks for delivery.

This is the seventh special musical offering arranged for our readers by the editors of STEREO REVIEW to help you give greater depth and breadth to your collection and to increase the enjoyment you derive from music. Reader response to the previous offers has been gratifying, and we are confident that you will enjoy this sampler of landmark recordings of the uniquely American art form known as jazz. □

JOHN O'CONNOR FAITHFULLY RECREATES MOZART.



Get a free *Up Close* CD of Mozart Piano Concertos No. 21 & 27 featuring John O'Connor. Send check or money order for \$3.75 (U.S. funds) to cover shipping and handling to:

Pianist and music scholar, John O'Connor has nothing but reverence for Mozart.

That's why, when asked by Telarc International to record Mozart's Piano Concerto No. 21, he wanted to do it right. Which meant embel-



certo the way it was originally conceived, new, ornamented solos had to be written.

O'Connor wrote them in the style of Mozart, studying operas like *Don Giovanni* and *The Marriage of Figaro* to get a feeling for how the composer

solo voice in his

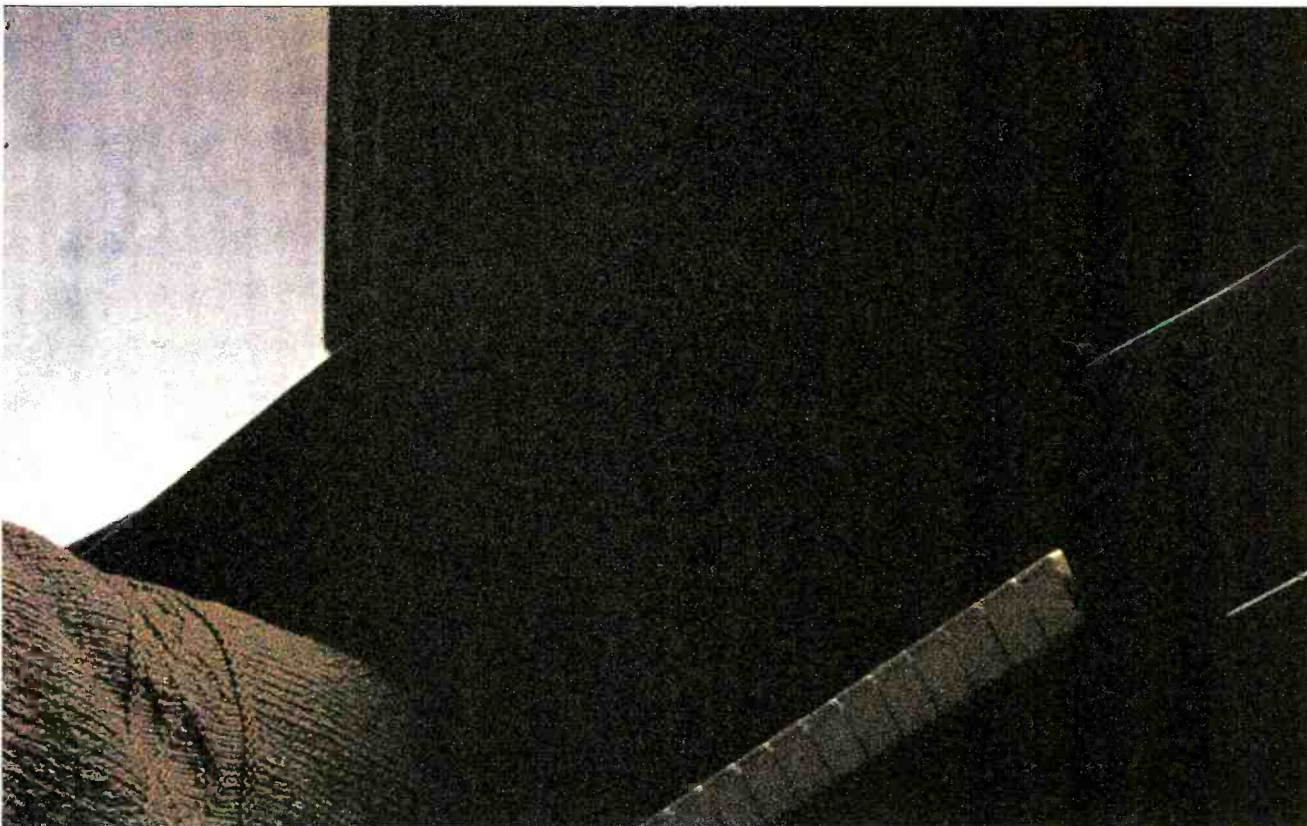
urther the accuracy
ording, O'Connor

Telarc goes to great lengths to create a sense of realism in their recordings. And the Boston T1030



Reference Standard

BY REWRITING IT.



Boston Acoustics, Dept. S4, P.O. Box 625, Holmes, PA 19043. Allow 4-6 weeks for delivery. Offer is good until September 30, 1990 or while supplies last.

highs of strings and woodwinds with clarity. Plus our 6½-inch midrange features an



extremely wide sonic range (250 to 2500 Hz) to ensure flat mid-range response. And

Through methodical positioning of the three omnidirectional mikes, Renner created just the right mixture of direct and reflected sound from piano and orchestra. He then used a stereo pair of directional mikes to bring the piano sound into focus. Renner's philosophy: the fewer microphones used, the better.

The effect is dramatic. You, the listener, are instantly transported to the fourth row of the Glasgow Town Hall where the piece was recorded. In front of you is the Scottish Chamber Orchestra

our dual 8-inch woofers faithfully recreate the lowest tones of the orchestra, without



distortion. In total, the T1030 is our finest, most sonically accurate speaker system ever.

— strings to the left and right. And in the middle, woodwinds and John O'Connor's piano.

Mozart has never sounded like this. Except, perhaps, once in 1785.

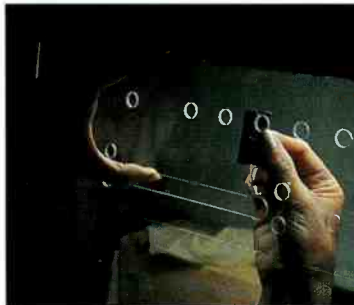
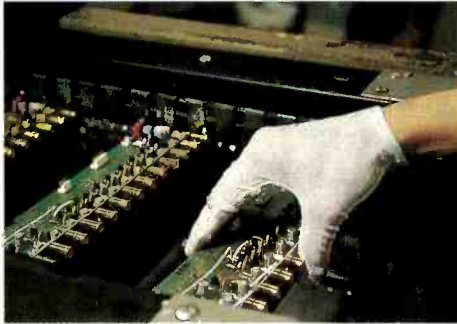
Visit a Boston Acoustics dealer and hear John O'Connor on a pair of T1030 Reference Standard speakers.

Music this good should be heard on speakers this good.

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Quality of Sound begins with accuracy of design and engineering. It is enhanced by precise manufacturing, then assured by continuous Quality Assurance inspection.



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THE BASICS

THE EYES HAVE IT

Home entertainment's
visual component—
the tenth in a
continuing series.

BY IAN G. MASTERS

YOUR ears and eyes function in very different ways. For sound, we have only two sensors, which detect air-pressure variations over time; each is capable of receiving only a single sequential waveform. Our eyes, on the other hand, contain millions of sensors capable of processing a vast number of separate bits of information at the same time. To duplicate this processing electronically would require millions of channels of information—unless there were a way to analyze the visual information and convert it to a sequential signal like audio.

In a **television camera**, light reflected from an object is focused onto a light-sensitive plate. At every point on the plate, the light induces an electrical charge proportional to its intensity. To turn these charges into usable signals, they are **scanned** in a carefully defined order to make a voltage sequence that can be reassembled as a picture.

As the sensing device repeatedly scans the charged surface from side to side and top to bottom, its position is determined by a **synchroniz-**



ing (or simply **sync**) signal, which is added to the sequential output of the sensor so that the picture can be reconstructed. A conventional TV **picture tube** (a **cathode-ray tube**, or **CRT**) produces a **beam** of electrons that varies in intensity according to the video signal. The beam is aimed at the phosphor-coated inside face of the picture tube, which glows wherever the beam hits. The sync signal directs the beam to a point on the CRT's face that represents exactly the corresponding point on the TV camera's sensing device. An image is thus "painted" on the TV screen point by point.

A TV picture is divided into a number of horizontal **scanning lines**. In the NTSC system used in North America, Japan, and some other places, there are 525 of these lines in all, together making up a complete video **frame**. Actually, all 525 lines are not scanned in sequence; rather, each frame is divided into two **fields** of 262.5 lines apiece. In the first field, every *other* line is scanned, and then the second field fills in the spaces between—a process called **interlacing**. A certain minimum number of fields must be displayed each second for us to perceive a smoothly moving image. If there are too few fields per second, the image will seem to **flicker** and motion may seem **jumpy**. In the NTSC system, the picture is broken down into approximately 60 fields per second, just slightly greater than the minimum rate necessary for smoothness. Interlacing increases the amount of vertical detail (**vertical resolution**) without introducing flicker or increasing the number of lines per field.

A Composite Signal

The core of the video information is its basic black-and-white level, known as **luminance**, which determines the brightness of each point on the video screen. Practically all television is in color these days, however, and this requires the inclusion of a color, or **chrominance**, signal as well. To avoid making existing TV sets obsolete, the inventors of the color system added the color information on a subcarrier strategically located at the high-frequency end of the black-and-white signal to minimize interference between the two and degradation of the luminance information.

THE BASICS

The resulting **composite video signal**, containing luminance, chrominance, and synchronizing information, can be carried, along with the accompanying audio signal on another subcarrier slightly above the video band, in a single 6-MHz TV channel. The TV signal itself is about 4.5 MHz wide, with the video portion extending to 4.2 MHz. Broken down into picture elements, this yields a **horizontal luminance resolution**, or **definition**, of just over 330 lines. That is, the system can produce detail sharp enough that with an ideal receiver we could distinguish about 330 alternating vertical lines across a width of the television screen equal to its height. To reduce the system's bandwidth would reduce this resolution.

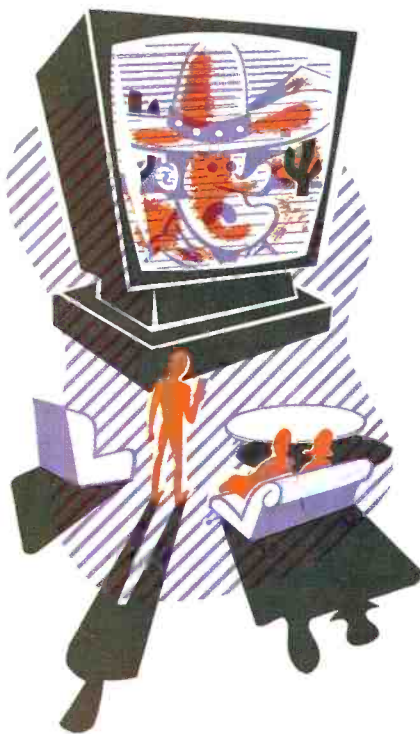
Preserving the Picture

For broadcast television, achieving such a wide bandwidth requires the allocation of enough space in the radio spectrum to accommodate the full signal, but developing devices to *record* this much material took years. The initial method was to use a system of **rotating heads**, recording the video information across a 2-inch tape in a series of very narrow side-by-side bands running almost perpendicular to the direction of tape travel. Even for professional use, many companies sought a simpler, cheaper method, and one that showed early promise used **helical scanning**. In this system, the tape wraps around a rotating **head drum**, which records a series of long tracks diagonally across the tape, each track corresponding to a single field of video. Rotating heads combine high head-to-tape speeds (or **writing speeds**), for wide bandwidth, with low linear speed, to conserve tape.

A number of attempts were made to adapt the technique for home use before Sony introduced the first successful consumer system: **Betamax**, or simply **Beta**. Sony's system used half-inch tape contained in a plastic **videocassette**, which could be recorded and played back on a **videocassette recorder**, or **VCR**. Beta was followed shortly by the similar, but incompatible, **VHS** system. Both formats were designed to enable manufacture of recorders that

would be reliable and affordable, and this involved some technical compromises. The original Beta and VHS systems yielded horizontal resolution of only about 160 to 240 lines—considerably inferior to the potential of broadcast signals but reasonably close to the performance of most color television sets at that time.

At an early stage, VCR designers began to offer extra **tape speeds** to allow more material to be fitted on a cassette with some sacrifice in qual-



ity. The VHS system now has three speeds: **standard play** (or **SP**) lets you record 2 hours on a T-120 cassette, **long play** (**LP**) 4 hours, and **extended play** (**EP**) 6 hours.

All VHS machines today can record in **SP** and **EP** and play back at all three speeds. A few will record in **LP** mode as well, although that speed is found mainly on older VCR's. The years have seen little change in the original Beta and VHS systems other than advances in their audio quality and a series of VHS enhancements lumped together under the name **VHS HQ**. Beta has been almost totally sup-

planted by VHS, however, when it comes to standard, or **tabletop**, home VCR's.

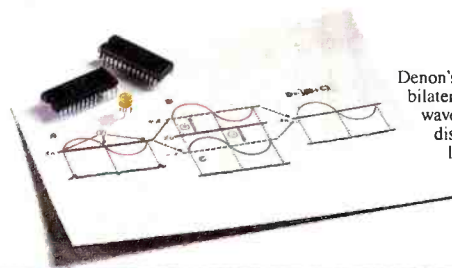
More Buttons to Push

Until quite recently, the VCR manufacturers concentrated mainly on bringing prices down and adding features and functions. From the start, practically all VCR's contained their own tuners because early TV sets did not have outputs for taping off the air. The built-in tuner not only let viewers tape one program while watching another, but it also enabled **time shifting**—using a timer to record a program for later viewing.

The first VCR's contained simple timers that would turn them on and off at predetermined hours during a 24-hour period. Soon, however, more sophisticated **programming** controls were added that enabled a number of broadcasts to be recorded at different times over periods ranging from a week to a year. As the operation of VCR's became more involved, the need for elaborate **remote controls** grew, and the early wired versions gave way to the virtually universal **infrared remote**. The built-in tuners kept up with the proliferation of cable TV, and most VCR's are now **cable compatible** or **cable ready**.

Another field of considerable activity over the years has been in video **special effects**. At first, these were confined to **still frame**, or **stop motion**, achieved by halting the tape and letting the video heads read the same track over and over. To this was sometimes added **visual search**, for seeing what was on the tape while winding forward or backward at high speed. Both these functions were improved by adding extra video heads. Only two heads are required for normal playback, but now many VCR's are **four-head** machines. In some VCR's the extra heads are used only for cleaner special effects, but others have one pair optimized for the highest tape speed and the other pair for the lowest, to improve picture quality. A few recent models have **digital effects** as well, including such tricks as **picture-in-picture**, or **PIP**, where a second video source is visible in the corner of the main image.

Starting with the first digital recording of music in 1972, Denon has produced an unbroken string of digital audio breakthroughs.



Denon's LAMBDA processor bilaterally offsets the digital waveform to eliminate the distortion that occurs when low-level waveforms cross the zero line.

The LAMBDA Super Linear Converter: Another significant digital audio first from the first company to record music digitally.



Denon's CD player innovations include the Super Linear Converter, the 20-bit digital filter, the real 20-bit converter and noise-shaping filter circuitry.

Denon's latest digital advancement is the LAMBDA Real 20-Bit Super Linear Converter in the DCD-1560. The LAMBDA system's digital offset processor and dual 20-bit converters eliminate the most common source of distortion in CD players: the zero crossings of low-level signals.

Denon's consistent leadership in digital audio technology may explain why earlier generation

Denons often sound better than current competitors' models. And why a leading hi-fi journal found that a moderately-priced Denon equalled or outperformed all others tested, including machines costing over \$1800.

What makes Denon CD players better? Perhaps it's that Denon performs every step in the music chain from recording artists through pressing CDs. And that Denon has concentrated on one thing and only one thing for 80 years.

Music.

DENON

DESIGN INTEGRITY

Denon America, Inc., 222 New Road, Parsippany, NJ 07054

DCD-1560 shown with the optional side panels available for most Denon models. Prices quoted are manufacturer's suggested retail prices and may vary.

CIRCLE NO. 27 ON READER SERVICE CARD

IF GOD EVER SPEAKS TO YOU, THIS IS THE TAPE TO RECORD IT ON.

There are some things you want to record with absolute accuracy. Which is why Maxell has created Metal Vertex — the most precise audio cassette ever.

52% LESS MODULATION NOISE.

And that's compared to our top-of-the-line MX tape. Thanks to a sturdier, fiber-glass-reinforced guideblock, steel pins, wider pressure pad, and high precision crown-shaped rollers, Metal Vertex virtually eliminates tape fluctuation. Plus our proprietary Techno-Silver backcoating reduces friction and further improves tape-running stability. All of which makes for a tape with the lowest modulation noise level available. Anywhere.

A REVOLUTIONARY NEW CASSETTE SHELL.

To better absorb outside vibrations, our new three-piece shell is made of a highly visco-elastic, super composite material with almost twice the specific gravity of that found in most cassettes. Yet what

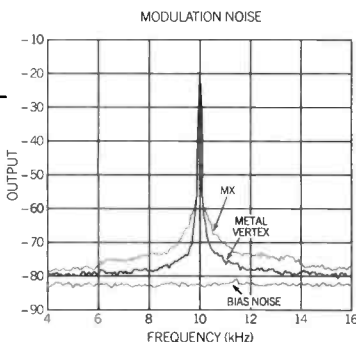
makes this mechanism truly unusual is the golden emblem center, which is not simply decorative but serves to dampen external vibrations even further. Bad vibes aside, our new Metal Vertex cassette shell also provides unmatched durability and heat resistance.

WIDER DYNAMIC RANGE AND THE HIGHEST MOL IN EXISTENCE.

The Metal Vertex magnetic coating consists of extremely fine (.3 micron) metal particles, packed together with high density through a process called parallel bundling. That not only increases dynamic range, it pushes the Maximum Output Level 1db to 2db higher than our MX tape (depending on frequency). That, in turn, allows for a substantial improvement in sensitivity and an astonishing 40% reduction in distortion.

If you're surprised by all these incredible specs, don't be. Remember, Maxell has always been at the forefront of creating magnetic tape for the world's most sophisticated equipment. So if what you're recording demands superior reproduction, look to Metal

Vertex from Maxell. Anything less and you don't have a prayer.





0004520

Metal Vertex 90

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ANTI-MODULATION NOISE CASSETTE MECHANISM
THREE-PIECE CONSTRUCTION

Techno-Silver Back Coat

A

THE BASICS

A handful of tabletop VCR's also provide **editing** assistance in the form of a **flying erase head**, which permits smooth transitions between recorded segments because the erase head is mounted on the head drum rather than at a fixed point earlier in the tape path. This feature is more common in portable recorders than in home equipment.

Smaller and Better

Shortly after the introduction of home VCR's, several companies produced battery-operated portable units designed to be used with separate video cameras. These have now given way to all-in-one units called **camcorders**. In addition to portability, virtually every camcorder includes a **zoom lens**, which enables you to widen or narrow the field of vision; an **automatic iris**, which adjusts for varying light conditions; **autofocus**; an **electronic viewfinder** (a tiny built-in monitor); and a wide range of other facilities.

The popularity of camcorders has given rise to a couple of new formats, both aimed at making the equipment smaller and lighter. One is **VHS-C** ("C" for compact), which conforms to the VHS standard but uses a smaller cassette that permits 20 or 30 minutes of recording at SP speed. The other is **8mm**, which employs a narrower tape than VHS as well as a small cassette but permits as much as 2 hours of recording. An 8mm cassette usually has to be played back through the camcorder (there are very few 8mm tabletop VCR's) or dubbed to a conventional videocassette.

Other new systems have been forthcoming as well. A desire for higher video quality has resulted in the redesign of both the original home video systems. Sony began it by bringing out **Super Beta**, which could produce somewhat higher resolution but was not completely compatible with standard Beta; tapes made in the original format would play on the new machines, but Super Beta tapes would not play on all previous Beta decks. The Beta upgrade was followed shortly by **VHS HQ** and later by **Super VHS** (or **S-VHS**), which offered still better performance—and had the same kind of reverse incompatibility. Al-



though nearly all of the improvement afforded by S-VHS can be seen on any good TV, the greatest benefit is achieved with monitors having separate luminance and chrominance inputs, called **Y/C** or **S-video** connections.

Similar upgrading has affected the portable formats as well with the arrival of advanced 8mm, called **Hi8**, and its VHS equivalent, **S-VHS-C**. Ultimately, Sony took the technology a step further with its **Extended Definition (ED) Beta**, claimed to provide still higher resolution and also providing separate luminance and chrominance output signals. But ED Beta was perhaps too late in coming, and too costly, to make a lasting impression on consumers.

At about the same time as the original tape-based systems were introduced, work was proceeding on **videodiscs**. Several competing systems emerged, but the most technically sophisticated—and the only one that survives, at least outside of Japan—is the optical **laserdisc**. The video information on a laserdisc is encoded as a series of physical deformations. A laser beam is bounced off the disc to a light-sensitive element, and the resulting electrical signal can be reconstructed as a television picture.

Aside from its higher video quality, one of the laserdisc's advantages is its ability to include CD-format digital sound along with the picture information. The compact disc it-

self grew out of the laser videodisc, and a logical extension of this in recent years was the introduction of **combi-players**, which can handle 8- and 12-inch laser videodiscs, 3- and 5-inch CD's, and 5-inch **CD Videos**, or **CDV's**, which hold 5 minutes of video with digital audio plus as much as 20 minutes of digital audio without video.

The End of the Line

The various improvements to video storage systems either prompted or followed on similar developments in TV sets themselves. The desire to reproduce something close to the full bandwidth of original broadcast signals prompted the development of color sets able to resolve 300 lines or more, but this meant that the chrominance information included at the upper end of the video signal could interfere with the luminance information. The solution was the addition of a **comb filter**, which separates the color signal from the basic picture without restricting the luminance bandwidth.

Further advances included the addition of direct audio and video inputs and outputs, **Y/C** inputs to take maximum advantage of S-VHS and Hi8, and increased screen sizes (CRT's are now available with diagonal measurements as great as 35 inches). The new-generation TV sets are usually called **monitors** or **monitor receivers**. An extension is the **projection television**, which operates somewhat like a photographic slide projector, casting a large image on a screen either from the front or the rear. Most early projection TV's suffered from lack of brightness and poor off-axis visibility, although both of those problems are less evident in recent models.

A current thrust in video engineering is the quest for even better performance. **Improved-definition television (IDTV)**, which modifies an existing video signal, is available in a few sets, and true **high-definition television (HDTV)**—a whole new standard with much greater bandwidth—is waiting in the wings.

NEXT: Audio on the move—stereo jumps from the living room to the highway and bicycle path.



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You know how it is. You're sitting there watching the game and you get a little worked up. No harm done. Except, if you're seated in front of a 45" Pioneer Big-Screen. Then, you're faced with the reality of being knocked out by the sharpest, brightest big-screen with the leanest, best-looking build ever. But, even though it's lean and mean, it won't glare at you, thanks to a non-reflective screen. It's all part of what makes Pioneer the standard in the big-screen field.

Imagine, a big-screen television designed to overwhelm you with brilliance, not bulk. What a game plan.



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Call 1-800-421-1404 for the dealer nearest you.

by Julian Hirsch



MULTIROOM INSTALLATIONS

IN recent years, there has been increasing interest in extending high-fidelity sound beyond the confines of a dedicated listening room. Aside from the uneconomical and usually inconvenient solution of installing a separate music system in each of the desired listening areas, there are a number of ways to solve the problem.

Most receivers have two (and sometimes three) sets of speaker outputs, activated singly or in combination by a front-panel control. To distribute programs from such a source to other rooms requires nothing more than running wires to them from the receiver and installing the extension speakers.

Unfortunately, this approach is too elementary to be fully satisfying to most people. Neither the volume level nor the program source is controllable from the remote locations, limiting its application to casual background listening. Although a switch at the extension speakers can silence them, and an "L-pad" attenuator can provide volume control, the maximum level is still determined at the source.

Lately, however, a number of manufacturers have introduced

more sophisticated multiroom components. A year ago (September 1989) we tested and reported on the Luxman TP-117, a tuner/preamplifier designed to serve as the heart of a two-zone multiroom system. Containing two complete preamplifiers in addition to a tuner, it is able to supply separate programs to each of two zones (a zone may consist of one or more rooms, although all of the speakers in a given zone must carry the same program). With the aid of infrared remote-control repeaters, program selections and other control signals can be transmitted back to the TP-117, giving each zone a considerable degree of control over the system's operation.

As the review last year mentioned, the accessory units available from Luxman, together with a number of TP-117's and a considerable amount of in-wall wiring, make it possible to create multiroom installations of almost unlimited complexity.

This month, we report on a very different sort of two-zone system, the Bose Lifestyle Music System. Its only special installation requirement is running wires from the Music Center (which includes both a tuner and a CD player) to the speakers. The remote-control signals are transmitted to the Music Center by radio, eliminating the need for repeaters or any in-wall wiring except the speaker lines.

Within certain constraints, the remote listener can control the program source and listening level through the system remote control. Distribution to the remote speakers

is at line level, since the Bose speakers intended for use with the system are powered by built-in amplifiers.

Each of these systems was designed with some degree of single-brand integration. The Luxman system, beyond the use of TP-117's and certain remote accessory devices, does permit almost any suitable power amplifier to be used to supply a remote zone, as well as any type of speakers. The Bose system is considerably more integrated, although it does allow the second zone and additional rooms to be served by external amplifiers and speakers (which, however, would not be turned on and off by the system itself) or by other brands of powered speakers.

Both the Luxman and Bose systems share a common weakness, however. A program selection can be verified only by the audible results, and there is no visual indication at the remote point of which source (or radio station or CD track) has been selected.

At the June Consumer Electronics Show in Chicago, I saw portions of a multiroom system soon to be introduced by a/d/s/ that will address this problem. Each room (or zone) has a small control panel, about 6 inches square, installed flush with the wall. The upper half of the panel is devoted to an LCD display, with several buttons below it.

With these controls, almost any typical function of an audio system (program source, tuner frequency, volume, and so forth) can be selected or adjusted, and the actual settings are visible on the display, which in effect becomes the front panel of a remote receiver.

When multiroom systems finally appear with this sort of capability, they will be true, logical, evolutionary descendants of the relatively unsophisticated (or costly, or both) systems that preceded them. There are other fascinating developments in multiroom systems, made possible by digital technology, that are close to being commercially realizable. Meanwhile, many people will find the techniques employed in the Luxman, Bose, and other available systems to be quite workable and usually preferable to multiple complete audio systems. □

Tested This Month

*Sony DTC-75ES Digital
Audio Tape Deck
B.I.C. Venturi V620
Speaker System
AudioSource Amp One
Power Amplifier
Cambridge SoundWorks
Model Eleven Portable
Music System
AKG K280 Headphones*

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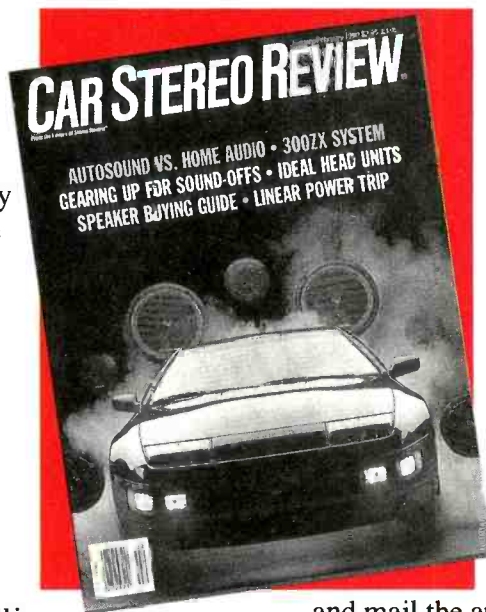
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JOCK P. LEUNG

SONY DTC-75ES DIGITAL AUDIO TAPE DECK

Craig Stark, Hirsch-Houck Laboratories

SONY'S DTC-75ES digital audio tape deck gives Americans their first opportunity to purchase a full-featured DAT recorder designed for home use. It officially introduces the Serial Copy Management System (SCMS) supported by tape and equipment manufacturers and the American and European recording industries. This "one-generation" arrangement allows a user to make digital-to-digital copies of CD's but not to make digital-to-digital copies of the copies. The new Sony DAT deck also incorporates the latest in 1-bit design developments in its digital-to-analog (D/A) and analog-to-digital (A/D) converters. And, perhaps the most welcome news of all, the DTC-75ES digital recorder actually costs *less* than a number of today's best analog cassette decks.

At first glance, indeed, it would be easy to mistake the DTC-75ES for a regular topflight cassette deck. Its cassettes, though smaller than their familiar analog counterparts, measuring only $2\frac{7}{8} \times \frac{3}{8} \times 2\frac{1}{16}$ inches, go into a similar-looking cassette well, which is equipped with a power-assisted door. Interior illumination and a transparent door panel give

full visibility to the tape reels and label.

Since the research and tooling needed to produce the high-precision mechanical drives and heads required by the DAT format is very costly, the ability to borrow in this area from existing VCR drive/head technology is an important consideration in holding down the cost of home DAT machines such as the DTC-75ES. The transport mechanism of the DTC-75ES uses a standard head drum, 30 millimeters (mm) in diameter, which spins the two audio heads at 2,000 rpm (1,000 rpm in the lower-fidelity long-play mode). The heads are mounted at an angle to the drum, and as the tape is slowly pulled around it, they are alternately exposed to the tape over a 90-degree arc. They can thus read or write the long, diagonally recorded ("helical-scan") tracks that contain both the digital audio signal and the subcode information.

The subcode fields in DAT recordings hold such important information as absolute time codes, program-selection numbers, and start, skip, and end codes. Unlike analog cassettes, in which blank spaces between selections can be tolerated,

DAT machines must preserve the continuity of the subcode information even in the absence of an audio signal. For this reason, then, the fast-forward button of the DTC-75ES does not run the tape directly to the end but instead automatically stops the machine at the last recorded "end ID" marker. At that point a new selection can be recorded immediately, or an intervening silent space can safely be added by using the record-mute button.

"Start ID" codes can be written automatically or manually, and start, skip, and end codes can be written or erased manually either during or after the initial recording. Using the DTC-75ES's editing facilities, the exact locations of these codes can be shifted backward or forward by up to 70 seconds, in increments as small as 0.3 second. Further, since the originally assigned selection numbers will often need to be changed because of subsequent editing or the addition of new selections, the DTC-75ES provides a RENUMBER button that updates all of the program numbers in a single pass.

The DTC-75ES supports all three of the DAT format's sampling rates: 48 kHz for analog-input standard recordings, 44.1 kHz for digital-input recordings of CD's and commercially recorded DAT's, and 32 kHz for analog-input recordings in long-play mode. In long-play mode, a C-120 cassette will hold 4 rather than 2 hours of music, at the cost of

TEST REPORTS

limiting high-frequency response to about 14,500 Hz.

The low-level inaccuracies inherent in even the best 16-bit linear D/A converters have recently given rise to the idea of 1-bit conversion, which employs an ultra-high-speed stream of pulses at a constant amplitude to express the 65,536 (2^{16}) amplitude values that can be represented by the 16-bit signals used in digital audio recording. This 1-bit technology is now finding its way into various CD and DAT machines and is incorporated in the Sony DTC-75ES. Its advantage is that pulse intervals that are precisely controlled by a quartz clock can be maintained far more accurately than can the transistor/resistor-dependent analog voltages with which digital amplitude values must normally be associated in D/A conversion. The result is better handling of very low-level signals. And such low-level signals are not limited to musical passages marked *pianissimo*; they occur in the transition area between the positive and negative halves of every audio waveform.

Unfortunately, however, to implement *pure* 1-bit conversion would theoretically require oversampling the recorded signal not at eight or sixteen times the normal rate, as is commonly done in high-quality CD players, but at 65,536 times the normal rate. Since the standard sampling rate for CD's and for DAT decks in their digital dubbing mode is 44,100 times a second, the rate needed to generate the range of pulsewidths required for straight 1-bit operation would rise to an awesome 2,890,093,500 samples a second, or roughly 3 *giga*-hertz.

While operating at such frequencies is beyond the capacity of current integrated-circuit technology, "noise-shaping" and "bit-compression" techniques can be (and are) employed by various companies to obtain high performance from a 1-bit design in a considerably reduced bandwidth. In the Sony DTC-75ES, for example, these techniques are used in conjunction with a high-density linear converter that is itself remarkable in being able to operate at up to 50 MHz. Large-scale integra-

tion (LSI) of the various DAT circuits actually helps make higher-frequency operations possible, and at the same time it helps bring down the production cost.

The display window of the DTC-75ES manages to present an enormous amount of information without visual clutter. In addition to a linear tape-counter mode, the absolute time, program time, and remaining time on the tape are shown by successive presses of the COUNTER MODE button. (The same button, in conjunction with various program-number keys, also controls the brightness of the display.)

The deck has a twenty-two-segment-per-channel peak-holding level indicator that is calibrated from -60 to 0 dB. When making a digital recording it is imperative *never* to "run into the red" (a common practice with analog decks). Once all 16 binary bits have been turned on, at 0 dB, any larger input will create severe distortion. For that reason, the DTC-75ES's level indicator is supplemented by a two-digit numeric MARGIN readout, which displays the difference, to the nearest 0.5 dB, between the 0-dB point and the maximum signal level encountered in either channel. If the record level goes too high even momentarily, the margin indicator will flash until the MARGIN RESET button is pressed. In addition to the clutched record-level controls (which affect only analog input signals), adjustable, digitally controlled fader facilities are provided.

The deck's remote control can be used to program up to sixty selections for playback in any order. It has the usual scan and automatic search functions as well as a repeat

function for individual selections, the whole tape, or specific portions of a single selection. In conjunction with a number of Sony CD players, the remote control can also be used to synchronize dubbing operations.

If pressed during play mode, the fast-forward and rewind buttons provide audible cue-and-review facilities. Entered from the stop mode, fast-winding runs at two hundred times normal tape speed. A front-panel switch is used to select among the rear-mounted analog, fiber-optic digital, and coaxial digital input jacks. A switch for timer-controlled operations is also provided, as is a front-panel headphone jack with its own level control.

