

THE WORLD'S #1 A/V MAGAZINE

Stereo Review

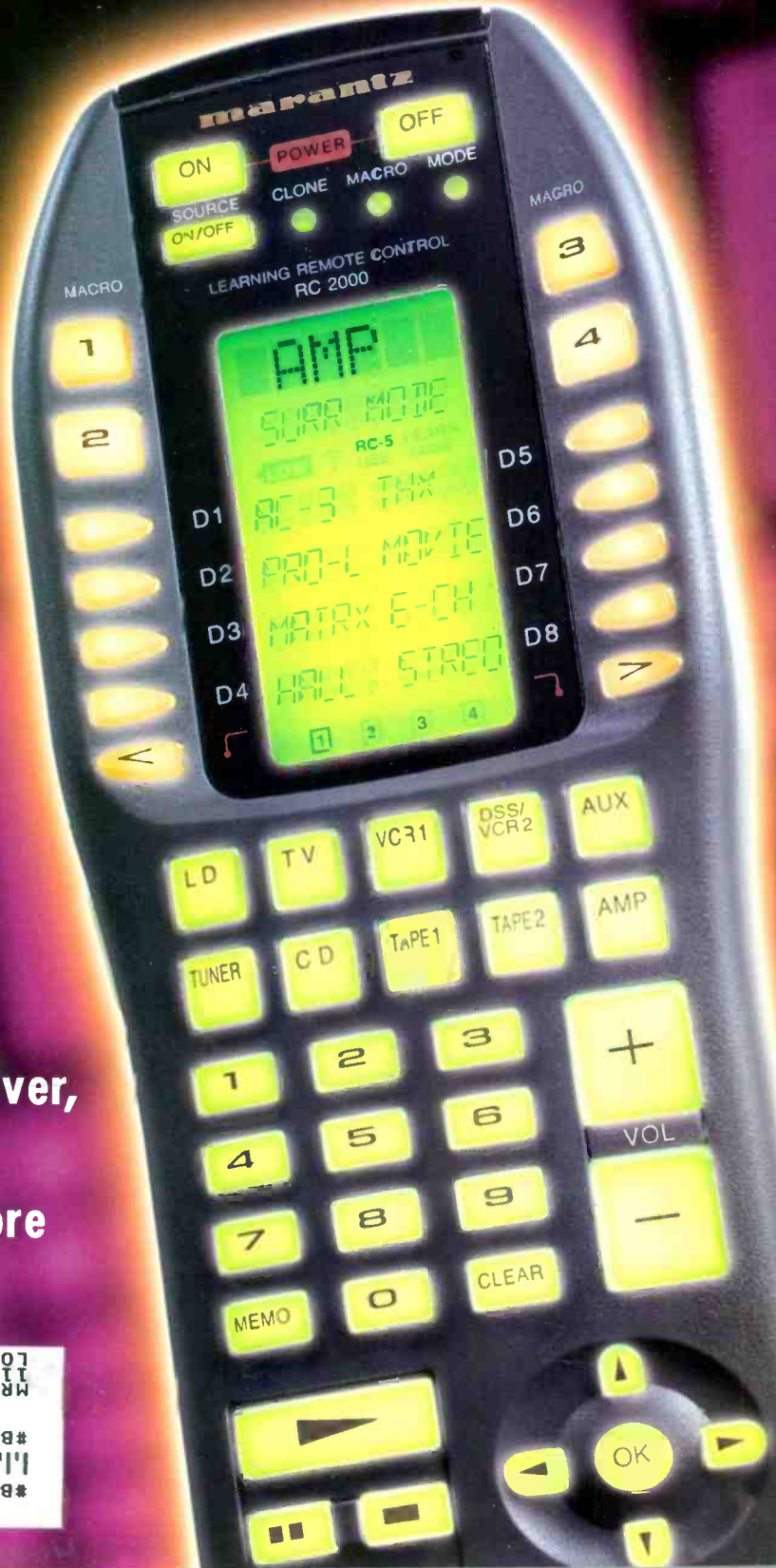
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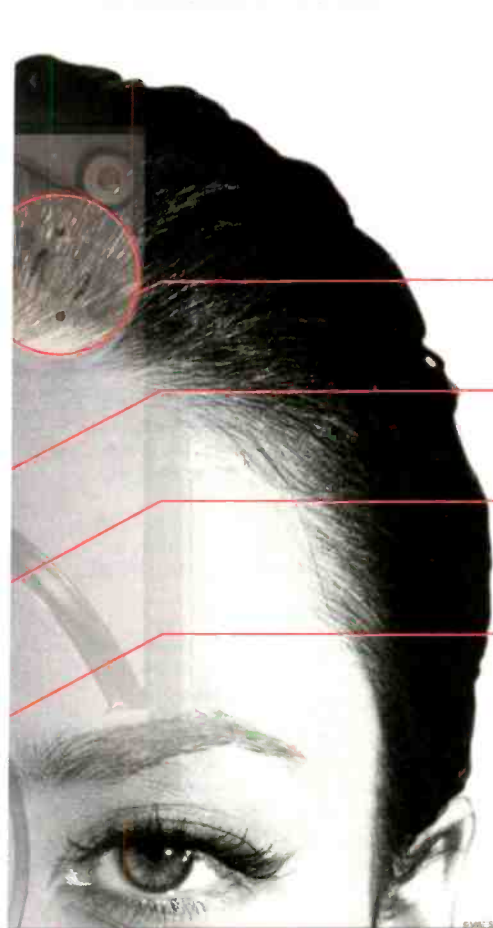


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BULLETIN

BY BOB ANKOSKO & WILLIAM LIVINGSTONE

THE SUMMER OF LOVE REVISITED

Thirty years ago this summer, love was free, not to mention All You Needed, and that era is now being recalled all over. It was the summer of the Doors' "Light My Fire" and Jefferson Airplane's "White Rabbit," and you can hear the two-CD "spoken-word history" of each band as told, respectively, by Ray Manzarek in *Myth and Reality* and Paul Kantner in *A Guide Through the Chaos (A Road to the Passion)*, both released by MonsterSounds.

The Airplane, whose *Surrealistic Pillow* has just been reissued by DCC Compact Classics on audiophile vinyl only, was one of the bands at the summer's defining get-together, the Monterey International Pop Festival. Rhino now offers a smaller, reduced-price repackaging of its four-CD Monterey box as well as rereleased videos of *Monterey Pop: The Film* (which adds the Who's 10-minute "A Quick One While He's Away"), Otis Redding: *Shake*, and *Jimi Plays Monterey*.

That's Jimi as in Hendrix, of course, whose 1967 album *Are You Experienced* has been remastered yet again (by MCA) along with *Axis: Bold as Love* and *Electric Ladyland*.

If you're looking for the big Day-Glo picture, hightail it to Cleveland for "I Want to Take You Higher: The Psychedelic Era 1965-1969," a new exhibit at the Rock and Roll Hall of Fame, including posters, costumes, a recreation of the Merry Pranksters' bus, and a Grateful Dead "installation." The companion book (*Chronicle*, \$25) was edited by chief curator James Henke and *STEREO REVIEW* contributor Parke Puterbaugh. By the way, the exhibit was supposed to be called "The Summer of Love," but according to the *New York Times*, "the phrase is trademarked by Bill Graham Presents." Today, I guess, all you need is litigation.

— Ken Richardson

TOWARD DVD-AUDIO

With the rollout of the new DVD movie format now well under way, a coalition of representatives from the worldwide recording community has announced plans to finalize specs for a new DVD-

Audio music system by the end of the year, which could pave the way for the launch of music-oriented DVD players "within two years." In a statement sure to stir heated debate among proponents of various DVD-Audio

systems, the committee is seeking a system capable of delivering "much higher sound quality" than CDs and the audio format used for DVD movie discs.

The committee will conduct listening tests "to decide on a system that delivers the highest possible sound quality on a disc format" while being compatible with existing CD players. The plan calls for a dual-layer disc with standard CD and digital surround-sound versions of the recording. Don't hold your breath.

SUPER GEEK

Dave Pasternak of Springfield, Virginia, has been crowned Ultimate Music Geek (*Geekus musicus maximus*) for scoring 212.7 out of a possible 350 points on the Rhino Musical Aptitude Test (RMAT) held in April at Tower Records stores in Los Angeles and New York and on the Internet. Proving his geekhood, Pasternak passed up the grand prize of an all-expenses-paid trip to six cities where rock history was made, choosing instead the runners-up prize: a Rock-Ola CD jukebox with 100 CDs from Rhino Records. RMAT questions and answers appear on Rhino's Web site at www.rhino.com.

A/V DIGEST

Got an old A/V receiver or another home-theater component that's ready for the boneyard? Take it to an authorized Lexicon dealer and they'll give you a \$1,000 credit toward the purchase of the \$4,500 Dolby Digital-equipped version of Lexicon's revered DC-1 A/V preamp. "Any home-theater component" will be accepted for trade-in through the end of August. . . . Krell, maker of ultra-high-end audio gear, is aiming to introduce its first — dare we say it? — A/V receiver this fall. Target price is less than \$3,000. . . . CBS

announced that it will begin transmitting high-definition TV (HDTV) programming by November 1, 1998, in Detroit, Philadelphia, and San Francisco, joining stations in New York City and Raleigh that are already testing HDTV.

SONG CONTEST

The John Lennon Songwriting Contest will award more than \$200,000 in cash plus other prizes to 120 winners. Professionals and amateurs can enter in twelve categories, including rock, country, pop, jazz, world music, hip-hop, and Latin music. For details visit the contest Web page, www.jlsc.com.

CD FIXER-UPPER

There may be hope for those scratched CDs that skip during playback. Fix-A-Disc, the CD Repairman offers a direct-mail CD repair service. Send a damaged disc to the Repairman in Glendale, Arizona, using a prepaid mailer (order by calling 888-349-3472), and the company says you'll have a refurbished CD back in your hands in seven to ten days. Cost is \$5.99 per CD. Cracked discs and those with deep scratches can't be repaired.

MUSICAL POTPOURRI

Kiss has licensed four of its hits to Muzak: "World Without Heroes," "Every Time I Look at You," "Sure Know Something," and "Beth." . . . *The Enhanced CD Fact Book*, second edition, which explains the development of enhanced CD and includes interviews with pop musicians, can be perused on the Web at www.amp.apple.com. . . . Marion Boyars Publishers has issued Fritz Spiegl's *Lives, Wives, and Loves of the Great Composers* (\$35), which includes a chapter on the pet cats, dogs, monkeys, and parrots of such musical titans as Scarlatti, Fauré, Gounod, Mozart, Ravel, and Tchaikovsky.