The Sony DTC-75ES measures 16 $\frac{3}{8}$ inches wide, 13 $\frac{3}{4}$ inches deep, and 5 $\frac{1}{4}$ inches high. It weighs about 16 $\frac{1}{2}$ pounds. Price: \$950. Sony Corp. of America, Dept. SR, Sony Dr., Park Ridge, NJ 07656.

Lab Tests

We checked the frequency response of the DTC-75ES both with the Sony TY-7551 calibrated test DAT and by making overall record-playback frequency sweeps with our Audio Precision System One test instrument. Results for the five frequencies on the test tape are shown in the box on page 44. In no case did the deck's response deviate from the ideal by more than 0.16 dB.

Predictably, total harmonic distortion (THD) of a 1,000-Hz tone at 0 dB was roughly twice as high on an overall record-playback basis as it was in playback-only mode. Again, however, as the figures show, in both cases the distortion was measurable only in the third decimal place. Our crosstalk measurements

FEATURES

- Digital inputs and outputs for direct CD and DAT dubbing in regular and long-play modes
- One-bit A/D and D/A converters
- Twenty-two-segment-per-channel peak-level indicators with peak-holding margin indicator
- Remaining, absolute, and program time indicators plus linear tape-counter mode
- Editable start, skip, and end ID markers with one-touch program renumbering
- Analog outputs and coaxial and optical digital outputs
- Ninety-nine-selection automatic music search and music scan
- Repeat play of whole tape, single selection, or portions of a selection
- Full remote control for deck and compatible Sony CD player
- Adjustable digital fader

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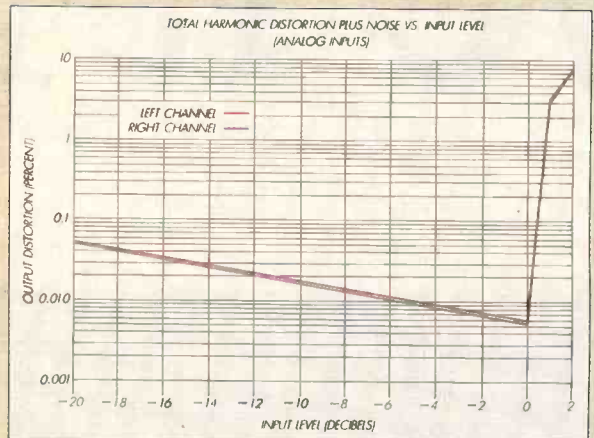
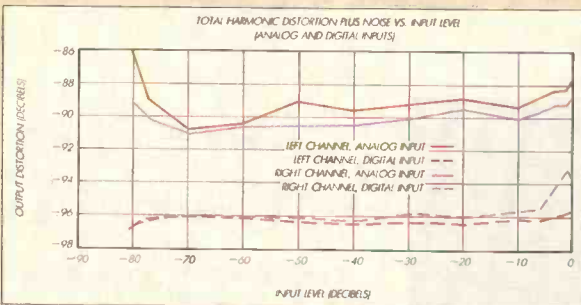
Fast-forward/rewind time (C-120)	48 seconds
Speed error	not measurable
Wow and flutter	not measurable
Line input for indicated 0 dB	0.45 volt
Line output at indicated 0 dB	2.0 volts

PLAYBACK PERFORMANCE (Sony TY-7551 test tape)	LEFT	RIGHT
Frequency response (dB)		
1,000 Hz	0.00	0.00
20 Hz	+0.16	+0.15
100 Hz	+0.09	+0.03
10,000 Hz	+0.04	-0.01
20,000 Hz	+0.05	0.01
Signal-to-noise ratios (dB)		
unweighted	101.21	101.46
A-weighted	106.30	106.83
CCIR/ARM	104.57	105.31
Channel separation (dB)		
1,000 Hz	98.95	98.07
10,000 Hz	95.53	90.07
Linearity (dB) at -60-dB level	-0.01	-0.01

	LEFT	RIGHT
Total harmonic distortion plus noise at 1,000 Hz	0.0016%	0.0017%

RECORD-PLAYBACK PERFORMANCE

Frequency response (dB)		
1,000 Hz	0.00	0.00
20 Hz	+0.16	+0.16
100 Hz	+0.07	+0.07
10,000 Hz	+0.02	+0.01
20,000 Hz	+0.00	+0.01
Signal-to-noise ratios (dB)		
unweighted	90.21	90.21
A-weighted	92.51	93.05
CCIR/ARM	89.87	89.80
Channel separation (dB)		
1,000 Hz	89.23	89.51
10,000 Hz	83.19	78.01
Linearity (dB) at -60-dB level	-0.02	-0.01
Total harmonic distortion plus noise at 1,000 Hz	0.0039%	0.0036%



revealed excellent channel separation as well.

The graph of total harmonic distortion plus noise (THD + N) vs. analog input levels shows the importance of not exceeding 0 dB when recording a DAT. Given the 94-dB A-weighted signal-to-noise ratios (overall record-playback) we measured, there is ample margin available to encourage erring on the

safe side when setting record levels, though this may mean changing the habits of a lifetime. The separate left- and right-channel low-level-linearity measurements (see graph) disclosed no nonlinearities of consequence down to a level of approximately -90 dB.

In an attempt to get at least *some* indication of the measurable difference between digital-to-digital dub-

bing and copying a CD via the player's regular analog outputs, we also measured the deck's THD + N in decibels at various levels with both analog and digital inputs (see graph). The approximately 6-dB difference (a 2:1 voltage ratio) between the analog and digital curves across most of the dynamic range shows the clear advantage of recording digital-to-digital if possible. Still, the

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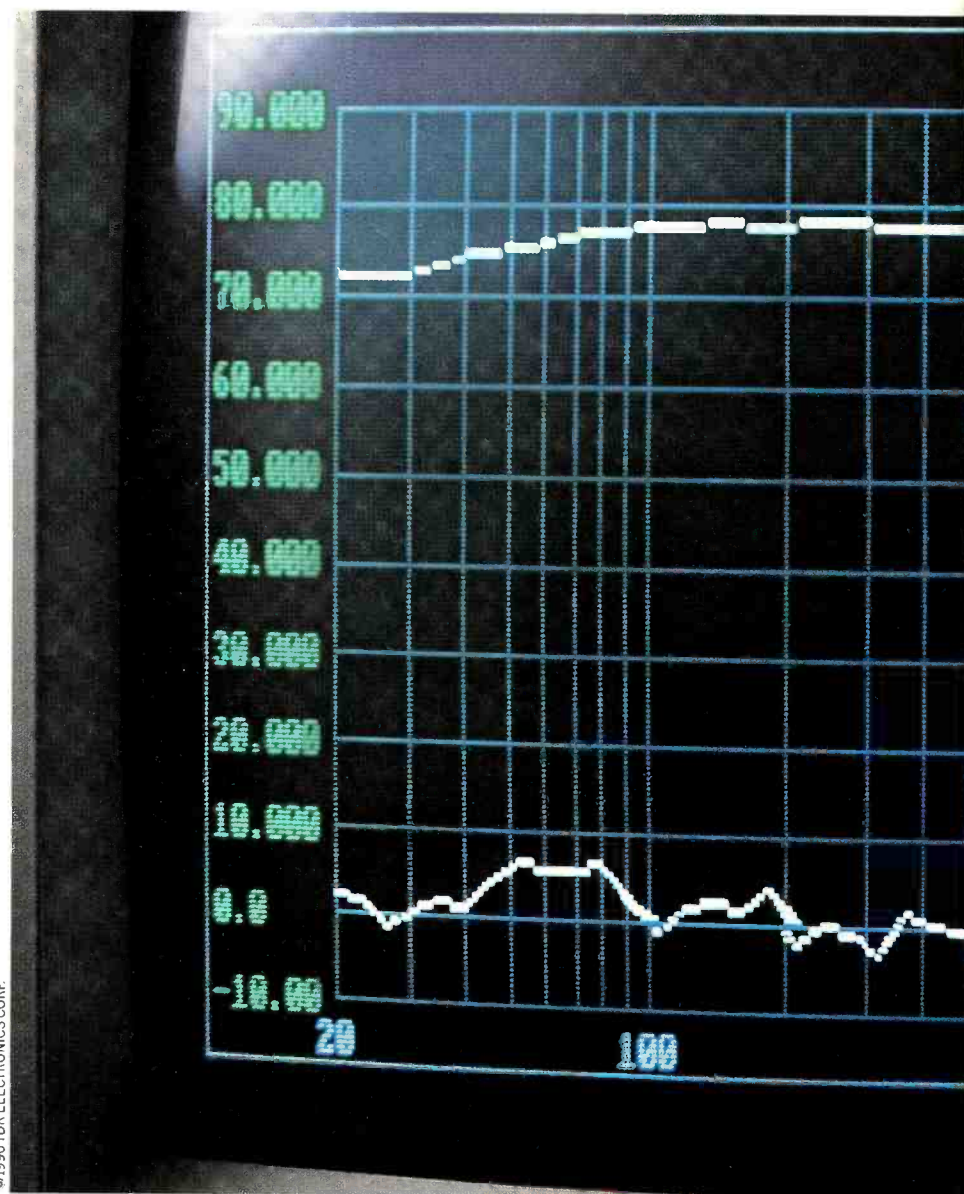
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MOL is indicated by the curve at the top of

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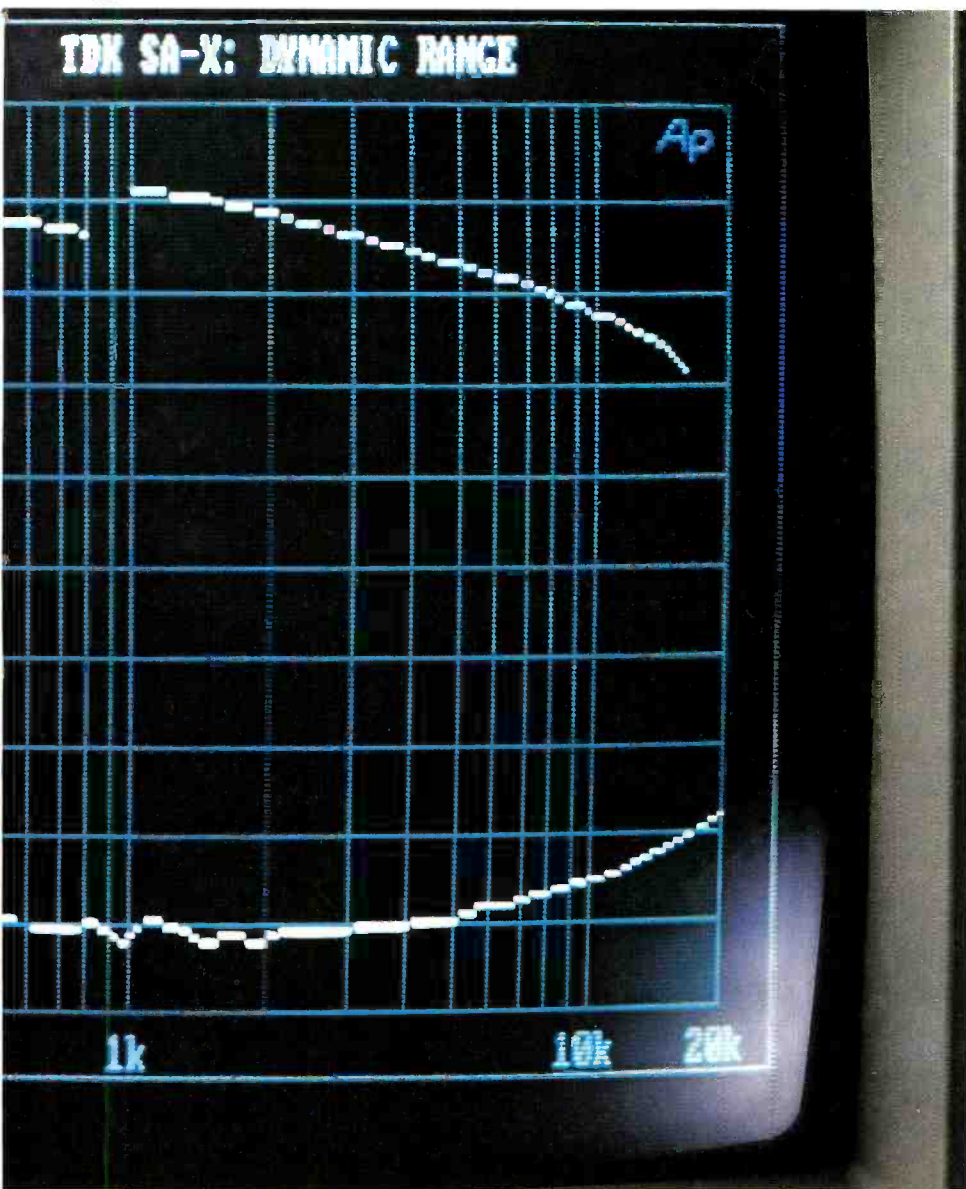


TDK SA-X's DYNAMIC RANGE, THE WIDEST OF ANY HIGH BIAS

the analyzer's monitor; bias noise is indicated by the curve at the bottom. The vertical distance between any two points on these curves is the

measure of an audio cassette's dynamic range at that particular frequency.* The greater the distance, the greater the dynamic range. And the greater

lyzer Never Lies.



What the analyzer told *Audio*—in no uncertain terms—was TDK SA-X's dynamic range was the widest of all Type II audio cassettes tested. Which makes it the best tape you can use to capture the fortissimos, pianissimos, and transients of today's music sources.

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*Vertical Scale Normalized to 0 dB for illustration purposes.

TAPE, IS SHOWN HERE ON AN AUDIO PRECISION ANALYZER.*

the dynamic range, the more sound the cassette can faithfully reproduce.

When *Audio* magazine conducted an exhaustive test of 88 blank audio

cassettes (the results of which were published in the March 1990 issue), it utilized an Audio Precision Analyzer to evaluate dynamic range.



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B.I.C. VENTURI V620 SPEAKER SYSTEM

Julian Hirsch, Hirsch-Houck Laboratories

A NUMBER of years ago, B.I.C. America introduced a line of loudspeakers featuring an unusual form of vented bass enclosure. Instead of a simple opening in the cabinet wall or a tubular duct with a constant cross section, the speakers use a tapered duct whose effective cross-sectional area varies over its length, from wide to narrow to wide again, before the duct opens to the outside of the enclosure.

The tapered duct is similar in principle to the Venturi tube used in

flowmeters, which create changes in the pressure and velocity of the gas or liquid flowing through the tube. According to B.I.C., the tapered duct used in Venturi speakers increases the sound pressure at the vent by as much as 140 times as well as providing improved loading of the rear of the speaker cone. The practical benefit is high-efficiency bass performance from a compact enclosure, a combination normally difficult to achieve in an inexpensive speaker system.

The current line of B.I.C. Venturi

speakers consists of five models, ranging from a compact bookshelf speaker to large, three-way floor-standing models. The V620 we tested is the smallest of the floor-standing units, a compact two-way system measuring 22 $\frac{3}{4}$ inches high, 9 inches wide, and 11 $\frac{1}{8}$ inches deep and weighing about 21 pounds.

The V620 has a single 6-inch cone woofer formed of carbon-impregnated polypropylene with a butyl-rubber surround. This rigid, low-mass driver operates up to 3,000 Hz, where there is a crossover to a $\frac{3}{4}$ -inch soft-dome tweeter with ferrofluid cooling. The rectangular port, measuring 6 $\frac{1}{2}$ by 1 $\frac{3}{4}$ inches, is at the bottom of the cabinet's back panel.

Twin gold-plated five-way binding posts are recessed into the rear of the cabinet. A removable black cloth grille, retained by plastic snaps, covers most of the speaker's front panel. All of its exterior surfaces are veneered in black or oak wood-grain vinyl. The front side edges of the cabinet are chamfered to minimize diffraction, and the cabinet is internally cross-braced to reduce resonance effects.

The manufacturer's specifications include a frequency response of 49 to 20,000 Hz (-6 dB at 39 Hz) and a sensitivity of 90 dB sound-pressure level (SPL) at 1 meter with a 1-watt input. The nominal impedance is 8 ohms, and the speaker is recommended for use with amplifiers delivering from 20 to 100 watts per channel. Price: \$329 a pair. B.I.C., Dept. SR, 895 E. Hampshire Rd., Stow, OH 44224.

Lab Tests

As recommended by B.I.C., we installed the V620 speakers on 12 $\frac{1}{2}$ -inch spiked stands about 2 feet in front of a wall and 8 feet apart. The room response was quite smooth over most of the tweeter's range, varying ± 2 dB from 4,000 to 20,000 Hz. The woofer's response was also very good over most of its range, within ± 3 dB from 35 to 2,000 Hz, but there was a distinct depression of about 4 dB in the composite response curve between 2,000 and 4,000 Hz. The overall composite response curve was ± 5 dB from 30 to 20,000 Hz, excellent

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performance for a speaker the size of the V620.

Other response measurements, including quasi-anechoic FFT tests, also showed a dip of 4 to 6 dB in the 3,000- to 4,000-Hz range. The horizontal directivity of the system, over a 45-degree angle off its forward axis, was very good up to 10,000 Hz and still better than average all the way to 20,000 Hz. The upper-midrange hole was present in both the axial and 45-degree off-axis curves, however, indicating that it was not merely an interference effect but a true reduction of the system's acoustic power output in that frequency range.

The system sensitivity was 89 dB, close to the rated 90 dB. Its minimum impedance in the bass and midrange was 6.3 ohms at 200 Hz, and the overall minimum was 4.5 ohms at 7,000 Hz. The two bass-resonance peaks were 45 ohms at 28 Hz and 25 ohms at 80 Hz. The average impedance was roughly 6 to 8 ohms,

close to the 8-ohm nominal rating. Over most of the audio frequency range the impedance phase angle was less than 25 degrees, a further indication that a pair of V620's

Our initial listening tests showed the B.I.C. V620 to be a balanced-sounding speaker that compared favorably with costlier systems. It certainly did not sound like the inexpensive speaker it is.

should be very easy for any amplifier to drive.

At an input of 3.15 volts (corresponding to a 90-dB SPL in the sensitivity measurement), the woofer's distortion was between 1 and 2 percent from 50 to 100 Hz and typically 0.5 to 1 percent from 150 to 1,000

Hz. In single-cycle pulse power-handling tests, the woofer cone rattled at 100 Hz with an input of 135 watts into its 10-ohm impedance. At 1,000 and 10,000 Hz, our amplifier clipped (at 880 and 1,020 watts, respectively) before there was evidence of driver overload.

Comments

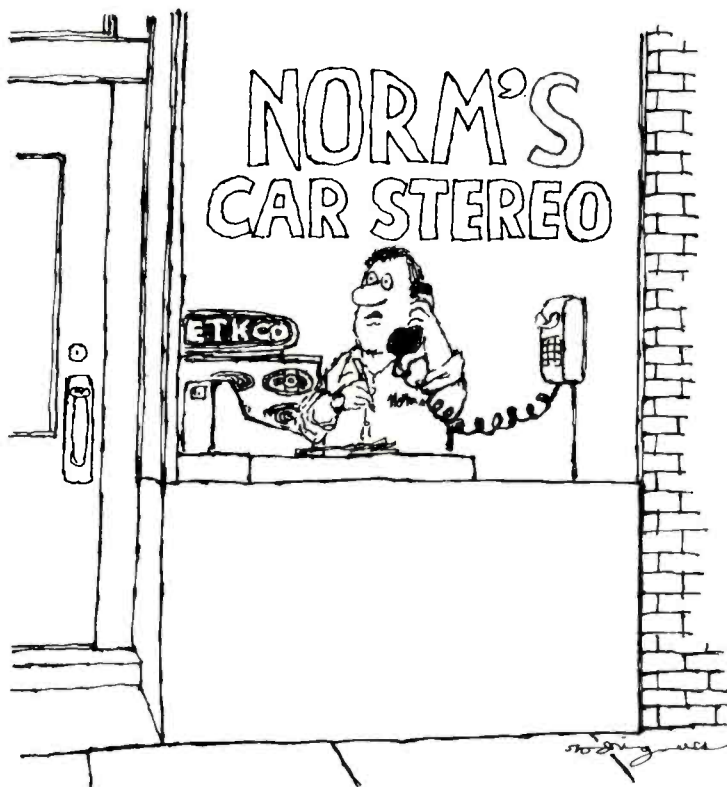
Our initial listening tests showed the B.I.C. V620 to be a balanced-sounding speaker system that compared favorably with other, costlier systems. It certainly did not sound like the inexpensive speaker it is.

After our tests, when we saw the upper-midrange response depression in our measurements, we wondered if it could possibly be a measurement artifact. It *should* have been audible, but we had not detected it in a moderate amount of pre-test listening. More listening, with a variety of music, finally confirmed the depression's reality, but fortunately its effect disturbed the ear much less than the measurement curve disturbed the eye.

Obviously, for this characteristic to be heard, there must be a significant amount of program energy in the 3,000- to 4,000-Hz range. Surprisingly few of the recordings and FM broadcasts to which we listened met that requirement. But every so often, switching between our reference speakers and the V620's produced a hollow-sounding effect that must have been the result of its upper-midrange output deficiency. The characteristic often affected the ambience more than the tonal balance of the program. But even when it was present (and it showed up in both speakers of the pair we tested), it was rarely strong enough to be obvious without an A/B comparison with a speaker having a uniform response in that range.

Aside from this anomaly, the sound of the B.I.C. V620 was very good and thoroughly satisfying. Few speakers at its price would be likely to equal it, much less surpass it. When the speaker's efficiency, frequency range (both the deep bass and top treble were excellent), and overall balance are considered, it is clearly a good value—and very attractive to boot.

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AUDIOSOURCE AMP ONE POWER AMPLIFIER

Julian Hirsch, Hirsch-Houck Laboratories

THE compact, low-price AudioSource Amp One stereo power amplifier, although conservatively rated at a modest 60 watts per channel, can meet the requirements of most home audio systems. It is housed in a lightweight (a little more than 14 pounds), low-contour package that measures 16½ inches wide, 11¾ inches deep, and only 2¾ inches high. A distinctive feature of the front panel is a pair of round, illuminated level meters about 1½ inches in diameter.

Individual level-control knobs for the two channels are at the right end of the panel; several small pushbuttons and a headphone jack occupy the left. Each button displays a small red light when it is activated. The power button is red, but the others are black, like the amplifier's panel and case. Two of the buttons activate the two pairs of speaker-

output terminals on the rear apron, another increases the level meters' sensitivity by 10 dB, and the fourth turns on the soft-clipping circuit, which rounds off the peaks of a signal that might otherwise drive the amplifier into hard clipping. By reducing the level of high-order harmonics in the amplifier output, soft clipping lowers the risk of damaging a tweeter.

The level meters have two scales, calibrated in watts (into 8 ohms) and decibels relative to the 60-watt maximum power rating. The meter movements respond rapidly to level increases, with a slower decay. The power-scale calibrations extend down to 0.2 watt (200 milliwatts), or 20 milliwatts in the expanded mode, providing useful readings over the full listening range.

On the Amp One's rear apron are two sets of insulated binding-post speaker terminals, which accept sin-

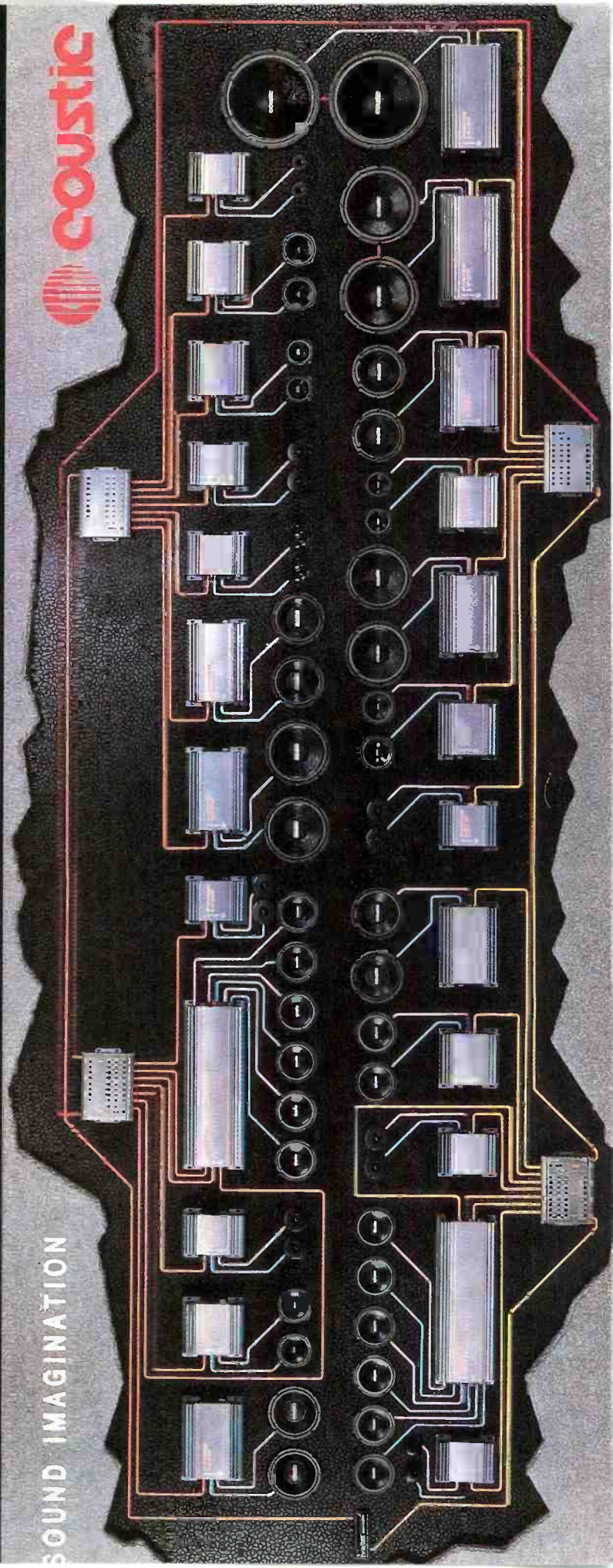
gle or dual banana plugs as well as stripped wire ends. A slide switch connects the two channels for bridged (mono) operation, increasing their maximum output to about 170 watts into 8 ohms. The amp has a single unswitched AC outlet and a user-accessible fuse holder (an increasingly rare convenience). Unconventionally, there are two pairs of input jacks, marked for line and CD sources. They are not selectable and differ only in their sensitivities and impedances, which are 30,000 and 50,000 ohms, respectively.

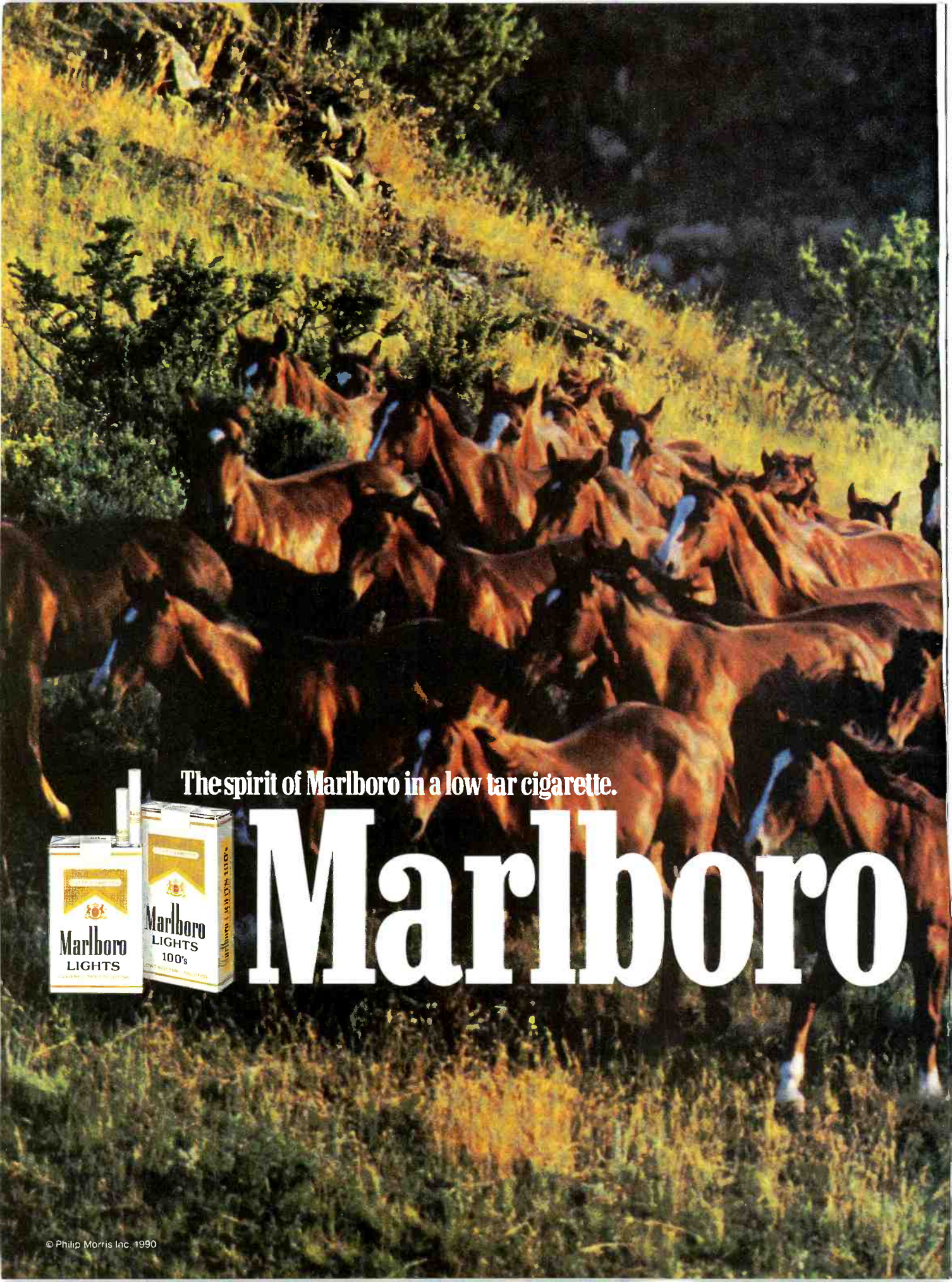
Through the ventilating slots on the top cover can be seen a husky toroidal power transformer as well as the amplifier circuit board and its two rows of black heat-sink fins. The specifications include a power rating (with both channels driven) of 60 watts per channel into 8 ohms with less than 0.04 percent total harmonic distortion (THD), frequency response of 20 to 20,000 Hz ±0.5 dB, 110 dB signal-to-noise ratio, and 2 dB headroom (presumably dynamic). The rated sensitivity is 0.8 volt for the line input and 1.3 volts for the CD input. Price: \$300. AudioSource, Dept. SR, 1327 N. Carolan Ave., Burlingame, CA 94010.

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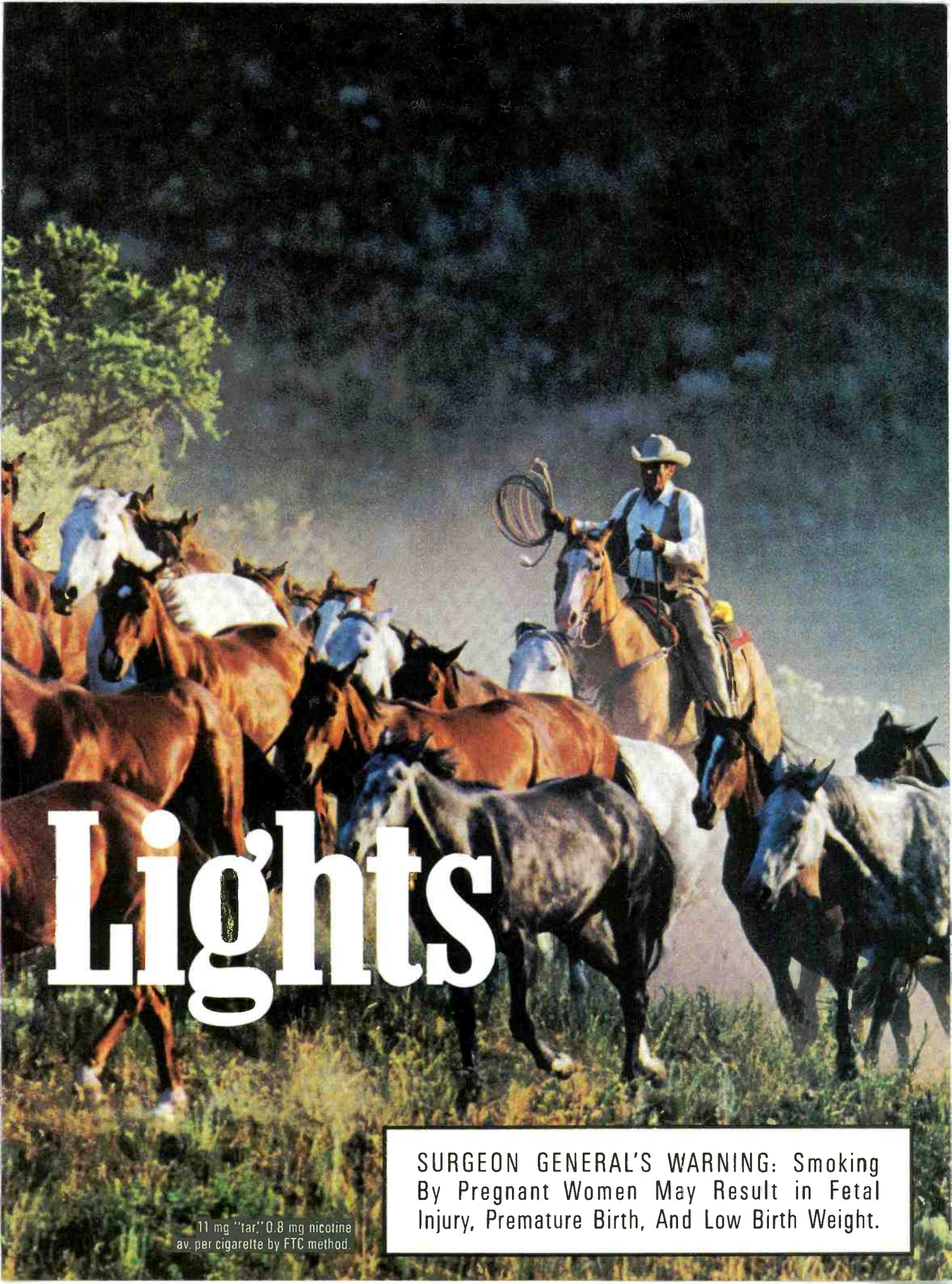




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TEST REPORTS

Lab Tests

The 1-hour preconditioning at one-third rated power from both channels left the top of the Amp One comfortably warm. During the following high-power tests it became noticeably hotter, but in normal operation it became only faintly warm. With both channels driving 8-ohm loads at 1,000 Hz, the outputs clipped at 80 watts, for a clipping-headroom rating of 1.25 dB. The output into 4 ohms (for which the amplifier is not rated) was 100 watts per channel. We made 2-ohm measurements on only one channel, with the other connected to a 4-ohm load, since we have found that many amplifiers not specifically rated for 2 ohms will blow an internal fuse or become otherwise disabled when driving 2-ohm loads with both channels. The 2-ohm output at clipping was 84 watts.

Dynamic power tests produced an output of 110 watts into 8 ohms (for a dynamic headroom of 2.6 dB), 170 watts into 4 ohms, and an impressive 225 watts into 2 ohms. The last figure is actually a more important performance indicator than the continuous 2-ohm output power, demonstrating that the Amp One can

deliver high-level program peaks, without clipping, to almost any speaker.

The amplifier's distortion varied only slightly with power and frequency. From 6 to 60 watts into 8 ohms, at frequencies from 20 to 20,000 Hz, distortion remained between 0.032 and 0.036 percent. With 4-ohm loads, the range was 0.062 to 0.07 percent from 1 to 100 watts, and into 2 ohms it was 0.11 to 0.14 percent from 1 to 80 watts.

The soft-clipping circuit commenced rounding off the waveform peaks well below the maximum unclipped power available without it. For example, at a constant 0.2 percent distortion, the Amp One delivered 90 to 94 watts into 8 ohms from 20 to 20,000 Hz when soft clipping was turned off. With soft clipping switched on, the power was 51 to 55 watts over the same range. More power was available only at the expense of more distortion than in the normal operating mode.

The amplifier's frequency response was flat from 10 to 2,000 Hz, rolling off at higher frequencies to -0.6 dB at 10,000 Hz and -1.6 dB at 20,000 Hz. This was the only measurement we made that did not match the manufacturer's rating.

The slew factor was 3 because of a visible waveform distortion that occurred above 60,000 Hz.

Input sensitivity at maximum level settings, for a reference output of 1 watt, was 95 millivolts (mV) at the line inputs and 160 mV at the CD inputs. The respective A-weighted noise levels, with EIA standard gain settings, were -91 and -91.6 dB, relative to 1 watt. Referred to the amplifier's 60-watt rating, these figures correspond closely to the rated 110-dB signal-to-noise ratio.

The meters proved to be as accurate as could be expected from such small scales and certainly more than adequate for their intended purpose. At rated power, they read about 10 percent low and showed an increasing error at lower levels, down to about 50 percent low at the 60-milliwatt calibration, where the actual output into 8 ohms was 88 milliwatts. These errors were comparable to the width of the slender meter pointer, which is highly visible against the white scale.

Comments

The AudioSource Amp One is a good value in a compact and attractive amplifier, and, although it won't appeal to "high-end" enthusiasts, it can do a first-rate job in most installations. It sounded as good as most of the more powerful and better-known amplifiers we have used, with more than enough power for the kind of listening most people enjoy—that is, *not* at the levels experienced in a concert hall by the conductor, the orchestra, and the first few rows of listeners.

The Amp One's size, weight, and cool operation make it a practical, stylish companion for most of today's source components. We operated it on top of a CD player without fear that its weight would deform the player's top or that its external hum field would degrade the player's signal-to-noise performance (the amplifier's toroidal power transformer generates a very low external magnetic field). The Amp One produced no turn-on or turn-off transients. Indeed, it was as civilized an audio component as we have used in some time. And, not least of all, its price is right.

Circle 142 on reader service card

FEATURES

- Bridgeable for 170-watt mono output into 8 ohms
- Switchable soft-clipping circuit
- Compact toroidal power transformer
- Independent front-panel level controls for both channels
- Illuminated output meters calibrated in watts into 8 ohms and decibels relative to rated power; front-panel switch increases sensitivity by 10 dB
- Two sets of speaker outputs controlled by front-panel buttons
- Front-panel headphone jack
- Separate input jacks for CD and line sources
- Single unswitched AC outlet

LABORATORY MEASUREMENTS

- Output power at clipping** (1,000 Hz): 80 watts into 8 ohms, 100 watts into 4 ohms, 84 watts into 2 ohms
- Clipping headroom** (relative to rated output): 1.25 dB into 8 ohms
- Dynamic power output:** 110 watts into 8 ohms, 170 watts into 4 ohms, 225 watts into 2 ohms
- Dynamic headroom:** 2.6 dB into 8 ohms
- Harmonic distortion** (THD + noise at 1,000 Hz into 8 ohms): 0.04% at 1 watt, 0.033% at 10 watts, 0.036% at 60 watts
- Maximum full-power distortion** (20 to 20,000 Hz into 8 ohms): 0.036% at 60 watts (10,000 Hz)
- Slew factor:** 3
- Sensitivity** (for a 1-watt output into 8 ohms): line, 95 mV; CD, 160 mV
- A-weighted noise** (referred to a 1-watt output): line, -91 dB; CD, -91.6 dB
- Frequency response:** 20 to 20,000 Hz $+0$, -1.6 dB

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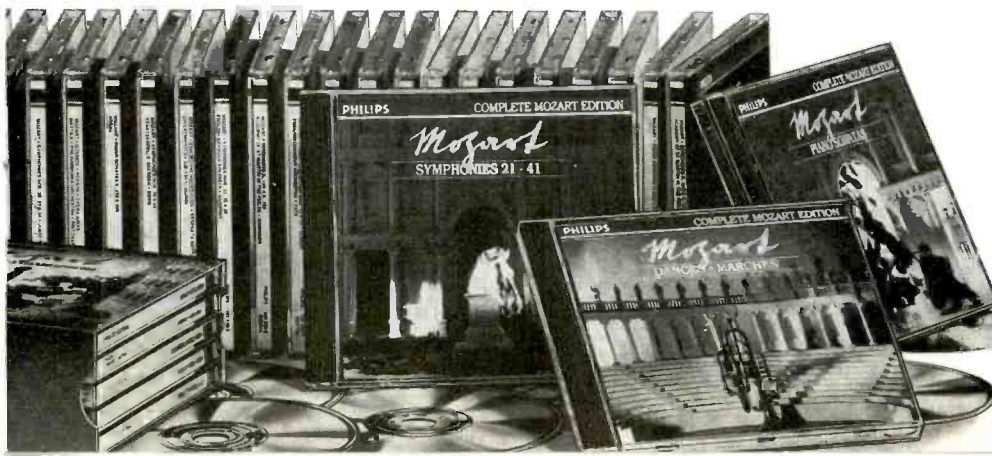
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CAMBRIDGE SOUNDWORKS MODEL ELEVEN PORTABLE MUSIC SYSTEM

Julian Hirsch, Hirsch-Houck Laboratories

THE Cambridge SoundWorks Model Eleven transportable component music system is a direct descendant of designer Henry Kloss's KLH Model 11, which was very popular in the 1960's. The original Model 11, advertised as a "stereo phonograph in a suitcase," consisted of a four-speed record changer, a low-power stereo amplifier (7½ watts per channel), and two detachable speakers. The amplifier had conventional bass, treble, and balance controls as well as a pair of auxiliary input jacks with a switch to select the desired source. The complete \$199 system weighed 26 pounds, qualifying it as portable if not exactly a feather-weight.

The KLH 11 made no claim to high-fidelity performance, although it was a very respectable "mid-fi" system for its time. Ideal for children's rooms and college dormitories as well as a convenient portable music source, it was not only a suc-

cessful product in its own right but also inspired a host of "compact" music systems from many other manufacturers. (Even KLH produced several variants designed for fixed use in a home.) The KLH 11 disappeared from *STEREO REVIEW's Stereo Directory* in 1973, and the once flourishing "compact" audio market dwindled and vanished over the next several years.

As Cambridge SoundWorks tells it, Henry Kloss wanted to enjoy good music while on a recent vacation. Although a portable CD player and a couple of small powered speakers could fit into a suitcase, the combination was not convenient to carry, set up, and repack for transportation. And its sound quality, which lacked the deep bass of a good home system, was also not good enough to satisfy a serious listener or to do justice to CD's.

Kloss set out to design a portable system compatible with the sound quality and dynamics of today's dig-

itally recorded music. Noting that a pair of small powered speakers and a portable CD player together occupy about the same volume as an acoustic-suspension woofer enclosure, he designed a carrying case of an appropriate size. Called the BassCase, it measures 19½ x 16½ x 6¼ inches and is made of a composite material with a ⅝-inch-thick rigid foam core and outer layers of high-strength, luggage-grade plastic.

The BassCase holds a single 7-inch, long-throw acoustic-suspension woofer. Internal struts and a transverse rib add strength and form an airtight seal when the case is closed with its four heavy-duty, toggle-locking latches. Internal damping is supplied by a soft foam chosen for its acoustic properties. The foam has cutouts for the system's two satellite speakers, its miniature amplifier, and a personal CD player or radio/cassette player. The supplied cables (two 15-foot lengths for the satellites and a 20-foot length for the BassCase) wrap around the woofer's magnet structure for transportation.

There is an electronic crossover from the woofer to the satellites at 150 Hz. Each satellite has a 3-inch midbass/midrange driver and a ¾-inch copolymer-dome tweeter in a black ABS plastic case with internal damping and stiffening. Dimensions are only 6¼ inches high, 4¼ inches wide, and 3⅞ inches deep. The back of each case has a keyhole slot and a threaded insert for mounting on a wall or stand. The black metal grille is not removable.

A three-channel amplifier powers the woofer and the two satellites. The frequency response of each amplifier channel is shaped to optimize the performance of the speaker it drives. This reduces the number of parts needed in the passive crossover between drivers in the satellites (although, according to the specifications, it is still a complex ten-element design) and is said to elicit extended bass response from a more efficient woofer than would otherwise be possible for the same performance.

The amplifier measures 7 inches wide, 3 inches high, and 5⅝ inches deep. Its total output is given as 36 watts, without specifying how this is



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“In its price category, the Adcom GFA-535 is not only an excellent choice; it’s the only choice.”

Sam Tellig, The Audio Cheapskate

stereophile

Vol. 10 No. November 1987



The complete report:

Sometimes products are too cheap for their own good, and people don't take them seriously: the Superphon Revelation Basic Dual Mono preamp, Rega RB300 arm, AR ES-1 turntable, Shure V15-V MR cartridge, and the B&K ST-140 power amp. They can't be any good because they cost so little, right?

Wrong, of course.

Adcom appears to be having the same problem with their \$299.95 GFA-535 amp. Credibility.

Now if this amplifier were imported from England and sold for \$599.95, then maybe it would be taken seriously. And highly praised, no doubt.

For the baby Adcom is one of the finest solid-state amps I have heard. No, not the best; I'm not sure what *is* the best. But it's an amplifier that is so good for so little money as to be practically a gift.

Actually, when Rob Ain from Adcom called, I was about as enthusiastic about the GFA-535 as you were before you finish reading this piece. But Rob insisted, "You've gotta hear this amp."

He brought it over the next day, along with the GFP-555 preamp (\$499.95), and we put both pieces into the rest of the system: a Shure Ultra 500 in a Rega RB300 arm on an AR ES-1 table, with Quad ESL-63 speakers on Arcici stands. Then we chatted for a half hour or so while the electronics warmed up.

And then, simultaneously, the two of us decided to shut up and listen.

Adcom GFA-535 power amplifier.

"I've never heard the Quad ESL-63 sound better," Rob said. Of course, he was hardly an impartial observer, but the sound was extraordinarily clean, detailed, and musical. If it wasn't the best sound I have ever heard from Quads, it was pretty close.

This humble \$300 amplifier was driving a pair of very revealing \$3000 speakers and giving a very good account of itself. (We listened first to some Goran Sollscher classical guitar.)

"So how come this product isn't flying off the dealers' shelves?" I asked Rob.

"I don't know. Everyone wants the GFA-555 with 200 watts per channel. Including people who don't need it."

"Does the GFA-555 sound any better?" I asked.

"It's our aim to have all our amps sound pretty much the same. You pay more money, you get more power."

Rob pointed out that while the GFA-535 is rated at 60Wpc, it puts out more like 80. And while I did not do any measurements, my experience with other amps tells me Rob's right. I suppose Adcom doesn't want to steal sales from its GFA-545, rated at 100Wpc and selling for \$200 more.

After a couple of hours, Rob left, grinning from ear to ear, and I later sat down to listen alone. True, when I tried certain Telarc and pushed hard I could get the amplifier to clip—two LEDs quickly light up (very useful). But the Quads were running out of the ability to use the power anyway. My first impressions

were confirmed: the GFA-535 is one of the best amplifiers around for driving Quads. Spendor SP-1s, too.

Suddenly, it hit me what this meant. Conventional wisdom had been dealt a severe blow. You know, the old saw that you should never power a good pair of speakers with a

“The GFA-535 reminds me of... amplifiers that sell... for about three and five times the price.”

cheap amplifier. Here was a cheap amp—one of the cheapest on the market—that sounded good with Quads, Spondors, later Vandersteens. Probably Thiels, too—at least the CSI. What it means is you can stretch your speaker budget a bit and get the speakers you really want, then economize by buying an Adcom GFA-535 for \$299.95. True, you may be a little power shy, but probably not much. And to say the least, the GFA-535 would make a decent interim amp.

What does the GFA-535 sound like? (You thought I'd forget that part, right?) Well, this is one of the most neutral amps I've heard.

“...the baby Adcom is one of the finest solid-state amps I have heard... so good for so little money as to be practically a gift.”

While it doesn't sound particularly tubelike, it avoids the typical transistor nasties through the midrange and into the treble. I wouldn't call it sweet—there's no euphonic coloring—but it isn't cold or sterile. What it is, is smooth. And detailed. Far more detailed than I would ever imagine a \$300 amplifier could be. The GFA-535 reminds me of the Eagle 2A and PS Audio 200C, amplifiers that sell, respectively, for about three and five times the price. Of course, they have more power. And they *are* more detailed. The point is, the Adcom comes close. Very close.

The bass, like everything else, is neutral, certainly not fat and overdone. But it's here where

you notice that this amp is not a powerhouse. You just don't get the solidity and extension you get with a very powerful (and expensive) solid-state amp. Nor do you get the breadth and depth of soundstage that you often find with a very powerful amp. The Adcom GFA-535 sounds a wee bit small, which it is.

My only criticism, and it's more of a quibble, is that the speaker connectors are non-standard and unique (so far as I know). You insert bared speaker wire into a hole and twist the connector tight a quarter turn. Most speaker cables will fit, but some will not. Certainly MIT won't. Neither will the best Kimber, the kind with eight clumps of strands. The less costly four-clump Kimber will, and proved an excellent choice. My sample amp was quiet—

“This amplifier is so good and so cheap that I think any CD owner who buys an integrated amp is nuts.”

no hum—and ran cool. There are selectors for two sets of speakers. And the 535 looks nice.

And talk about economy: If you're not into LPs anymore, you could buy a Mod Squad, dbx, or Old Colony line-level switching box—or possibly a B&K Pro 5 preamp, with its switchable line amp section (only \$350), or the Adcom SLC-505 passive preamp (\$150)—and run it with a CD player. In fact, if you are into CD only (no tape, no tuner, no phono), you could buy a CD player with a variable volume output and run it directly into the Adcom. This amplifier is so good and so cheap that I think any CD owner who buys an integrated amp is nuts.

In its price category, the Adcom GFA-535 is not only an excellent choice; it's the only choice. The real question is whether you should buy one even if \$299.95 is much *less* than you planned to spend for an amp—*ie*, whether you should put the money into a better CD player or pair of speakers instead.

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TEST REPORTS

divided among the speakers. The three high-level inputs (auxiliary, tape, and CD) are balanced within the amplifier for minimum noise pickup and are selected by a knob on the front panel. Other knobs control volume, balance, bass, and treble (the last three are center-detented). Slide switches control power and mono/stereo mode, and there is a red LED pilot light.

As befits its portable status, the Model Eleven can operate from 115- or 230-volt AC power (50 or 60 Hz) or a 12-volt DC supply. The amplifier also provides a 9-volt DC output for a portable CD or tape player. The system includes a 12-volt adaptor to power it from an automobile cigarette lighter, a stereo mini-plug adaptor, and wall-mounting hardware for the satellites. The speaker cables are fitted with polarized plugs at one end and



The BassCase has cutouts in its damping foam to hold the satellite speakers, the amplifier, a portable CD or tape player, and the connecting wires.

stripped wire ends at the other; once connected properly to the speakers, correct attachment to the amplifier is assured. The complete Model Eleven system, ready to carry, weighs about 23 pounds. Price: \$749. Cambridge SoundWorks, Dept. SR, 154 California St., Newton, MA 02158; (800) 252-4434.

Lab Tests

We tested the Cambridge SoundWorks Model Eleven as a system, measuring from the amplifier input to the acoustic output of the speakers. The satellites were placed on 26-inch stands about 2 feet in front of the wall, with the BassCase on the floor midway between them. The

system's averaged room response was smooth, uniform, and strong down to below 70 Hz. The BassCase's close-miked (anechoic-equivalent) response was within ± 1.5 dB from 50 to 160 Hz, falling at about 24 dB per octave below that range and about 14 dB per octave above it. Splicing the curves produced a composite frequency response of ± 3.5 dB from 45 to 20,000 Hz.

We checked the amplifier's tone-control range by acoustic measurements of the system output at the extreme control settings. The range was approximately ± 10 to 11 dB at 100 Hz and $+10$, -20 dB at 10,000 Hz. Although speaker impedances are accounted for in the design of the system and therefore need not be of any concern to the user, we thought it would be interesting to measure them anyway. The satellites had a minimum impedance between 3 and 4 ohms, with a peak of 17 ohms at 170 Hz. The BassCase's impedance peak was 14 ohms at 60 Hz, and its minimum was 4.6 ohms at 150 Hz. Its impedance rose steadily above 200 Hz, indicating the use of a passive inductor to remove high-frequency signals from the woofer circuit.

Output from the 3-inch driver of one of the satellites was greatest at 200 Hz. The tweeter's horizontal dispersion was excellent, typically exhibiting less than 6 dB difference between the on-axis response and the response 30 degrees off-axis all the way up to 20,000 Hz. The satellites had very good phase linearity, with less than 0.1 millisecond (ms) variation in group delay from 1,000 to 20,000 Hz except for a single 0.5-ms jog at 4,500 Hz, which appeared only on the speaker's axis and apparently was associated with its cabinet dimensions.

The integration of amplifier and speakers prevented our usual sensitivity and power-handling tests. We did make distortion measurements on the BassCase output, however, using the onset of audible buzzing at 100 Hz as a criterion for maximum signal-handling ability. With the drive set just below the buzzing point, the woofer's distortion varied between 6 and 14 percent from 20 to about 48 Hz, dropped to between 3

and 4 percent from 50 to 85 Hz, and sloped off at higher frequencies to 0.6 percent at the bass driver's nominal 150-Hz crossover frequency. Reducing the drive level by 10 dB (which still left a healthy bass output) cut the distortion to 7 percent at 20 Hz, 4 to 5 percent from 25 to 48 Hz, 1 percent at 80 Hz, and 0.5 percent from 125 to 200 Hz.

Comments

The best way to judge an integrated system such as the Cambridge SoundWorks Model Eleven is by using it, since many measurements of its individual components are either impractical or meaningless. We chose to operate the Model Eleven as we would on a vacation (without traveling, however). Aside from the extremely stiff BassCase latches, which for a while resisted our efforts to open them, the setup was easy and straightforward. The most convenient program source was an inexpensive portable radio/tape player. Since we didn't have a portable CD player on hand, we used a home CD player as our source of digital program material.

The results were highly satisfactory, rivaling the performance of our main system in many respects. Like some other good three-piece speaker systems, the Model Eleven gave no audible clues to the size or configuration of its components. The BassCase could not be located by ear, even though it was usually most convenient to place it behind one of the satellites, and its output was perfectly integrated with that of the satellites. The hum field above the amplifier made it necessary to place the portable unit a few inches away while it was playing a tape, but no other anomalies came to light.

The sound was smooth and full-range, with a tendency toward brightness. The upper bass was subjectively flat, resulting in a non-boomy reproduction of male voices, and the low end—down to about 40 Hz—was clean and ample enough to provide a solid footing for the sound of an orchestra. The maximum volume level was as impressive as its quality. This system can easily produce much louder undistorted sound levels than we care to use, making conversation practical-



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Here's yet another point well worth considering.

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ly impossible in the same room.

Like all Cambridge SoundWorks products, the Model Eleven is sold direct from the factory, with a thirty-day return privilege. It carries a five-year limited warranty; problems resulting from a manufacturing defect will be repaired free the first year and for no more than \$25 over the next four years.

The Cambridge SoundWorks Model Eleven is a true high-fidelity component system that can hold its own with others many times its price.

The obvious conceptual connection between the Cambridge SoundWorks Model Eleven and the KLH 11 inspired us to set up our long-retired KLH Model 11 and test it with the same procedures and instruments. The results showed dramatically how much progress has been made in the last twenty-seven years. The KLH unit sounded like the mid-fi compact system it was (and still is—it did not seem to have deteriorated over the years in storage). By no stretch of the imagination could it be described as a hi-fi component. The new Model Eleven, on the other hand, is a true high-fidelity component system. Today's improved program sources sounded thin, confined, and really not very pleasant through the older system, whereas the Model Eleven could easily hold its own with modern component systems selling for many times its price and occupying even more times its space. True, the Model Eleven's price is three times that of its predecessor, but inflation is responsible for most, if not all, of that apparent increase. And it is a lot more of a music system, no matter how you look at it.

Although the Model Eleven probably would not satisfy many audiophiles as a main system, it was not intended to. But for use in dens, dormitories, or other limited-space installations, and especially for travel, it has no equal for its combination of performance, value, and portability.

Circle 143 on reader service card



AKG K280 HEADPHONES

Julian Hirsch, Hirsch-Houck Laboratories

THE AKG K280 "Parabolic" headphones appear to be a conventional dynamic circumaural headset with open-air earcups that vent the rear of the diaphragm to the room. That description could apply to a number of headphones, from AKG and most other manufacturers. Like many other AKG headphones, the K280 has a self-adjusting headband with a soft plastic strap and soft, foam-filled ear cushions that fully enclose the wearer's ears. A straight 10-foot cord emerges from the left earcup and is terminated in a standard quarter-inch stereo phone plug.

There is, however, much more to the K280 than meets the eye. Each earcup contains *two* dynamic drivers, one above the other, angled toward the center of the ear. A deflector molded into each earcup,

just forward of the diaphragms, also directs the sound into the ear. According to AKG, the two diaphragms are tangent to a parabolic surface whose focus is at the entrance to the ear canal. This arrangement forms an acoustic lens that directs the sound into the ear, presumably with a minimum of modification by the shape of the pinna (outer ear). Computer-aided design was used to minimize the interference patterns between the identical signals radiated by the two angled diaphragms and to optimize the overall transient response of the system.

According to AKG, the parabolic design gives the K280 a "surround-sound" quality that more accurately conveys the perspective of a concert hall than conventional phones. The dual drivers increase power-handling ability and reduce distortion

TEST REPORTS

compared with a single-driver design. Moreover, they reduce the headset's impedance to 75 ohms—somewhat less than that of most high-quality stereo phones.

The K280 headphones weigh 250 grams (about 8¾ ounces) without the cord and exert a pressure of about 350 grams on the wearer's head. Their rated power-handling capability is 200 milliwatts. The rated frequency response is 20 to 20,000 Hz, and the rated sound-pressure level (SPL) is 94 dB. Price: \$195. AKG Acoustics, Dept. SR, 77 Selleck St., Stamford, CT 06902.

Lab Tests

We tested the AKG K280 phones on an ANSI standard coupler. The frequency response was very flat (± 1.5 dB) from below 100 Hz to 1,000 Hz, falling off at lower frequencies to -9 dB at 20 Hz. The output dipped to about -5 dB between 1,000 and 4,000 Hz, rising to $+2$ dB at 10,000 Hz before dropping to -6 dB at 18,000 Hz. At a drive level corresponding to a 94-dB SPL, the total harmonic distortion plus noise was just over 3 percent from 100 to 300 Hz and rose at lower frequencies to 8 percent at 30 Hz.

The impedance (per channel) varied between 70 and 83 ohms from 20 to 13,000 Hz. A slight impedance glitch at 4,000 Hz may have been caused by a diaphragm or structural resonance, but there was no evidence of this in the frequency-response measurements. While frequency-response measurements on headphones are reasonably reliable at low and middle frequencies, the resonances in the cavity between the headphone and microphone diaphragms make the response jagged and unpredictable above a couple of kilohertz. Our response measurements, made with the Audio Precision System One, were taken at thirty frequencies across the spectrum (at approximately one-third-octave spacing) and smoothed once by averaging each reading with the ones immediately above and below its frequency.

Comments

Because of the interaction between the acoustic structure of an earcup and the specific shape and

size of a given listener's outer ears—to say nothing of his internal auditory system—judging the sound of headphones from measurements is even less meaningful than judging loudspeaker sound by measured output. In addition, there are great differences between a listener's interpretation of headphone sound and his response to the same program material heard from a pair of loudspeakers.

In general, headphones put mono (in-phase) sounds in the middle of the listener's head. Left- or right-

The sound of the AKG K280 headphones had the well-knit coverage of the spectrum that is achieved only by high-quality speakers, and its excellent bass performance even led me to pair it with a powered subwoofer.

channel information appears, of course, only in the corresponding ear and seems to originate from that side. A full stereo program can produce a very listenable spatial effect, which is nevertheless quite unlike that heard in a normal room. Binaural recordings, made with closely spaced microphones and meant to be heard through headphones, create the closest approach to a “you are there” sense of reality, with one glaring exception: While they can produce an amazingly life-like effect around perhaps a 270-degree angle, including the sides and behind the listener, they are typically unable to make a sound appear to be coming from in front of the listener.

Although AKG makes no claim to have solved this problem, the attribution to the K280 of “surround-sound” listening was intriguing. I listened to a number of CD's through these phones, including binaural recordings as well as ordinary stereo ones. The results were somewhat inconclusive.

As might be expected, binaural programs were reproduced with

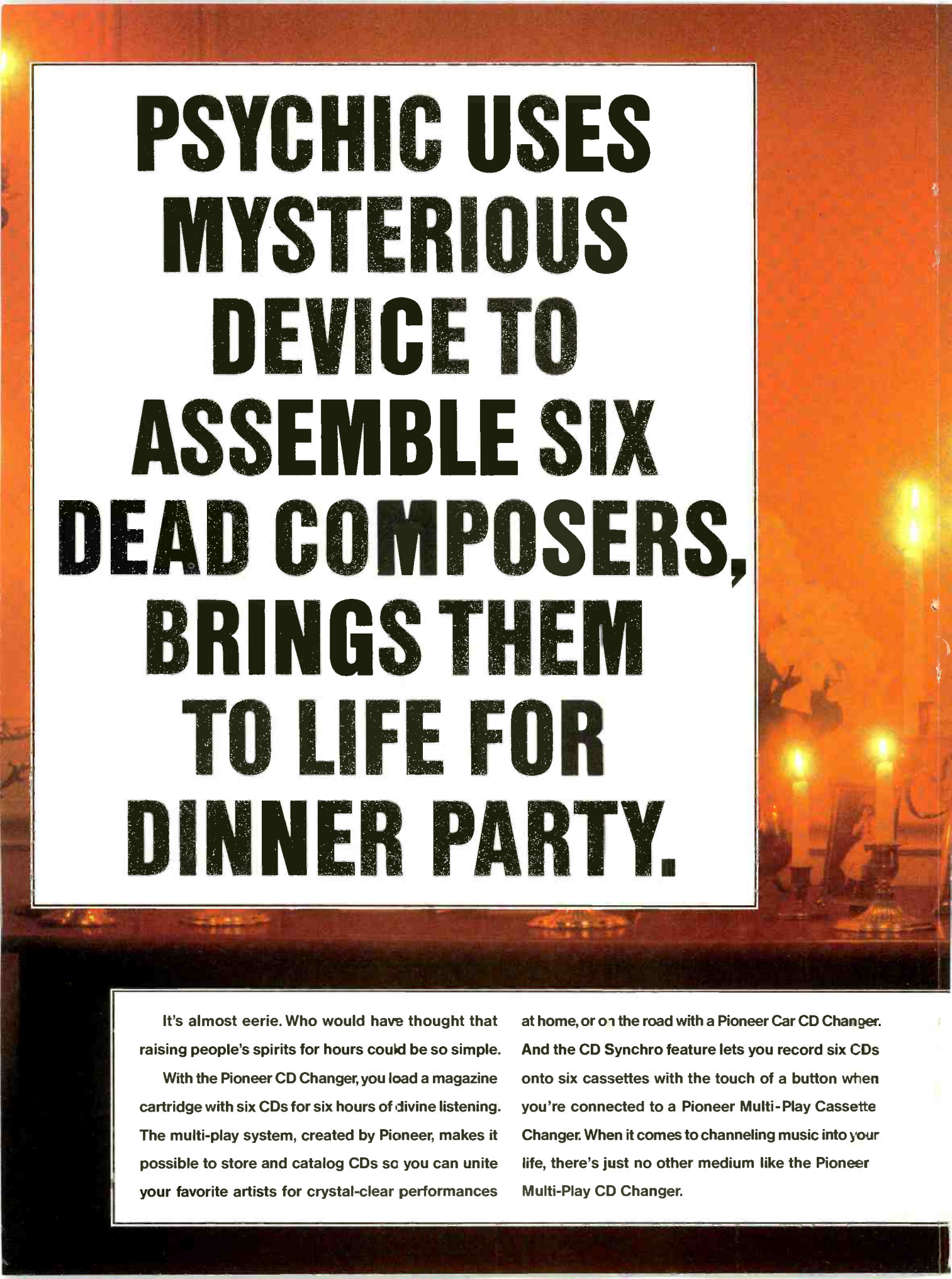
great realism, though at no time did the source appear to be in front of me. As a speaker on the record walked from side to side in front of the dummy head containing the microphones, he seemed to travel over or through my head.

Stereo recordings were another matter. The sound of the K280 phones was quite unlike that of the AKG K340, which has been one of my favorite headphones for some years. On the whole, it was much more speaker-like in character, with the well-knit coverage of the spectrum that is achieved only by high-quality speakers. Although the K280's extreme highs were not quite as strong as those of the K340, its bass was much more like that of some of the better speakers we have tested recently. Still, however, as much as I tried to hear a “surround sound” effect, I could not convince myself of its presence. That was not surprising, since in the days of quadraphonic sound many headphone designers tried with no success to develop four-channel phones.

Although the K280 does not quite surround you with sound, it is definitely the most speaker-like headphone I have heard. Its frequency balance, and especially the quality of the midrange and bass, came closer to matching that of good speakers than other headphones—even the finest ones, whose sound quality can far surpass that of any speaker in some respects. Apparently the balance is a result of the focused sound field of the headphones, although the exact details of the process are not explained. The excellent bass performance of the K280 even led me to pair it with a powered subwoofer; the result was at least as effective as with speakers while retaining most of the private-listening aspect of headphone use.

Whether or not the sound of the AKG K280 has surround qualities, it is an excellent headphone that might be a good choice for someone who doesn't like “headphone sound” but has to keep a low sonic profile. It is the nearest thing I've found to wearing a pair of good speakers that have been miraculously miniaturized.

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SPEAKER

BEYOND all doubt, loudspeakers provide the highest extramusical entertainment value of any hi-fi component. Audio fans may argue for hours over the sonic merits and shortcomings of this amplifier or that CD player, but just about everyone will generally agree that there's a difference between the sound of speaker A and the sound of speaker B. Of course, serious listeners will still argue about which of the differing speakers sounds better—but that's exactly where half the fun lies.

Even today, in the 1990's, there is no accepted standard for precisely how an "ideal" loudspeaker should behave, much less how to achieve "ideal" performance, with whatever combination of pure science, technology, and black art. But this is a happy state of affairs, at least from the purely observational viewpoint, because as a result the profusion of speaker types, sizes, shapes, and designs is richer than ever before. This musical variety show runs the gamut from the

Combining
pure science,
technology,
and black art



by David Simon

budget-priced to the unabashedly high-end, from diminutive mini-monitors to unrepentant giants,

Consider Boston Acoustics' newest minispeaker, the HD5. A mere 9¼ inches on its longest side, the HD5 is an exceptionally compact two-way system with a 5¼-inch woofer and ¾-inch soft-dome tweeter. The new design, in the tradition of the company's highly

regarded A-40 (which it supersedes), places a premium on correct octave-to-octave balance, imaging precision, and solid, clean bass performance. These virtues are pursued largely by sweating the details: The new model includes such features as woofer baskets formed with structural bracing to reduce internal vibration, flush-mounted drivers, and even countersunk screw heads to control image-blurring diffraction. The HD5 is projected to sell at \$150 a pair. The slightly larger HD7, equipped with a 7-inch woofer but otherwise identical, lists for \$200 a pair.

At the other end of the scale is the latest "statement" product from one of the oldest names in loudspeaker design and manufacture, JBL. The company's XPL series employs new components developed specifically for the line, including titanium domes for both the 1-inch tweeter and the 3-inch midrange. In the top of the line, the XPL 200 (\$3,398 a pair), these drivers

are joined by a 12-inch composite low-frequency driver incorporating JBL's Symmetrical Field Geometry high-efficiency magnet structure. The resulting full-range system claims impressive power handling and a significant reduction in "power compression," a sort of dynamic nonlinearity found to some degree in all loudspeakers. The cabinet is finished in a dramatic black lacquer with molded, multilayered, stepped baffle boards for phase integrity and a rounded back and nonparallel sides to break up any internal standing waves.