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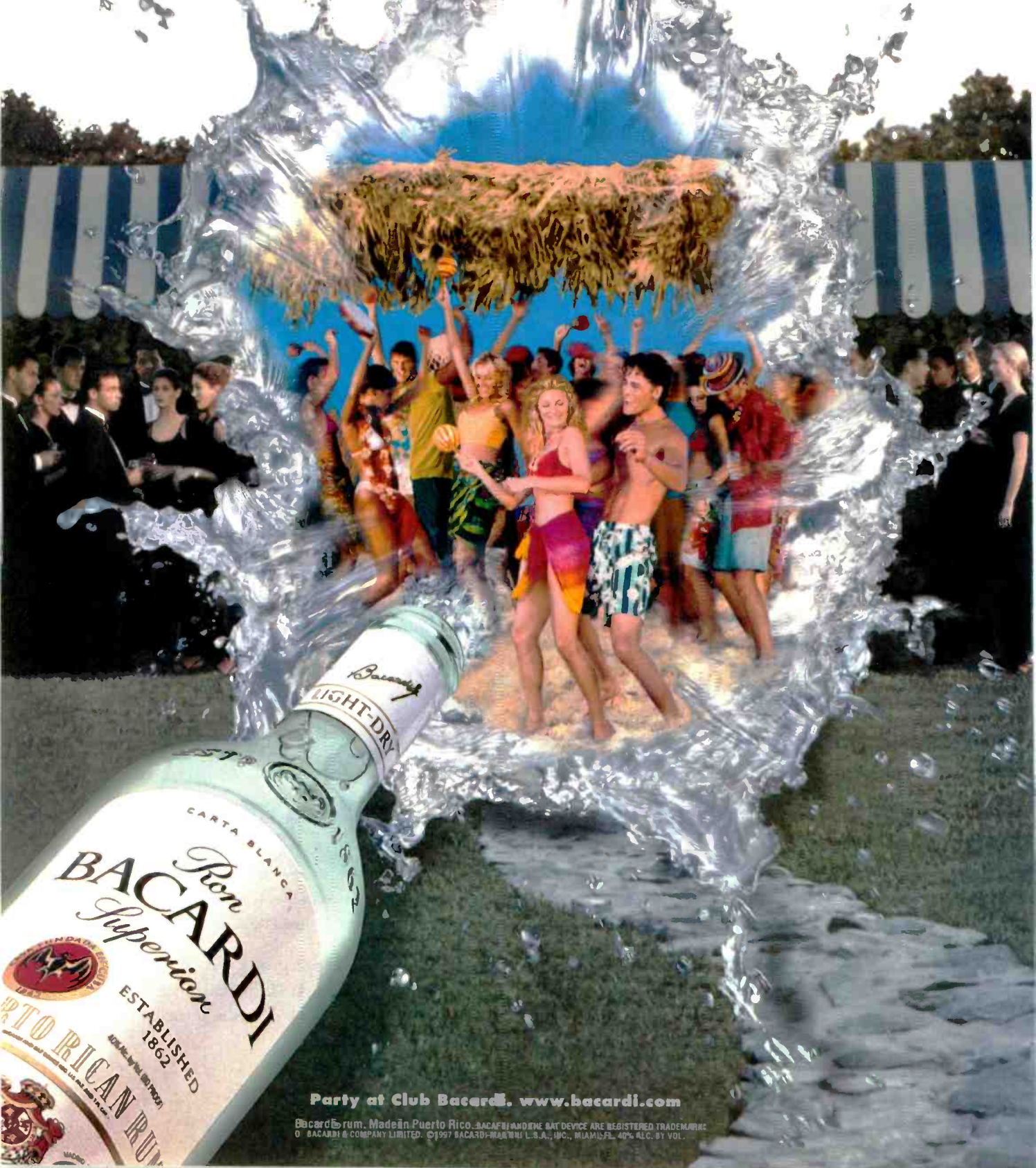
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Stereo Review

INCORPORATING HIGH FIDELITY

August 1997

Cover: The Marantz RC 2000 is one of three super remote controls we evaluated for their ability to consolidate operation of an A/V system with a minimum of hassle. See page 56 for details.

Photograph by Chris Gould

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This year will probably decide the fate of the Radio Data System in the U.S.

BY RICH WARREN

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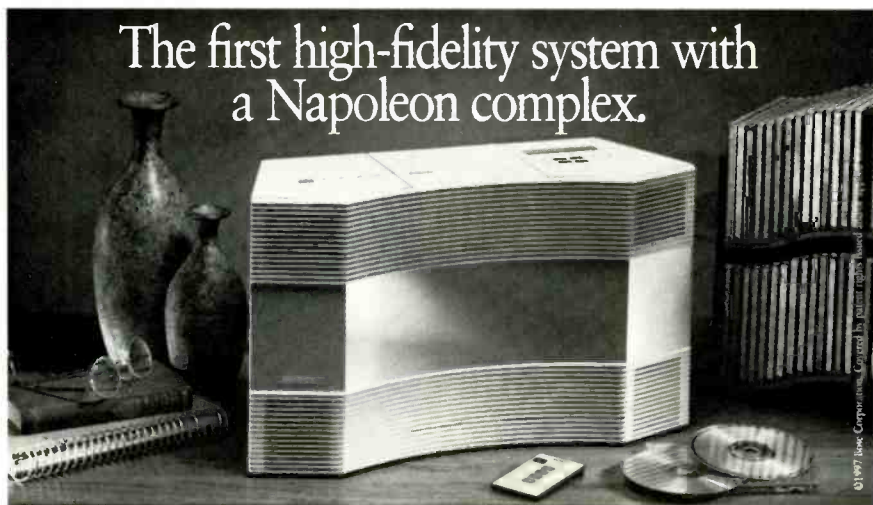
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LETTERS

Streaming Audio

In his May "Signals" column, Ken Pohlmann states that software companies are "stretching the truth" with claims of "near CD-quality sound" over the Web. The quality of the sound from streaming audio signals depends on the bandwidth for which they are encoded. The reason most of the music on the Web is not CD quality is because the recordings are being encoded for 28.8-kbps and even 14.4-kbps modems. RealAudio 3.0, among other software, is capable of encoding for up to 128-kbps connections. The sound quality of the high-bandwidth files is very impressive. My site (www.thehump.com) encodes our music at 28.8 kbps, the current standard, but we will soon offer higher-bandwidth files. Sites that currently offer high-bandwidth material can be found on the RealAudio home page (www.realaudio.com). WILLIAM NORMAN
Abilene, TX

Ken Pohlmann replies: Trust me, I am very much a supporter of streaming-audio technology and look forward to its development as an increasingly important industry. Even at 128 kbps, however, today's streaming coders are no match for CD quality. The widespread claims of "near CD-quality" from Internet audio, digital broadcast satellite systems, and other industries is false and misleading and has dangerously lowered the public's perception of CD, which still offers by far the best sound quality to the consumer.

Punditry

Ian G. Masters pulled off a monumental pun with his "Port-Noise Complaint" in June "Audio Q&A." I must warn him, however, that he has probably incurred the roth of those who disdain this form of wit.

ROBERT E. MICHAUD
Bedford, MA

Paper vs. Plastic

Your article a while back on the deterioration of CDs because of foam inserts got me wondering about the increasing practice of putting CDs in paper jackets rather than jewel boxes. Is there any evidence that these paper jackets could be harmful to the discs?

AUGUST HELMBRIGHT
Oklahoma City, OK

Technical Editor David Ranada replies: While I know of no evidence that paper jackets cause damage to CDs, there are two important things to consider. First, a tight sleeve of any material can trap gritty particles that will scratch a CD as it is inserted and withdrawn from a sleeve. Second, most paper used in packaging is probably not of the acid-free variety. It's conceivable that the acid content of the paper could interact

with materials in the label side of the disc. For the first reason alone I prefer jewel-box storage. It's too soon to tell whether the second consideration is valid.

Computer Hi-Fi

Thanks to James K. Willcox for his June "Peripherals" article, "New Technology Shows PC Audio a Little Respect," but I always thought "PC" meant Personal Computer, not just a computer using an Intel microprocessor. Perhaps in a future article Mr. Willcox could compare the advances of the Apple/Motorola/IBM PowerPC chip with the highly touted Intel Pentium II (code-named Klamath) or Pentium Pro MMX.

DAVID JOHNSON
Centreville, VA

In reference to "Peripherals" in June, why not just connect your computer to your A/V receiver the way you would a DVD player or DSS receiver? A good receiver will have all the trimmings you could want in a single shot. Is this now possible, or is that what James Willcox was referring to in his comments on FireWire?

PABLO DECENA
USS Squall

Yes, FireWire is exactly what you'll need to make useful connections between a computer and an A/V receiver or other conventional audio and video equipment. It's coming, but not instantly.

While we're at it, allow us to correct an error in Mr. Willcox's article. The data rate for USB (Universal Serial Bus) is 12 megabits per second, not megabytes. Similarly, the maximum rate for FireWire is 400 megabits (not megabytes) per second.

Cassette/MD Changers?

Several years ago Pioneer offered cassette decks that both played and recorded six or seven tapes in sequence, relay-style. Sony also put out a five-cassette deck. Are there any decks today with Dolby S and more than two wells? Also, are any five- or six-disc carousel MiniDisc players available?

BILL NELSON
Tucson, AZ

As far as we know, no one is making multi-cassette decks — with or without Dolby S. There are also no MiniDisc changers for home use, but Sony makes an in-dash car player that holds six MD's in vertical slots.

It's Alive!

I take issue with the statement in Daniel Kumin's June article on turntables ("Get Back!") that \$149 can buy a CD player that will "blow away" most real-world turntable setups. *Au contraire!* I have a CD player that actually cost me \$149 and a "real-

world" turntable setup (a Thorens TD290 with Stanton CS100), and I have yet to find one person (with intact hearing) who claims the CD player sounds better than my turntable after listening to both. Compared with the LP system the CD player sounds artificially bright, lifeless, and thin.

MICHAEL T. KLEWIN
Lawrenceville, NJ

In his article on turntables, Daniel Kumin neglected to mention one of the best sources in the world for replacement phono cartridges and styli: Radio Shack. Our mail-order service has literally thousands of listings for replacement styli and cartridges.

RICK BURNS
Manager, Radio Shack 01-1707
Charlottesville, VA

Your article on turntables in the July issue was both entertaining and informative. I am puzzled, however, as to why Daniel Kumin did not mention any models featuring linear-tracking tonearms. I have a Kenwood automatic turntable with that feature that I bought in 1987. Let me tell you, "It doesn't get any better than this." Advertising at the time mentioned that master records were cut in the same way.

JOSEPH R. CZER
Sun City, AZ

Daniel Kumin replies: Linear-tracking tonearms still exist, but they're extremely expensive, very high-end models that were outside the scope of the article.

Oscar Brown, Jr.

I read with interest the review of the CD release of Oscar Brown, Jr.'s *Sin and Soul* in the April issue. Reviewer Chris Albertson is correct about its being a great album, but he said that five of the tracks on the CD were previously unreleased. I believe they were on Brown's 1962 Columbia LP *Between Heaven and Hell*.

I hadn't listened to Oscar Brown, Jr., for a number of years, but the CD kicked my interest back on. It was great to hear this superb artist again, and with the improved sound quality of CD!

JOE GRIFFIN
E. Falmouth, MA

Chris Albertson replies: As is explained in the notes to the reissue, Brown's original versions of those five songs were never released before the Sin and Soul CD, though he rerecorded the songs themselves for Between Heaven and Hell and other albums.

We welcome your letters. Please address correspondence to Editor, Stereo Review, 1633 Broadway, New York, NY 10019. You should include your address and telephone number for verification. Letters may be edited for clarity and length.



Apparently, someone just bought Sony's 200-CD changer. Smart move. You took your ever-growing collection out of those awkward towers and loaded it into our MegaStorage[®] disc changer. Thanks to its Custom File[™] System, you can finally hear what you want, when you want it, in the pure sound quality only Sony can deliver. Yeah, life is good. The sun is shining. Nice day for a tag sale.

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The DVD-2000, Denon's first DVD player, supports all of the base-level features of the DVD-Video format, including multi-angle and multi-language playback. In addition, it can decode linear PCM digital data in various high-resolution audio formats. An optical digital audio output is

provided for connection to outboard surround processors such as Dolby Digital decoders. Denon's Twin-Focus Pickup insures compatibility with audio CDs. Price: \$799. Denon, Dept. SR, 222 New Rd., Parsippany, NJ 07054.

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▲ KLIPSCH

The Klipsch Synergy Monitor Series includes three ported bookshelf speakers, the 11-inch-high KSB 1.1 (left, \$230 a pair), the 15-inch KSB 2.1 (\$330), and the 17-inch KSB 3.1 (\$430). All feature the K-94 Tractrix horn tweeter, which is said to provide controlled directivity. Sensitivity

ratings range from 92 to 94 dB. The series is rounded out with the sonically matched KSC-C1 center speaker (\$279) and KSW-50 subwoofer (not shown, \$329). All are finished in rosewood or black ash vinyl veneer. Klipsch, Dept. SR, 8900 Keystone Crossing, Suite 1220, Indianapolis, IN 46240.



▼ BOSTON ACOUSTICS

The ProSeries 6.4³ component car speaker system from Boston Acoustics consists of the Neo 4t tweeter, the ProSeries 4.4LF midrange driver, the ProSeries 6.4LF woofer, and the 6.4³X crossover network. The crossover provides three tweeter-level settings (0, -3, and -6 dB),

allowing the system to be tailored for a car's acoustics and speaker placement. Price: \$700 for a complete system (one pair of each component). Boston Acoustics, Dept. SR, P.O. Box 6015, Peabody, MA 01961.