Hybrids

Audio enthusiasts have a long-standing fascination with panel-type loudspeakers that shows no signs of diminishing in this decade. Many listeners believe that planar-style designs have a clear advantage over conventional dynamic-driver designs in reproducing transients and the full panoply of musical nuances. As a rule, however, full-range panel speakers are grossly inefficient. They tend to be dreadfully large, to need monstrous amplifiers, and to be *very* expensive.



NE solution is the *hybrid* speaker, in which efficient, compact, and relatively inexpensive cone woofers are used

to excite the air at low frequencies while one of the several varieties of planar or ribbon drivers, with their attendant virtues of precise imaging, dynamic detail, and spaciousness, manages the middle-frequency and treble ranges.

Examples of hybrid speakers are proliferating. One of the newest is from Apogee, best known for costly, highly regarded full-range ribbon speakers. The Boston-area firm's latest effort, the Centaur, mates an 8-inch long-throw woofer with a 26-inch, "line-source" ribbon driver, mounted in a dipole configuration, that reproduces all frequencies above the bass region. The two drivers reside in a vertically oriented cabinet, about 4 feet tall and just 11 inches deep, with the woofer mounted about halfway up the tower. Efficient, strontium-based magnets improve the ribbon's sensitivity; the Centaur system is said to reach realistic sound levels (107 dB at 4 meters distance) with as little as 50 watts of amplification. And it's not too expensive at \$1,495 a pair.

A somewhat similar approach is taken by Celestion, whose stunning Thousand Series hybrid loudspeakers also combine ribbon top ends with dynamic woofers. There's one big difference, however: Celestion's ribbon driver is not used as a dipole radiator. Instead, its back wave is absorbed in an asymmetrically shaped, damped chamber, a design that Celestion says enhances sensitivity. The ribbon driver operates over the entire audio range above 900 Hz. Its position at the corner of the cabinet gives the Thousand Series speaker its unusual flat-corner shape while making it somewhat easier to locate for best sound. The 3000 model, at \$1,999 a pair, includes an 8-inch woofer and is rated for usable bass down to 49 Hz.

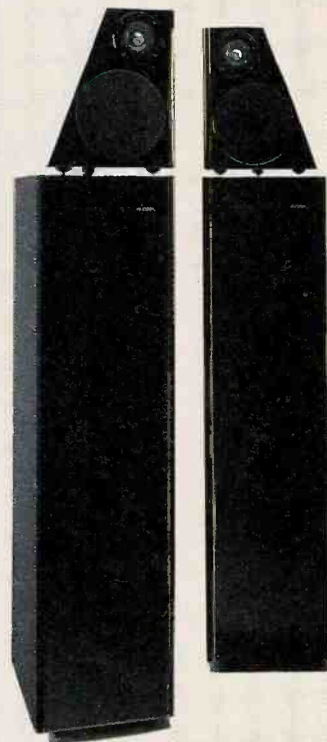
Hybrids of a technically different sort altogether come from Martin-Logan. The Midwestern maker's line includes—among larger, even more imposing models—the Sequel II, which combines a dynamic woofer and an electrostatic panel driver. The panel covers the range above 250 Hz, and the woofer is rated for a useful output down to 28 Hz. To make its electrostatic panels, Martin-Logan uses vapor deposition to coat an extremely lightweight polymer film with conductive material. The panel's curved surface is said to yield tightly controlled horizontal dispersion (30 degrees), while in the vertical plane the driver is said to behave like a 4-foot line source. Standing some 6 feet tall and weighing 110 pounds, the Sequel II (\$2,500 a pair) is a lofty unit, but its top two-thirds is largely transparent, lessening its living-room impact considerably.

Home Theater

Audio/video enthusiasts have for years put hi-fi speakers (and amplifiers) in multimedia setups, but only recently have speaker designers begun taking the idea of the home theater very seriously. Nowadays they are creating systems dedicated as much to video film sound as music listening.

By far the most dramatic example is Home THX, the domestic version of the THX Sound Systems found in more than four hundred upscale movie theaters. Licensed by the creator of THX, Lucasfilm Ltd., Home THX was developed by Lucasfilm's technical director, Tomlinson Holman, in an effort to re-create for high-end home theaters

Successor to KEF's legendary Model 105, the new 105/3 Reference Series speaker features a KEF Uni-Q driver for the upper midrange and treble along with two midrange drivers and dual coupled-cavity woofers. Price: \$3,500 a pair.



Meridian's new four-piece D6000 Digital Active Loudspeaker uses digital filters for its crossover network and includes four 75-watt amplifiers as well as remote-controlled preamplifier functions. Price: \$12,000.



Atlantic Technology's Pattern Surround Home Theater (\$1,500) is a powered five-channel surround-sound system with its own Dolby Pro Logic decoder.



JBL's new XPL 160 (\$2,500 a pair) features titanium-dome tweeters, composite woofers with Symmetrical Field Geometry magnets, and a molded foam baffle.

Apogee's Centaur is a hybrid, with a dipole ribbon tweeter and an 8-inch polypropylene woofer in an acoustic-suspension enclosure. Price: \$1,495 a pair.



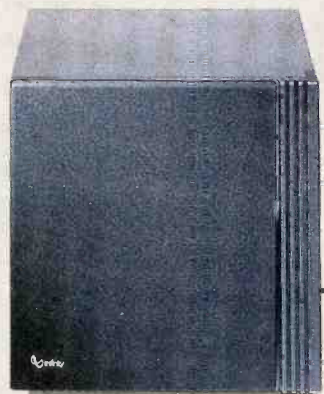
Ohm's FRS-7 uses a corner-mounted tweeter to generate a controlled-directivity sound field. Its 6½-inch woofer is acoustically coupled to a 10-inch passive radiator for extended bass response. Price: \$680 a pair.





Polk's newest Signature Reference Series speaker is the SRS 3.1TL (\$2,000 a pair). Featuring Polk's Stereo Dimension Array design to cancel interaural crosstalk, it takes only 1½ square feet of floor space.

Infinity's three-piece Modulus system (\$3,000) includes a pair of two-way satellites and a 250-watt servo-amplified subwoofer.



exactly the quality, quantity, and localization of sound heard by the artists, engineers, and directors on a film's "dubbing stage." The system involves strict guidelines for such characteristics as the directivity, placement, and frequency response of loudspeakers as well as for an enhanced Dolby Pro Logic surround decoder. The Home THX menu calls for seven speakers in all: identical left, right, and center (dialogue channel) front speakers, twin subwoofers, and two rear speakers.

Technics is among the first licensees for Home THX equipment, along with a new division of Snell Acoustics, Snell Multimedia. Snell's initial Home THX line encompasses the three required speaker designs as well as optional stands to place the front speakers at optimum projection-TV height and the rear ones at the proper height for the surround function. The entire speaker complement, which Snell asserts can also provide top-quality sound for pure music listening, is priced at \$4,993 (not including decoder, amplifiers, or video components).

A MUCH more modest surround-sound arrangement from Atlantic Technology is the Pattern Surround Home Theater, comprising a single subwoofer and five tiny satellite speakers. Each satellite contains twin mid/high-frequency drivers that can be independently oriented to augment or reduce reflected sound (a good idea in principle for surround channels, since the satellites can be arranged to present a more diffuse sound to the listener, reducing the chance of discrete localization of surround sources). All five amplifier channels are contained within the compact bass enclosure. The \$1,500 system also includes a Dolby Pro Logic decoder, making it a plug-and-play home theater with the addition of just a video source and monitor. The Pattern design is also available in a simpler, three-piece active stereo system with only two satellite speakers (\$499).

One of the busiest frontiers of current loudspeaker development is that of stereo imaging. Employing a bewildering variety of tricks and technologies, designers vie to produce the most realistic, three-dimensional "sound stage."

Soundwave Fidelity's dynamic designs concentrate on producing

unusually flat power response—the total of radiated sound energy in all directions. The firm's compact Silhouette model (\$950 a pair), like all Soundwave speakers, uses tweeters built on a compact, high-power magnet structure, which permits *two* of the tweeters to be mounted cheek-by-jowl on either side of the "prow" of the unit's pentagonal enclosure. (The speaker also has two 6½-inch woofers in a sealed enclosure, for usable bass to below 60 Hz.) The close spacing lets the two tweeters work in concert without inducing interference, yielding exceptionally broad dispersion. The result is said to be very spacious sound with outstanding stereo imaging and wide dynamic range.

Ohm Acoustics takes a different tack with its FRS ("Full-Room Stereo") speaker series. For example, in the FRS 7 (\$650 a pair), the drivers are designed for controlled directivity. The high-frequency drivers have a somewhat restricted horizontal dispersion, and they are arranged on the FRS 7's front corners

so as to steer their strongest treble output well across the room toward the opposite corner. Thus, as the listener moves out of the "sweet spot" between the speakers, the more distant unit's treble output at his position actually becomes stronger, an effect said to preserve stereo imaging and a coherent sound stage over a wider listening area. The floor-standing FRS 7's driver complement includes an 8-inch woofer, a ¾-inch dome tweeter, and a 10-inch, rear-firing passive radiator.

EVEN after many years of hi-fi development, there is nothing wrong with refining a successful design. An object lesson is the KEF Model 105/3 monitor, the latest evolution of a design that's more than a decade old. And what refinement: The Model 105/3's bass section encompasses twin 8-inch drivers in KEF's "coupled cavity" arrangement, which places the drivers one above the other, linked by a rigid metal rod in such a way that vibra-

tion of the driver frames tends to cancel out instead of being transmitted to the cabinet. For the top end, the KEF flagship system employs a three-unit vertical array of 6½-inch polypropylene midrange drivers. The middle unit is also a tweeter, being one of KEF's "uni-Q" coincident-source combination drivers. A compact, 1-inch dome tweeter is placed *within* the center of the midrange cone, giving the dual unit a single acoustical focus and enabling it to cover almost the entire musical range except the bottom few octaves of bass. KEF says that the 105/3 has extremely uniform directivity—within 2 dB from 50 to 17,000 Hz up to 30 degrees off-axis. The design also provides both notably high sensitivity (a rated 93 dB sound-pressure level at 1 meter with 1 watt input) and excellent power-handling abilities (up to 300 watts). The result is one of the widest dynamic ranges of any loudspeaker available. The price of glory, in this case, is \$3,500 a pair.

Digital Speakers

But the loudspeaker that most compellingly embodies late-twentieth-century hi-fi thought must be the Meridian D-6000. This four-piece system—a pair of two-driver subwoofers and another pair of two-way satellites—has the most extensive electronics ever incorporated in a speaker. These include three bands of amplification and, most important, comprehensive on-board digital processing. The digital functions include advanced 1-bit digital-to-analog (D/A) conversion and extensive digital signal processing (DSP) for digital-domain crossovers, response shaping (to match each D-6000 to a reference ideal), tone control, and more. The D-6000 also provides complete system control, including multiroom capabilities, for it is not just a loudspeaker; it's also an unusually full-function, remote-controlled preamplifier. In fact, Meridian's \$12,000 D-6000 is an entire high-end audio system except for the source components.

Because engineers may well come to prefer the overall system problem-solving that this kind of integration on a grand scale makes possible, it could be the next loudspeaker trend. Or, more probably, it will prove to be only one of the many divergent trends that keep the speaker field endlessly stimulating and fascinating. □

Futurespeak

So much for the 1990's. How will the loudspeakers of the next decade sound and work? We can only guess, of course, but a good window on at least one possible future is a cooperative Anglo-Danish study project currently under way. Nicknamed Archimedes, the study functions under the aegis of the Eureka initiative, a joint research venture among nineteen countries of the European community to apply advanced technologies to enhance competitiveness in world markets.

Archimedes is a joint venture of Britain's KEF, Denmark's Bang & Olufsen, and the acoustical labs of the Danish Technical Institute. Its aim is to study and assess the effects of acoustic reflections on loudspeaker sound in a wide variety of rooms, and then to model an "ideal" speaker—one whose sound quality would remain the same in different rooms and with different placements.

From the pure-science standpoint, the project requires a vast amount of data gathering. In the Danish Institute's very large anechoic chamber, multiple arrays of carefully

matched loudspeakers are strategically dispersed to locations where—with the aid of computer-controlled digital frequency- and time-domain response shaping—they can simulate early reflections from different wall, floor, and ceiling surfaces for a wide variety of "virtual" rooms. The process begins with extensive listening tests using a large panel of listeners to gather statistics about how perceived sound changes according to room size, finish, and loudspeaker placement.

Archimedes has been going on for more than two years now, and it has moved from data-gathering to more practical, concrete developments. Although no reports have yet been issued regarding prototype loudspeakers, the study should soon provide much more than a glimpse into the loudspeaker technology of the next century. The methodology being used suggests strongly that the result will be a "smart" speaker, one in which adaptive digital processing automatically compensates for response changes induced by the characteristics of the listening room.

UPGRADING

SOONER or later, we all get the urge. The cat has manicured itself on the speaker grilles once too often, fingerprints are permanently etched onto the receiver controls, the tape deck screams every time it sees a cassette, and the book propping up the corner of the turntable really must go back to the library—three years late. Perhaps it's time to breathe some new life into the old hi-fi.

Even when new, a stereo system always involves some compromises. Few of us have the budget to buy the "ultimate system"—assuming we know what that is—and so we normally settle for what we can afford, with the intention of adding or replacing components later. Often, however, we get used to what we have and end up living with it in spite of its shortcomings. Mostly this doesn't matter very much in terms of performance, as audio equipment is pretty hardy, but it can eventually show signs of wear. And technology does march on; some components have seen remarkable advances in a very short time, so even if what you own is performing properly it may not match the quality of what you could buy today.

Whatever the reason, almost all audio enthusiasts occasionally feel the need to upgrade. One way would be simply to relegate the old system to the basement and start fresh, but often it is possible to attain higher performance levels and greater flex-

ibility by keeping what you have that is still good and applying your resources to improvements that really are improvements.

— THE CRITICAL EYE —

The first task, then, is to turn a critical eye on what's in your system now. Look at each component in turn, assess how well it's doing what it's supposed to be doing, and decide if that's enough for you.

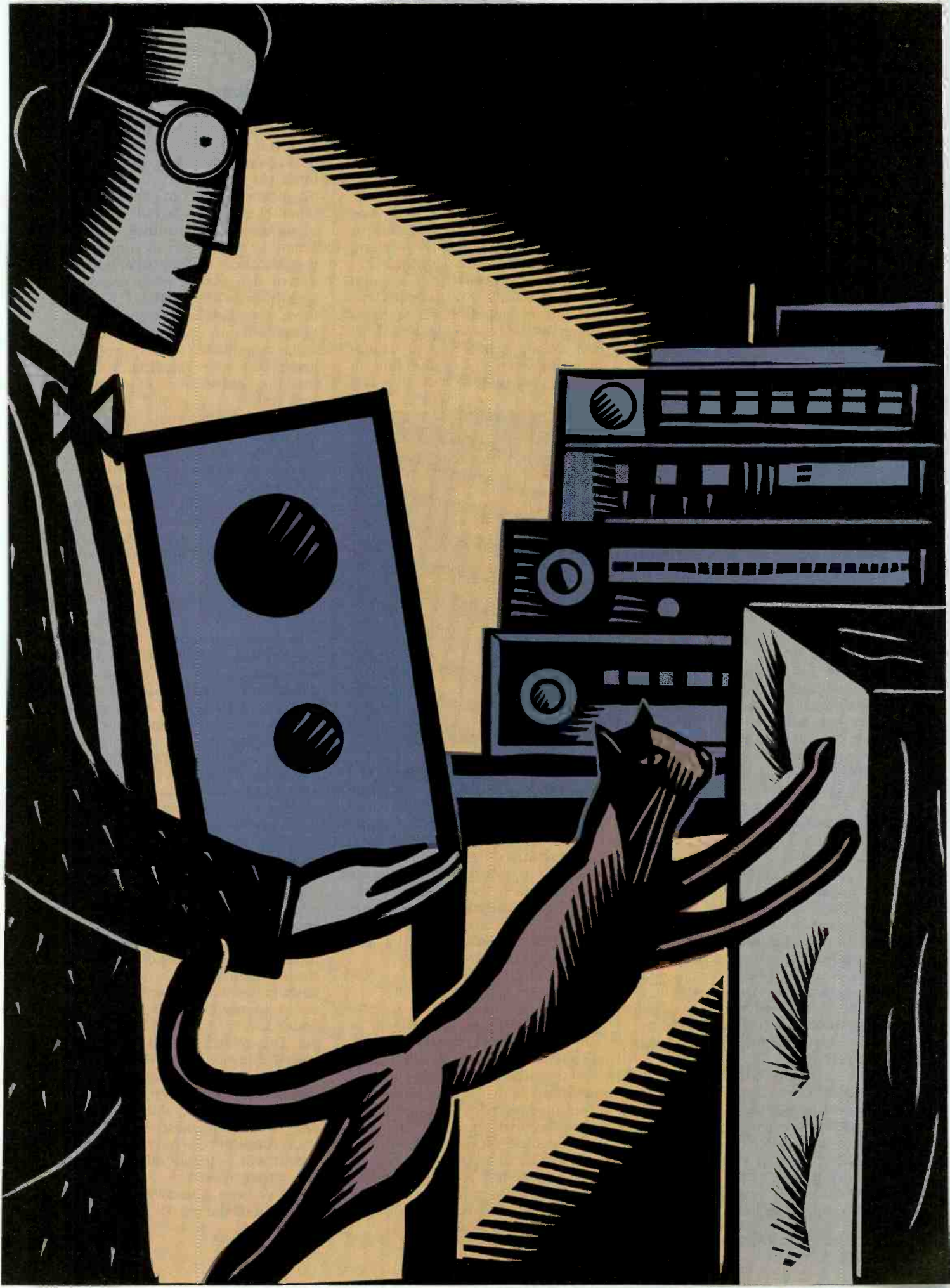
Some problems will be obvious immediately: loose knobs, malfunctioning pilot lights, and the like. Look also for such signs of wear as oxide buildup within a cassette recorder or crumbling foam surrounds in speakers. More serious could be circuits or functions that simply don't work, or only work sporadically. Such faults might spell the end for a particular piece of equipment, but not necessarily: even major faults can sometimes be fixed quite inexpensively, or at least for a lot less money than comparable new equipment would cost. If the component in question is otherwise satisfactory, the repair option should certainly be considered.

Look closely as well at the ergonomics—the ease of use—of the equipment you have now. Are there enough inputs for all the sources you use (or intend to use), or do you have to do a lot of unpatching and repatching to listen to certain things? Are the controls on your tape deck or CD player easy to understand? Can you read the markings and displays on the various components? Is your remote control impossibly complex, or—worse—do you have to use six separate ones? In short, what drives you crazy about using your current system? If there are lots of things, or none, you'll know what to seek out or avoid when you buy new gear.

The most critical concern, of course, is how well your present equipment performs. Unless your components are very old, chances are that they will be pretty good on this score, but some areas do warrant investigation. Mechanical devices, for instance, may develop speed irregularities over time, a situation that is difficult to remedy short of replacement. Tuners vary considerably in their ability to pull in weak signals or discriminate between strong ones,

Is it time
to breathe
some new
life into
your old
hi-fi
system?

BY IAN G. MASTERS



which might suggest either a new tuner more suited to your situation or a better antenna. Older phono cartridges are rarely a match for their 1990 equivalents, even if the stylus is in good shape. And so on.

Listen particularly to the combination of amplifier and speakers. Distortion at anything more than moderate levels might mean that you are providing too little power or that your speakers have developed a physical problem, such as a rubbing voice coil. Above all, pay attention to the character of the sound your speakers produce. Human beings are notorious for being able to accommodate mediocre sound, but speakers have taken great strides in the past few years, and even some modest ones made today outperform the stars of yesteryear.

Throughout all this, you should have a very clear idea of what you want your new or upgraded system to do. Measuring the components you now have against that idea will help you determine which of them to keep and which should be replaced. The more you can salvage, the better.

— SHAPE UP OR SHIP OUT —

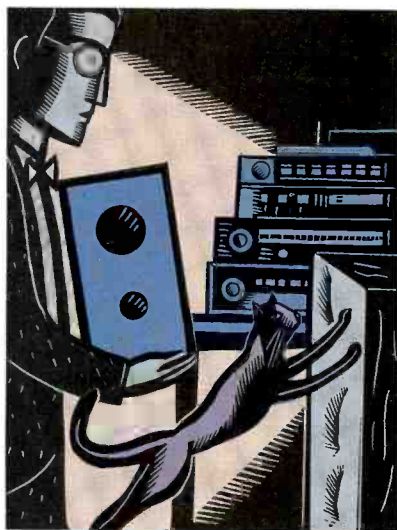
Except for equipment that you know will never be used again, it's worthwhile at this stage to optimize what you already own. In some cases you might be surprised to find that components you were ready to dismiss are not so bad after all and might be useful in the upgraded system. Even if that doesn't happen, equipment that works properly will make a greater contribution to a secondary system.

In some cases, all you have to do is a bit of cleaning. Removing several years' worth of oxide and dust from the heads and guides of your cassette deck, for instance, can often pay surprising sonic dividends. The same is true of the stylus in your phono cartridge. An occasional removal of fluff will not prevent the long-term buildup of dirt on the stylus, which usually requires a special stylus-cleaning kit. The cost is worth it, but don't bother if you've already discovered stylus wear; only replacement will cure that.

A shot of contact cleaner in every control and switch you can reach will often rid your system of pops, scratchy noises, and intermittent level differences. Another shot on all jacks and plugs can improve con-

tact and reduce certain types of noise (this can often be accomplished simply by unplugging and replugging them a few times). You might also consider replacing the cables with ones of better grade, particularly if long runs are involved. Low-capacitance patch cords and heavy-duty speaker cables may or may not yield a sonic improvement, but they never do any harm.

Some pieces may require repair at a service facility. Most service centers will give you an estimate that is either free or bears only a nominal cost. While you're lugging equipment to the shop, make sure to include your cassette deck even if it



appears to be working properly. The best thing you can do for your recordings is to have your deck matched to a particular tape; chances are, an older deck will have been optimized for a tape no longer available in its original form, so it's a good idea to pick an up-to-date formulation and have your machine adjusted for it. Even if you plan to buy a new recorder, an extra one always comes in handy.

— MOVING ON —

Once everything is working as well as money and time can make it, it's often worthwhile to do a little tinkering with the positions of various components, as this can sometimes reveal quality that you never knew they had.

Turntables, for instance, can be sensitive to where they are placed. In one spot, they may pick up bass from the speaker, enhanced by a room mode, and be susceptible to

acoustic feedback. At high levels feedback is immediately apparent and unbearable, but it occurs at lower levels too and might only be heard as muddy sound. Moving the turntable just a short distance can often cure this sort of effect. By the same token, it may be only a matter of inches that determines whether or not the record-playing equipment is stable or causes the arm to bounce out of the groove when someone walks across the floor. If you do move your turntable to check these things out, or even if you don't, make sure that the unit is absolutely level; otherwise skipping, uneven tracking, and a range of other ills may result.

Even more important is the positioning of your speakers. Before you decide that their sound is terrible, try moving them to new locations—the difference is often dramatic. You may even find that those dogs you couldn't wait to get rid of are actually pretty good, or at least good enough to be used in the rear or in a second room.

— ADDITIONS —

By now you may have decided that there is no real reason to fiddle with your system. But even if you decide to live with what you have, there are still ways you can improve it. One way is to add new functions to it. If, for example, you have been holding off on buying that CD player, now might well be the time. Don't worry too much about whether your system is "digital-ready." If it can handle reasonable levels without stress using the sources you now have, it should have little difficulty with digital sound.

Alternatively, you might decide to add video to the system. Audio/video components, and the systems they inhabit, can be very complicated, but they need not be. In the simplest configuration, all you have to do is connect the outputs of a hi-fi VCR to any line or tape input on your receiver or preamp and off you go. The TV set should ideally be placed midway between the speakers (and not too close to them unless they are shielded), but it can be connected to the VCR with a normal piece of 75-ohm antenna cable. If your VCR is of relatively recent vintage it will probably offer MTS off-air stereo reception, which may mean you can squeeze another few years out of the old TV set.

Once you have this sort of setup, expanding to a surround-sound system is relatively easy. A decoder is necessary, but one may already be included in the VCR or TV set. Beyond that, a small second stereo amplifier and a modest pair of rear speakers are all you need. If you decide to go for broke, adding amplifiers, speakers, and an outboard surround decoder make it possible to create a truly impressive audio/visual experience in the home. But the core *can* still be your old hi-fi.

If video doesn't appeal to you, there are a number of things that can be added that will improve your sound without breaking the bank. Some systems may benefit from the inclusion of an equalizer, for instance. While this device, which is little more than an elaborate tone control, should be used with care, it is capable of smoothing out the rough spots in some difficult acoustic environments. In others, such as very small rooms, devices that "widen" the sound stage can produce some very pleasant effects for very little outlay.

Probably the best add-on is a subwoofer to extend the low bass. Many speakers, particularly small ones, tend to roll off the lowest musical notes; a separate speaker for this part of the spectrum can restore the "body" of the music. And because a subwoofer can be placed practically anywhere in the listening room, it can be positioned with a view to reducing the effects of standing waves. Some subwoofers are driven by the main amplifier, which is convenient as long as your amp has enough power. Others require their own channel of amplification, but that needn't be expensive. And still others are powered, with built-in amplifiers.

— IN CONTROL —

If you are satisfied with your sound quality as it is, your efforts might be better directed to the way you control it. That clutter of remote controls on the coffee table, for instance, can be replaced with a single universal remote. Some universal remotes will control the equipment of only one manufacturer, but an increasing number are showing up with the ability to "learn"—they can be programmed to emulate any infrared remote. Most of these are fairly complicated to set up, and the limits vary as to

how many functions they can accommodate, but once working they can take much of the frustration out of operating an audio system.

Another entry on the scene offers true hands-off listening: The CD changer lets you load anywhere from five to a dozen discs at a time and then program cuts from among them for hours of unattended listening. Not everyone requires a changer, but it can be very useful in some circumstances. And the machines generally offer the same level of performance as their single-play cousins at much the same price.

With some kinds of components, newer models may do more but

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By far the
most important
components to
consider in
upgrading are
your speakers.

— — —

they are unlikely to sound any better. There are several areas, however, where updating can definitely pay sound benefits. Given the amount of time a lot of music lovers spend making tapes, for instance, it makes sense to replace a cassette deck that lacks the more advanced circuits for getting music onto the oxide. While practically all recorders offer basic Dolby B noise reduction, for critical listening Dolby C should be considered a basic minimum, and Dolby HX Pro is a definite advance as well. Metal tape capability also lets you squeeze an extra measure of performance out of the cassette, a distinct advantage now that a lot of CD's are being dubbed. Digital audio tape will take this a step further.

Unless you are prepared to abandon vinyl entirely, now may also be the time to look closely at the equipment you use to play LP's. Most of us have collections of conventional records, and however dedicated we

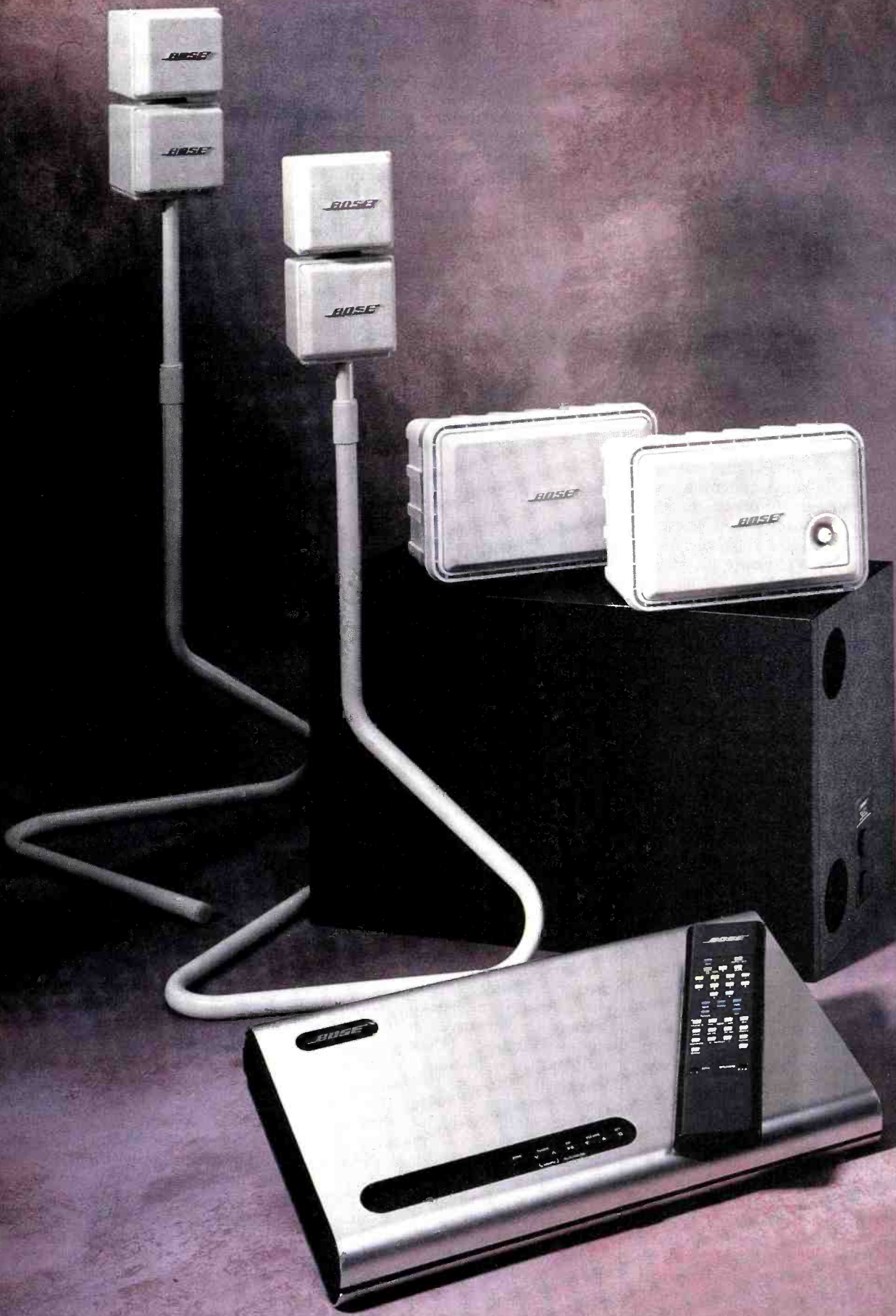
might have become to the compact disc, we will want to hear the older material from time to time. There are still lots of turntables and cartridges out there, but the selection is beginning to diminish; an investment now in high-quality recording equipment may mean you will be able to listen to those old Carpenters records well into your dotage.

At the very least, you should invest in a new cartridge; although some carry astronomical price tags, a couple of hundred bucks will buy you as good a cartridge as most audiophiles would ever need. And it will probably last indefinitely, as the listening emphasis shifts toward tapes and CD's.

By far the most important components to consider in upgrading a system are your speakers. They determine how everything else sounds, so they should be chosen with great care. It may be, of course, that you are content with the speakers you have now, but unless they are fairly recent models, the chances are that you will be able to improve your sound considerably by buying newer ones. But inferior speakers still abound, alas, so newness doesn't guarantee quality. If this aspect of your system is what needs updating, prepare to spend a lot of time seeking out the speakers that are right for you.

When you find them, do them a big favor: make absolutely sure you have enough amplifier power to drive them. There's no point in investing in new speakers and then starving them of watts; too little power may both negate the gains you thought you were getting in upgrading and damage your new speakers. Take time as well to find the best position in your listening room for the speakers; all rooms and all speakers differ, and it's worth some effort to make sure you actually achieve the improvements you are seeking.

Upgrading a stereo system can often require more thought and investigation than buying a whole new set of equipment. But by retaining and optimizing what is still useful, and replacing only what needs replacing, you will almost certainly end up with much better sound. The experience is more satisfying, too. That is, until technology passes by again and the cat takes a liking to the new grille cloths. But then nothing is forever. □



A Special Test Report

BOSE LIFESTYLE MUSIC SYSTEM



Multiroom, multizone sound from a few small packages

AT first glance, the Bose Lifestyle Music System looks like a slim, unusually stylish receiver paired with a three-piece loudspeaker—there is nothing revolutionary about that. In fact, it does perform all the functions of just such a system. But it does a great deal more besides.

To begin with, the “receiver” is really a combination preamplifier/control unit, CD player, and AM/FM tuner called the Lifestyle Music Center, and unlike a true receiver it contains no amplifiers. It can, however, drive many more loudspeakers than a conventional receiver can, provided they contain their own amplifiers—as does the Acoustimass powered speaker system that the Lifestyle Music Center comes

with—or have separate amplifiers devoted to them. The speakers can be spread all over your home and can be divided into two “zones” with independent control over the music delivered to each one; you could, for example, have the tuner playing in one part of the house and the CD player in another. The system can be operated from literally anywhere in or around the house by means of an innovative radio-frequency (RF) remote control. One of these controls comes with the basic system and you can buy extras for multiroom installations.

Few of the elements that make up the Lifestyle Music System are essentially different from features of other equipment already available, but the way they are organized and controlled is. As a result, it can

by Julian Hirsch

deliver high-quality music in a single room or throughout a house with equipment so compact that it almost disappears from view. No costly custom installation is required, and the system is easily expanded simply by adding powered speakers and running the necessary wires to connect them.

THE powered Acoustimass speakers that come as part of the Lifestyle system are very similar to the standard Bose Acoustimass 5 three-piece loudspeaker system, with the addition of power amplifiers, electronic crossovers, and protective circuits built into the bass module. The system also includes a proprietary dynamic equalization circuit to maintain audible bass at low listening levels.

Each of the satellite speakers con-

black box measuring 18¼ x 12½ x 9⅞ inches and weighing 37 pounds. It contains two 6-inch cone drivers whose front and rear surfaces are in separate compartments, each opening to the outside through a ducted port. This configuration acts as an acoustic bandpass filter, with a range of about two octaves, whose low out-of-band harmonic output makes the bass source unlocatable by ear. The bass module contains a separate 50-watt amplifier for each of the satellite speakers and a 100-watt amplifier that drives the woofers. The amplifier heat sink forms part of one side of the bass module. Near the ports are bass and treble level-adjustment knobs useful for balancing the outputs of the two sets of drivers to suit a variety of room conditions.

The CD-10 Lifestyle Music Cen-

tem, vital to its operation, is the remote control, which appears quite conventional but is actually as unusual as the other components of the system. Unlike other remote controls, which send their commands on infrared light beams, the Bose control operates at radio frequencies (in the 27-MHz range) and does not have to be aimed at the device being controlled. In fact, it does not need to be in the same room, or even in the same house, as the other system components. Its range is conservatively rated at about 60 feet.

The remote control operates all of the functions of the Lifestyle Music Center. Numbered buttons select any preset tuner channel or any track of a CD. Other buttons provide full control of the CD player, including play, pause, scan, and random and repeat play.

The low-profile Lifestyle Music Center measures 16½ inches wide, 9⅞ inches deep, and 2½ inches high, and it weighs only 7½ pounds. Its top and bottom are rounded panels of brushed aluminum that contrast with its black chassis. The top hinges up to reveal two rows of buttons for selecting the input source, programming the tuner memories, tuning, volume adjustment, and other functions. The CD transport is also exposed when the top is lifted (it cannot be operated until the cover is down, however). There is also a display window, visible when the cover is closed, that shows the tuner frequency and preset channel number or the CD track number and elapsed time.

In addition to the normal complement of signal inputs on its rear apron, the Lifestyle Music Center has two pairs of outputs, labeled ZONE 1 and ZONE 2. The remote control also has a switch that lets it control either zone. The Lifestyle system can supply separate, simultaneous programs to the two zones. The amplifier or powered speakers in the second zone must be connected by shielded cables to the Zone 2 jacks on the rear of the Music Center. To avoid conflicts of control, the first zone to select a particular source has full control of its operation except for volume—the other zone can select the same source and control its volume in that zone without affecting what is heard in the first zone.



The Lifestyle Music Center incorporates an AM/FM tuner and a CD player.

sists of two nearly cubical boxes, about 4 inches on a side, mounted one above the other. The cubes can be aimed independently to obtain the desired coverage of the listening area. Each cube contains a single 2½-inch cone driver operating at frequencies above about 150 Hz. Floor stands and wall-mounting brackets are available for use with the satellites, which can also be placed directly on a table or shelf.

The Acoustimass bass module is a

ter has tuner preset memories for thirty stations and input and switching facilities for three other line-level sources (tape, auxiliary, and video) besides the built-in tuner and CD player. The Music Center delivers the selected audio program at line level to the power amplifiers in the Acoustimass bass module, and a control signal from it turns the amplifiers on and off with the rest of the system.

The third component of the sys-

A single zone can encompass a number of rooms, each with its own set of loudspeakers, and it is not necessary to use Acoustimass speakers in all rooms. For rooms set up for background listening only, Bose recommends using its Lifestyle powered speakers (\$339 a pair), which are small, single-driver units similar to the company's Video RoomMates. Another alternative is to use a room's existing audio system, feeding one of its auxiliary or tape inputs from one of the Lifestyle Music Center's outputs. In any case, all that is necessary is that the speakers in a room have their amplification inputs wired to the master Music Center.

The basic Bose Lifestyle Music System, including the Music Center and the powered Acoustimass speakers, lists for \$2,400 and is supplied with one remote controller, an AM loop antenna, and a cable to link the Music Center with the Acoustimass bass module. Additional remote controls are \$149 each, and additional Acoustimass powered speaker systems are \$1,300 each.

In the Laboratory

We tested the Bose Lifestyle Music Center as we would a conventional receiver, measuring the CD and tuner output signals at the Zone 1 jacks. We tested the Acoustimass powered speakers separately, driving the bass module's input directly from our test-signal sources.

THE performance of the Lifestyle Music Center's FM tuner section was, for the most part, unremarkable. Its 50-dB quieting sensitivity was 24 dbf in mono and 43.5 dbf in stereo, corresponding to voltage levels of 4.3 and 41.2 microvolts (μV), respectively, into its 75-ohm antenna terminals. The noise level at a 65-dBf input was -77.5 dB in mono and -69.2 dB in stereo. The distortion varied somewhat with level, reaching a minimum of just under 0.2 percent in mono at 35 to 45 dbf input and rising again to 0.35 percent at the standard measurement level of 65 dbf. In stereo, the distortion was about 0.8 percent for all signal levels exceeding 45 dbf.

The muting and stereo threshold was 24 dbf ($4.3 \mu\text{V}$). Selectivity was good, reading 71 dB for alternate-channel spacing and 6.5 dB for adja-



Walls are no barrier to the system's RF (radio-frequency) remote control.

cent-channel spacing. Image rejection was a good 71 dB, and the capture ratio of 1.3 dB was better than average. The AM rejection was poor, measuring 30 dB at a 65-dBf level and only 13 dB at a 45-dBf input.

The FM frequency response was $+0.6$, -0.1 dB from 30 to 15,000 Hz. Channel separation reached 37.5 dB in the midrange, falling to about 30 dB at 15,000 Hz and 26 dB at 30 Hz. Stereo-subcarrier leakage into the audio was -40 dB at 19 kHz and -55 dB at 38 kHz. Powerline hum was -70 dB at 60 Hz. The AM section's frequency response was down 6 dB at 85 and 2,900 Hz.

The maximum audio output from a 100-percent modulated FM signal was 1.52 volts. From a 30-percent modulated AM signal it was 0.44 volt. A CD test track at 0-dB level produced a maximum of 3.86 volts output. Our measurements on the speaker system showed that these levels were more than sufficient to drive the speakers to a very high output level, since only 0.2 volt was needed to produce a 90-dB sound-pressure level (SPL) at 1 meter from one of the satellite speakers.

The CD player had a frequency response of $+1.4$, -0.2 dB from 20 to 20,000 Hz, with most of the variation being a rise at about 18,000 Hz. The channel separation was 57 dB at low and middle frequencies, decreasing to 46 dB at 20,000 Hz. The total harmonic distortion plus noise (THD + N) at 1,000 Hz was about 0.01 percent for levels under -20 dB, rising to 0.05 percent at 0

dB. At 0 dB, the THD + N was about 0.1 percent between 1,000 and 12,000 Hz, rising to 1.6 percent at 20 Hz and 3.2 percent at 20,000 Hz.

The low-level linearity of the CD player was good down to -70 dB, with errors of a fraction of a decibel. At -80 dB, however, the error increased to $+2$ dB, and at -90 dB it was about $+6.5$ dB—somewhat higher than average for today's CD players but still respectable performance. The noise spectrum was between -120 and -135 dB over most of the audio range, and 60-Hz hum was -118 dB. Interchannel phase shift was a maximum of 0.7 degree at 10,000 to 15,000 Hz.

The de-emphasis response error was between 0.04 and 0.05 dB from 1,000 to 5,000 Hz, reaching $+0.5$ dB at 16,000 Hz. The A-weighted noise level was -105.5 dB, and the A-weighted quantization noise was -78.5 dB. The dynamic range (EIAJ) was 91.4 dB.

THE CD mechanism was able to slew from Track 1 to Track 15 of the Philips TS4 test disc in 3 seconds, slightly slower than average. The error-correction system permitted the player to track through information defects as large as 1,000 micrometers, but a 1,250-micrometer gap in the digital data flow produced mistracking. The relatively light construction of the Music Center made it fairly sensitive to impacts; moderate finger-tapping on any part of the cover or sides of the unit caused mistracking.

The room response of the Acoustimass powered speaker system was measured with the satellites about 7 feet apart on 24-inch pipe stands. The bass module was on the floor near a wall, between the two satellites. The bass and treble adjustments were set flat, although we made separate measurements to establish their range of control (about a 6-dB range in the bass and roughly the same above 2,000 or 3,000 Hz).

The averaged room response of the satellites was ± 3 dB from 200 to 13,000 Hz. There was a fairly narrow resonance peak of 6 to 8 dB at 14,000 Hz. The close-miked bass response, measured separately at the two ports and then combined, was ± 4 dB from 36 to 160 Hz, with the maximum output at 60 to 65 Hz.

It is difficult to establish a mean-

ingful overall response curve for a three-piece system whose separate woofer can be located almost anywhere in the room, with uncertain effects on its frequency response. Our best estimate of the overall frequency response of the Acoustimass powered system is that its effective range is from below 40 Hz up to 20,000 Hz.

The standard unpowered Bose Acoustimass 5 system, which is very similar to the powered Lifestyle version, typically shows a dip in its output through the crossover region from 100 to 200 Hz. We did not find this effect to be as prominent in the powered version, either by measurement or in listening; in fact, it was rarely noticeable. Our composite response curve (which is

component audio system. Since the installation was to be temporary, we ran speaker wires to a pair of Bose Lifestyle powered speakers in a downstairs room, which served as Zone 2.

Each of the small Lifestyle powered speakers has a single 4½-inch cone driver, driven by a low-power stereo amplifier built into one of the speaker cabinets. Their small size (6 x 9 x 6 inches) makes them an ideal complement to the basic Lifestyle Music System for use in less-critical areas such as a kitchen or den.

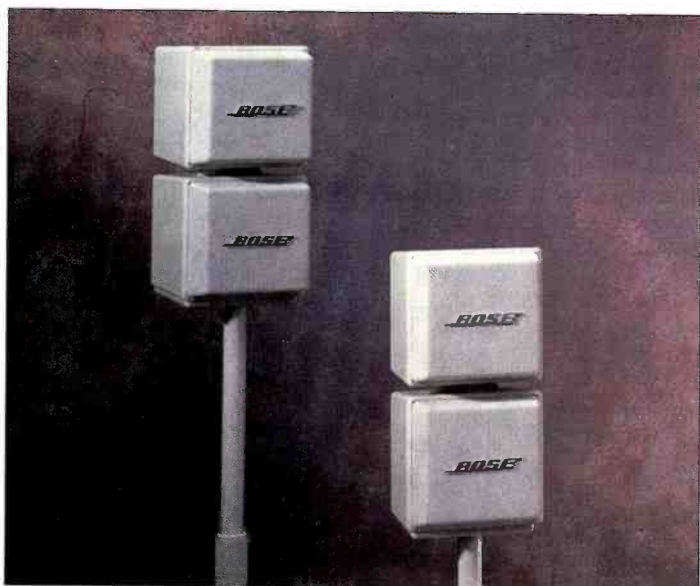
During a few weeks of evaluation, we managed to check out all of the system's control and operating features. Everything worked exactly as specified. Those operating the system in one of the two zones had no

the system's bass response, which extends down to the vicinity of 40 Hz. Also, the Dynamic Equalization feature is one of the most effective and least obvious loudness compensators we have run across. Even at low background levels, deep organ pedal notes filled the room, yet at high levels they did not become overpowering.

In respect to sound quality and ease of operation, the Bose Lifestyle Music System makes very few compromises. Perhaps its most obvious lack is any information at the listening location concerning the current program source, which station is being heard, which CD track is playing, and so forth. To some degree, this problem exists with many multi-room systems, but we were mildly discomfited by having to select several of the FM presets in order to pin down which one we had been listening to. This information (plus the usual CD track and time readouts) is visible only on the Music Center itself, and then only from a viewing point directly above the window on its cover.

In terms of measured FM and CD performance, the Bose Lifestyle Music System, in many respects, does not match some relatively inexpensive conventional separate components. Nevertheless, under most conditions its minor aberrations of distortion or frequency response were totally inaudible to me. It is a mistake to conclude that a component with 0.005 percent distortion will sound better than one with 0.1 percent distortion or that a channel separation of 40 dB in the uppermost octave will be audibly inferior to a 100-dB separation. Put into a realistic perspective, the Lifestyle Music System's performance measurements are quite adequate. What distinguishes the system is its exceptionally ingenious and attractive styling and its ability to provide a home with a two-zone, multiroom installation without major construction expense or arrays of unwieldy and expensive components.

Our total experience with the Lifestyle Music System was very positive. Its convenience (with virtually total system control from anywhere around a house), the invisibility of most of its components (including speakers), and its very listenable sound are difficult to match—especially at the price. □



Stacked pairs of miniature speaker cubes handle all but the lowest frequencies.

least valid in this frequency range) does show a minor depression of perhaps 5 dB between 160 and 220 Hz, but this is comparable to the normal response variation in a liveroom measurement.

Quasi-anechoic FFT response measurements confirmed the characteristics observed in our room curves. The satellites' polar response was very good at frequencies under 12,000 Hz, with less than a 6-dB difference between the response curves measured on-axis and 45 degrees off-axis.

At Home

We installed the Bose Lifestyle Music System in a room that was already equipped with an Acoustimass 5 speaker system and a modest

indication of the existence of the other zone other than by their inability to interfere with its priority in respect to tuner or CD-player operation. Taking a controller into the back yard (with windows open so that we could hear the system playing) showed that the range of the RF remote-control system exceeded 100 feet.

The sound of the Zone 1 system through the Acoustimass powered speakers was excellent. The speakers can play as loud as any person with normal hearing is likely to require, and up to that level the sound did not seem strained or distorted. The small size of the satellites and the concealability of the bass module can make it difficult for a listener to accept the reality of

SHOW STOPPERS

New products from the Consumer Electronics Show

by Rebecca Day


PITY the unassuming traveler who happened upon Chicago during the first week of June. Walls shook, floors rumbled, and restaurants were packed when 55,353 manufacturers, journalists, distributors, and retailers jammed into McCormick Place and nearby hotels to hear and see the latest audio and video products, games, and gadgetry at the Summer Consumer Electronics Show.

The hot topics at this show were home theater and multiroom audio systems with an emphasis on custom installation. The THX Sound System, developed by Tomlinson Holman for Lucasfilm in 1982 and currently found in hundreds of certified movie theaters across the country, will be available this fall for the home. Technics introduced a Home THX ten-piece speaker/controller/amplifier ensemble, which has a list price of \$12,000, and Snell Acoustics demonstrated its Home THX speaker systems with Lexicon's prototype THX decoder.

Multiroom audio/video is becoming more widespread as Sony, Carver, a/d/s/, Adcom, and Terk showed various new types of remote-control systems that give users access to source equipment from any room in the house.

Four years after they first appeared at CES, digital audio tape recorders, now equipped with the Serial Copy Management System,

finally seemed to be on their way to consumers. Sony introduced two models (see test report on page 39), which have been in stores since the end of June, and Technics, JVC, Denon, Philips, Onkyo, and Casio all showed DAT recorders that were slated to be on sale by year's end. [Shortly after the show, however, Congress postponed consideration of a bill to require SCMS circuits in DAT decks, and as we went to press a group of music publishers filed suit against Sony seeking to halt the sale of the decks. Stay tuned.]

 Breathing new life into a languishing category, Toshiba showed its new TRX-2000 satellite TV receiver (\$1,949), supporting the introduction with claims that since cable channel scrambling began in 1986, more than forty new satellite TV channels have been added to the airwaves for a total of 150.

Compact disc changers continue to gain in popularity, as do combination laserdisc/CD players. Denon demonstrated its first combi-players, NSM-Lions showed a one-hundred-disc changer, Sansui showed a five-disc mini-size changer that is expected to retail for about \$180, and Nakamichi's new Music Bank system stores as many as six discs inside the changer.

As usual, there was no shortage of new products in Chicago, and on the following pages are some of those we found especially exciting.



Nakamichi's alternative to magazine- or carousel-type CD changers is the MusicBank system in its CDPlayer 2, which can store a front-loaded stack of six discs and play them in any order. The \$649 changer can also operate as a single-play machine without removing the stored discs.

Designed for portable viewing, the JVC HR-PIU VHS Hi-Fi VCR (\$1,499) can operate from AC power, a battery pack, or a car battery. It has a 3-inch LCD color monitor, four video heads, two audio heads, and two stereo headphone jacks.



The a/d/s/ 750iL in-wall speaker is designed for serious listening. The flush baffle of the three-way system is finished in premium walnut veneer or black lacquer. A perforated metal grille is optional. Price: \$1,200 a pair.



Carver's CT-6 preamp/tuner, just 1 3/4 inches high, is part of the new Pro-Phile line. Featuring Carver's Sonic Holography technology, the \$550 CT-6 has four audio inputs, two tape loops with cross-dubbing, and twenty AM/FM presets.



Blaupunkt's CDC M1 car CD changer (\$900) is the first autosound product to use integrated fiber optics to transmit digital audio signals. A Blaupunkt Washington SQR 49 cassette receiver controls the changer.



The Serial Copy Management System for digital audio tape recorders, with support from both the recording industry and equipment makers, will be a feature of consumer DAT decks like these from Technics and Denon, due in stores this fall. The system allows digital copies to be made directly from a CD or prerecorded DAT, but it prevents second-generation copies of copies.

Proton's attractive, easy-to-use UVA-2000 universal remote control comes preprogrammed to operate components from many manufacturers. It can also be updated to accommodate new control codes. Price: \$140.





Sony's Digital Signal Transfer System is designed for multiroom audio/video. The Digital Master Control Center (\$1,000) can transmit television and digitized audio signals by coaxial cable—the same wires used for cable TV—to satellite decoder/amplifiers in as many as sixteen different rooms. The satellites convert the digital signals to analog for listening.

Hearing RCA's new line of 27-inch video monitor/receivers is the F27196BT (\$1,099). Features include a high-drive 55-watt picture system with Invar shadow mask, a digital comb filter, Dolby surround sound with on-screen calibration, and stereo speakers powered by 10 watts per channel.



Snell Multimedia's Home THX audio system (\$4,993) includes three shielded speakers for left, right, and center front; two subwoofers; and two rear surround speakers. Properly installed with a Home THX decoder, the system is said to provide sound comparable to that in THX-equipped movie theaters as well as excellent sound from audio-only programs. The speakers are also available separately.

Mitsubishi's M-R8010 four-channel A/V receiver, rated to deliver 125 watts per channel to two front speakers and 25 watts each to a rear pair, features on-screen menus to calibrate the Dolby Pro Logic surround-sound system and to set rear delay times. It also has presets for simulated stadium, club, and theater modes. Price: \$1,399.



Instant Replay's Traveler videocassette player (\$795) can show tapes in all three world video formats (NTSC, PAL, and SECAM) on its own 3-inch monitor or through most NTSC-format TV's. It operates on 12-volt DC or 110-/220-volt AC power.



At \$500, the Pioneer CLD-980 broke a price barrier for combi-players. The CD section has a four-times-oversampling digital filter and dual 16-bit digital-to-analog converters. Other features include intro scan for both video and audio tracks, twenty-four-track programming, and on-screen display.



Philips's WallVision home theater system includes an installation kit and a 46-, 52-, or 61-inch rear-projection TV that can be mounted flush with a wall. The 61-inch model shown here lists for \$3,900.



NEEME JÄRVI



AMEEN HOWERANI/DETROIT SYMPHONY

by Lawrence B. Johnson

NEEME JÄRVI considers himself a man on a mission. Gleeful record collectors and overwhelmed critics might assume the prodigiously productive conductor, who already has some 160 recordings to his credit, means that he's determined to outdo the likes of Herbert von Karajan and Eugene Ormandy in sheer number of catalog entries. That may well happen, since at fifty-three he has many years ahead of him to achieve it, but according to Järvi his swelling discography is incidental. His driving purpose is to explore, to discover, to shed light—in particular, to cham-


pion less familiar Romantic and Neoromantic symphonists.

"I believe it's every conductor's duty to help composers become known, to find the very great qualities that have not been noticed," Järvi told me recently. "I'm always happy to pick out a composer who has not been at all known." And the first example he cited was his Estonian countryman Eduard Tubin, who died in 1982 at the age of seventy-seven, utterly unknown in the West. Thanks to Järvi's series of recordings for the Scandinavian Bis label and his persistent concert programming of Tubin's symphonies, another latter-day Romantic com-

poser has at last emerged into the international limelight.

Järvi added proudly that, under the banners of Bis, Chandos, Deutsche Grammophon, and Orfeo, he's done as much for the Swedish composers Wilhelm Stenhammar (1871-1927) and Niels Gade (1817-1890), as well as the Russians Alexander Glazunov and Nikolai Rimsky-Korsakov—whose names are familiar enough but whose symphonies are hardly basic repertory to Western audiences. "Glazunov and Rimsky-Korsakov are always talked about as second- or third-rate, but I do not believe that," Järvi said. "They were both masters

*"I believe it's every
conductor's duty to help
composers become known."*



of orchestration, and their symphonies are filled with great tunes and very good development."

In a sense, Järvi's crusading reflects his own long service in obscurity, and the plans for his next campaign, pledged to the revival of some American Neoromantics, bespeak his current status—as an American citizen and as the newly vested music director of the Detroit Symphony Orchestra. If he has his way, he will whip into public consciousness the works of Walter Piston, Paul Creston, and Amy Beach. And in the process music lovers will get a clearer picture of this masterly upstart whose very name his admirers still do not pronounce to his satisfaction. Indeed, much of the world still has Neeme Järvi born in the wrong place.

NIRST of all, his name. Amused, hinting mild vexation, an artist who has learned how to play an audience and market himself American-style, Järvi sits onstage at Detroit's Orchestra Hall minutes before he is to lead a concert with the orchestra that becomes his in September. It's meet-the-maestro time, and a patron has asked about his name. "Nobody pronounces it right in America," he replies with a faint grin. "It's YAIR-vee," and he rolls the R in a way that Americans simply can't. "Oh, YAIR-vee," echoes the voice from the audience. "No, no," volleys the conductor, deadpan. "YAIR-vee. And, by the way, I was not born in Finland, or Sweden. I was born in Estonia, but I am an American citizen now."

Järvi, who became a certified Yankee in 1987, makes his home with his wife Liila in Shrewsbury, New Jersey. They have three children, all musicians. Paavo, twenty-seven, is a conductor and graduate of the Curtis Institute; Maarika, twenty-six, holds a performance degree in flute from the New England Conservatory; Kristjan, eighteen, is a pianist. From the time Järvi im-

migrated with his family to America in 1980, he said, two objectives were paramount in his life: to become a U.S. citizen and to have his own American orchestra.

"Nobody knew me in America, coming from Estonia," he recalled. "You see, I had to wait until 1990. But you have to work in other places first. This is the style with American orchestras. If you go through all the steps slowly and surely, then you can succeed. American orchestras are usually looking for people from Europe and especially from Germany—even if they're not very good conductors. Orchestra managers simply look that way, and so American orchestras have a strong German or Italian influence."

Järvi spoke on that point with authority. By now he has conducted all the major American orchestras, and he has even begun an open-ended series of recordings with the Chicago Symphony for Chandos. (The first fruit of that association was yet another swatch of obscure Romanticism, Franz Schmidt's Second Symphony, released by Chandos early this year.) In 1979, even before he'd settled here, he made his Metropolitan Opera debut, with Tchaikovsky's *Eugene Onegin*, and was promptly invited back for the following season to conduct Smetana's *The Bartered Bride*. That plan was dashed, however, when the Met orchestra went on strike, and he was not to return to the house until the 1986-1987 season, when he led acclaimed performances of Mussorgsky's *Khovanshchina*.

Opera is no small matter in Järvi's life. He has an affinity for music writ large, in whatever form. Just recently he was in Sweden putting the final touches on a full-length recording of Prokofiev's *The Fiery Angel* for Deutsche Grammophon, due for release sometime next year, the centenary of the composer's birth. It will bring his Prokofiev discography to some twenty al-

bums, including nearly all the composer's orchestral music. He has done just as well by Shostakovich, having recorded that composer's first ten symphonies with the Scottish National Orchestra for Chandos and the last five with Sweden's Gothenburg Symphony for DG. That's to say nothing of assorted recordings of Shostakovich concertos and suites.

To be sure, Järvi has pursued more than just these two modern Russian masters into the core repertory. His first international notice sprang from a Sibelius symphony cycle for Bis, eventually extended to include all of the orchestral music, and for Chandos he has recorded most of Richard Strauss's orchestral works. Almost without exception, Järvi's far-flung ventures (he likes to refer to "enterprising" repertory) have brought favorable reviews and strong sales. It was his one dip into the basic Austro-German Symphonic literature, a series of the Brahms symphonies with the London Symphony for Chandos, that drew the most emphatically mixed critical response.

NOW he's embarked on new enterprises: Bruckner, plunging in with the Eighth Symphony, and a projected Mahler cycle with the Scottish National that he says will continue into the late Nineties, both for Chandos. On the DG docket, with Gothenburg, is a disc of operatic intermezzos—"the sort of thing Karajan did long ago"—and another of Russian pops warhorses such as Tchaikovsky's *1812 Overture* and Rimsky-Korsakov's *Russian Easter Overture*.

But that's just Järvi keeping the pot boiling. His heart is with the Romantic symphony he hasn't discovered yet, by the composer most of the world has long since forgotten or never noticed.

"It makes my life happier to find new composers," he said, "and to work with nice record companies

who accept my wishes to do such recordings." Looming ahead, however, is the question of whether Neeme Järvi, the demon recording artist, can find happiness with his new orchestra, the financially plagued Detroit Symphony. While both DG and Chandos have expressed interest in recording Järvi with Detroit in the offbeat repertory of his choice, officials of the hard-pressed DSO have made no commitment.

Detroit's departing music director, Gunther Herbig, accepted the directorship of the Toronto Symphony (effective this fall) when the DSO failed to come through on some developmental pledges and saw its financial situation deteriorate from serious to desperate. Järvi takes over an orchestra whose leadership insists the operation cannot long remain afloat without \$18 million in state and private funding. At this writing, DSO officials were by no means confident the orchestra would be in business to welcome its new artistic chief.

But Järvi takes a philosophical view of the crisis, preferring to focus on what he calls a first-rate ensemble and the privilege of conducting in the refurbished Orchestra Hall, a seventy-three-year-old structure that visiting performers routinely rank among the world's premier acoustical achievements. The new man is frankly counting on the Big Three automobile makers—Chrysler, General Motors, and Ford—to bail the orchestra out and, as Volvo has done for the Gothenburg Symphony, to provide the wherewithal for DSO recordings.

WITH his Detroit appointment, Järvi joins the exclusive club of jet-set music directors. He remains music director of the Gothenburg Symphony, and although he relinquished command of the Scottish National two years ago and now holds an emeritus position there, that orchestra has a special place in his heart. He returns to Scotland for a single week of concerts each year "just to remember the good times we had together." Last spring, Järvi was awarded an honorary doctorate by Aberdeen University.

This rather late bloomer on the



Järvi joins the Detroit Symphony team

RECOMMENDED RECORDINGS

Dvořák: *Symphonic Poems*. Scottish National Orchestra. CHANDOS CHAN 8798/9 two CD's.

Gade: *Symphonies Nos. 3 and 4*. Stockholm Sinfonietta. BIS CD-338.

Glazunov: *Symphonies Nos. 4 and 7*. Bamberg Symphony. ORFEO C-148201.

Mussorgsky/Ravel: *Pictures at an Exhibition*. Scriabin: *Poem of Ecstasy*. Chicago Symphony. CHANDOS CHAN 8849.

Pärt: *Symphonies Nos. 1-3; Cello Concerto ("Pro et contra"); Perpetuum mobile*. Bamberg Symphony. BIS CD-434.

Prokofiev: *Alexander Nevsky; Scythian Suite*. Scottish National Orchestra. CHANDOS CHAN 8584.

Rimsky-Korsakov: *Symphonies Nos. 1-3; Russian Easter Overture; Capriccio espagnol*. Gothenburg Symphony. DEUTSCHE GRAMMOPHON 423 604-2 two CD's.

Shostakovich: *Symphony No. 8*. Scottish National Orchestra. CHANDOS CHAN 8757.

Sibelius: *Symphony No. 4; The Oceanides; Canzonetta*. Gothenburg Symphony. BIS CD-263.

Stenhammar: *Symphony No. 1*. Gothenburg Symphony. BIS CD-219. Well up on Järvi's list of personal favorites among his recordings.

R. Strauss: *Don Juan; Also sprach Zarathustra: Two Songs*. Felicity Lott (soprano); Scottish National Orchestra. CHANDOS CHAN 8538.

Tubin: *Symphony No. 4*. Bergen Philharmonic Society. BIS CD-227. Asked to cite the cream of his own recordings, Järvi put this one right at the top.

world music scene came to conducting from an improbable starting point. Back in his home town of Tallinn, Estonia, young Neeme Järvi first made a name for himself as a xylophone player. He still recalls proudly how he could play the last movement of Khachaturian's Violin Concerto on the xylophone. By the time he got to the Leningrad State Conservatory, he had mastered a wide range of percussion instruments and was sufficiently accomplished as a pianist to tackle the Beethoven concertos.

Collecting a double degree in percussion and choral conducting in 1960, Järvi worked his way up to chief conductor of the Estonian Radio and Television Orchestra and in the same year, 1963, began a thirteen-year tenure as principal conductor of the Tallinn Opera. International opportunity opened its door when he won first prize in the 1971 Conductors Competition at the Accademia Nazionale di Santa Cecilia in Rome. He was named artistic director of the Estonian State Symphony and led the belated Soviet premières of Strauss's *Der Rosenkavalier* and Gershwin's *Porgy and Bess*.

RECORDINGS, it can be fairly said, have made Järvi's career. It is a compliment returned. Järvi fondly recalls collecting records as a boy, long before he ever dreamed of making one himself. "I still go to the record shops," he said, "but I miss the old 33's. There is so much repertory that never will appear on CD, and with LP's you could read the jackets."

For that matter, he is less than enchanted by the modern technology that brings his big Romantic repertory to life in our living rooms: "I prefer the old stereo [analog LP] recordings," confessed this musician well on his way to his two-hundredth recording. "They gave a more natural acoustic than [digital] recordings on compact disc. The silence [of CD's] is good, and there's no turning of sides. But the 33's sounded better." □

Lawrence B. Johnson a free-lance writer based in Detroit, writes about music for CD Review, the New York Times, and other publications.

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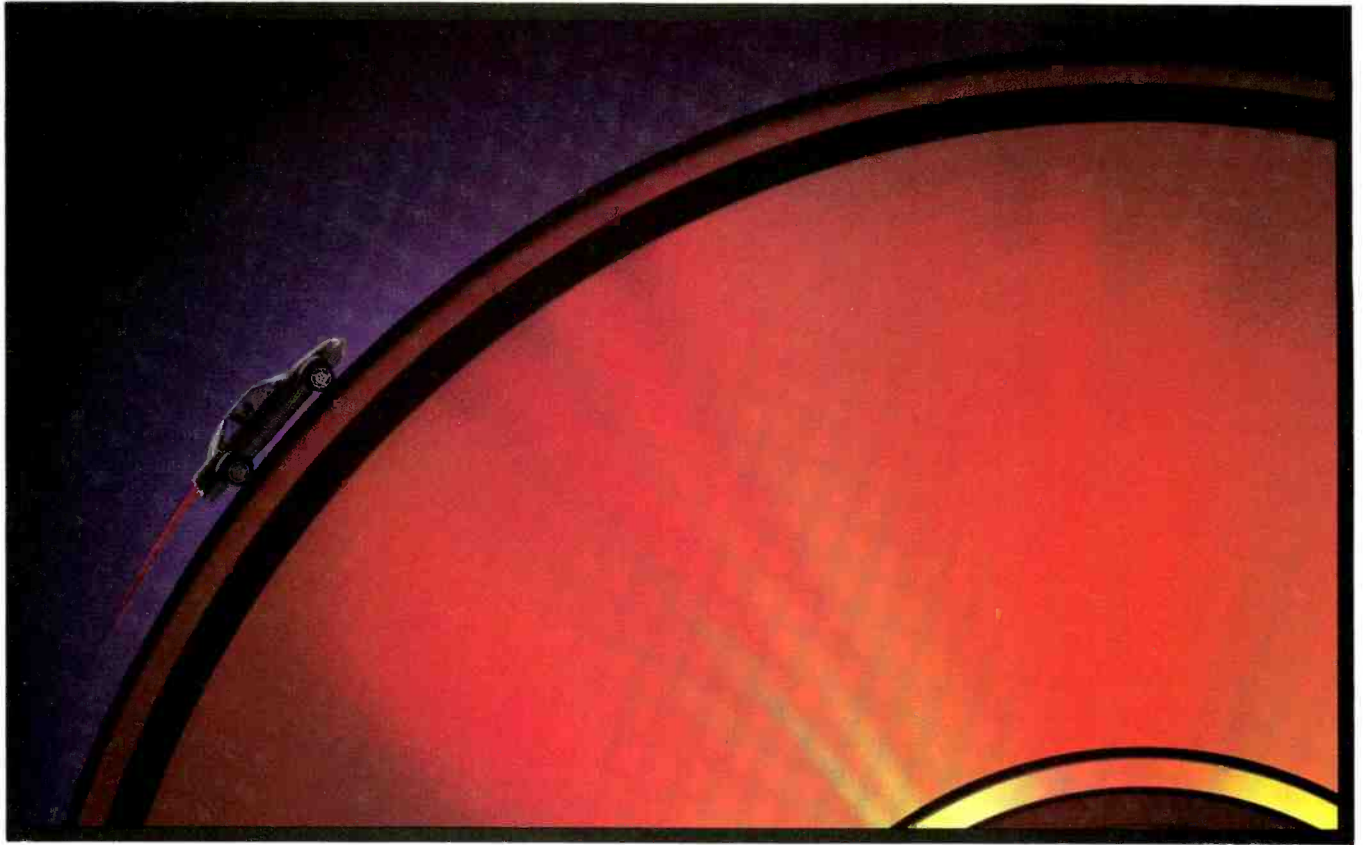
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BEST RECORDINGS OF THE MONTH

Stereo Review's critics choose the outstanding current releases

WORLD PARTY'S WARMHEARTED ROCK NOSTALGIA

DEPENDING on your political point of view, you could call the Sixties either the greatest period ever for rock-and-roll or an overrated and essentially foolish decade that refuses to go away, looming over contemporary art and life like a gigantic, suffocating blanket of aesthetic smog. There's no mistaking, however, where Karl Wallinger comes down in this debate: "Goodbye Jumbo," the second World Party album (World Party being, essentially, a Wallinger one-man show), is clearly the work of somebody who's fascinated, perhaps even obsessed, by the period, particularly its more obstreperous music.