• Circle 121 on reader service card



▲ PIONEER

Pioneer's Elite VSX-99TX A/V receiver features Dolby Digital processing and THX certification. The five-channel amp section is rated at 100 watts per channel. The glossy black-finished cabinet with rosewood side panels has a copper-shielded chassis. On the rear panel are gold-plated

terminals for four video inputs, four audio inputs, and five S-video inputs. An additional set of audio and video inputs is located behind a front-panel door. The tuner has thirty AM/FM station presets. Price: \$1,750. Pioneer, Dept. SR, 2265 E. 220th St., Long Beach, CA 90810.

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200 Fourth Prizes
Retail Value: approx. \$20

JVC Jazz "Sea•Doo•Bop to London" Sweepstakes '97 Official Rules. **NO PURCHASE NECESSARY.** To enter, visit a participating JVC retailer or Tower Records store, complete the official entry form and mail it to: JVC Jazz "Sea•Doo•Bop to London" Sweepstakes '97, P.O. Box 7394, Melville, NY 11775-7394. Ohio and Michigan residents may also enter by handprinting your name, complete address, zip code and daytime phone number on a 3"x5" paper and mailing it in an envelope to the same address. One entry per envelope. Sweepstakes begins on 7/20/97, except in the New York City tri-state metropolitan area, where it begins on 8/20/97, and ends on 8/26/97 and received by 8/26/97. No mechanically reproduced entries allowed. Not responsible for late, lost, stolen, illegible, incomplete, mutilated, misdirected or postage-due entries or mail. Sweepstakes open only to legal residents of the U.S., including Puerto Rico. On or about 8/26/97, winners will be chosen in a random drawing from among all eligible entries received by an independent judging organization, whose decisions on all matters relating to this sweepstakes shall be final. All prizes will be awarded, provided sufficient entries are received. Winners will be notified by phone and/or mail. One prize per person or household. 1,260,000 entry forms will be distributed. Odds of winning depend on the number of eligible entries received. One (1) Grand Prize: A 5 day/4 night trip for two (2) people to attend the JVC Jazz Festival in London in October 1997 and a Sea•Doo watercraft. (Approx. retail value \$11,800.) Trip includes round-trip coach air transportation from major gateway airport nearest winner's residence; double occupancy hotel accommodations; and concert tickets and VIP passes to Jazz Festival events to be selected by Sponsor. Prize does not include transfers, meals, gratuities and any other expenses not specifically listed herein. Travel and accommodations subject to availability; certain restrictions apply. Winner must travel during 10/97 on dates to be determined by Sponsor. If winner cannot take the trip on the specified date, the prize may be forfeited and an alternate winner may be selected. Three (3) First Prizes: JVC Home Theater System, including Receiver, VCR, Cassette Deck, Compact Disc Player, Floor Standing Speakers, Center/Surround Speaker Package, A/V Rack and 32" Television. (APV \$2,700.) Ten (10) Second Prizes: Gibson USA ES-135 (APV \$1,339.) Twenty-five (25) Third Prizes: JVC Personal CD Player. (APV \$110.) Two Hundred (200) Fourth Prizes: JVC Jazz Festival T-shirt. (APV \$20.) By participating, entrants agree to abide by these rules; and the decisions of the judges. No cash substitution, transfer or assignment of prize allowed, except by Sponsor for reason of unavailability, in which case a prize of equal or greater value will be awarded. Major prize winners may be required to execute an affidavit of eligibility and liability/publicity release, which must be returned within seven (7) days of notification attempt or an alternate winner may be selected. Travel companion must also execute a liability release prior to ticketing. If a major prize is won by a minor, it will be awarded to minor's parent or legal guardian. Any traveler under 18 must be accompanied by a parent or legal guardian as their companion. By accepting a prize, each winner grants to Sponsor the right to use the winner's name, voice, picture and/or likeness for purposes of advertising and publicity, without further permission or additional compensation (except where prohibited by law). All expenses on receipt and use of prizes, and all federal, state and local taxes, are the sole responsibility of winners. By accepting a prize, each winner releases Sponsor, its parent, subsidiaries, affiliates, suppliers, agents and agencies from any and all liability for any loss, harm, damages, cost or expense, including without limitation property damages, personal injury and/or death, arising out of participation in this sweepstakes or the acceptance or use of the prize. Employees, their immediate family members and others living in their household, of JVC ("Sponsor"), Tower Records, Sea•Doo, Gibson USA, their parents, subsidiaries, retailers, affiliates, suppliers, and their advertising, promotion, production agencies and Don Jagoda Associates are not eligible to enter. Void in Puerto Rico and where prohibited by law. For a list of major prize winners, available after 10/15/97, send a self-addressed, stamped envelope, by 9/30/97, to: JVC Jazz "Sea•Doo•Bop to London" Sweepstakes '97 Winners, P.O. Box 7109, Melville, NY 11775-7109.

NEW PRODUCTS



▲ ULTECH

The Ultech UCD-100 CD player features an HDCD (High-Definition Compatible Digital) decoder/filter that is claimed to improve transparency and detail of HDCD-encoded CDs. Ultech says that the player's "stable-platter" drive mechanism reduces mechanically induced errors

and that its dual D/A converters are hand matched to reduce conversion errors. The power supply features separate regulation for digital and analog circuitry. Price: \$895. Ultech, Dept. SR, 401 Chaddick Dr., Chicago, IL 60090.

• Circle 122 on reader service card



▲ SAUDER

Sauder's Mission entertainment center is 53 $\frac{3}{8}$ inches high, 59 $\frac{1}{2}$ inches wide, and 19 $\frac{1}{2}$ inches deep. The fruitwood-finished particleboard, ready-to-assemble unit includes trim and shelving that can be reversed to show a contrasting green edge. The 28 $\frac{3}{8}$ -inch-wide shelf

above the TV can be removed to create an opening 29 inches high. Storage space is provided for components, CDs, and tapes behind solid and glazed doors. Price: \$310. Sauder Woodworking, Dept. SR, 502 Middle St., Archbold, OH 43502.

• Circle 123 on reader service card

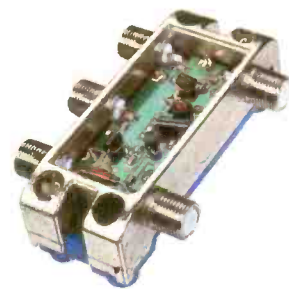


▼ PHASE TECHNOLOGY

The CI-100 is Phase Technology's first in-wall speaker to feature the company's variable-axis soft-dome tweeter. The user-adjustable tweeter gives added flexibility in placement of the speaker. The CI-100's 1-inch-thick medium-density-fiberboard baffle is said to reduce the trans-

mission of vibrations to walls. Its paintable white frame measures 22 $\frac{1}{2}$ x 8 $\frac{3}{4}$ inches; depth is 3 $\frac{3}{4}$ inches. Bandwidth is given as 38 Hz to 22 kHz. Price: \$425 each. Phase Technology, Dept. SR, 6400 Youngerman Circle, Jacksonville, FL 32244.

• Circle 125 on reader service card



▲ WOODS

The Woods Thunder TV signal splitters feature gold-plated connectors and internal passive circuitry that is said to prevent ghosting and signal loss. The splitters allow DC voltages to pass through, so they are compatible with antenna amplifiers. Two-way and four-way Thunder splitters are available; both feature a detachable bracket for easier installation. Prices: two-way, \$9.99; four-way, \$14.99. Woods, Dept. SR, 510 Third Ave. S.W., Carmel, IN 46032.

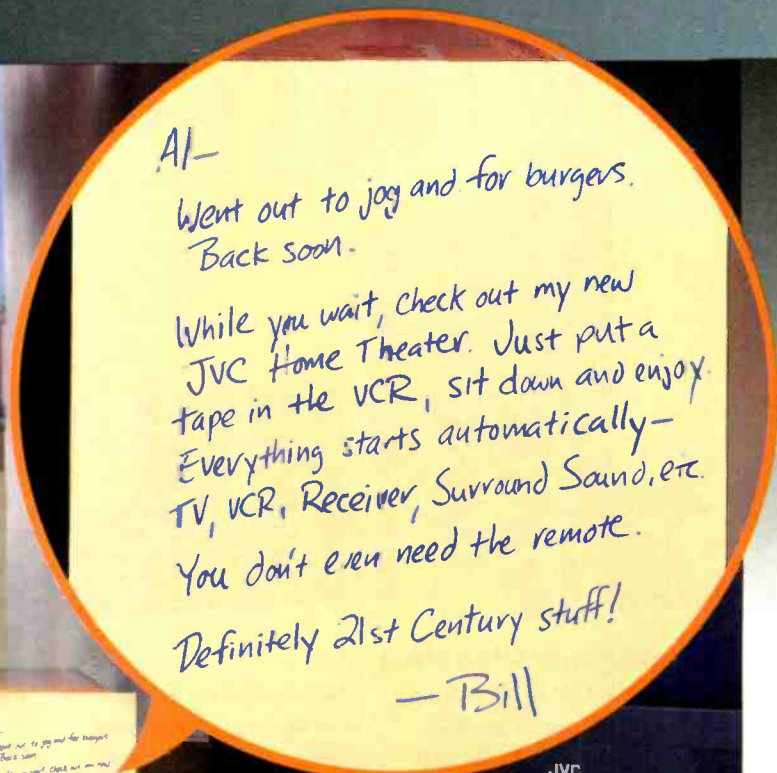
• Circle 126 on reader service card

▲ RUARK

The Ruark Templar II floor-standing loudspeaker features a 6 $\frac{1}{2}$ -inch woofer with magnesium-chassis construction and a 1-inch silk-dome tweeter. The frequency response of the system is given as 50 Hz to 20 kHz \pm 3 dB and the sensitivity as 88 dB. The 30-inch-tall speaker weighs about 29 pounds, and the medium-density-fiberboard cabinet is available in four different finishes. Price: \$1,200 a pair. Ruark, distributed by Audio Influx, Dept. SR, P.O. Box 381, Highland Lakes, NJ 07422.

• Circle 124 on reader service card





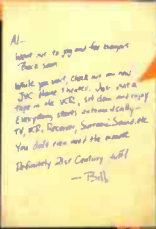
Al-

Went out to jog and for burgers.
Back soon.

While you wait, check out my new
JVC Home Theater. Just put a
tape in the VCR, sit down and enjoy.
Everything starts automatically—
TV, VCR, Receiver, Surround Sound, etc.
You don't even need the remote.

Definitely 21st Century stuff!

—Bill



If you're like Bill, you don't like "the process" either. You've rented a movie, but first you have to turn on all your components, select the proper video source and set the surround mode, balance and level on your AV receiver. Next, you hit PLAY and then—as always—have to get up and re-adjust everything so it's perfect. Getting a balanced budget through Congress is easier.

At JVC, "the process" is history.

To watch a movie on a JVC Home Theater System with AV COMPU LINK, just put in the tape. Period.

Our AV COMPU LINK technology lets the RX-882VBK Dolby Pro Logic receiver talk to all JVC TVs, VCRs and other components. Pre-set at the factory, the RX-882VBK is ready to go right out of the box. And if you do choose to adjust the sound, AV COMPU LINK automatically remembers everything you've done. So whenever you load a video tape, CD or cassette, your system instantly plays exactly as you want it. Every time you want it.

JVC AV COMPU LINK Home Theater Systems. Unparalleled home theater performance and convenience.



RX-882VBK DOLBY PRO LOGIC RECEIVER

- 120 Watts x 3 (Front) / 60 Watts x 2 (Rear)
- Dolby Digital ready • Dolby Pro Logic Surround Sound
- 5 Video Inputs (including DVD) • Digital Acoustic Processing to create multiple movie and music listening environments
- Multi-brand AV remote control
- Multi-color on-screen displays.