At various times on this quite lovely record, Wallinger evokes (or quotes outright) such Sixties icons as the Rolling Stones, Bob Dylan, the Velvet Underground, the early Kinks, and the Beach Boys. And the spirit of the psychedelic-era Beatles hovers over just about every song. Even the cover photos are perfect; check out the Rickenbacker guitar and Wallinger's psychedelic yellow jacket.

Evoking the Sixties is, of course, an enterprise fraught with peril. Sixties rock, for all its pleasures, had as high a b.s. quotient as any other music, and it had an innocence that seems unduplicable in these more cynical times. While everybody has influences, and Sixties influences are as valid as any, the idea of an entire album of cheerful acid-tinged pop here in the Nineties is a bit uncomfortable, verging on XTC/Dukes of Stratosphere territory—that is, self-conscious parody.

Fortunately, Wallinger avoids those pitfalls through a deceptively simple strategy: He just pretends they don't matter and goes about making the music that sounds good

to him. And so, in a splendidly clagorous rocker like *Way Down Now*, he doesn't worry whether a background chorus is reminiscent of the "Who's!" from the Stones' *Sympathy for the Devil*; he just throws it into the mix with an exhilarating nonchalance. Even better, especially for a guy who might be dismissed as a tie-dyed hippie *manqué* like Todd Rundgren, Wallinger lets his lyrics, at least, acknowledge that we're living in a different world from the one that inspired his musical idols. For example, in the astonishingly beautiful *When the Rainbow Comes* (a musical pastiche of George Harrison, if you can believe such a thing), Wallinger slyly quotes from the Beatles' version of *Please, Mr. Postman*, but the original song's postcards and letters are transmogrified into more, shall we say, *au courant* letter bombs.

In fact, for all his obeisance to the Sixties, there's no escaping the fact that Wallinger, for better or worse, has a thoroughly contemporary sensibility. In that respect, he reminds me more than anyone else of Prince, another pop obsessive who's found

a way to translate his influences into something both original and familiar (you can hear the similarity made explicit in this album's churning *Take It Up*). Wallinger isn't quite as brilliant as Prince, and "Goodbye Jumbo" has the odd track where you won't have the faintest idea of what he's going on about or where his melodic ideas are stretched a little thin. But mostly it's a warmhearted, sonically gorgeous collection of lovably eccentric pop songs from a guy who'd be an obvious talent in any era. That it may remind aging baby boomers of their jukebox past is merely one of its pleasures. Grab this one immediately.

Steve Simels

WORLD PARTY: *Goodbye Jumbo*. Karl Wallinger (vocals and instrumentals); Chris Witten (drums); Guy Chambers (keyboards); other musicians. *Is It Too Late; Way Down Now; When the Rainbow Comes; Put the Message in the Box; Ain't Gonna Come Till I'm Ready; And I Fell Back Alone; Take It Up; God on My Side; Show Me to the Top; Love Street; Sweet Soul Dream; Thank You World.* CHRYSALIS F1 21654, © F4 21654, © F2 21654 (53 min).

Karl Wallinger: an obsession with the Sixties



MICHEL DALBERTO'S SCHUBERT

ELEVEN years ago the young French pianist Michel Dalberto, having won the Clara Haskil Competition at the age of twenty in 1975 and the Leeds Competition three years later, made a striking recording for Erato of Schubert's big D Major Piano Sonata (D. 850) and the two-movement C Major (D. 840). He subsequently made some interesting Mozart con-



Dalberto: convincing

certo recordings, but we haven't heard a great deal from him since then. He has now, however, committed himself to recording *all* the Schubert sonatas for Denon, and Volume 1 is certainly compelling.

The Schubert Sonata in A Minor we usually hear is the one composed in 1823 (D. 784). On the new disc Dalberto plays the later and bigger one in that key (D. 845), composed in 1825 and dedicated to the same Archduke Rudolph we remember as friend, pupil, and patron of Beethoven. With it are Schubert's very first sonata, in E Major (D. 157), composed ten years earlier, when he was only eighteen but was already producing some of his finest songs, and a baker's dozen of tiny waltzes. The early sonata itself is no mere apprentice work; it is in three move-

ments and is usually thought to be missing a finale, but the menuetto rounds it off conclusively enough.

Dalberto's way with both sonatas, even more assured than in the two he recorded in 1979, suggests nothing less than a born Schubert player—and a more thoroughly persuasive one than several of his more celebrated senior colleagues. There is not a phrase that is not fully convincing or that calls attention to itself at the expense of the music's overall design and continuity. Dalberto doesn't call attention to *himself*, either. There is no self-consciousness in his playing. The music seems to shape itself as spontaneously as one imagines it did for Schubert himself when he first set it on paper. Subtleties of touch and an apparently instinctive regard for tone are taken for granted after the first few bars, and tempos at all points are especially sound; the music always *moves*, with the most natural momentum.

That natural momentum serves the little waltzes especially well. Denon's decision—or perhaps it was Dalberto's—to present only twelve of the thirty-four *Valses sentimentales* of Op. 50 (D. 779) was a judicious one: All thirty-four would have become a bit of a blur, but 10 minutes' worth works just fine, and I imagine the rest of the set will turn up in subsequent installments. After a decent pause, the solitary, gently melancholy Waltz in A-flat Major (D. 978), the latest work on the disc, brings the program to the sort of conclusion that seems to sum up in barely more than a minute the essence of both Schubert's own spirit and that of the Viennese character that was to flourish in the well-loved works of the great waltz composers. In short, Dalberto displays a good sense of programming as well as superior playing, and Denon, for its part, has given us about as handsome a recording of a piano as can be imagined. *Richard Freed*

SCHUBERT: *Piano Sonata in A Minor, Op. 42 (D. 845); Piano Sonata in E Major (D. 157). Valses sentimentales, Op. 50 (D. 779): Nos. 1, 3, 5, 7, 14, 13, 19, 21, 24, 28, 30, and 34. Waltz in A-flat Major (D. 978).* Michel Dalberto (piano). DENON © CO-73787 (67 min).

NITTY GRITTY DIRT BAND: NO WEAK LINKS

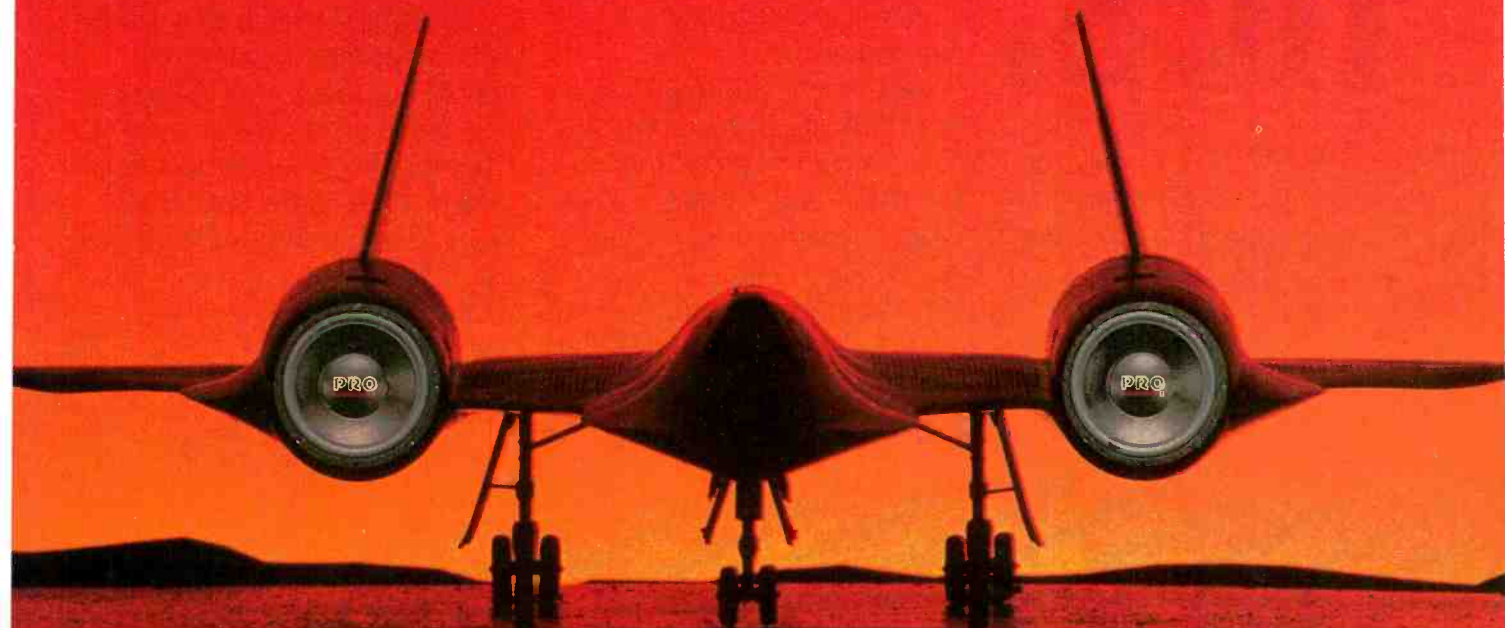
FOR the follow-up to "Will the Circle Be Unbroken, Vol. II," the Nitty Gritty Dirt Band could presumably take a rest—that award-winning album is conceivably as much of a landmark as its predecessor. Instead, the Dirt Band has responded with one of its strongest records ever, "The Rest of the Dream," a wonderful collection of songs of pleasures big and small, love true and otherwise, and characters who curdle the blood and tickle the mind.

Among the odd bodies who drift through the Dirt Band's world are the sixteen-year-old waitress from Bruce Springsteen's *From Small Things (Big Things One Day Come)*, who shoots her lover because she can't stand the way he drives. And in *Just Enough Ashland City*, one of the two unforgettable John Hiatt songs, we meet the self-proclaimed Big Shot who picks a honey who's "just enough small-town girl to cook my supper in an evening gown."

There's also a tribute to *Junior's Grill* ("It's heaven with a corner booth"), kicked off with riffs reminiscent of *Wake Up Little Susie*; two plangent tunes about the exaltation and sadness of romance, *Blow Out the Stars*, *Turn Off the Moon* and *Snowballs*; and Hiatt's title song, a sober meditation on the cyclical evolution of life and love. Some songs are stronger than others, but there are no weak links in the chain.

"The Rest of the Dream" would be an outstanding album for the songs alone, but the vocal and instrumental treatments are also stellar. Lead singers Jimmy Ibbotson and Jeff Hanna read just enough irony into the lyrics and deliver them with the correct twangy flavors, and the band balances the rhythm section with exquisite touches of mandolin and harmonica, bringing in the occasional washboard for rural authenticity.

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Cocaine lies.

After nearly a decade of being America's glamour drug, researchers are starting to uncover the truth about cocaine.

It's emerging as a very dangerous substance.

No one thinks the things described here will ever happen to them. But you can never be certain. Whenever and however you use cocaine, you're playing Russian roulette.

You can't get addicted to cocaine.

Cocaine was once thought to be non-addictive, because users don't have the severe *physical* withdrawal symptoms of heroin—delirium, muscle-cramps, and convulsions.

However, cocaine is intensely addicting *psychologically*.

In animal studies, monkeys with unlimited access to cocaine self-administer until they die. One monkey pressed a bar 12,800 times to obtain a single dose of cocaine. Rhesus monkeys won't smoke tobacco or marijuana, but 100% will smoke cocaine, preferring it to sex and to food—even when starving.

Like monkey, like man.

If you take cocaine, you run a 10% chance of addiction. The

risk is higher the younger you are, and may be as high as 50% for those who smoke cocaine. (Some crack users say they felt addicted from the *first time* they smoked.)

When you're addicted, all you think about is getting and using cocaine. Family, friends, job, home, possessions, and health become unimportant.

Because cocaine is expensive, you end up doing what all addicts do. You steal, cheat, lie, deal, sell anything and everything, including yourself. All the while you risk imprisonment. Because, never forget, cocaine is illegal.

There's no way to tell who'll become addicted. But one thing is certain.

No one who is an addict, set out to become one.

C'mon, just once can't hurt you.

Cocaine hits your heart before it hits your head. Your pulse rate rockets and your blood pressure soars. Even if you're only 15, you become a prime candidate for a heart attack, a stroke, or an epileptic-type fit.

In the brain, cocaine mainly affects a primitive part where the emotions are seated. Unfortunately, this part of the brain also controls your heart and lungs.

A big hit or a cumulative overdose may interrupt the electrical signal to your heart and lungs. They simply stop.

That's how basketball player Len Bias died.

If you're unlucky the first time you do coke, your body will lack a chemical that breaks down the drug. In which case, you'll be a first time O.D. Two lines will kill you.

Sex with coke is amazing.

Cocaine's powers as a sexual stimulant have never been proved or disproved. However, the evidence seems to suggest that the drug's reputation alone serves to heighten sexual feelings. (The same thing happens in Africa, where natives swear by powdered rhinoceros horn as an aphrodisiac.)

What is certain is that continued use of cocaine leads to impotence and finally complete loss of interest in sex.

It'll make you feel great.

Cocaine makes you feel like a new man, the joke goes. The only trouble is, the first thing the new man wants is more cocaine.

It's true. After the high wears off, you may feel a little anxious, irritable, or depressed. You've got the coke blues. But fortunately, they're easy to fix, with a few more lines or another hit on the pipe.

Of course, sooner or later you have to stop. Then—for days at a time—you may feel lethargic, depressed, even suicidal.

Says Dr. Arnold Washton, one of the country's leading cocaine experts: "It's impossible for the nonuser to imagine the deep, vicious depression that a cocaine addict suffers from."

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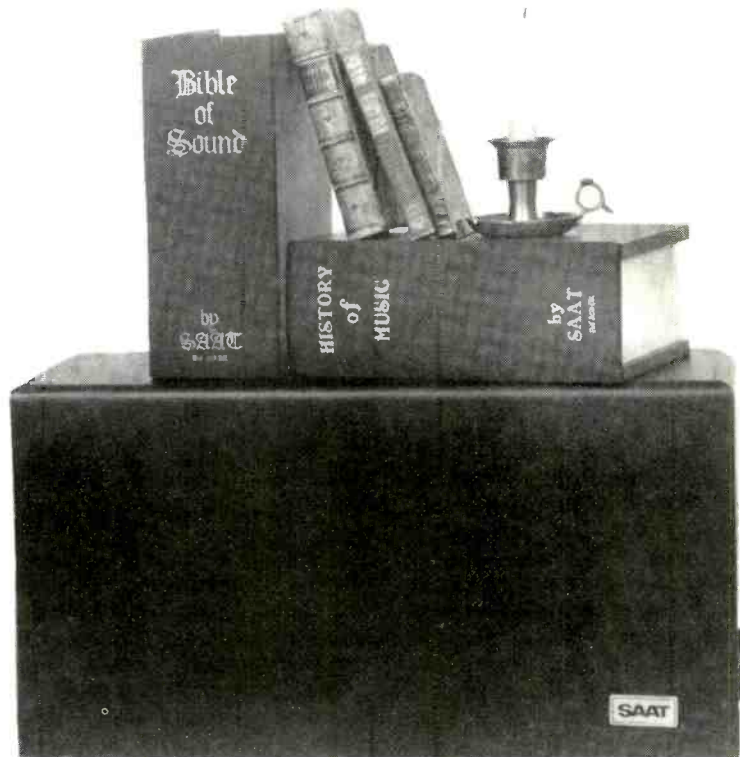
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CIRCLE NO. 17 ON READER SERVICE CARD



BEST RECORDINGS OF THE MONTH

Always a group that eschewed trends to follow its own musical path, the Dirt Band is becoming one of the foremost lyric- and rhythm-oriented acts in the history of country-rock. "The Rest of the Dream," a delight from start to finish, shows why.

Alanna Nash

NITTY GRITTY DIRT BAND: *The Rest of the Dream*. Nitty Gritty Dirt Band (vocals and instrumentals). From *Small Things (Big Things One Day Come)*; *Waitin' on a Dark Eyed Gal*; *Junior's Grill*; *Blow Out the Stars, Turn Off the Moon*; *The Rest of the Dream*; *Just Enough Ashland City*; *Hillbilly Hollywood*; *Snowballs*; *Wishing Well*; *You Made Life Good Again*. MCA MCA-6407, © MCAC-6407, © MCAD-6407 (37 min).

BARRY DOUGLAS PLAYS THE LISZT CONCERTOS

PIANIST Barry Douglas's discography—which includes such formidable works as the Beethoven *Hammerklavier* and the Brahms D Minor Concerto and Piano Quintet, along with exotica like Liszt's *Dante Sonata* and Tchaikovsky's *Sonata in G Minor*—suggests an intellectual's virtuoso. While the new RCA release of his recording of the Liszt concertos seems intended to alter that impression, what it brings to my mind is the all-too-short career of the British pianist Solomon, who was equally a master of the intellec-

Douglas: ardor and fireworks



Nitty Gritty's Jeff Hanna, Jimmie Fadden, Bob Carpenter, Jimmy Ibbotson

tual peaks of the repertory and of its bravura showpieces.

That Douglas, an Irishman, has a similar potential is well demonstrated in this program, which also includes Liszt's *Hungarian Fantasy*. He is more than a match for the virtuosic demands of the two concertos, running double octaves and dazzling passage-work in the best big-league style, but he also handles the lyrical episodes with a highly developed sense of poetry. Of swooning sentimentality there is little, but there is no lack of ardor from either the soloist or the conductor, Jun'ichi Hirokami, the winner of the 1984 Kiril Kondrashin Competition. With the youthful drive he brings to bear here in leading the London Symphony, his role goes far beyond that of a mere accompanist.

I was even more impressed with Douglas's performance of the Hun-

garian *Fantasy*, which is on a somewhat smaller scale than Solomon's classic version but is graced with a remarkable sense of the dulcimer overtones in the piano figuration of the extended slow section. And when the quick-paced *friss* finally arrives, Douglas provides fireworks aplenty.

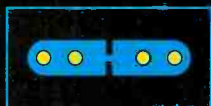
The excellence of the musicianship is enhanced by the recording, in which piano and orchestra are captured in a single acoustic perspective, with no sense of the piano's being in your lap. The orchestral sound is full and brilliant throughout. In all, a splendid production.

David Hall

LISZT: *Piano Concerto No. 1, in E-flat Major*; *Piano Concerto No. 2, in A Major*; *Hungarian Fantasy for Piano and Orchestra*. Barry Douglas (piano); London Symphony Orchestra, Jun'ichi Hirokami cond. RCA © 7916-4-RC, © 7916-2-RC (55 min).

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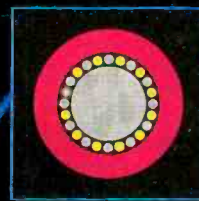
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*Discs and tapes reviewed by
Chris Albertson, Phyl Garland,
Ron Givens, Roy Hemming,
Alanna Nash, Parke
Puterbaugh, Steve Simels*

ALABAMA: *Pass It On Down.* Alabama (vocals and instrumentals); vocal and instrumental accompaniment. *Pass It On Down; Here We Are; Down Home; Forever's As Far As I'll Go; Jukebox in My Mind;* and four others. RCA © 2108-4-R, © 2108-2-R (34 min).

Performance: *New diversity*
Recording: *Good*

In "Pass It On Down," which Alabama co-produced with Josh Leo and Larry Michael Lee, the band shows a willingness to go beyond its usual base of Southern rock songs and love ballads to experiment with a diversity of styles and lyrical content. These are subtle changes, of course, worked in to test the waters. The title song, a call for environmental action (handily released as a single in time for Earth Day), is still a Southern stomper in the Charlie Daniels tradition. *Moonlight Lounge*, too, is the kind of heavy-footed party rap the band is known for, and there's the obligatory love song in *Goodbye (Kelly's Song)*, which works equally well as a farewell to a child.

But there's also *Jukebox in My Mind*, a fine song in the pure honky-tonk mold (marred by the gimmick of a quarter falling into a coin box), which lead singer Randy Owen delivers in his best Merle Haggard syntax. The tune is vastly different from anything else the band has recorded, and *Down Home* is also a slightly more sophisticated tribute to small-town life than they've tackled before. There's even a country bubble-gum song, *Here We Are*, written by Beth Nielsen Chapman and Vince Gill. While most of the impressive tracks were contributed by outside writers, the group's bassist, Teddy Gentry, proves his worth with *Fire on Fire* (co-written with Ronnie Rogers and Greg Fowler), which blends erotic longing and the kind of melodic advancement Alabama has long needed to elevate it from its usual five-note span. All in all, the band's move toward more tuneful ma-

LLOYD COLE

LLOYD COLE is a wounded romantic who has found in New York a city of dashed dreams and boundless possibilities, and its personality has possessed his muse. The expatriate Briton left his band, the Commotions, last year and relocated to Manhattan, where he discovered both songwriting inspiration and sympathetic musical accomplices. His new album is an oddly affecting combination of romantic fatalism and brisk, flowing melodies evoking the middle-period Bob Dylan of "Blonde on Blonde." It's the old antic bohemianism and upstart literariness of Greenwich Village returned and burnished to a contemporary, CD-worthy aural gloss.

The mood of the album, sustained through thirteen songs and 50-odd minutes, is one of melancholy reverie nurtured in the wee hours. No superfluous adornment is hung on these tunes, yet they are exquisitely detailed with guitar filigree by Robert Quine and inspired by such odd touches as the lonesome harmonica that drifts like a human cry through *Downtown*. Cole's vocals are a marvel of understatement, whether dreamy and diaphanous *à la* Bryan Ferry in *No Blue Skies* or an unvarnished sing-speak, as in *Loveless*.

Love seldom measures up to dreams of it in Cole's universe, and he deals with heartbreak as if it were an old friend he expects to run into time and again. His conclusions are so foregone they're endearing; in *To the Church* he reports, "I'm looking for a religious girl with child-bearing hips and a wedding veil/But I'm saddened to report it's not easy." How can you not love a rocker who's holding out for old-fashioned values in this jaded age? In a delightful,

sprightly folk-rock jig called *Undressed*, he pays his companion a peculiar compliment: "You look so good when you're depressed." Best of all, in the languorous, midtempo *No Blue Skies* he lets fly with a put-down for the ages: "Baby, you're too well read."

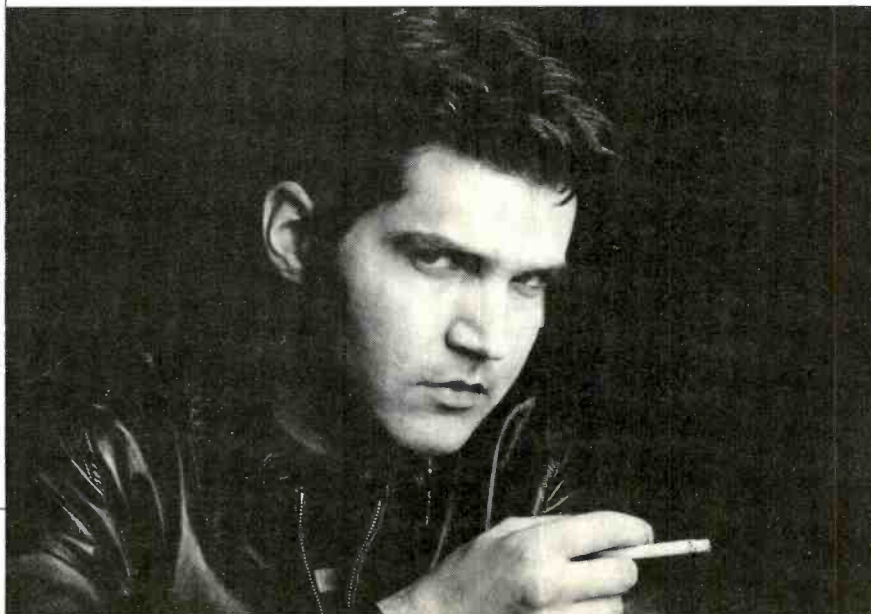
Echoes of the Velvet Underground, another New York touchstone, quietly permeate "Lloyd Cole." It's there in the modest simplicity of the arrangements, the jewel-like quality of the guitar work, and the romanticization of the urban demimonde. The city is the backdrop for songs such as *What Do You Know About Love?*, in which he becomes one with the Village street he's wandering: "It's raining on Bleecker Street/It's raining from my heart down to my feet."

The Dylan, Village, and V.U. references are no doubt intended as homage and celebration of Cole's arrival, but he is very much an original. No one matches words and music with quite his mellifluous ease; check out the graceful orchestration of *A Long Way Down* or the amiable, frictionless gait of *Ice Cream Girl*. Cole is clearly one of the most gifted songwriters on the contemporary scene, and this album is a delectable piece of popcraft that glimmers like a rain-slicked city street beneath a streetlamp's glow. *Parke Puterbaugh*

LLOYD COLE. Lloyd Cole (vocals, guitars, bass, keyboards, harmonica); other musicians. *Don't Look Back; What Do You Know About Love?; No Blue Skies; Loveless; Sweetheart; To the Church; Downtown; A Long Way Down; Ice Cream Girl; Undressed; I Hate to See You Baby Doing That Stuff; Waterline; Mercy Killing.* CAPITOL 92751-1, © 92751-4, © 92751-2 (52 min).

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CARLY'S STANDARDS

IN her liner notes for "My Romance," her lush new album of pop standards, Carly Simon writes, "I grew up wanting to be . . . a dancer, until I wanted to be a jazz singer, until I wanted to be a folk singer, until I wanted to be a rock singer, until I forgot what it was that I wanted, and just did it (whatever 'it' is)."

There are those who will argue that Simon proves herself a dilettante with both that statement and this record, her second collection of romantic popular classics (the other one was the disastrous "Torch" of 1981). There are also those who will say that anyone who really appreciates Rodgers and Hart, Dietz and Schwartz, Styne and Cahn, and other masters of sophisticated jazz-pop would do better to turn to Frank Sinatra, Ella Fitzgerald, and the late Sarah Vaughan. What could Simon, from a generation whose music revolved around acoustic guitars and plaintive ballads, contribute to the music of an era when singers used their voices as band instruments and sang against full rhythm sections and horns? As it turns out, plenty.

According to the notes, Simon grew up with these songs floating around her family's New York home. Arthur Schwartz (of Dietz and Schwartz) was her parents' closest friend, and after attending each new musical that opened on Broadway, the Simons came home and plunked out the songs on the piano, young Carly later becoming mesmerized listening to the recordings of the foremost popular singers of the Forties and Fifties.

That may explain how she came by such a surprising sense of phrasing for songs like Rodgers and Hart's *Bewitched* and Jule Styne and Sammy Cahn's *Time After Time*. Her deft massage of these old chestnuts becomes even more seductive paired with her impeccable intonation and elocution and her direct, yet heartfelt, manner of delivery, devoid of hokey frills or affectation—an approach that also characterizes pianist Michael Kosarin's subtle yet substantial contributions, Michael Brecker's saxophone and Steinerphone solos in two cuts, and Marty Paich's unobtrusive orchestral arrangements throughout (a compliment that could not be paid to the late Nelson Riddle for his kitschy work in a similar vein with Linda Ronstadt).

What's missing here, however, is a sense of fun, of stepping back from a reverential pose to enjoy the thrill of this collaboration and the rejuvenation of a genre. Some may, indeed, find "My Romance" too stiff, plodding, and understated, perhaps even airless.

And yet, in the midst of these plush

renditions, Simon the contemporary singer is very much alive, loosening up the melody a bit in *Time After Time* or sliding the word "bothered" (in *Bewitched*) over more bent notes than usual. She also offers up a new song, *What Has She Got*, that she wrote with Kosarin and Jacob Brackman, matching Fifties-style lyrics and perfumed sentiments with a swirling melody of romantic longing. A lovely, uplifting song, it fits as beautifully into the pro-



Carly Simon: seductive

gram as if it had been written in the postwar period.

Just by choosing such songs as *Danny Boy* and *My Funny Valentine* and treating them with sensitivity, Simon has freed them from the Las Vegas clichés with which they're associated. But there is another reason these songs no longer seem so dated under Simon's aegis: When she sings, "Now the young world has grown old," in *Little Girl Blue*, she's addressing her own peers. For aging baby boomers, the declaration is not camp but a dry-eyed verity. Some songs are timeless, after all. *Alanna Nash*

CARLY SIMON: *My Romance*. Carly Simon (vocals); Michael Kosarin (piano); Michael Brecker (saxophone, Steinerphone); Marvin Stamm (trumpet); David Nadien (violin); Jimmy Ryan (guitar); Wayne Pedziwiatr (bass); Steve Gadd (drums); orchestra, Marty Paich cond. *My Romance*; *By Myself/I See Your Face Before Me*; *When Your Lover Has Gone*; *In the Wee Small Hours of the Morning*; *My Funny Valentine*; *Something Wonderful*; *Little Girl Blue*; *He Was Too Good to Me*; *What Has She Got*; *Bewitched*; *Danny Boy*; *Time After Time*. ARISTA AL9-8582, © AC9-8582, © ARCD-8582 (38 min).

terial, with a lighter instrumental touch and increasingly mature subject matter, is unquestionably a major improvement. *A.N.*

FOSTER AND LLOYD: *Version of the Truth*. Radney Foster (vocals, guitar); Bill Lloyd (vocals, guitars, mandolin, six-string bass, tambourine); Sam Bush (fiddle, mandolin); Vince Gill (guitar); other musicians. *Is It Love*; *Version of the Truth*; *I Wishdada Run into You*; *Leavin' in Your Eyes*; *Side of the Road*; *It's a Done Deal*; and four others (five others on CD). RCA © 2113-4-R, © 2113-2-R (38 min).

Performance: *Your favorite artists*
Recording: *Very good*

Radney Foster and Bill Lloyd, the Brat Packers of the contemporary country-music scene, are back with their third album, one that keeps the foot tapping and the senses reeling to postwar honky-tonk and Sixties rock and pop à la the Beatles and the Byrds. But then, what else is new in this "Version of the Truth" since those styles have always been the backbone of Foster and Lloyd's hybrid sound?

Well, there's a more artful integration of styles, a tighter vocal harmony (with John Cowan and Jeff Hanna brought in for the elusive third parts), and an upgraded level of musicianship—and not just in the final cut, *Whoa*, a stylish instrumental featuring Albert Lee and two blasts from the past, the Rascals' Felix Cavaliere and guitarist Duane Eddy. There's also a looser, less self-conscious feel to this album, in part because F&L recorded with their touring band—pedal-steel guitarist Pete Finney, bass guitarist Byron House, and drummer Bob Mummert—before bringing in the star pickers.

That said, F&L's act is getting a bit stale. Lyrically, they plow the same old ground as every mediocre pop act before them. Their strong suit—an ability to write songs that seem vaguely familiar and yet surprisingly inventive—is also their liability. There's something distasteful about hearing the stamp of your favorite artists on every cut. *It's a Done Deal*, for instance, is rife with *Day Tripper*-like guitar riffs, *Leavin' in Your Eyes* is cut straight from the Phil and Don Everly mold, *Side of the Road* has a Dylanesque *Subterranean Homesick Blues* approach, and the Byrds are all over *All Said and Done*, right down to the twelve-string-guitar framework. And so it goes. Foster and Lloyd are talented fellows, but now that we've seen how well they can mimic their influences, it's time to see what they can do on their own. *A.N.*

JOHNNY GILL. Johnny Gill (vocals); vocal and instrumental accompaniment. *Rub You the Right Way*; *Fair-weather Friend*; *Wrap My Body Tight*; *Feels So Much Better*; *Never Know Love*; and six others. MOTOWN MOT-

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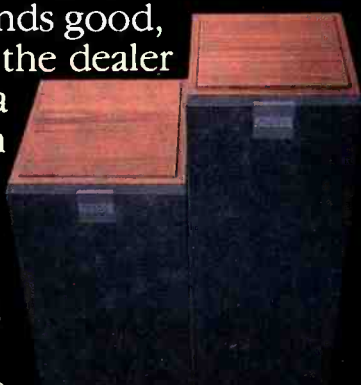
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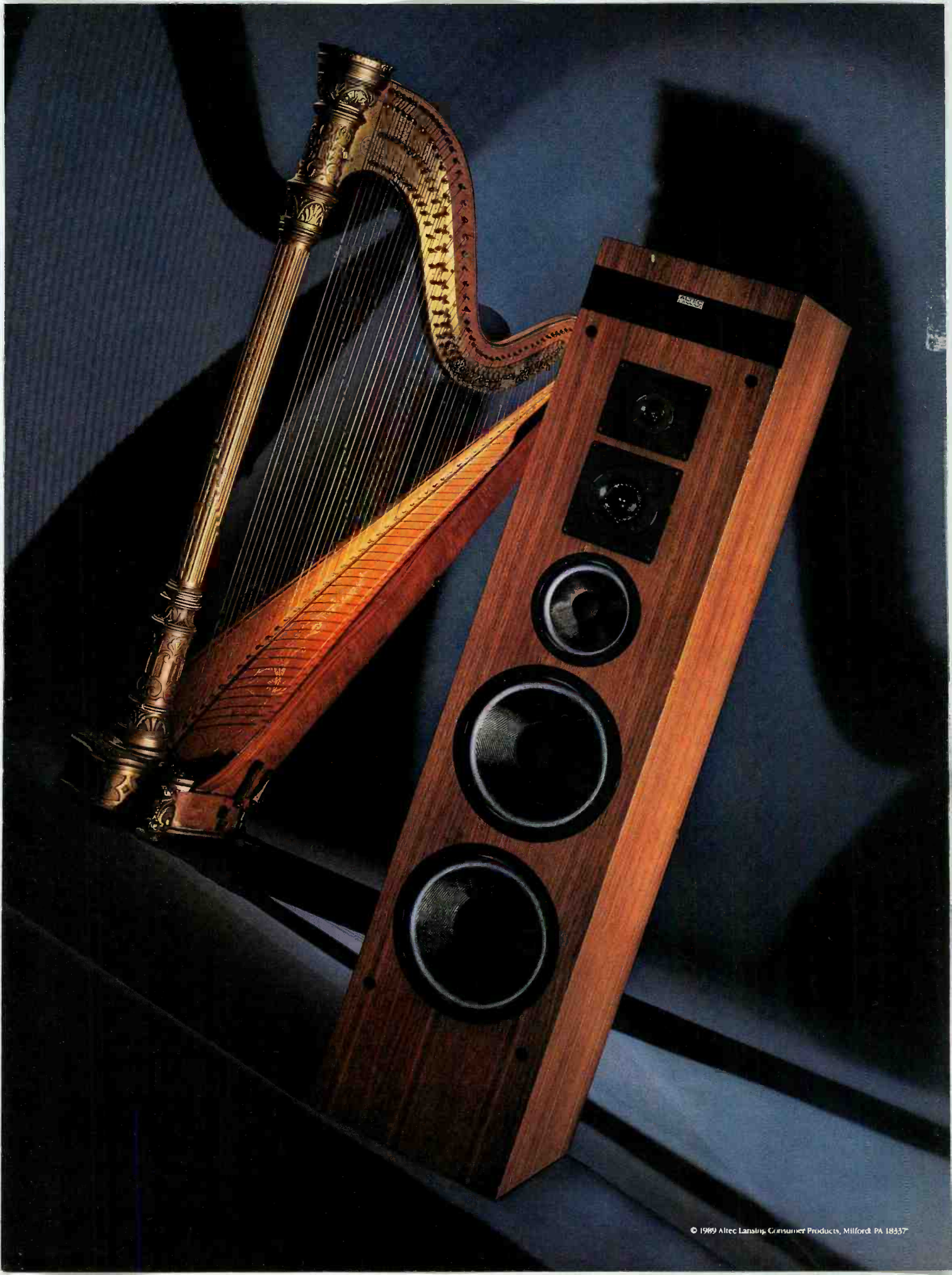
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6283, © MOTC-6283, © MOTD-6283 (49 min).