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*Dolby Pro Logic™ is a trademark of Dolby Laboratories Licensing Corporation

NEW PRODUCTS



CAMBRIDGE SOUNDWORKS ▲

MovieWorks 5.1 from Cambridge SoundWorks is a six-speaker home-theater system. The front left and right speakers measure 8¼ x 5¼ x 4¼ inches and have a 4-inch woofer and a 1¾-inch tweeter. The center-channel speaker, 25 x 11 x 6¼ inches, uses the same tweeter as the front satellites but has two 5¼-inch woofers. The 150-watt

powered subwoofer is rated down to 20 Hz. Each of the surround speakers has a pair of 2-inch tweeters firing front and back and a single 4-inch woofer; they can be switched between dipole and bipole operation. Price: \$1,799. Cambridge SoundWorks, Dept. SR, 311 Needham St., Newton, MA 02164.

• Circle 127 on reader service card



▲ AIWA

Aiwa's AV-X270 four-channel A/V receiver includes Dolby Pro Logic decoding and is rated to deliver 140 watts to each channel. Other features include BBE sound enhancement, Super T-Bass, digital signal processing, and

electronic EQ. The appearance is enhanced by an aluminum front panel. A learning remote control is provided. Price: \$400. Aiwa, Dept. SR, 800 Corporate Dr., Mahwah, NJ 07430.

• Circle 130 on reader service card



A/D/S/ ▲

The Model 335i component car speaker system from a/d/s/ consists of a 1-inch dome tweeter, a 5¼-inch woofer, and a crossover with 18-dB-per-octave high-pass networks. The tweeter includes hardware for flush, surface, or angle mounting, and it is equipped

with a grille that is said to improve the system's off-axis response. The woofer's glass-reinforced resin frame is said to reduce its resonance. Price: \$600. A/d/s/, Dept. SR, One Progress Way, Wilmington, MA 01887.

• Circle 128 on reader service card

TERK ▼

Terk's FM Pro antenna can be mounted indoors or out thanks to its weatherproof housing. The antenna's Advanced Capture Circuitry is said to insure that strong signals are locked in and weaker broadcasts are received with less noise. The antenna, said to be engineered to

minimize the effect of multipath interference, includes a remotely switchable amplifier to boost signals. The half-wave dipole is horizontally polarized. Price: \$120. Terk, Dept. SR, 63 Mall Dr., Commack, NY 11725.

• Circle 129 on reader service card



▼ MONSTER CABLE

The goal of the IHP Y adaptor from Monster Cable is to split or combine music signals with the lowest possible loss. It features gold-plated Turbine connectors and dual multiple-gauge wire networks. The fine-stranded high-purity copper windings are said to increase

signal transfer for the best sonic performance. The IHP Y is available in two configurations, female-to-two-male and male-to-two-female. Price: \$14.95. Monster Cable, Dept. SR, 274 Wattis Way, South San Francisco, CA 94080.

• Circle 131 on reader service card



PANASONIC INTRODUCES DVD. IT WILL DO FOR MOVIES WHAT THE CD DID FOR MUSIC.



Remember the first time you heard a CD? You didn't just hear the difference, you felt it. That's what Panasonic DVD will do for movies.

A DIGITAL PICTURE THAT'S TWICE AS SHARP. You know what most rental movies look like. Now imagine one

that's twice as sharp.

That's the difference DVD can make. DVD

is capable of 500 lines of horizontal resolution*, more than twice that of the industry standard for most rental movies.

5.1 CHANNEL DIGITAL SURROUND SOUND. You can tell you're watching a movie on DVD with your eyes closed. Its Dolby** Digital (AC-3)† surround sound has 6 channels, including one for a sub-woofer, for theater-like sound at home.

MOVIES ARE JUST THE BEGINNING.

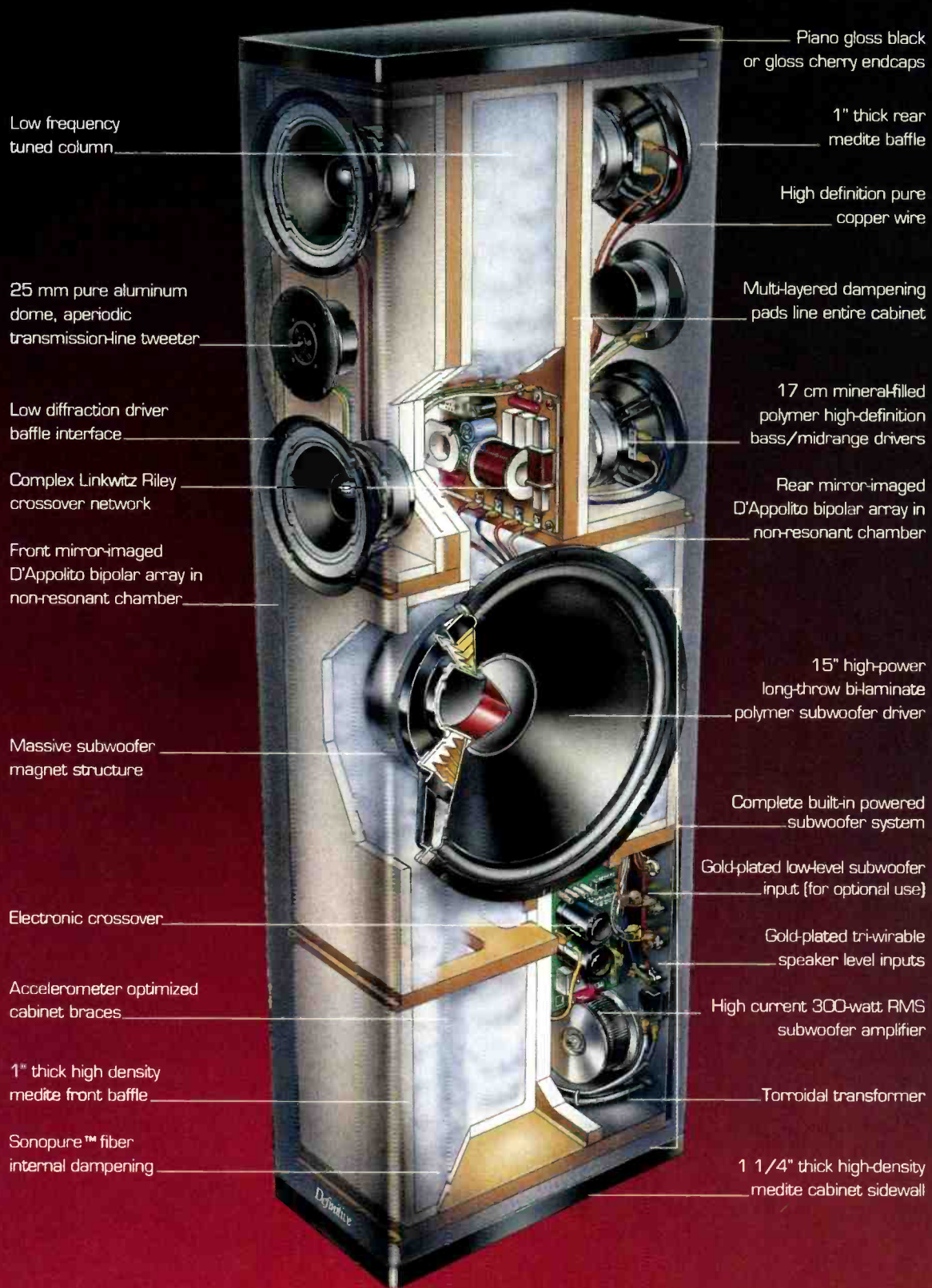
DVD is more than just the ultimate entertainment machine playing movies and music CDs. One DVD disc can hold the equivalent of 11,500 floppy discs. That means for computers, video games and business the possibilities are endless. And that's just the beginning. For more information call toll free 1-888 PANACVD. For an informative fax call 1-888-329-4872. Or see us on the web at www.panasonic.com. Once you know all that DVD can do, there's no looking back.



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* Depending on TV monitor and software content.
** With Dolby Digital ready equipment.
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The Advanced Technology Inside Definitive's BP2000



“...I would choose these speakers for myself.”

—Julian Hirsch, *Stereo Review*

Definitive's Amazing BP 2000 & 2002 Are The World's Most Highly Acclaimed Loudspeakers!

"The first speaker I have been able to audition in my own familiar surroundings that has given me that special thrill that usually costs ten or more times its price to obtain."

—Julian Hirsch, *Stereo Review*, USA

"Literally Staggering"

—Home Theater, USA

Top reviewers around the world agree that Definitive's amazing BP 2000s & BP 2002s combine highly advanced technology and superior build quality in order to achieve unsurpassed sonic performance plus unequalled value.

"Astounding...The Stuff of Dreams"

—Home Cinema Choice, England

Definitive's revolutionary BP 2000 & BP 2002 combine our incredible bipolar technology with dual built-in high-powered subwoofers (BP 2000: 15"/300 watts ea., BP2002: 12"/125 watts ea.) for extraordinary sound quality beyond anything you've ever heard.

"Absolutely Unsurpassed"

—Prestige HiFi, France

Both music and movies are reproduced with outstanding purity, transparency and life-like realism. And the astounding high resolution imaging, magnificent soundstaging, awesome bass and explosive dynamic impact totally envelop you in sonic ecstasy. It is simply amazing!



BP 2000 - \$499 ea. BP 2002 - \$999 ea.
Definitive's Grand Prix award-winning BP 2000 and BP 2002 combine our revolutionary bipolar technology with awesome built-in powered subwoofers for unsurpassed performance.

CIRCLE NO. 15 ON READER SERVICE CARD

See our dealer list on page 20

"Amazing Music and Home Theater... Most Spectacular Speakers Ever"

—HiFi Review, Hong Kong

In addition to being an audiophile's dream, the BP 2000s & BP 2002s are also the main speakers in Definitive's Ultimate Home Theater Systems. These astonishing systems are absolutely the finest sounding available. They recreate a "you are there" virtual reality that actually puts you into the sound-space of the original cinematic action.

"The Best Performance You Can Get"

—V.T.V., England

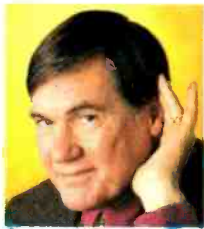
Experts agree these complete Dolby Digital AC-3* ready systems deliver the ultimate listening experience. They combine BP 2000s or BP 2002s with perfectly matched center and rear surround speakers. Dual powered subwoofers are already built into the sleek towers. Experience them today!

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Authorized Dealers

- AK - Alaska Audio: Juneau • Pyramid: Anchorage.
- AL - Cohen's Electronics: Montgomery • Kincaid's TV: Tuscaloosa • Likis Audio: Birmingham.
- AR - Custom Audio Video: Little Rock.
- AZ - Jerry's Audio Video: Phoenix, Tucson.
- CA - Access to Music: Larkspur • Accurate A/V: S. Lake Tahoe • Ahead Stereo: Los Angeles • Audio Concepts: Long Beach • San Gabriel • Bay Area Audio: San Jose • Boots Camera: Fresno • Christopher Hansen: West LA • Coast Home Ent.: Alascadero, Orcutt • Creative Stereo: Santa Barbara • David Rutledge Audio: Palm Desert • DB Audio: Berkeley • Digital Ear: Tustin • Dow Stereo Video: San Diego & Suburbs, La Jolla, El Cajon, Chula Vista, Escondido • Lee's Home Theater: Visalia • Monterey Stereo: Monterey • Paradyme: Sacramento • Performance Audio: San Francisco • Systems Design: Redondo Beach • Videotek: Westminster • Wilson Home Theater: Woodland Hills.
- CO - Listen Up: Denver, Boulder, Colorado Springs • Soundtrack: Denver & Suburbs, Boulder, Ft. Collins, Colorado Springs.
- CT - Al Franklin's: Greenwich • Audio Etc.: Orange • Carston's Audio Video: Danbury • Roberts Audio Video: New London • The Sound Room: Westport • Stereo Shop: Hartford.
- DC & Washington Suburbs: Myer-Emco.
- DE - Sound Studio: Newark, Wilmington.
- FL - Absolute Sound: Winter Park • Audio Advisors: West Palm Beach • Audio Center: Deerfield Beach • Audio Video Stores: Tallahassee • The Audiohouse: Vero Beach • Cooper for Stereo: Clearwater • Hoyt Stereo: Jacksonville • Palm Audio: Destin • Sound Components: Coral Gables • Sound Ideas: Gainesville • Sound Insights: Ft. Pierce • Stereotypes: Daytona Beach • Stuart A/V: Stuart.
- GA - Laser Disc Enterprises: Atlanta • Merit TV: Columbus • Stereo Connections: Valdosta • Stereo Festival: Atlanta.
- HI - Sam Sung Electronics: Honolulu, Waipahu.
- IA - Audio King: Cedar Rapids, Des Moines • Archer Audio Video: Ft. Dodge • Audio Video Logic: Des Moines • Audio Visions: Sioux City • Hawkeye Audio: Iowa City, Cedar Falls.
- ID - Ultimate Electronics: Boise • Wise Buy: Idaho Falls.
- IL - United Audio Centers: Chicago & Suburbs • Good Vibes: Champaign • Jon's Home Ctr.: Quincy • Sound Forum: Crystal Lake • Sundown A/V: Springfield.
- IN - Classic Stereo: Ft. Wayne, Mishawaka • Good Vibes: Lafayette • Kings Great Buys: Evansville • Ovation Audio: Clarksville, Indianapolis.
- KS - Accent Sound: Overland Park • Advance Audio: Wichita • Audio Junction: Junction City, Manhattan.
- KY - Ovation Audio: Lexington, Louisville.
- LA - Alterman Audio: New Orleans, Metairie • Lake Charles Music: Lake Charles • Mike's Audio: Baton Rouge • Wright's Sound Gallery: Shreveport.
- MA - Cookin': Chestnut Hill, Saugus • Goodwinds Audio: Boston, Shrewsbury • Nantucket Sound: Hyannis • Northampton Audio: Northampton • Pittsfield Radio: Pittsfield.
- MD - Gramophone: Baltimore, Ellicott City • Myer-Emco: Gaithersburg, Beltsville, Rockville • Sight & Sounds: Easton • Soundscape: Baltimore, ME - Cookin': Portland.
- MI - Pecar's: Detroit, Troy • Classical Jazz Holland • Sound North: Iron Mt. • Stereo Center FRAV: Flint • Court St. Listening Room: Saginaw.
- MN - Audio King: Minneapolis & Suburbs, Rochester, St. Cloud • Audio Design: Winona.
- MO - Independence A/V: Independence • Reference Audio: Sedalia • Sound Central: St. Louis.
- MS - Ideal Acoustics: Starkville • McLelland TV: Hattiesburg • Players A/V: Ridgeland.
- MT - Avitel: Bozeman • Rocky Mt. Hi Fi: Great Falls.
- NC - Audio Video Systems: Charlotte • Audio Visions: Wilmington • Now Audio Video: Durham, Greensboro, Raleigh, Winston Salem • Audio Lab: Wilmington.
- NE - Custom Electronics: Omaha, Lincoln.
- NH - Cookin': Nashua, Manchester, Newington, Salem, S. Nashua.
- NJ - Hal's Stereo: Trenton • Monmouth Stereo: Shrewsbury • Sound Visions: Northfield • Woodbridge Stereo: West Caldwell, Woodbridge.
- NM - Ultimate Elect.: Albuquerque • Sound Ideas: Albuquerque, NV - Ultimate Elect.: Las Vegas • Upper Ear: Las Vegas.
- NY - Audio Breakthroughs: Manhattan • Audio Den: Lake Grove • Audio Expressions: Newburgh • Clark Music: Albany, Syracuse • Stereo Exchange: Manhattan • Hart Elect.: Vestal • Innovative Audio: Brooklyn • Listening Room: Scarsdale • Rowe Camera: Rochester • Speaker Shop: Amherst.
- OH - Audio Craft: Akron, Cleveland, Mayfield Hts., Westlake • Audio Etc.: Dayton • Classic Stereo: Lima • Ohio Valley Sound: Cincinnati • Paragon Sound: Toledo • Stereo Visions: Columbus • Threshold Audio: Heath.
- OK - Audio Dimensions: Oklahoma City • Photo World: Stillwater, Shawnee • Ultimate Electronics: Tulsa.
- OR - Bradford's HiFi: Eugene • Chelsea A/V: Portland, Beaverton • Kelly's Home Ctr.: Salem • Magnolia HiFi: (Portland,) Beaverton, Clackamas • Stereo Plant: Bend.
- PA - Audio Junction: Pittsburgh • Gary's Elect.: State College • GNT Stereo: Lancaster • Hart Elect.: Blakely • Hi Fi House: Abington, Broomall • Hi Fi Unlimited: Camp Hill, Harrisburg • Listening Post: Pittsburgh • Palmer Audio: Allentown • Pro Audio: Bloomsburg • Stereo Shoppe: Selinsgrove, Williamsport • StereoLand: Natrona Heights • The StereoShop: Greensburg.
- RI - Stereo Discount Ctr.: Providence.
- SC - A/V Design: Charleston • Custom Theater & Audio: Myrtle Beach • Unstairs Audio: Columbia.
- SD - Audio King: Sioux Falls • Sound Pro: Rapid City.
- TN - College HiFi: Chattanooga • Hi Fi Buys: Nashville • Now Audio Video: Knoxville • Modem Music: Memphis • Sound Room: Johnson City.
- TX - Home Entertainment: Dallas, Houston, Plano • Audio Tech: Temple, Waco • Audio Video: College Station • Brock A/V: Beaumont • Bunkley's Sound Systems: Abilene, Bjorn's: San Antonio • High Fidelity: Austin • Krystal Clear: Dallas • Marvin Electronics: Ft. Worth • Sound Quest: El Paso • Sound Systems: Amarillo • Sound Towne: Texarkana.
- UT - AudioWorks: Salt Lake City • Crazy Bob's: St. George • Stokes Bros.: Logan • Ultimate Elect.: Layton, Murray, Orem, Salt Lake City.
- VA - Myer-Emco: Falls Church, Tyson's Corner, Fairfax • Audio Connection: Virginia Beach • AudioTronics: Roanoke • Home Media Store: Richmond.
- WA - Magnolia HiFi: Seattle & Suburbs, Tacoma, Silverdale, Spokane • Pacific Sight & Sound: Wenatchee • Tin Ear: Kennewick.
- W.VA - Sound Post: Princeton.
- WI - Audio Emporium: Milwaukee • Absolute Sound & Vision: Sheboygan • Hi-Fi Heaven: Appleton, Green Bay • Sound World: Wausau.
- Puerto Rico - Precision Audio: Rio Piedras.
- Canada - A & B Sound: Calgary, Edmonton, Kelowna, Vancouver & Suburbs, Victoria • Advance Electronics: Winnipeg • Bay Bloor Radio: Toronto • Canadian Sound: Brampton Ont. • Digital Dynamics: Clearbrook • Kebecon: Montreal • Lipton's: New Market Ont. • Sound Room: Vancouver • StereoLand: Windsor • Treble Clef: Ottawa.
- Mexico - Contact Grupo Volumen: Mexico City.



AUDIO Q & A

IAN G. MASTERS

Watts and Bass

Q I was satisfied with my new 150-watt-per-channel receiver and 80-watt-powered subwoofer, but except for the sub I noticed little audible improvement over my old 40-watt receiver. Then I heard my friend's system, which has a 100-watt receiver and a 40-watt subwoofer. He gets much deeper and stronger bass despite having much less power. Is extra wattage worth it, or is it a waste of money?

JUSTIN HULLINGER
Lexington, KY

A First of all, the power differences aren't all that great. At full tilt, your subwoofer's amplifier can play only 3 dB louder than your friend's, and since neither of you is ever likely to crank the subs all the way up, he can match your output with a tiny tweak of the level control. The difference between the two receivers' 100 and 150 watts is even smaller, and I wouldn't expect to hear any performance differences attributable to output power.

The ability of a subwoofer — or any speaker — to produce full, deep bass is a function both of the speaker's design (driver size, enclosure type, and so on) and of its interaction with the room. It's not at all surprising that you would hear dramatic differences between your system and your friend's. It's too bad that the comparison favored his setup, but it has nothing to do with the amount of amplifier power available.

What can you do about it? Experiment with the sub's placement in your own room. First try putting it in a corner, which tends to emphasize the bass. If your room is truly problematical, a second subwoofer may be necessary, but that would probably be a last resort.

Dialogue All Around

Q I've heard TV commercials where the sound is at equal level in all channels, even the rear ones, and I assume this is done intentionally for effect. But one nearby station has the same peculiar characteristic all the time: Every show has the dialogue coming from all speakers. Needless to say, this is very annoying. Does it mean the station has the polarity reversed on one channel somewhere in the signal path?

WAYNE A. PFLUGHAUPT
Katy, TX

A Probably not, but you can check it by switching your set to mono; if the sound virtually disappears, the station has a polarity problem. That's pretty unlikely, however, as most viewers listen in mono

and they would surely complain if there were no sound. My guess is that your station is engaging in the questionable practice of stereo synthesis, which carves up the signal and manipulates it to give a spurious sense of width to mono signals. Some stations leave the synthesis circuit on all the time, even with real stereo material, and the results can be excruciating, especially when decoded by a surround-sound system. Do everybody in your corner of Texas a favor and complain to the station.

Antique Autosound

Q I own an antique car in which it would be impractical to mount stereo speakers. I do, however, have several stereo car radios. Is there an easy way to run a single speaker from a stereo radio?

NORMAN LEVIN
Downey, CA

A The simplest way is to switch the radio to mono operation, crank the balance control to one side, and connect the speaker to that output. You'd lose the benefit of the second channel of amplification, but that's unlikely to be serious, and drawing power for only one amplifier rather than two should compensate to some degree. This solution probably won't work, however, if the "radio" also has a tape player and you want to use it — you'll get only one channel's worth of music.

One Conductor or Two?

Q I'm fairly new to serious audio and am confused by the cables that connect the components together. All of them terminate in phono plugs that connect to RCA jacks on the equipment. I have assumed that each wire contains two conductors, one ending in the plug's central pin, the other in the outer sleeve. But when I look at the back of my receiver, for example, I see that the preamp-out and main-amp-in jacks are connected by a single conductor, a U-shaped metal bar inserted into the central conductor of each jack. If the outer conductor serves no electrical purpose, what is its function?

RICK PARGETER
Elmira, OR

A In home systems, audio connections consist of a "hot" conductor and a connection between the grounded chassis of the various components. The hot signal is carried by the center conductor of an audio cable and terminates in the pin of an RCA plug. The ground-to-ground connection is

“All Definitive’s New Bipolar Towers Deliver Astounding Sound for Music & Movie Perfection”

The extraordinary new BP30, 10B, 8B and 6B (from \$299) now have BP2000 Series technology for dramatically superior sonic performance!

“Truly Outstanding”

— *Stereo Review*

Absolute sonic superiority and unexcelled value have made Definitive the leader in high-performance loudspeakers. We are now pleased to introduce a new series of incredible-sounding bipolar towers which incorporate drivers, pure aluminum dome tweeters, crossovers and cabinet technology developed for our flagship BP2000 Series.

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“Music and Movie Sound was Stunning”

— *Video Magazine*

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 - *AudioVideo* Speaker-of-the-Year
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 - *Inner Ear Report* Editor’s Choice
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made through a braided outer shield that ends in the RCA plug's sleeve. This shield keeps stray electrical fields from inducing hum and other interference in the inner, signal-carrying "hot" lead.

The pre-out/main-in jumper you describe has only one conductor because the grounds are already connected by virtue of their being on the same chassis. The length of the exposed hot lead is so short that shielding is not required.

Amplifiers in Parallel

Q I plan to upgrade my Dolby Pro Logic receiver by adding a Dolby Digital processor and multichannel amplifier (the receiver doesn't have inputs for all six channels). The digital processor has no Pro Logic decoder, however, so I'll have to continue using the receiver for that. Would connecting the speaker outputs of the receiver and amplifier together cause any harm to either of them?