Performance: *First-rate balladeer*
Recording: *Satisfactory*

Johnny Gill, a former lead singer with the New Edition, is no new Marvin Gaye, as his Motown promotional material asserts, but he is a first-rate soul balladeer with a highly appealing, intimate style that commands attention. In this debut album, for which he's been given star-level production, he's at his best in the ballads, which include one shimmering jewel, *My, My, My*, where Gill exudes the kind of sensuality and dramatic intensity that grips the listener and never lets go. In fact, this song and Gill's interpretation of it are good enough to be worth the price of the album, though there are plenty of other goodies. P.G.

BRUCE HORNSBY AND THE RANGE: *A Night on the Town*. Bruce Hornsby and the Range (vocals and instrumentals); other musicians. *A Night on the Town*; *Carry the Water*; *Fire on the Cross*; *Barren Ground*; and six others. RCA 2041-1-R, © 2041-4-R, © 2041-2-R (56 min).

Performance: *Rockier*
Recording: *Good*

In his first two albums, Bruce Hornsby carved out a distinctive niche in pop music. The sound of his music has become instantly recognizable, so much so that Don Henley's recent hit *End of the Innocence*, co-written with Hornsby and featuring his sparkling piano, seemed more Hornsby than Henley, Henley's vocals notwithstanding. Now, in his own new album, "A Night on the Town," Hornsby is paradoxically not so instantly recognizable. Chalk it up to artistic growth.

Let me reassure Hornsby fans, however, that this album will sound familiar in parts. Hornsby hasn't given up on keyboards. Rather, this is mostly a Range album, with a greater emphasis on the band than before. And there are superb contributions from a variety of guest artists, including Jerry Garcia on guitar, Wayne Shorter on saxophone, Bela Fleck on banjo, and Shawn Colvin singing background vocals and one duet. To try and put it in some perspective, I would guess that if you've been a Hornsby fan before you'll probably like "A Night on the Town." If, on the other hand, you haven't been a Hornsby fan, you'll probably like it too.

As in Hornsby's previous albums, the songs he's written for this one—and those by his frequent collaborator, brother John Hornsby—hark back to their home state of Virginia and to the South in general. The two Hornsbys have succeeded, however, in creating a view of small-town life that applies to any region of the country. While the nature of the racism described in a song like *Fire on the Cross* may be specific to

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CIRCLE NO. 31 ON READER SERVICE CARD

the South, the provincial narrow-mindedness of *Across the River* can be found everywhere (and I say this as the native of a dinky Midwestern town). Hornsby's upright moral outlook has been demonstrated before, in songs like *The Way It Is* and *Look Out Any Window*. In "A Night on the Town," he's lost none of his righteous fire.

Musically, Hornsby has never rocked harder. Last year, before entering the studio with these tunes, he went on the road with the Range to break in the new

material. That changed the dynamic of his music considerably. The flowing quality of the first two albums and the dominant sweetness of his piano playing are less evident. In *Barren Ground*, a slow-but-sure duet by Hornsby and Shawn Colvin about physical/emotional/spiritual/environmental entropy, the dominant instrument is Jerry Garcia's ringing guitar. As Garcia squeezes out an ascending series of notes, like a spiritual telegraph operator, he lifts the song to another emotional level. This song is

a refreshing counterpoint to tunes like *Carry the Water*, which feature Hornsby's enjoyable but familiar keyboard ruminations. "A Night on the Town" represents the best of both worlds: It is true to the Hornsby style while striking out for new musical territory. *R.G.*

BART HOWARD: *Bart!* Bart Howard, K.T. Sullivan, Julie Wilson, William Roy (vocals); John Loehrke, Jeff Carswell (bass); Lenny Steinberg (drums); Howard and Roy (duo-pianists). *Imagining Things; Beautiful Women; Who Besides You; On the First Warm Day/My Love Is a Wanderer; Beware of the Women; Let Me Love You; When Somebody Cares; Walk-Up;* and nineteen others. PAINTED SMILES © PSCD-114 (61 min).

Performance: *Okay to super*
Recording: *Crisply up-front*

The wise, witty, insightful, occasionally cynical, mostly romantic songs of Bart Howard have long brought smiles to faces in the smartest supper clubs—especially if the incomparable Mabel Mercer or Felicia Sanders were singing them. But aside from *Fly Me to the Moon*, most of Howard's songs, numbering in the hundreds, have been recorded much too rarely. Along comes Ben Bagley, that tireless rescuer of neglected but worthy musical gems, to help remedy the situation.

At seventy-three, Howard's voice may not be as secure or pitch-steady as it once was, but he can still put across his own lyrics ingratiatingly, and certainly authoritatively. Even so, he has wisely limited himself to singing just a dozen of the generous twenty-eight songs included here—and he mixes those with the delicious chirpings of two of the most admired canaries on today's cabaret scene: veteran Julie Wilson and up-and-comer K.T. Sullivan.

Wilson drags all sorts of innuendos out of *It Was Worth It, Let Me Love You, and So Long As He Loves You* with her usual pungent style. But it's superstar-to-be K.T. who steals the show with her beguiling versions of *You Are Not My First Love, Who Besides You, Year After Year, Perfect Stranger*, and several others. Sullivan, who's something of a cross between Barbara Cook and Bernadette Peters, with a dash of early Irene Dunne, has the rare ability to convey vocally both foxiness and insouciance, sometimes within the same song. And she teams up with the urbane and always first-class pianist-singer William Roy for a few delightfully animated duets. *R.H.*

NITTY GRITTY DIRT BAND: *The Rest of the Dream* (see *Best of the Month*, page 96)

PRETENDERS: *Packed!* Chrissie Hynde (vocals, guitar); other musicians. *Never Do That; Let's Make a Pact; Millionaires; May This Be Love; No Guar-*

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antee; *When Will I See You*; and five others. SIRE 26219-1, © 26219-4, © 26219-2 (39 min).

Performance: *Honest*
Recording: *Fine*

"Packed!" the first Pretenders album in four years, initially seems offhand, casual, and even a little perfunctory. Chrissie Hynde, essentially the one and only Pretender, slaps a new title (*Never Do That*) on an old song (*Back on the Chain Gang*), covers Jimi Hendrix for the second time in a row, and leaves loose threads—studio chatter, count-downs, and sloppy endings—hanging on the album. "Packed!" contains the only truly bad song she has ever written, *Millionaires*, and, overall, doesn't seem to know where it wants to go. Emotional anomie, however, might just be the point; in one of her most telling lyrics, Hynde sings, "Give me a sense of purpose/A real sense of purpose now."

While "Packed!" might lack the fire and fury of the first few Pretenders albums, it's honest and refreshingly unpretentious. Hynde isn't pretending she's resolved all her contradictions into a neat and tidy bundle. One minute she's speed-rapping over a cranked-up punk-tempo blowout; the next she's wearing her heart on her sleeve in a confessional ballad. Throughout the album, Billy Bremner's crisp, chiming guitar is as sentimental in its yearning as are Hynde's repeated cries for a lover's attention: "When will I see you?" "How do I miss you?" and "Don't you wanna take me home?" are three of her repeated importunings. She is most effective in the slower, more personal songs. Indeed, her beautifully detailed vocal in *Let's Make a Pact* may be the finest singing of her career.

Mixing expressions of vulnerability with cries of outrage at obscene wealth, razed home towns, and the like, Hynde has painted an honest, unretouched portrait of herself and her feelings about the world. It's not a perfect album, but it's a genuine one—and somehow that means more. P.P.

ULTRA VIVID SCENE: *Joy 1967-1990*. Ultra Vivid Scene (vocals and instrumentals); other musicians. *It Happens Every Time*; *Staring at the Sun*; *Three Stars*; *Special One*; *Grey Turns White*; *Poison*; and six others. 4AD/COLUMBIA C 46227, © CT 46227, © CK 46227 (43 min).

Performance: *Paisley pop*
Recording: *Very good*

Echoes of Syd Barrett and woozy psychedelic pop circa 1967 waft like incense through the music of Ultra Vivid Scene. As was the case in the Sixties—and it still holds true today—psychedelia is the place you go when reality offers not enough of some things and way too much of others. As such, "Joy 1967-1990" is a diverting place to let your mind wander in a hypnotic slip-

stream of imagistic pop with a slight undercurrent of danger tugging in the other direction.

New Yorker Kurt Ralske, who formed Ultra Vivid Scene, is something of a one-man band. His drowsy, boyish voice calls to mind the North Carolina pop savant Mitch Easter. The main difference between Ralske's Ultra Vivid Scene and Easter's Let's Active is technology, with Ralske utilizing programmed drums and synthesizers while Easter generally plays it straight. To my

mind, "Joy 1967-1990" is one hands-on drummer shy of being a terrific pop record; the chinky percussion tracks simply lack the organic dimension essential to music of so colorful a stripe. Still, it's first-rate trance-pop, especially when Ralske locks into an energetic little run of songs near the beginning that includes *Staring at the Sun* and *Three Stars*. P.P.

WORLD PARTY: *Goodbye Jumbo* (see Best of the Month, page 95)

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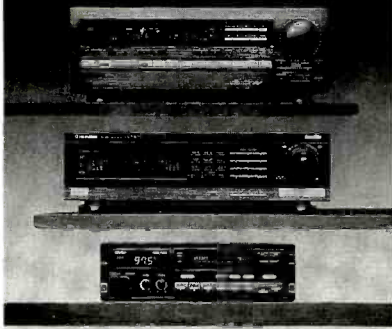


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JAZZ

JACK DEJOHNETTE: *Parallel Realities*. Jack DeJohnette (drums, keyboard bass); Herbie Hancock (piano); Pat Metheny (guitars, synclavier). *Jack In; Exotic Isles; Dancing; Nine over Reggae*; and three others. MCA ● MCA-42313, © MCAC-42313, © MCAD-42313 (55 min).

Performance: *Stagy*
Recording: *Too much reverb*

Drummer Jack DeJohnette's background is broad in scope, ranging from work with T-Bone Walker and various Chicago blues groups to stints with Coltrane, Monk, and Miles Davis. He played with Davis in his style-setting "Bitches Brew" album and ever since has been closely identified with high-energy synthesized jazz forms, but he has never stepped on the treadmill of formulas that traps pop-market seekers. True jazz fans will find "Parallel Realities," the drummer's new album, to be a cut above most fusion fare, but such fence straddling is not my cup of tea. Herbie Hancock is present playing acoustic piano, guitarist Pat Metheny contributes fine moments, and DeJohnette is excellent throughout, but this is essentially contrived music, created more with buttons and switches than with body and soul. "Album and CD recorded exclusively with Monster Cable," boast the credits; fine, but I wish there hadn't been quite so many cables used in the performance. C.A.

ROY HARGROVE: *Diamond in the Rough*. Roy Hargrove (trumpet); Ralph Moore (tenor saxophone); Antonio Hart (alto saxophone); Geoffrey Keezer, John Hicks (piano); Ralph Peterson, Jr., Al Foster (drums); others. *Proclamation; Ruby My Dear; A New Joy; Confidentiality; Broski; Whisper Not*; and five others. NOVUS 3082-1-N, © 3082-4-N, © 3082-2-N (63 min).

Performance: *Persuasive*
Recording: *Excellent*

On the evidence here, trumpeter Roy Hargrove has a bright future: "Diamond in the Rough," his debut recording as a leader, has more polish than the album title would indicate. The straight-ahead bop set presents Hargrove with two groups—a sextet, with fine work by tenor saxophonist Ralph Moore and pianist Geoffrey Keezer, and a quintet propelled by drummer Al Foster. Both groups also feature noteworthy performances by alto saxophonist Antonio Hart, who clearly deserves greater exposure than he has been given. Hargrove himself has a crisp, engaging tone and a style that perhaps still owes too much to others, but he should eventually find his own path. Remember, there was a time when Dizzy Gillespie's work was virtually indistinguishable

from that of another Roy, the late Roy Eldridge, so I wouldn't worry about Roy Hargrove's derivative output. His playing is remarkably mature for a man who, judging by the photo, looks to be in his late teens. C.A.

CHRISTOPHER HOLLYDAY: *On Course*. Christopher Hollyday (alto saxophone); Larry Goldings (piano); John Lockwood (bass); Ron Savage (drums). *No Second Quarter; Lady Street; Memories of You; Hit and Run; West Side Winds*; and five others. NOVUS ● 3087-1-N, © 3087-4-N, © 3087-2-N (51 min).

Performance: *Substantial*
Recording: *Very good*

Christopher Hollyday's first Novus album was an ear-opener featuring a quintet with trumpeter Wallace Roney, pianist Cedar Walton, and drummer Billy Higgins. His second, "On Course," is an aptly named quartet date featuring young musicians whose names have yet to be established, and they deliver an excellent set under a very gifted leader whose music is marked by good taste, control, and a healthy sense of tradition. The influence of Charlie Parker and Jackie McLean is clear, but it does not stand in the way of Hollyday's ability to make distinctive statements. His group of relative unknowns can wail with the best of them, and I can't remember when, say, Herbie Hancock, George Benson, or Miles Davis made an album that was half as good as this one. If Hollyday stays on this course, there's no telling how high he'll soar. C.A.

KEITH JARRETT: *Changeless*. Keith Jarrett (piano); Gary Peacock (bass); Jack DeJohnette (drums). *Dancing; Endless; Lifeline; Ecstasy*. ECM © 839 618-4, © 839 618-2 (49 min).

Performance: *Absorbing*
Recording: *Excellent remotes*

At the dawn of the fusion era, Keith Jarrett had great success with his extended, lyrical solo-piano improvisations, in concert as well as on records. This new release, featuring 1987 concert recordings by Jarrett and two stellar rhythm men, Gary Peacock and Jack DeJohnette, has the pianist still playing long, drawn-out pieces, being as lyrical and creative as ever, and generating the same kinds of enthusiastic responses from audiences in Denver, Dallas, and Houston. This is not the kind of music one wanders in and out of, and though I remain a fan, I still think Jarrett has a tendency to stretch his pieces too far; there often comes a point where I lose my concentration. For the most part, however, "Changeless" is an absorbing album. C.A.

NAJEE: *Tokyo Blue*. Najee (saxophones, flute); Fareed (guitars); other musicians. *Talkin'; Stay; Cruise Control; I'll Be Good to You; Tokyo Blue; Buenos Aires; (Superwoman) Where Were You When I Needed You;* and three others. EMI E11H-92248, © E41H-92248, © E21S-92248 (47 min).

Performance: *Slick but sweet*
Recording: *Very good*

Najee serves up the sort of slick, easy-to-swallow instrumental popular music that is so much in vogue these days, but he does so with an admirable command of tone and technique on reeds, usually tenor or alto saxophone but also soprano sax and flute. From time to time he uses vocals to change the pace and break the monotony (one problem with this type of music is that the lead horn voice is merely backed by the other instruments without much interplay), yet he serves up this palatable fare with style. He's at his best here in the sweet numbers *Stay* and *My Old Friend*, but the set is consistently engaging if not particularly challenging. P.G.

MARCUS ROBERTS: *Deep in the Shed*. Marcus Roberts (piano); Scotty Barnhard, E. Dankworth (trumpet); Wessel Anderson (alto saxophone); other musicians. *Nebuchadnezzar; Spiritual Awakening; The Governor;* and three others. NOVUS ● 3078-1-N, © 3078-4-N, © 3078-2-N (42 min).

Performance: *Meaningful*
Recording: *Very good*

"Deep in the Shed," the title of Florida-born pianist Marcus Roberts's second album, refers to the "woodshed," or drawing board, to which one returns to hone one's craft. Roberts is indeed honing his skills, and evidence of that is offered here. He is still touring and recording with Wynton Marsalis, in whose group he replaced Kenny Kirkland five years ago, but—his ardent admiration of Marsalis notwithstanding—I suspect it won't be long before he truly strikes out on his own. Like Marsalis, Roberts has a respect for and understanding of jazz's past styles, which he uses wisely to adorn his own, more current ideas. Also like Marsalis, and Art Blakey before him, Roberts has used his key to open doors for new talent; his new album introduces five new players.

The influence of Ellington, too, is evident in this blues-oriented set, imparting an easygoing indigo mood to *Nebuchadnezzar* and *Mysterious Interlude* and providing familiar surroundings for trombonist Wycliffe Gordon's Nantonian grunts and growls. No one stands out among the newcomers, but time and experience are bound to remedy that. Time and experience have stood Marcus Roberts in good stead: He becomes a more interesting performer and composer with each release. This is a glorious album. C.A.

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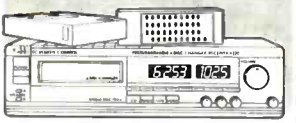
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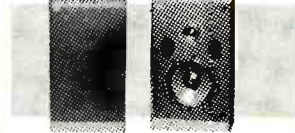
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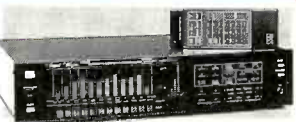
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 - Sima SL3 • Camcorder light, 20 watt, lightweight **\$79⁹⁵**
 - Velbon 470 • Video tripod, heavy-duty **\$79⁹⁵**
 - Video Link 270 • Intertaped to UHF converter **\$99⁹⁵**

A/V Furniture & Racks



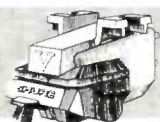
- Bell/Oggetti B-500 La Forza A/V Furniture**
- Metal with tempered glass shelves • Adjustable levelers • Upper section has 30-degree swivel • For TVs up to 100 lbs. • Black or white • 23 5/8" W X 30 1/2" H X 19" D
- Our Low Price **\$199⁹⁵** (BLG B500-color)
- Wood Technology W-410 • Speaker stands, 8" high Pair **\$34⁹⁵**
 - Speaker Uppers 2050 • Speaker stands, 12" w/casters Pair **\$59⁹⁵**
 - Target TAPIO • Speaker stands, adjustable, casters Pair **\$74⁹⁵**
 - Elite EL-35 • Audio cabinet, 3-shelves **\$99⁹⁵**
 - Elite EL-82 • TV/VCR cabinet, oak, casters **\$129⁹⁵**
 - Standesign Penta • Audio rack, 5-shelf, black ash **\$249⁹⁵**

Blank Video Tape



- Fuji T-120HQ VHS Tape**
- A high quality, general purpose video tape • Fine grain Barend particles are densely packed & uniformly dispersed for low noise & high output
- Our Low Price **\$29⁹⁰** 10-Pack (FUJ T120HQ)
- Sony L750ES • Beta Dynamican tape 10-Pack **\$29⁹⁰**
 - TDK T-120HS • VHS high standard 10-Pack **\$29⁹⁰**
 - Maxell T-120EX • VHS, standard grade 10-Pack **\$31⁹⁰**
 - TDK T-120EFG • VHS, extra high grade 10-Pack **\$34⁹⁰**
 - Scotch T-120EG+ • VHS, high grade 10-Pack **\$41⁹⁰**
 - Sony P-120 • 8mm metal video tape 10-Pack **\$52⁹⁰**

Phono Cartridges



- Shure V-15 Type V-MR Deluxe Micro Ridge Phono Cartridge**
- Micro ridge stylus tip • Excellent trackability • Dynamic stabilizer • Side-guard stylus protection • Duo-point alignment gauge • Top rated design
- Our Low Price **\$139⁹⁵** (SHU V15-VMR)
- Shure M92E • Universal mount, elliptical **\$9⁹⁵**
 - Audio Technica AT-125LC • Standard mount, linear contact **\$34⁹⁵**
 - Audio Technica AT-231LP • Universal mount, linear contact **\$39⁹⁵**
 - Stanton 681-EEEEHS • Standard mount, stereo/hedron **\$49⁹⁵**
 - Shure M-111HE • Universal mount, hyperelliptical **\$49⁹⁵**
 - Audio Technica AT-152MLP • P-mount, microline **\$99⁹⁵**

Disco Phono Cartridges



- Stanton 68CEL-MP Matched Pro Disco Cartridges**
- The choice of professional DJ's now comes in a pair of cartridges that are matched for output performance & frequency response
- Our Low Price **\$69⁹⁵** (STA 68OELMP)
- Stanton 500AL • Standard mount, spherical **\$19⁹⁵**
 - Stanton L-500AL • P-mount, spherical **\$19⁹⁵**
 - Stanton 500ALMP • Standard mount, 2-pack **\$29⁹⁵**
 - Pickering 625DJ • Standard mount, elliptical **\$32⁹⁵**
 - Stanton 68OEL • Standard mount, w/extra stylus **\$54⁹⁵**
 - Stanton 890AL • Standard mount, for pro use **\$64⁹⁵**

Disco Equipment



- Atus AM100 Stereo Preamp/Mixer**
- Inputs for two turntables, two line level inputs • Mic input • Talkover mic switch • Monitor system for cueing • Master bass & treble controls • VU meters display output
- Our Low Price **\$89⁹⁵** (ATU AM100)
- Gemini HPM-100 • Headphone/microphone, ideal for mixing **\$39⁹⁵**
 - Atus AM300E • Mixer, 5-band EQ, echo **\$199⁹⁵**
 - Gemini MX-6500SE • Mixer, 3-phono, sound effects **\$249⁹⁵**
 - Gemini MB-560 • Disco speaker, 15" woofer Each **\$325**
 - Gemini PDM-5000 • Mixer, w/digital sampling **\$449⁹⁵**
 - GLI PMX9000A • Mixer, pre-amp, w/EQ, scratch effect **\$449⁹⁵**

Blank Audio Tape



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- Metal/ferriic hybrid formula provides extraordinary performance using the high-bias settling • Ultra low noise • 10-pack plus 1-HDM-100 metal tape banus
- Our Low Price **\$27⁹⁵** 11-Pack (DNN HD8/100-10)
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 - Maxell MV90 • Vertex deluxe metal cassette Each **\$14⁹⁰**
 - TDK SAX-90 • Deluxe high bias cassette 10-Pack **\$19⁹⁰**
 - Sony SR-90 • Metal cassette 10-Pack **\$19⁹⁰**
 - Maxell XLIIIS-90 • High bias cassette 10-Pack **\$21⁹⁰**
 - Sony SR-100 • Metal cassette 10-Pack **\$21⁹⁰**

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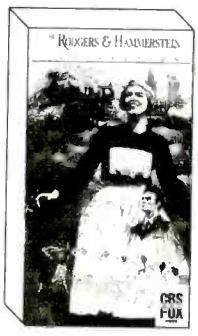
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Databanks/Reference



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- Selectronics 1000C • 10K databank, 10K character memory . . . \$26.95
- Selectronics HH220 • Desktop Wordfinder, thesaurus . . . \$34.95
- Franklin ACE 200 • Pronounces/spells 90K words . . . \$99.95
- Royal EM-200 • 64K databank, 6-line display . . . \$129.95
- Sharp OZ-7200 • Wizard 64K databank/calendar, etc. . . **CALL**
- Franklin LM-4000 • Language Master, 83K word-spell . . . \$249.95

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- Panasonic CQ-H05**
 Digital AM/FM Cassette Car Stereo
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 - Clarion SE-5361 • Speakers, 3-way system . . . Pair: \$59.95
 - Pioneer GM42A • Power Amp, 30 watts/channel . . . \$64.95
 - Sherwood SX-1092 • Speakers, 6" X 9", 3-way . . . Pair: \$79.95
 - Sherwood XR-2204 • Car Stereo, AM/FM/Cassette . . . \$99.95
 - Pioneer TS-TRX60 • Speakers, 2-way, 150 watt handling . . . Pair: \$189.95
 - Clarion 9772RT • Stereo, AM/FM/Cassette . . . \$229.95

Clock Radios



- Sony ICF-C240**
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 - Battery power backup system • Choose beige, gray or white finish
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 - Panasonic RC-6092 • Dual wake-up system, back-up . . . \$25.95
 - Sony ICF-C101W • Cube design, back-up . . . \$27.95
 - General Electric 74965 • Stereo w/cassette recorder . . . \$59.95
 - Sony ICF-CS950 • Stereo, dual alarm, line-in Jack . . . \$69.95
 - Panasonic RCX-250 • Stereo, dual alarm . . . \$74.95
 - Proton 320 • High-tech, dual alarm . . . \$99.95

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- Yamaha VSS-200**
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- Mid size with 49 keys • Voice sampling with detachable mic • 100 preset FM voices & sampled voices • Digital synthesizer voice editor • Requires 6 X C batteries
 - Our Low Price **\$79.95** (YAM VSS200)
 - Yamaha PSS-50 • Keyboard, 32-keys, 100 FM voices . . . \$39.95
 - Yamaha DD6 • Electronic drum pads, 100 PCM patterns . . . \$99.95
 - Yamaha PSR-18 • Keyboard, 61-keys, stereo . . . \$169.95
 - Casio CT-615 • Keyboard, 5-octave lane bank . . . \$189.95
 - Casio CT-670 • Full size keyboard, 12 note polyphonic . . . \$339.95
 - Casio CPS-300 • Keyboard, midi-compatible . . . \$379.95

Personal Care Specials



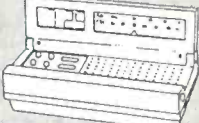
- Metro 9800**
 Electronic Digital Scale
- Highly accurate scale uses strain gauge technology • No moving parts • Only 1.25" thick • Steel construction • Large easy-to-read LED display • Black or White finish
 - Our Low Price **\$39.95** (MTS 9800-color)
 - Panasonic EV-228 • Panabrator massager, variable speed . . . \$39.95
 - Panasonic ER-200B • Beard/hair trimmer . . . \$49.95
 - Marshall 85 • Blood pressure monitor, LCD readout . . . \$54.95
 - Remington HR2 • Ladies hair remover, rechargeable . . . \$59.95
 - Interplak PB-2 • Plaque removal dental instrument . . . \$74.95
 - Braun 3550 • Mens deluxe electric shaver . . . \$88.88

Home Appliance Specials



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 - Black & Decker 9334 • Compact vacuum, rechargeable . . . \$39.95
 - Krups/130 • Coffee maker, 10-cup . . . \$54.95
 - Panasonic NI-682 • Steam iron, non-stick surface . . . \$59.95
 - Delonghi Alfredo • Euro-style toaster/oven, asst. colors . . . \$79.95
 - Sharp R3V80 • Microwave Oven, 500 watts . . . \$139.95
 - Panasonic NN-6509 • Microwave Oven, 1.1 cu. ft., 700 watts . . . \$199.95

Assorted Specials



- British Boston 4427**
 Portable Clock Radio
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 - Our Low Price **\$34.95** (BB 4427)
 - Braun AB-30VS • Alarm clock voice controlled . . . \$29.95
 - Zelco 10006 • Micro halogen lamp . . . \$39.95
 - Bushnell 13-7305 • Ensign Standard binoculars, 7 X 35 . . . \$42.95
 - SciSys Checkers-Table • Electronic checker game . . . \$49.95
 - SciSys Bridge • Electronic bridge game . . . \$89.95
 - SciSys Conquistador • Electronic chess game . . . \$129.95

Cordless Phones/Answers



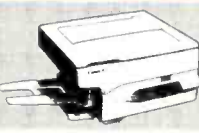
- AT&T 5500**
 Cordless Telephone
- Corded sound quality • Indoor/outdoor use • Extended life batteries • Speakerphone • Dual keypad • 9# memory • 10 channels • Digital security system • Lighted dial
 - Our Low Price **\$179.95** (ATT 5500)
 - Panasonic KXT-1450 • Answering Machine, beeperless remote . . . \$69.95
 - Panasonic KXT-3720 • Cordless phone, 10# speed dial . . . \$99.95
 - AT&T 5200 • Cordless phone, corded sound quality . . . \$119.95
 - Panasonic KXT-2634 • Answering Machine/Speakerphone . . . \$149.95
 - Code A Phone 5890 • Answering Machine/Feature phone . . . \$159.95
 - Phonemate ADAM • Digital Answering Machine/Phone . . . \$199.95

Typewriters/Word Processors



- Panasonic KX-W151C**
 Personal Word Processor
- 58,000-character text memory • 3.5" disk drive • 80-character X 25-line 9" CRT display • 63,000 Accu-Spell Plus dictionary • 45,000-word thesaurus
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 - Panasonic KXR-530 • Typewriter, 7K text memory . . . \$169.95
 - Canon Tpeyster 110 • AC/DC Portable Typewriter . . . \$179.95
 - Brother AX-550 • Typewriter, w/Word Processor features . . . \$219.95
 - Brother WP-760D • Word Processor, 70K dictionary . . . \$349.95
 - Brother WP80 • Portable Word Processor, Disk drive . . . \$499.95
 - Canon Stanwriter 80 • Word Processor, bubble jet printer . . . \$699.95

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 Personal Copier
- Fast speed of 10 copies per minute • Zoom lens allows reduction & enlargement: 70-122% • Stationary platen & document holder • Single toner cartridge system
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 - Sharp UX-181 • Fax, 10-page feed, 60# auto dial . . . \$649.95
 - Canon Fax 23 • Fax, paper cutter, 15 page feeder . . . \$749.95
 - Murata M2000 • Fax, paper cutter, 30-page feeder . . . \$999.95

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SOMETHING FIERCE THIS WAY COMES

by Steve Simels

ONE of the coolest things about rock-and-roll—at least in the days before such demystifying phenomena as an Establishment rock press and MTV—used to be the opportunity to discover stuff on your own. What, after all, could be more gratifying than stumbling across a neat record by some band neither you nor anybody at your school had ever heard of?

Of course, these days that kind of happy accident happens less frequently than it used to, perhaps because of the global consolidation of the entertainment industry and the resultant Orwellian manipulation of audience taste. But thanks to a small group of unrepentant musician/entrepreneurs worldwide, it still *can* happen. In fact, it just did, and therein hangs a tale.

Briefly, a package—a letter and a CD—recently crossed my desk. I didn't recognize the band responsible for the disc, but the note was from a reader who, some months before, had sent me a flattering fan letter. His new missive extolled the virtues of a group called Something Fierce, three youngsters from Wayzata, Minnesota, who are apparently, to paraphrase Mel Brooks, world famous in their home town.

Now, like most critics, I get similar packages fairly often, few of which I have the time to audition. Nevertheless, I decided to give the CD, titled "Franklin Pierce," a spin. And you know what? It was the best piece of rock-and-roll I'd heard in ages, a little masterpiece of wit and songcraft. True, there were obvious influences—the Beatles, XTC, Squeeze, all sorts of pop stuff ranging from the Sixties to the early Eighties—but the tunes were so unfailingly catchy, so wickedly funny (I defy anyone to listen to the gorgeous *Deep and Meaningful* without cracking up), and so beautifully played (Steely Dan guitar solos in a post-punk context?) that the group seemed like that rarest of rare birds: a young band with a fully devel-

oped, thoroughly original stylistic identity.

However you describe Something Fierce, it's a great band, and the only question left is, where has it been all my life? The answer, as I discovered during an expensive phone call to Jeff Carpenter, one of the band's two principal songwriters, is both mundane and inspiring. The trio has been in Minnesota, doing what they do for the love of it, with occasional breaks for graduate school and nonmusical jobs.

Brief bio: Something Fierce got together at Carleton College, a small liberal-arts school of 1,800 students near Minneapolis, in 1983. From the start, it was a songwriters' band: "We try to let the songs determine what our style is," Carpenter explained. The "Franklin Pierce" album, which the band billed in typically wry fashion as having "a fuller, more presidential sound," is actually their fourth—the first three were originally on cassette only. Although the guys still work day jobs, they play at least four or five nights a month to a devoted and expanding local following (they've already made back the money it cost to produce the "Franklin Pierce" CD).

Asked to describe the band's music, Carpenter came up with (in all seriousness) "original danceable pop," a characterization that could, of course, also be applied to Madon-

na, whom they in no way resemble. Later he added, almost offhandedly, "If we can't do what we do and be successful, I'd rather just do what we do."

That mildly quixotic attitude is probably why Something Fierce is off in the boonies making great music that I had to discover essentially by accident. Unlike the majority of the preening careerists featured on radio and TV today, these guys have taken to heart Rick Nelson's sage advice: You can't please everyone, so you might as well please yourself. But if, against the odds, it's still possible to discover a cool band on your own, there's no reason why said cool band can't get a big break eventually, and Something Fierce is so obviously good that I wouldn't discount the possibility.