J. A. VALENTIN
Worcester, MA

A Yes. Feeding the output of one amplifier into the output stages of another is a recipe for trouble. Since you'd never want to run both sets of amplifiers at the same time anyway, however, you could prevent any problems by using a multipole switch in the speaker lines to make sure the speakers are being driven by one amp or the other but not both. It's important that the switch be a

"break-before-make" type, or it might momentarily create just the sort of connection you're trying to avoid.

Rewiring a TV's Audio

Q My mother's console television has developed an erratic audio problem. The volume goes up and down unexpectedly, and she has to compensate for the difference constantly. A repair shop said that the sound module had to be replaced but that the manufacturer had discontinued the part. The set has RCA jacks on the back, and there is a VCR hooked up. Is there any way we can use an external source, such as an A/V receiver, to drive the existing speakers in the television?

ARMANDO SERRANO
Tucson, AZ

A There's a bit of sleuthing to do before you'll know the best way to proceed. For instance, you don't say whether the RCA jacks on the set are inputs or outputs, or both. If outputs are provided, they might be able to feed the audio to an external amplifier or receiver, depending on where in the TV's own audio circuitry the problem occurs. If it is in the TV's amplifier section, then you may get a stable signal from the RCA outputs. If you can, temporarily hook things up this way and see what happens. If the problem is in the tuner section and the amplifiers are okay, then you can probably feed an external audio signal to the set's

inputs and have it reproduced by its own speakers. The easiest way to do this is to use your VCR as your tuner, feeding both the audio and the video to the set from that. To check out the feasibility of this, just make the connections and play a prerecorded videotape from the VCR to see what happens. If neither solution works, you can still use the VCR as your tuner, feeding its video signal to the set and its audio output to an external amplifier or receiver.

As for feeding the output of that amplifier to the set's own internal speakers, that's probably not a good idea. For one thing, hooking anything up to those speakers absolutely requires that they be disconnected from the television set's own circuitry. Getting access probably means opening the back of the set, which can be quite hazardous — there are capacitors back there that can give you a jolt even if the set is unplugged. And, in any event, the quality of most built-in TV speakers is usually so poor that it wouldn't really be worth the effort. A small pair of shielded satellites on either side of the set driven by your external amplifier, or a pair of powered speakers, would be a better bet.

If you have a question about audio, send it to Q&A, Stereo Review, 1633 Broadway, New York, NY 10019. Sorry, only questions chosen for publication can be answered.

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John Sunier,
Audio Magazine April 1996

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SIGNALS

KEN C. POHLMANN

To Whom It May Concern

It is with regret that I inform you, the executives of the recording industry, of my decision to stop buying records. The reasons are many, and space allows me to express only a principal few, but I must emphasize above all else how sorry I am to have come to this resolution. Nietzsche was entirely correct when he said, "Without music, life would be a mistake," and I owe your industry many thanks for the pleasure and profundity you have brought to me. Nevertheless, my decision stands.

I will not bore you with complaints about the current music scene. More than anyone, you must understand that aging rockers excite me less and less, and that bold, new music seems curiously absent from the record-store shelves. I will enjoy my music library for years to come, but the drought in new music does not encourage me to add to my collection. It is not artistic reasons that prompt me to write, however. My rationale stems more from technological developments, and how they have changed my interests.

When I was younger, music was central to my life. I can't begin to estimate the number of hours I spent listening to LP records. That was mainly because I dearly love music (as evidenced by my becoming a music professor) and also because my other entertainment options were limited. For example, my family's television, as I recall, received a total of four broadcast channels. Today, technology has changed every hour of our lives, especially our leisure time. The televisions in my house receive about 170 channels (so many that I've never actually counted them all), while my computers offer a variety of programs and games and are connected to the Internet with its virtually endless array of entertainment and information. Even theatrical films have been much improved by technology; the images on the screen are impressive, as are the advances in theater sound. In short, over the last two decades, my entertainment choices have exploded in number and improved in quality. Somehow, unbelievably, music was pushed aside. My question is, why haven't you stayed competitive?

The reason, I think, is technology. Granted, some of the technologies I most

enjoy haven't changed all that much. I like to read books, and that technology hasn't changed in 500 years (though I am now ordering more books over the Internet). But the success of music playback depends entirely on technology. Unlike books and live concerts, music playback is a recreated experience that exists only through a technology filter. When that filter is old and worn, especially compared with newer, more transparent filters, the recreation suffers. To remain appealing, especially when other media such as theatrical films and computer games are evolving, music playback technology must also evolve.

Unfortunately, with all due respect to you and the audio equipment manufacturers, music playback has not really changed since stereo was introduced in 1958. True, the compact disc was a great

**If the record industry
wants to compete for my
dwindling leisure
time, it must upgrade its
delivery technology.**

innovation (not to mention a money-maker), but it didn't change the fundamental experience of listening to music playback. The result, as you know, is that sales of prerecorded music have been only modestly rewarding after year-to-year growth is adjusted for inflation. Meanwhile, other segments of the entertainment industry are booming. If you want to compete seriously for my ever-dwindling leisure time, I think you must consider upgrading your delivery technology.

From my very limited (and probably naïve) vantage point, I would recommend to your industry a strategy involving three new technologies: DVD-Video, DVD-Audio, and the Internet. DVD-Video, of course, is ostensibly a weapon of your competitors, the motion-picture and computer industries. Yet it also provides an ideal opportunity for the music-recording industry. Hundreds of thousands of

homes now have 5.1-channel home-theater systems, and the launch of DVD-Video should quickly boost that number. The 5.1-channel playback experience blows away traditional stereo and condemns your current catalog to obsolescence. But it also offers you the chance to resell the catalog and introduce new titles. Your move is simple: You should energetically release music videos and live concert videos on DVD-Video, with 5.1-channel sound. The combination of high-quality picture and sound (especially in the context of you-are-there live concerts) should excite music lovers.

As appealing as DVD-Video is, you must also move quickly toward a DVD-Audio format. Frankly, I have been stunned to see the apprehension with which some segments of your industry have greeted this format. The CD was a success both because it was superior to all existing formats and because it was a bold technological statement. DVD-Audio promises the same opportunity. As one company's slogan puts it, "The history of CD is the future of DVD." To relive the glory days of the CD, you must devise a high-fidelity DVD-Audio specification with 5.1 channels of sound and, say, a 96-kHz sampling frequency and 24-bit word length. While some or many listeners may not immediately hear the improvement in sound quality over the CD, no one will miss the excitement of 5.1-channel music playback.

Finally, and most important, you must embrace Internet technology. Of course, the Internet is not new, but its growing multimedia capabilities make it vital to your enterprise. Most record labels have Web pages that provide artist information such as biographical notes, photographs, concert dates, and sound and video clips. This is a step in the right direction. But you must also develop direct delivery methods in which a consumer can log on and, using a secure transaction, download an entire album (at full CD quality), along with complete liner notes and art, for rerecording to a CD-R. I feel that this is the future of music distribution. Already, PCs are outselling TVs, and as high-bandwidth connections become common, the Internet will become the world's biggest record retailer. Soon, Internet commerce will account for billions of dollars in annual sales, and you can't afford to miss out.

You in the record industry shouldn't fear the growth in home-theater systems and home computers. Although these new technologies compete for my entertainment dollar, your industry can successfully exploit those same technologies. If you provide 5.1-channel programs for my DVD player, and downloadable recordings for my Pentium PC, I promise that I'll start buying music again, just like in the old days. □

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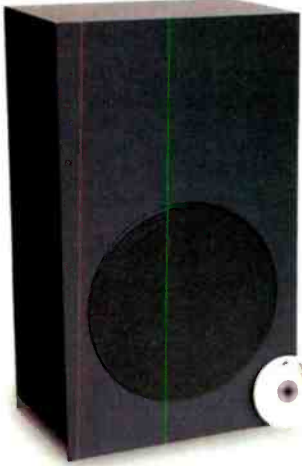
“ All in all, this is a lot of speaker for \$1,500 a pair – which is precisely the point of CSW's factory-direct strategy...As soon as I fired the Towers up, it was evident that they threw a big image. The Towers' soundstage was noticeably deep and solid on most material.” *Audio*

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TIME DELAY

30 YEARS AGO

"What's Wrong with Loudspeakers" was the subject of an August 1967 article by speaker designer/guru Edgar Villchur. "The wide variation in speaker sound is a reflection of the degree and quality of speaker faults," he wrote, "some of



them sins of omission and some sins of commission." He outlined four sins: stridency, inadequate treble dispersion, dryness, and nasality. In "Whatever Happened to Those Revolutionary Loudspeaker Designs?," George L. Augspurger revisited such ideas from the 1940s and 1950s as the corona wind speaker, the acoustic balloon, the Klein



Heath organ kit, 1967

Ionophone, the Flewelling air coupler, and the Bradford swinging-door baffle. Augspurger predicted, "The next big breakthrough in loudspeakers will come . . . in the overall system made up of speakers and listening room."

New products ranged from the Aiwa TP-718 car cassette deck (\$70), with mono-only playback, to the Heath TO-67 Thomas Color-Glo "Paramount" organ kit (\$995).

Nominating *There's a Kind of Hush All Over the World* as a Best of the Month recording, Peter Reilly wrote that Herman's Hermits "have little to fear should the fashion in popular music suddenly change."



20 YEARS AGO

Mike Aubin of Fremont, California, took Lester Bangs to task for praising *Ramones Leave Home* in a previous issue. "The Ramones are really phonies," Aubin wrote in August 1977, "as phony as Bowie or Farrah What's-her-name." Meanwhile, Maury

Molina of San Francisco was similarly displeased with a recent interview subject. "About Herbert von Karajan: what a stuffed shirt! He's earned my vote as the person I'd most like to see slip on a banana peel."

"Tape Horizons" columnist Craig Stark reported on the imminent debut of metal tape. And in his editorial, William Anderson cautioned, "The time has come to step bravely (if expensively) into the noiseless new world of the digital disc. It's that or join the dodo."

Special loudspeaker coverage included "Some Straight Talk on Speaker Design" by Design Acoustics chief engineer George Sioles, who concluded, "From the consumer's point of view, the fact that the better speakers are sounding more and more alike should be reason for rejoicing."

Reviewing *Peter Gabriel No. 1*, Lester Bangs said, "He does a semi-credible impersonation of Randy Newman as he sings about the big Southern California earthquake, but that's about the extent of his vocal ability."

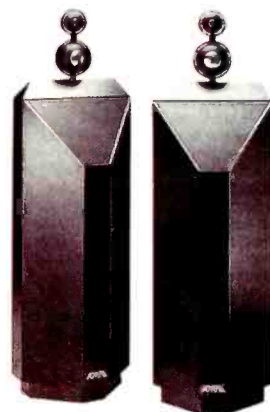
10 YEARS AGO

Featured in the August 1987 special report on European audio were two speaker models from Germany's Magnat: the Delta 3, with back-to-back pairs of hemispherical tweeters and midranges perched on an enclosure of six woofers, and (shown on the cover) the see-through All Ribbon 8P.

Peter Gabriel, 1977



Julian Hirsch tested the Focus .7 High Definition Monitor speaker (\$995 a pair), which had a "strikingly airy" sound whose "overall subjective effect was unlike that of any other speakers we have heard in our room." He also tested the Thorens TD 520



Magnat Delta 3 loudspeakers, 1987

turntable (\$999), deeming it to be "created for the serious phonophile who realizes that the selection of suitable record players is certain to shrink as the years go by."

Suzanne Vega's *Solitude Standing* was a Best of the Month recording, as was Gerard Schwarz and the Seattle Symphony Orchestra's version of Prokofiev's *Romeo and Juliet* suites on Delos.

Louis Meredith, reviewing *Hot Rock Videos, Volume 2*, noted that Jefferson Starship, "seemingly without embarrassment, performs the appalling 'Layin' It on the Line,'" only to be upstaged by G. Gordon Liddy and Timothy Leary.

—Ken Richardson

"The Only Speakers You'll Ever Need."¹ *PC Magazine*

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At Cambridge SoundWorks, we manufacture speakers and music systems designed by Audio Hall of Fame member Henry Kloss (founder of AR, KLH and Advent). *Audio* says we may have "the best value in the world." *PC Gamer* says "Cambridge SoundWorks line of multimedia speakers is one of the leading wonders of the computer world." *Stereo Review* says "Cambridge SoundWorks' lineup performs so far beyond its price class it can be compared only with much larger speakers at substantially higher prices."