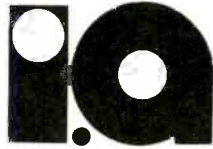
In the meantime, you can order "Franklin Pierce" c/o Something Fierce, 2220 Springwood Rd., Wayzata, MN 55391. Postpaid, the cost is \$9 for the cassette version and \$12 for the CD. Make the check payable to the band, and don't forget to ask about the rest of its catalog, including the wonderful "Something Fierce This Way Comes," featuring the dance classic *The Ironic Twist*, and the forthcoming Christmas single *Satan Claus* ("He's got eight reindeer—and *he fills them with fear!*"). Be the first kid in your school to get hep to these guys. □



Something Fierce: from left, Jerry Lefkowitz, Jeff Carpenter, and David J. Russ

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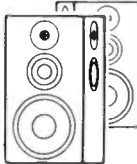
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• 24 preset station file • Parametric
equalizer
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TECHNICS SA-GX500
Quartz Synthesized
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• 150 W (80x2) • 30 W (15x2) rear AMP
• Dolby Surround System • 49 key
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• Parametric Equalizer • Preset EQ
curve memory
CALL FOR PRICE



JVC RX-703VBK
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• AM/FM Stereo Digital Receiver • 200
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• Built-In Synthesizer-Tuner • 40 memory
presets • 7 band EQ • 2pr. speaker
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JVC RX-903VBK
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Tuner • 80 presets • Preset Scan
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• 100 minutes perfect for
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TDK MA-90
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Remote Control Compact Disc Player
• Full function remote control with 10 key
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• 4 way repeat function
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TECHNICS SL-P370
Programmable
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• A new generation of CD player using
the MASH Digital-to-Analog converter
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SHERWOOD CDM-1260R
6-Disc CD Changer with Remote
• 4X oversampling • 16 bits • 2 DA Convertors
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• 10 key remote
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Rotary Compact Disc Changer
• Change discs during play with top-loading,
5-disc rotary design • Completely pro-
grammable: repeat and random play for 5
discs • Multi-function, 25 key wireless
remote control • Quadruple oversampling
• 20 step random access programming
CALL FOR PRICE



JVC XLM703BK
CD Multi-Changer
• 6+1 CD Changers player • Remote
control • Random Access program up to
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BRITTEN: *Sinfonia da requiem, Op. 20; Peter Grimes, Op. 33, Four Sea Interludes and Passacaglia; The Young Person's Guide to the Orchestra (Variations and Fugue on a Theme of Purcell), Op. 34.* Royal Liverpool Philharmonic Orchestra, Libor Pešek cond. VIRGIN © VC7 90834-2 (63 min).

Performance: *First-rate*
Recording: *Likewise*

The *Sinfonia da requiem*, composed in 1940 when Britten was still in his twenties, is one of those masterly pieces that somehow manages to emerge after long periods of puzzling neglect. Its background and its substance combine to make it a sort of preamble to the *War Requiem*. In any event, it is probably Britten's finest work for orchestra alone. It has been appearing in our concert halls in the last few years and is now represented by four or five recordings, including the composer's own on London. Libor Pešek's riveting new performance is no mere courtesy gesture by a Czechoslovak conductor who's taken over an English orchestra but the sort of musicmaking that bespeaks the most genuine commitment.

That impression is sustained in the other two works on the disc, which followed the *Sinfonia* by only a few years but are much more familiar. Pešek places the *Passacaglia* neither after the *Sea Interludes*, as is usually done, nor before them, as is sometimes done, but between the last two of them. The arrangement works very well—and, of course, one of the advantages of CD's is that if you don't care for his sequence you can program the one you prefer. In any case, you couldn't ask for a more convincing performance of this music.

The chronological programming makes for an exhilarating conclusion. It was the Liverpool Philharmonic—not yet "Royal"—that first performed and recorded *The Young Person's Guide to the Orchestra*, under Sir Malcolm Sargent in 1946, and one might infer a bit

of proprietary relish on the part of today's players and their conductor. The recording puts all three works in the most natural aural frame, from the perspective of a good seat smack in the center of a fine hall. R.F.

DONIZETTI: *Maria Stuarda.* Edita Gruberova (soprano), Maria; Agnes Baltsa (mezzo-soprano), Elisabetta; Francisco Araiza (tenor), Leicester; others. Bavarian Radio Chorus; Munich Radio Orchestra, Giuseppe Patané cond. PHILIPS © 426 233-2 two CD's (133 min).

Performance: *Very satisfying*
Recording: *Clear, resonant*

Donizetti's *Maria Stuarda* is based loosely on Schiller's verse tragedy and is written to a libretto built upon character relationships rather than action. It is also transcendent in its fecundity of melody, sweep of orchestration, and theatrical totality created by music alone. The technically superior new Philips recording is performed by artists who understand and have mastered the composer's florid and powerfully dramatic style. As Maria, Edita Gruberova delivers one of her best recorded performances. A few alternate end-of-scene high notes are unnecessarily assaulted and, unhappily, out of vocal focus, but she sings the role with expressive limpidity and brings to the helpless Maria a touchingly pitiable quality. Agnes Baltsa's Elisabetta conveys the contrasting qualities familiarly associated with England's great queen—strength, intense feeling, jealousy, hesitancy in the face of irrevocable action. These diverse facets of character are portrayed with a seamless mezzo-soprano that manages Donizetti's fioratura with the ease of a champion steeplechase racer.

Francisco Araiza sings Leicester with considerable effect. His instrument has darkened in recent years but without loss of agility, so that in this vocally rather light role he comes off to good advantage. As Cecil, Simone Alaimo uses his pleasing, fairly large baritone to re-create effectively the implacability of Elizabeth's foremost advisor in his desire for Maria's death. Francisco Ellero d'Artegna is effective in his scene with Maria as she confesses past wrongs; it is the one extended passage for this character, and the basso performs it with simplicity and sincerity. The Bavarian Radio Chorus's contributions to this most un-German of operas are full of dramatic fervor, tonal richness, and affecting pianissimo passages. Likewise, the Munich Radio Orchestra responds with precision and full-bodied tone to Giuseppe Patané's wishes and delivers a reading best described as opulent. The conductor himself paces and colors the

performance so that encounters between the various characters are at all times incisive and compelling. R.A.

DVOŘÁK: *Symphony No. 5, in F Major, Op. 76; Othello Overture, Op. 93; Scherzo capriccioso, Op. 66.* Oslo Philharmonic Orchestra, Mariss Jansons cond. EMI/ANGEL © CDC-49995 (64 min).

Performance: *Spirited*
Recording: *Good*

An interesting program this, inasmuch as it includes the last of Dvořák's "apprentice" symphonies (the only one of the early series he allowed to be published); the *Scherzo capriccioso*, representing the composer at the height of his Czech-nationalist phase; and the concert overture *Othello*, a score that paves the way for the late symphonic poems.

An airily bucolic tone pervades the opening movement of the F Major Symphony, along with influences from Brahms and pre-*Ring* Wagner, but the melodic contours are essentially in the genuine Dvořák mold. Even though the slow movement echoes the big opening tune of Tchaikovsky's B-flat Minor Piano Concerto, which was given its première the same year (1875) in Boston, the music is no less beguiling for all that. It is in the scherzo that we get the real McCoy—a sizzling dance movement that points straight to the Slavonic Dances. The finale is a bit long and weighty, but it brings the symphony to a conclusion with a jubilant return of the opening theme. Mariss Jansons and the Oslo Philharmonic are in top form throughout, tackling the music with splendid rhythmic address without neglecting its tenderly atmospheric qualities. The *Scherzo capriccioso* likewise goes with splendid dash, if not quite the

Gruberova: a touching Mary Stuart



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authentic Czech lilt that characterizes some other readings.

The neglected and fascinating *Othello* overture was conceived by Dvořák as the last of a trilogy of overtures on the subjects of nature, life, and love, following *In Nature's Realm* and *Carnival*. The composer himself conducted the trilogy in 1892 as part of a concert in New York's Carnegie Hall marking his appearance on the American scene as director of the National Conservatory, and his program notes for that occasion made clear that in *Othello* he had in mind the tragic final scene of the Shakespeare play. The performance here is first-rate, and, in a welcome move, EMI apparently altered its Oslo microphone setup to provide a greater sense of space and a touch more brightness than in its previous recording sessions there. *D.H.*

LISZT: *Piano Concertos Nos. 1 and 2; Hungarian Fantasy* (see Best of the Month, page 100)

MAHLER: *Das Lied von der Erde*. Brigitte Fassbaender (mezzo-soprano); Thomas Moser (tenor); Cyprien Katsaris (piano). TELDEC © 2292-26276-2 (61 min).

Performance: *Excellent*
Recording: *Ideal*

Mahler's piano version of *Das Lied von der Erde* was apparently lost for nearly eight decades. Stephen E. Hefling, who prepared the critical edition once the autograph materials came to light, provides an indispensable note with this recording, pointing out that this version is by no means a mere sketch or "study" for the well-known orchestral version but a fully developed alternative to be considered on its own terms. There are some curious differences, though. The four inner movements have titles different from those in the orchestral version—"Die Einsame im Herbst," "Der Pavillon aus Porzellan," "Am Ufer," and "Der Trinker im Frühling," respectively, instead of "Der Einsame im Herbst," "Von der Jugend," "Vonder Schönheit," and "Der Trunkene im Frühling"—and there are a few changes in the texts themselves. There are differences, too, in the music, as Hefling notes, in respect to pitch, rhythm, tempo, and nuance—and in the concluding "Abschied," which is nearly as long as the five preceding movements combined, these differences are fairly numerous.

While Mahler did indeed produce piano versions of his earlier orchestral song cycles or collections—*Lieder eines fahrenden Gesellen*, *Kindertotenlieder* and the other Rückert songs, and *Des Knaben Wunderhorn*—it does seem curious that he would want to provide a



Brigitte Fassbaender

"WINTERREISE"

LEST anyone assume that Brigitte Fassbaender's recording Schubert's *Winterreise* is merely some sort of stunt, Alan Blyth points out in his annotation for the German mezzo's new Angel disc that both Lotte Lehmann and Elena Gerhardt not only sang this cycle but wrote about the effectiveness of women singing "men's songs." Fassbaender sang *Winterreise* for the first time at the Schubertiade at Hohenems in the summer of 1987 and made this recording a year and a half later, having in the interim settled in and refined her interpretation. It is a noble one, seemingly effortless and uncontrived, projecting the directness and simplicity of the text with a power that is the greater for concealing the subtlety and thought behind it.

If the opening "Gute Nacht" seems a little metronomic at first, its treadlike regularity sets up just that lulling melancholy the text calls for. The same sort of common-sense directness insures an uncommonly convincing poignance and freshness in "Der Lindenbaum" and a pure, uncluttered luminosity in "Einsamkeit." Clearly, Fassbaender does not see these twenty-four songs as separate units but as inseparable parts of a continuous narrative. Pulse and momentum support that continuity in a sort of arch, reaching a peak of intensity—with an impression, wholly appo-

site to the texts, of self-restraint imposed over some resistance—in "Die Krähe" and "Im Dorfe." When the end is reached, in "Der Leiermann," the sense of finality is quietly, intimately overwhelming.

Fassbaender's voice quality itself suits the music and her approach to it splendidly. The sound is at all points lovely but never *too* pretty, suggesting a simple purity from which all nonessentials have been scrubbed away—as has, perhaps, the notion of *Winterreise* as a work to be sung only by men (even though Schubert himself may have so conceived it). The pianist is Aribert Reimann, the composer of the operas *Lear* and *The Ghost Sonata*, who has made an important second career as accompanist to some of today's outstanding singers. Let us remember that "to accompany," especially in such a work as this, does not mean merely "to provide a back-up" but rather "to be a companion." Reimann is a partner here, and a superb one; I cannot imagine the songs or the singer being better served. The sonic focus, too, is exemplary, and the booklet contains full texts and translations. *Richard Freed*

SCHUBERT: *Winterreise (D. 911)*. Brigitte Fassbaender (mezzo-soprano); Aribert Reimann (piano). EMI/ANGEL © CDC 49846 (70 min).



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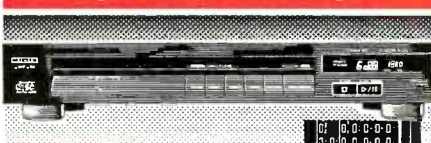
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similar alternative in the case of a work that he did not regard as a song cycle but took pains to label a "symphony." To most of us by now, and by no means solely because of familiarity, the orchestral textures constitute an essential part of the work, of its character and substance as well as its form, such that we cannot imagine its having been conceived in other than symphonic terms. Even in such a committed and largely persuasive presentation of the piano version as this one, it is not so much that the piano part sounds like a reduction of the orchestral one as that the dimensions indicated in the *vocal* writing seem scaled more to symphonic than to keyboard partnership.

Apart from such admittedly subjective observations, it must be said that this CD makes as strong a case as can be imagined for the piano version. Brigitte Fassbaender, who seems to thrive on exploring unusual or unexpected approaches to familiar works, responds with somewhat greater urgency and poignancy here than in her recording of the orchestral version with Carlo Maria Giulini for Deutsche Grammophon—perhaps because she is aware that so much more is riding on her own contribution in this case. Thomas Moser does not suggest great reserves of strength, but in general he is also a sympathetic and persuasive interpreter. Cyprien Katsaris, of course, has recorded a lot of orchestral music in piano transcriptions (all the Liszt settings of the Beethoven symphonies), and this may perhaps have equipped him with special insights for such an assignment. In any event, he discharges it heroically and with the greatest taste and sensitivity.

It seems unlikely that anyone would choose the piano version of *Das Lied* in preference to the orchestral one, but for those who may be interested in it for comparison's sake, it is even more unlikely that it will be brought off more persuasively by any other team. Teldec has put it all in ideal aural perspective and provided full texts and translations. R.F.

MENDELSSOHN: *Symphony No. 1, in C Minor, Op. 11; Symphony No. 5, in D Major, Op. 107 ("Reformation").* Leipzig Gewandhaus Orchestra, Kurt Masur cond. TELDEC © 44933-2 (55 min).

Performance: *Muscular*
Recording: *Rich, reverberant*

The New York Philharmonic's music director-designate, Kurt Masur, here completes his Mendelssohn-symphony cycle with the Leipzig Gewandhaus Orchestra, with which the composer's name is indissolubly associated. The C Minor Symphony (1824), Mendelssohn's initial foray into full-scale symphonic writing, is redolent of Beethoven and Weber in the first movement and of the brusque side of Mozart in the third-movement menuetto. The Weber ele-

ment comes to the fore in the finale, but there is also some powerful fugal development that shows conclusively the young composer's mastery of the musical nuts and bolts. As set forth in a sinewy performance by Masur, the First Symphony emerges as a work of considerable power.

The *Reformation* Symphony, Mendelssohn's second full-scale symphony (notwithstanding its being numbered as the Fifth because of its posthumous publication), was written to celebrate the three-hundredth anniversary of Lutheranism. Masur, however, seems intent on soft-pedaling those ceremonial associations, which have often led to overly pompous readings, in favor of tempos that evoke the purely festive in a secular sense. There is no lingering in the slow introduction, though the Dresden Amen is intoned with due mystical reverence. The delightful scherzo sounds a mite pushed to my ear, but the brief and somber slow-tempo bridge to the finale is done to telling dramatic effect. The finale, built around the chorale *Ein feste Burg ist unser Gott*, is the movement that trips up many performances if the pomp is overdone. Masur views the finale as more of a people's celebration than a solemn church ritual, and I believe the music is better for it. In short, this is a provocative and stimulating reading.

My one reservation has to do with the reverberation characteristic of the Neues Gewandhaus where the recording was made. While it results in very wide-ranging and full-bodied sound, in the strings especially, it also makes for ill-defined timpani strokes. Though Claudio Abbado offers a more conventional interpretation in his Mendelssohn cycle with the London Symphony on Deutsche Grammophon, the recorded sound is virtually ideal from every standpoint. If the music's the thing, however, I would not pass up this unusual reading by Masur. D.H.

PURCELL: *The Fairy Queen.* Nancy Argenta, Lynne Dawson (soprano); Charles Daniels, Jean-Paul Fouchécourt (countertenor); Thomas Randle (tenor); Bernard Deletré, Thomas Lander (bass); Les Arts Florissants, William Christie cond. HARMONIA MUNDI © 401308/9 two cassettes, © 901308/9 two CD's (129 min).

Performance: *Buoyant*
Recording: *Fine*

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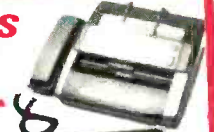
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cell's music for *The Fairy Queen*, an adaptation of Shakespeare's *A Midsummer Night's Dream*, we hear nothing of the confused couples who have escaped the Duke's court, nor of Titania and Oberon's quarrels, nor even of Bottom and his rustics, all of whom are a part of the spoken "poetical tale." What we hear are the numerous songs and choruses as well as the incidental music to the various masques: There's the one in which a drunken poet wanders into Titania's court and is pinched into unconsciousness by her attending fairies, and another, a masque of night, which is meant to lead the Fairy Queen into pleasant slumber. Oberon's birthday is celebrated by a splendid masque of the seasons, and the final nuptial masque introduces Juno and Hymen amid a good deal of chinoiserie. This is all interspersed with the dance music that opens and closes each of the work's five acts.

In order to re-create the full spectacle in your mind's eye, you'll have to study the accompanying booklet very carefully, as you also will to comprehend the sequence and the elaborate "scenes and machines." But Purcell's music is so strong and luminous that it stands firmly on its own, and you'll be thoroughly beguiled by its beauty even without the visual trappings that a recording must leave to the listener's imagination.

As we have come to expect from William Christie's recordings with Les Arts Florissants, the performance is indeed a very good one. His principal soloists include Nancy Argenta, who sings the three roles of Night, Spring, and Juno in a clear, well-articulated soprano; Lynne Dawson, who gives us a most moving *Plainte*; and Thomas Randle, whose light tenor is a joy in his many solos as *Phoebus*, *Autumn*, and a Chinese man. You can almost smell the fumes of the Drunken Poet's breath as rendered by Bernard Deletré, and when he's joined by Jean-Paul Fouchécourt as *Mopsa*, rowdiness reaches even greater abandon. The choral singing, of a transparency that allows us to hear the inner workings of Purcell's pungent lines, is especially splendid in the *Handelian Masque of the Seasons*.

The instrumental overtures, preludes, and dance pieces receive buoyant per-

formances, to say the least. Many of them, in fact, are played so fast that one expects the Keystone Kops to make the next entry rather than the fairy cohorts of Queen Titania. But in the end, I think, it must be pointed out that Christie has refitted this work, which in its day would have been presented as a large-scale English theatrical event, to the overrefined setting of the French salon. I question his constant use of double-dotting and rhythmic alterations. While they are effective at times, they very often weaken the strong rhythmic profile of Purcell's music. Also, his mix of English and French singers presents some problems regarding diction. The French forces do very well indeed, but there are lapses as an occasional vowel is nasalized or the rendering of a phrase is decidedly more Gallic than English. Altogether, though, this is a spirited and beautifully prepared production. *S.L.*

RAMEAU: *Les Surprises de l'Amour*. Les Musiciens du Louvre, Marc Minkowski cond. ERATO © 245 004-2 (52 min).

Performance: *A breakthrough*
Recording: *Resonant*

This is the first recording of a work that's important to the current French Baroque revival, both for the forward-looking nature of the music itself and for the way it's performed. While the music, a suite of dances arranged according to an elaborate mythological program, has all the surface gentility of its time, the mid-1700's, there are also startling flashes of ambiguous tonality and oddly contrasting cross rhythms. Accordingly, Marc Minkowski and his Musiciens du Louvre adopt an expansive style of performance that puts a certain emphasis on the thorny, impertinent side of Rameau's musical personality. Their approach is more convincing than the leaner, more Handelian style of Rameau by John Eliot Gardiner and Frans Brüggen or the more voluptuous style of Sigiswald Kuijken. Minkowski has not only given us an extremely enjoyable recording of some extremely charming music but has contributed greatly to our understanding of the French Baroque. *D.P.S.*

SCHUBERT: *Piano Sonatas; Valses sentimentales* (see *Best of the Month*, page 96)

SCHUMANN: *Fantasiestücke, Op. 12; Blumenstück, Op. 19; Davidsbündler-tänze, Op. 6*. Vladimir Ashkenazy (piano). LONDON © 425 109-2 (71 min).

Performance: *Mostly elegant*
Recording: *A little too close*

Over the years, Vladimir Ashkenazy has been one of the most consistent sources of musical pleasure in a reasonably broad, if not exactly all-encompassing, repertory. If there is anything at all negative to be said about this fourth installment in his new Schumann cycle, it is only by the measure of what he himself has led us to expect, and even at that it amounts to rather little: simply that in several of the more declamatory episodes he tends to sound a little uncharacteristically aggressive, if not quite coarse. It is an effect that may, in fact, have been created, or in any event enhanced, by the very close-up recording, which has the piano sounding a bit larger than life. Just turning down the playback level doesn't seem to help. Otherwise, there is little to speak of other than the unselfconscious elegance that illuminates all of this pianist's work. There is no end of poetry in the quieter sections, in which we are reminded of how true to life London/Decca's piano reproduction can be. This is a fine issue in so many respects; let's hope for a little more restraint in the sonic focus next time. *R.F.*

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Performance: *Very satisfying*
Recording: *Superb*

The early-instrument movement has been working its way up past Beethoven into the high tide of Romanticism for some time now. And here we are. Roger Norrington, who has recorded the Berlioz *Symphonie fantastique*, is, in fact, a very sympathetic interpreter of the early Romantics, and these popular, colorful, and lyric tone poems are very fresh-sounding in this new/old guise. The works here range from Schubert's 1820 overture to *Rosamunde* to the overture to the 1841 version of Wagner's *The Flying Dutchman*, which even in its earliest form strains the resources of the Classical orchestra.

It looks as if we're going to need a whole different period orchestra for works of the later nineteenth century—one for each decade, perhaps! *E.S.*

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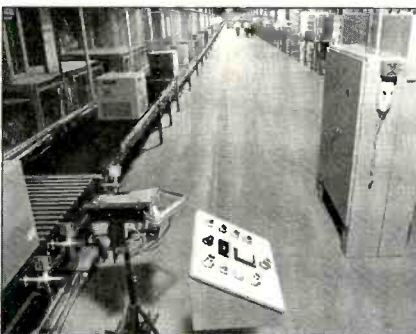
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SEPTEMBER



by Christie Barter
& Maryann Saltser

THE French composer and conductor **Pierre Boulez**, who celebrated his sixty-fifth birthday earlier this year, is being honored by Sony Classical with an "edition" all his own, the rerelease on CD of all of his CBS Masterworks recordings. The "Boulez Edition" will eventually comprise some fifty CD's documenting a recording career spanning more than twenty years.

Boulez has been acclaimed for his recordings of twentieth-century classics by such composers as Debussy, Ravel, Stravinsky, Bartók, and Berg as well as of his own works. Among the initial rereleases is a coupling of his *Éclat/Multiples* for fifteen in-



Boulez: a new edition

struments and the orchestral *Rituel in memoriam Maderna*. His years as music director of the New York Philharmonic (1971-1977) are represented in albums of music by Varèse and Berg as well as a three-CD set containing the complete orchestral music of Ravel. Also due this fall: rereleases of Boulez conducting Schoenberg and Webern. □

PERFORMING live for the first time in fifteen years, **David Cassidy** gave a sneak preview of his new Enigma album scheduled for September release. Cassidy was on hand for Enigma's "Last Groove at the Grove" party, the last official function before demolition of the famous Coconut Grove night club in



Cassidy: goodbye, Coconut Grove

Los Angeles. The crowd screamed in recognition as the former Partridge Family heartthrob opened with the first verse of *I Think I Love You* before getting into new material. Some of rock's most celebrated producers are working with Cassidy on the new record, including Phil Ramone (Paul Simon, Billy Joel) and Eric Thorngren (Talking Heads, Ramones, Huey Lewis). All but two of the songs were co-written by Cassidy. □

ON the evening of July 7, the eve of the World Cup finals in Rome, the world's three leading tenors—soccer fans **Luciano Pavarotti**, **Plácido Domingo**, and **José Carreras**—appeared and sang together for the first time on any stage at the Italian capital's ancient Baths of Caracalla. London Records taped the concert for release this month on compact disc, audio cassette, videodisc, and VHS videocassette.

Pavarotti's recording of "Nessun dorma" from Puccini's opera *Turandot* was used as the World Cup's unofficial musical theme, which probably accounts for the startling rise of the album from which it's drawn, "The Essential Pavarotti," to the No. 1 spot on the British pop charts at the end of June. According to London/Decca, this was the first time a classical album had ever reached the top of the pops in the U.K. □

PRODUCER **Jolie Jones** (Quincy's kid) has enlisted the help of some special friends to work on a music-video project about recycling. *Yakety Yak*, *Take It Back*, *Separate Your Papers from Your Trash* will serve as the centerpiece of a major recycling campaign to be sponsored by the Take It Back Foundation, which was co-founded by Ms. Jones. **Debbie Gibson**, **Quincy Jones**, **Carlos Santana**, **B.B. King**, **Natalie Cole**, **Tōne Lōc**, **Paula Abdul**, **Joe Cocker**, **Randy Newman**, **Charlie Daniels**, **the Judds**, and a host of others are set to join Jones and her production team at A&M studios in Los Angeles when production gets under way in early September.

The song used in the video is based on the 1958 tune by songwriters **Leiber** and **Stoller**. By incorporating special

effects and animation, Jones hopes to get the recycling message across to young people especially. "Kids need to assume responsibility," Jones said, "because they're the ones who are going to be left here with all the garbage." □

AUSTRALIAN rockers **Midnight Oil** added a noon-time mini-concert to their scheduled two-night stand at New York's Radio City Music Hall this past May. An estimated 10,000 fans spilled onto Sixth Avenue in front of the Exxon building to hear their favorite environmentally conscious band perform on top of a couple of flatbed trucks beneath a banner proclaiming, "Midnight Oil Makes You Dance, Exxon Oil Makes Us Sick." Between songs such as *Dreamworld*, John Lennon's *Instant Karma*, and *Blue Sky Mine*, lead singer **Peter Garrett**, who is also president of the Australian Conservation Foundation, talked of corporate responsibility and pleaded for better treatment of the earth. The show was broadcast live by metropolitan New York-area radio stations and was filmed for possible release as a long-form video or documentary. □

IN honor of the Silver Anniversary of *The Sound of Music*, CBS/Fox Video is releasing a special edition of the popular musical as part of a new Rodgers and Hammerstein Collection. The collec-

Domingo, Pavarotti, and Carreras: world-class soccer fans



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tion also includes *The King and I*, *South Pacific*, *Oklahoma!*, *State Fair*, and *Carousel*. The last two classic musicals are new to home video, and all six films have been remastered for this release. *The Sound of Music* is priced at \$24.95, the others at \$19.95.

Originally released to America's movie houses in 1965, *The Sound of Music*, starring Julie Andrews, received five Academy Awards that year, including Best Picture. The original Broadway production of 1959, which starred Mary Martin, was the eleventh and final collaboration between Richard Rodgers and Oscar Hammerstein II. The original-cast and soundtrack albums have both been rereleased on CD. □



Andrews in *The Sound of Music*: anniversary revival

recordings. Subsequent BMG releases featured the young pianist as soloist in concertos by Prokofiev, Shostakovich,

BMG has compiled a two-CD "musical portrait" of Kissin, to coincide roughly with his New York Philharmonic debut and his first solo recital in this country, at Carnegie Hall on September 30. BMG will also record that recital. □

GRACENOTES. The Public Broadcasting System's popular summer series "American Masters" continues with an August 20 program titled *John Hammond: From Bessie Smith to Bruce Springsteen* that documents the work of the late record producer, who in the course of a long career discovered and developed some of the most talented and influential American popular artists. The program includes performance clips, audition tapes, and interviews with such diverse musicians as Count Basie, Bob Dylan, and George Benson. . . . Deutsche

and Haydn. A Mozart concerto disc is planned for release in 1991. Meanwhile,

Midnight Oil: sick of the slick

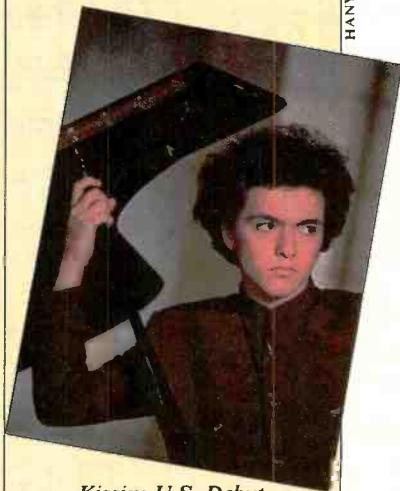


Jones: refuse refusenik

ADISTINCT highlight of the early 1990-1991 season is the American debut of the Russian pianist Evgeny Kissin, who will perform at Lincoln Center this month with the New York Philharmonic under Zubin Mehta. Kissin, barely nineteen, will play both of the Chopin piano concertos, works he recorded live with the Moscow State Philharmonic at the tender age of twelve.

Kissin's first studio recording, of Rachmaninoff's Second Piano Concerto, followed his London debut at the Barbican Center in 1988. It was released at the end of that year by BMG Classics, the company for which Kissin has made most of his

Grammophon has just released laserdisc and videotape versions of "Bernstein in Berlin," the No. 1 best-selling record of Beethoven's Ninth Symphony as conducted by Leonard Bernstein at the end of last year to celebrate the collapse of the Berlin Wall. . . . "Theodore," which CBS Records calls an alternative-music sampler, contains a number of previously unreleased or nonalbum tracks by such artists as Kate Bush, Big Audio Dynamite, Poi Dog Pondering, and the Psychedelic Furs. . . . Recently signed to new or renewed long-term exclusive recording contracts are the conductors Daniel Barenboim (Erato) and Günter Wand (BMG) and the pianist Ivo Pogorelich (Deutsche Grammophon). . . . DRG has



Kissin: U.S. Debut

formed a subsidiary label called Cabaret devoted to such club performers as Julie Wilson, Margaret Whiting, Sylvia Syms, and Andrea Marcovicci. . . . Soprano Jessye Norman was the recipient of six honorary doctorates this year, from the New School for Social Research, Yale, Juilliard, Western New England College, Kenyon College, and Edinburgh University. . . . The first multi-Platinum single of the Nineties is Madonna's *Vogue*, which was certified by the Recording Industry Association of America for over two million in sales—in less than three month's time. □

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EBET ROBERTS

by *Ralph Hodges*



A SOLID CENTER

IN his recent report on the eighth international conference of the Audio Engineering Society ("Technical Talk," July 1990), Julian Hirsch concentrated exclusively on headphone stereo. I'd like to concentrate on loudspeaker stereo, particularly on the on-again off-again issue of the value of a center channel for stereo reproduction.

Way back when, the concept of stereo wasn't even out of the box before there were predictions that a center channel would be essential. The recording industry was not impressed, however, and to this day the center sonic image in music studios remains a "phantom" image, unsupported by an actual loudspeaker.

For its part, the motion-picture industry has special requirements that make the center channel the most important carrier of audio information, and a center speaker has always been dedicated to it. It is evidently this situation, together with Dolby Laboratories' strong advocacy of a center speaker for both cinema and home-theater presentations, that has reignited interest in three front channels.

Originally, the appropriate constituent of a center channel for

reproduction of two-channel stereo was widely believed to be the sum (L + R) of the two recorded channels. That was logical, but hardly optimum. For example, when there is signal only in the left (L) channel, there will also be activity from the center (L + R) speaker, pulling the instrument toward the middle, thus narrowing the stereo stage and also quite possibly altering the perceived balance of reverberant to direct sound. Audiophiles noted this effect with displeasure and kicked the center speaker out of the system (or sometimes left it there, disconnected, as a visual reinforcement for the phantom center image).

Today, the center signal is properly derived from a logic-enhanced matrix decoder equipped to identify signals that should go predominately to the left, right, or center speaker and steer them appropriately by interchannel gain adjustments. A decoder implies an encoder, and indeed one is used by mixers in preparing film soundtracks. Such encoders are so far rare in music studios, however, and hence the use of a decoder with music productions guarantees some unplanned events. But these are usually perceived as benign, and there is, of course, no picture that a sound has to match.

So much for what the modern center channel is. How does it sound to experienced listeners who are in some cases just becoming reacquainted with the concept after long periods of uninterest or inattention? Three papers at the conference at least touched on the question, and, surprisingly or not, they were usually more concerned with the desirability of additional direct-sound sources than with the implementation. Their presenters were Tomlinson Holman of Lucasfilm and the University of Southern California, David Moulton of the Berkeley College of Music, and the near-legendary George Augspurger, head of the Los Angeles consulting firm Perception Incorporated.

Augspurger started things off briskly by declaring that "... conventional two-channel stereo cannot produce a center image that sounds the same as that from a discrete center channel, even if it is stable and well defined." A bit later on

he illustrated his point with an experiment that entails sweeping a narrow band of noise up in frequency while listening on the precise centerline of a two-channel system. At somewhere between 2,000 and 4,000 Hz the center image is lost, and so is much of the sound energy. At some higher frequency the image raggedly re-establishes itself. What is happening? At roughly 2,000 Hz the difference in distance between each ear and the two speakers is one half wavelength; the contributions from the loudspeakers at that frequency are out of phase at the ears. This sort of cancellation would not happen with a logic-steered center-channel system.

Holman explained that a center-channel speaker, if unequalized, will sound distinctly different from left and right speakers simply because there are differences in shadowing and diffraction effects produced by the listener's head on sounds impinging from the sides and sounds from in front. Whether equalization can fix things up is in some doubt; the audible differences are essentially on the order of comb-filter effects, narrow in bandwidth and inaccessible to many equalizers. Still, as Holman pointed out, film mixers will have equalized the sound assuming a center-channel speaker—an argument in its favor for home theater. The argument doesn't hold for music recordings, however.

Moulton wasn't thinking of center channels when he hypothesized that the ear-brain mechanism, confronted with a phantom center image, can only conclude it is hearing the first side-wall reflections from a singular, unified sonic event that it somehow missed entirely. Confusion is understandable, but the mechanism usually adapts sufficiently to let two-channel stereo work. Nevertheless, a center speaker would normally be slightly closer to the listener than the side speakers, and its temporal precedence might be enough to persuade the ear that it's not losing its mind.

These are the current theories surrounding the center-channel controversy. Optimum practice is still in the works. It will probably differ for different ears. □

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