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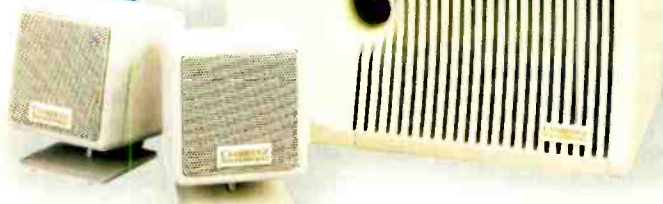
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TECHNOLOGY UPDATE

RDS: What's the Story?

BY RICH WARREN

If you've been shopping for a new receiver or car stereo, you may have come across a tuner feature called RDS. The name stands for Radio Data System, a method of piggybacking digital data on the audio signal of an FM radio transmission. RDS, now ubiquitous in Europe, where it made its debut in 1987, arrived in America in 1993, but 1997 will more than likely decide its fate here.

The system was officially called RBDS in the U.S., for Radio Broadcast Data System, but the industry cut it down to RDS, which is what the Europeans call it. The European and U.S. systems have slightly different technical specifications, but to the consumer they're virtually the same.

RDS teaches the old dog of FM broadcasting new tricks. When RDS circuits are added, a radio's dumb display gains smarts, showing a radio station's call letters or marketing name (for example, K-ROCK for KROQ) and format/program type, such as rock, jazz, or classical. The display can also scroll text messages up to sixty-four characters long (if the manufacturer implements that feature and the station transmits it). These could include artist, song and album titles, weather reports, sports scores, traffic updates, and telephone numbers for contests. And if you have a clock on your radio display, RDS will even set the time.

RDS radios are also equipped to receive special bulletins that are broadcast apart from regular programs. If you're listening to a CD or cassette when an RDS alert is broadcast, the disc or tape pauses and the volume ramps up so that you hear the warning. Similarly, you can program the radio so that when a local station broadcasts a traffic bulletin it interrupts a tape or disc for you to hear it.

A significant feature used throughout Europe is the alternate-frequency (AF) capability — augmented in Europe by Enhanced Other Networks, or EON — which enables RDS radios to

tune automatically from one station to another carrying the same program as you drive out of one coverage area and into the next. European countries broadcast identical programming on national networks (such as the BBC) using repeater or translator transmitters. The ability to keep listening to the same program from Hamburg to Munich or from London to Edinburgh greatly pleases European motorists. EON also automatically switches to local stations for traffic bulletins and local alerts.

No single company owns stations in enough U.S. markets broadcasting the same programming to make AF immediately practical here. Some states tie together networks of public radio stations, but they have yet to link these stations for the traveling listener using the RDS AF feature. Stations that use translators to expand their coverage area could use the feature to insure that motorists would always receive the strongest signal.

Beyond sending special traffic alerts or text messages to radios through RDS, radio broadcasters could use it for other purposes, such as transmitting data for paging systems, controlling billboards and highway signs, and sending correction signals to devices using the Global Positioning System (GPS) for navigation.

Conceptually, RDS represents the same objectives as the failed ARI (Au-

tomatic Radio Information) system introduced here by Blaupunkt in 1984, a few years after it was introduced in Europe. Carlos Altgelt, advanced audio supervisor at Ford Motor Company, noted that "RDS didn't come out of ARI, but it was part of the progressive type of work they do in Europe." The system enjoyed success in German-speaking countries, and to a lesser extent in England, but failed to catch on elsewhere. ARI mainly used a subcarrier signal to alert drivers to traffic reports and emergencies.

FM radio stations luxuriate in 100-kHz bandwidths but use only a little more than half of that for broadcasting stereo audio. That bandwidth has room for subcarriers that can transmit additional programming and data to special receivers. This is called subsidiary communications authorization (SCA).

In addition to the main L+R audio, most FM signals contain subcarriers, usually at 19, 38, 57, 67, and 92 kHz. The 38-kHz subcarrier contains the stereo information signal; the 19-kHz subcarrier is the stereo pilot that identifies the signal as being in stereo. Other subcarriers can be used for background music or data services like RDS. The RDS system uses a 57-kHz subcarrier.

At press time, about 700 U.S. FM radio stations, out of a total of 7,300, owned RDS encoders, and presumably most of the equipped stations transmit an RDS signal. The Consumer Electronics Manufacturers Association (CEMA) gave away more than 300 of those encoders (with a value of about \$2,000 each) in return for promotional consideration. An FM broadcast penetration of 10 percent for RDS appears a bit anemic, although in major markets the percentage looks more impressive. Stephen Baker, vice-president of sales and marketing at Denon, cited measurements by the radio rating



Pioneer's DEH-P85DHR CD receiver (\$530) for GM and Chrysler cars is one of several car stereo head units available in the U.S. featuring the Radio Data System (RDS).

service Arbitron that showed RDS was available to 33 million listeners, with ten markets being above 50 percent in RDS penetration. Cleveland, Philadelphia, and Baltimore show the highest penetration, more than 70 percent.

RE America, Inc., one of five companies selling RDS encoders in the U.S., has the lion's share of the business, having sold about 400 encoders. RE America provided CEMA with its special promotional model, which lacked a few features of the current model, such as multiple data ports so that a station could transmit multiple data streams over the same RDS sub-carrier. "The RDS market has been slow to develop in terms of what manufacturers' and broadcasters' expectations were," Steve Watts of RE America said. "We're certainly seeing a steady demand, but I don't think it's overwhelming yet."

The Chicken and the Egg

We decided to investigate a little further to determine if RDS is making any headway. Every person we spoke with cited the chicken-and-egg conundrum: Broadcasters demand more receivers in consumer hands, while radio/receiver manufacturers and consumers require more RDS stations.

Denon, Pioneer, Kenwood, and Delco lead the manufacturer cheering section for RDS, with additional support from Onkyo, Clarion, Philips, Grundig, Blaupunkt, and Audiovox. Denon and Kenwood are the only companies selling both car and home RDS receivers. Ford, Sony, Panasonic/Technics, and others remain on the sidelines.

Denon offers more RDS components than any other company, with six car systems and seven home units (receivers and a stand-alone tuner). Denon's Baker explained his company's view: "We live in an information age. We think the products that can deliver information to consumers have a leg up on other products in the marketplace. Denon is a value-added manufacturer, and we think that RDS is a great way to add value to our product. The beauty of RDS from a marketing point of view is that it adds value for everybody: the radio station, the manufacturer, and the consumer."

Noting a \$50 spread at retail between RDS and non-RDS units, Baker said Denon has sold more than 100,000 RDS units in the U.S. since it introduced the feature in April 1993. Baker also proclaimed that "RDS is a proven technology. It's omnipresent in Eu-

rope. Every manufacturer of consumer electronics that makes radios for Europe already makes an RDS product. It's not a huge, insurmountable obstacle to do it in the U.S."

Kenwood offers RDS in its top-of-the-line home receivers and in many of its car head units. According to Eric Kreis, national marketing manager for Kenwood, when the company did its new line this year, "We simply rolled RDS into it, so it really doesn't add any cost. We don't offer the same model with and without RDS. RDS is a good thing, but it has to be properly sold and explained to the consumer."

Russ Johnston, vice president for product planning for car audio at Pioneer, sees a definite split between RDS for the road and for home. "This is really the first time that we can get data into the car," he explained. "RDS's benefits fall into two categories: It adds to the ease of use of the radio, and it gives us a technology backbone to get data into the car. In home audio we have a lot of different data technologies — DSS, telephone, cable, and others — but we don't in the car; there aren't any telephone lines that long. Cellular telephone is a very, very poor technology for transmitting data at a rapid pace to the car. RDS opens up the window to the future for us."

As for expense, Johnston focuses on data-intensive applications that require more RAM than simply displaying call letters and format: "Once you start thinking as a product-development team about what you can do with this data, you see that almost everything requires RAM, and RAM is expensive in a car audio environment. It's not like a home PC where you can plop it in for *x* amount of dollars. Even \$50 is an extremely high additional cost for a car audio product because the market is very price-sensitive."

Johnston estimates that RDS adds about \$25 to the cost of a head unit. Pioneer sells twenty-nine RDS car audio products in Europe but only six models here. RDS is integrated into its Supertuner V series, which also includes ID Logic, an updatable database that provides call letters and format details for all AM and FM radio stations in the U.S.

Johnston sees radio text as the key feature of RDS in the U.S., while in Europe it's the AF (alternate-frequency) function. But Gil Porter, of GM Hughes Electronics subsidiary Delco Electronics, responding to concerns about RDS as a visual distraction for

drivers, said that Delco's implementation of RDS is "not text-intensive. The ergonomics are designed so you don't have to look at it a lot. Our unit won't scroll text, so only a limited amount of text will come through."

Ed Catlett, the RDS program manager for Delco, said: "We're actively promoting the technology with our customers, the GM car divisions. The response from the car divisions has been real good. There will be a car with RDS out this calendar year." Delco recently invited consumers to call 1-800-748-0422 for RDS information

The Radio Data System

teaches the old dog of FM

radio some new tricks.

or to order an RDS radio for dealer installation in a new car (Delco will also sell it as an upgrade for older cars).

Catlett suggested that RDS would become a standard feature "right after the turn of the century," and he noted that the display is the greatest RDS expense for Delco. Inexpensive displays that mix segments of capital and lower-case letters to create an entire alphabet must be replaced with more costly dot-matrix displays. Catlett predicted that small RDS transmitters will ultimately be placed on top of emergency vehicles to warn motorists of their presence. He does not, however, think RDS will be practical for in-car paging.

Jim Frazer, engineering manager of Blaupunkt, attributes the success of RDS in Europe to the alternate-frequency feature and considers National Public Radio a candidate to use the feature in the U.S. But on the whole, he said, "The nature of our radio stations and structure in the U.S. is not geared toward AF and never will be." He noted that because RDS is FM only, it leaves the roughly 30 percent of the radio audience that listens to AM out in the cold. Furthermore, Frazer claims, many FM stations that received free encoders from CEMA are using them improperly.

Frazer, based in suburban Chicago, noted that there are eight million people in the Chicago metro area and seven RDS stations, of which only two, both classical, have the same program type. "So essentially the program-type feature is useless in this market." He

TECHNOLOGY UPDATE

estimated the additional cost of RDS in a Blaupunkt radio as \$15 to \$25, depending on the implementation, display size, amount of memory, scrolling capability, and so on.

We asked Mike Starling, director of engineering and operations at National Public Radio, if NPR had considered using the RDS AF feature. (NPR coordinated CEMA's placement of RDS decoders with about a dozen of its major-market affiliates.) "We've certainly been receptive to the idea here," he said, "but since we're a membership network, it's really up to the individual stations. I think RDS still has tremendous potential, but, as so often happens, it comes down to a marketing issue."

What the Stations Say

When we asked several Chicago radio stations about RDS, we got a surprising variety of responses. Gordon Carter, chief engineer of WFMT, said: "We're not making a big deal about RDS because it may go away. We're not doing any of the sophisticated stuff. Basically there's a company using our RDS for a Global Positioning System correction signal. The problem is that anything that we would like to do with RDS is too labor-intensive to be cost-effective. RDS is one of those great ideas whose time probably will never come. This is more stubborn than FMX." (FMX was designed to reduce the noise and increase the dynamic range of FM broadcasts using a subcarrier to provide the information to restore compressed dynamics.)

At WXRT, one of Chicago's most progressive rock stations, chief engineer John Freberg said: "Right at this moment we are not broadcasting an RDS signal. We have the equipment but are in the midst of some transitions. Plans are to give just the call letters and some basic text messages for now. We are in the process of developing a song-title and artist display, but it probably won't be available until next year."

Over at one of Chicago's highest-rated stations, urban-contemporary WGCI, chief engineer Scott Clifton declared: "No, no plans. RDS won't go anywhere until the receiver manufacturers get off their rump or somebody pushes them to do it. It's just like AM stereo. Our AM is stereo, but you can't find a receiver for it anymore. I dare you to go to a Best Buy or Circuit

City, or wherever, and find even one RDS unit sitting on the shelf."

WKQX's manager of technical engineers, Joel Hodroff, told us: "We have an RDS encoder operational. Frankly, we're not doing very much with it at this point other than just displaying call letters and format. It's obvious that RDS is big in Europe, so it has the potential to become big in the U.S., but I don't see it going that way. It may be just like AM stereo."

At CBS-owned WBBM-FM, director of technical operations Mark Williams said: "We are not using it, and the primary reason is that it interferes with our subcarrier — they're not compatible. If a station uses a 57-kHz subcarrier, it will have a problem with RDS. There is a way to time-share, but obviously the subcarrier will not be optimized for either function. We've had this 57-kHz subcarrier for quite some time, and it's revenue for the station. At this point there's no reason to cancel that account."

Since WBEZ, Chicago's NPR station, refused to comment, we contacted the second-largest NPR outlet in Illinois, Urbana's WILL, whose chief engineer, Ed West, said: "I think RDS would be very useful if we had the budget for it. It hasn't been assigned a terribly high priority at this moment. We'd like to have it in the future." This more than likely reflects the view of most smaller-market stations, both public and commercial.

Ford's Altgelt, who was stationed in Europe during the development of ARI and RDS, predicts a dismal future for the system here. He refuted claims by the National Association of Broadcasters (NAB), which "said over a million RDS receivers had been sold. Apparently half were Grundig receivers used on boats — navigation units that happened to have RDS. They weren't sold or bought because they had RDS. It was immaterial." Altgelt qualified his anti-RDS remarks as his personal opinion, and a Ford public-relations representative told us that "Ford has no official position on RDS, other than that Ford engineers believe the infrastructure is prohibitive to it here. I have heard no talk at all of RDS coming to the U.S. in Ford vehicles."

Jack De Biasio, director of product planning for car stereo company Clarion, commented on Japanese car manufacturers' attitudes toward RDS (Clari-

on provides the radios for many Japanese car lines): "There's been a lot of discussion among manufacturers, but I think they will wait. If it's a feature that consumers want or can use, absolutely they'll go ahead and start including it in factory-installed radios. But they're very hesitant to increase the cost of their cars if the consumer demand is not there." Clarion has released one RDS model in the U.S., the DRX9375R. When there is no RDS information to display, it flashes computer-style screen savers.

"Do you add \$30 to \$50 to the cost of your product for RDS?" De Biasio asked. "Is the consumer really willing to spend that extra money? At this point it's hard to say, because the consumer doesn't know what the benefits will be. The year before last we introduced ID Logic, a database of radio-station call letters and formats, and there was no response. It seems that people don't respond to some of these new things." Things like AM stereo, a comparison we heard again and again.

Alternate RDS Applications

One company, Digital Corrections Incorporated (DCI), which uses part of WFMT's RDS signal, sees great potential for RDS apart from its popular applications. DCI currently contracts with 157 RDS-equipped stations, with 52 more pending. It needs a total of 300 to 400 RDS stations to blanket the country with its Global Positioning System correction signal. The government has indicated that it may remove the dither that fuzzes GPS signals for nonmilitary users in the next couple of years, however, perhaps leaving DCI looking for a new purpose.

Aside from the chicken-and-egg syndrome, both RDS's proponents and detractors agreed that it's a rehearsal for digital radio. Unfortunately, the U.S. continues to argue and delay a decision on digital broadcasting, postponing its emergence here. A few companies, such as Clarion, have already announced digital receivers for Canada, which will begin digital audio broadcasts later this year. Digital radio offers everything provided by RDS and more. Ford's Altgelt summed it up: "RDS is an obsolete technology. Digital audio broadcasting can do the same and much more because it's much faster and has a much wider bandwidth." □

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LOOK P. LEUNG

Kenwood 1080VR Dolby Digital A/V Receiver

DAVID RANADA • TECHNICAL EDITOR

Kenwood's Model 1080VR represents a breakthrough in A/V receivers. Priced at \$700, it is one of the first receivers providing full Dolby Digital (AC-3) decoding at a cost substantially below \$1,000. As you will see, this unusually low price doesn't mean that Kenwood has skimped on either features or performance.

For example, in multichannel operation the maximum output power across the front three speakers is specified as a hefty 120 watts per channel. Maximum output power for the two surround speakers is pegged at 60 watts each, only 3 dB lower. These multichannel wattages are specified at the rather high distortion level of 0.7 percent, which can be audible at times. During two-channel stereo operation, the specified output power for the front left/right channels remains 120 watts each, but the rated distortion drops to a comfortably inaudible 0.06 percent. All of these ratings turned out to be conservative.

The receiver's Dolby Digital facilities include not only AC-3 decoding but also a fairly complete array of ad-

justment and setup features essential for top multichannel performance. These include switchable 80-Hz high-pass filtering on the main (front and surround) speaker outputs, a line-level subwoofer output with matching 80-Hz low-pass crossover, individual channel-level adjustments for the main and subwoofer outputs with a built-in test tone, and image-improving speaker-distance compensation that seems to operate only in Dolby Digital playback (it should be on in all surround modes, a common fault) and only on the main speakers (omitting, wrongly, the subwoofer output, also common). The 1080VR includes the late-night mode of Dolby Digital operation and can be switched to compress the audio for reduced-level viewing should the

program material contain the necessary AC-3 compression data.

Several other DSP (digital signal processing) surround-sound modes are provided, none of which can be superimposed on the receiver's Dolby Digital or Dolby Pro Logic decoding (other receivers let you do that, but it always reduces the clarity of dialogue). The additional modes are intended for music enhancement and include settings labeled Arena, Jazz Club, Stadium, Church, and Theater. They introduce different patterns of multiple delayed artificial reflections and reverberation into all speaker outputs except the center. Each DSP mode in turn has three adjustable parameters: simulated wall "hardness" (three settings), simulated room size (three settings), and effect level (five steps).

The 1080VR's FM tuner is an RDS (Radio Data System) device and will display on the front-panel readout or on an attached TV monitor any transmitted RDS text such as call letters or traffic information. Other RDS facilities allow you to automatically seek RDS stations according to one of ten program types (news, sports, classical, country, and the like). You can also tune in any FM or AM station directly by its frequency, using a front-panel numerical keypad, and there are presets for up to forty stations.

Two digital audio inputs are on the rear panel. The one with an optical connector is associated with whatever component is connected to the Video 2

DIMENSIONS: 17¾ inches wide, 5¾ inches high, 15½ inches deep

WEIGHT: 24¼ pounds

PRICE: \$700

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TEST REPORTS

A/V input, and the one with a coaxial connector is associated with Video 3. Both inputs will accept either standard SPDIF digital audio data, such as from a CD player, or Dolby Digital multi-channel data from a DVD player, a laserdisc player's AC-3 RF adaptor, or any number of possible future Dolby Digital devices. Analog audio connections are provided for a moving-magnet phono cartridge, a CD player (I'd use one of the digital connections, however), and a tape recorder. The A/V connections include one VCR (Video 1) and three play-only video sources: Video 2, Video 3, and an auxiliary A/V input on the front panel. Somewhat luxuriously, the receiver also has connections to hook up a stereo

equalizer, which can be switched in by the bizarre procedure of holding down the front-panel display-dimmer key for more than 2 seconds.

Aside from the Dolby Digital connections, the receiver's rear panel is conventional. There's an F-connector for an FM antenna, push connectors for an AM wire-loop antenna, binding-post connectors for the front speakers, push connectors for the surround speakers and a pair of auxiliary stereo speakers (for second-room operation), RCA jacks for all line-level inputs and outputs, and RCA jacks for all the video outputs. Those video RCA jacks mean that the receiver switches only composite-video signals, not S-video signals, which I con-

sider essential for getting the best picture out of a DVD player. If your monitor can accept S-video signals, you'd have to hook up a DVD player's S-video output to it directly, because you can't route the output through the 1080VR. This may prove inadvertently advantageous, however, as it could reduce the possibility of a hum-generating ground loop.

The Kenwood 1080VR's remote control comes preprogrammed for hundreds of components (VCRs, CD players, TVs, and more). You can select each component's basic remote commands by entering a four-digit set-up code into the 1080VR remote's numerical keypad. The remote can even memorize a sequence of twenty steps

DOLBY DIGITAL (AC-3) PERFORMANCE

All data obtained with Dolby Digital signals from the Dolby Labs AC-3 test DVD using "large" speaker settings, a -19-dB volume setting (producing 1 watt into 8 ohms from a -20-dBFS* signal).

FREQUENCY RESPONSE (all 20 Hz to 20 kHz)

front left	+0.04, -0.28 dB
front right	+0.43, -0.15 dB
center	+0.2, -0.26 dB
surround left	+0.32, -0.07 dB
surround right	+0.55, -0.09 dB

NOISE

(A-wtd, re 1 watt output with -20 dBFS* input)

front left/right	-73.6/-73.5 dB
center	-73.9 dB
surround left/right	-73.8/-73.8 dB

EXCESS NOISE (typical results, with signal)

16-bit (EN16)	+3.8 dB
20-bit (EN20)	+25.7 dB

DISTORTION (THD+N, 1 kHz, -20-dBFS* input)

worst case (left surround) 0.042%

SUBWOOFER OUTPUT FREQUENCY RESPONSE

rolloff 12 dB/octave above -3-dB point at 80 Hz

HIGH-PASS FILTER FREQUENCY RESPONSES

rolloff 12 dB/octave below -3-dB point at 80 Hz

MAXIMUM SUBWOOFER OUTPUT

("small" main-speaker settings) 10.2 volts

SUBWOOFER DISTORTION AT MAXIMUM

OUTPUT ("small" main-speaker settings) 0.37%

* decibels referred to digital full-scale

DOLBY PRO LOGIC PERFORMANCE

All data for analog input signals, no-subwoofer speaker configuration, -16-dB volume setting (producing 1 watt into 8 ohms).

FREQUENCY RESPONSE

("large" center-speaker setting)

front	20 Hz to 20 kHz +0.02, -0.35 dB
center	20 Hz to 20 kHz +0.1, -0.24 dB
surround	84 Hz to 7.2 kHz +0.02, -3 dB

OUTPUT AT CLIPPING (at 1 kHz, 8 ohms)

front	128 watts
surround	64 watts

MEASUREMENTS

NOISE (A-wtd)

front	-71.5 dB
center	-71.3 dB
surround	-70.6 dB

DISTORTION (THD+N, 1 kHz)

front	0.048%
center	0.076%
surround	0.083%

SURROUND-CHANNEL NOISE-REDUCTION

CALIBRATION ERROR

re Dolby level (251.5 mV) 0 dB

SURROUND-DECODER INPUT-OVERLOAD

MARGINS (at 1 kHz)

front (re 2-volt input)	-0.2 dB
center (re 1.4-volt input)	+2.8 dB
surround (re 1.4-volt input)	+2.8 dB

CHANNEL SEPARATION (worst case)

left out, surround driven >38 dB

STEREO PERFORMANCE

Except where noted, all data for analog input signals.

OUTPUT AT CLIPPING (at 1 kHz)

8 ohms	133 watts
4 ohms	183 watts

CLIPPING HEADROOM (re 120-watt rating)

8 ohms 0.45 dB

DYNAMIC POWER

8 ohms	171 watts
4 ohms	258 watts

DYNAMIC HEADROOM (re 120-watt rating)

8 ohms 1.5 dB

DISTORTION AT RATED POWER 0.055%

SENSITIVITY (for 1-watt output)

CD/laserdisc	30 mV
phono	0.4 mV

INPUT-OVERLOAD LEVEL (re 2-volt input)

CD/laserdisc 12 dB

NOISE (re 1-watt output)

CD (500 mV input)	-82.7 dB
phono (5 mV input)	-70.9 dB

RIAA PHONO-EQUALIZATION ERROR

(20 Hz to 20 kHz) +0.07, -0.48 dB

ANALOG-INPUT FREQUENCY RESPONSE

20 Hz to 20 kHz +0, -0.41 dB

TONE-CONTROL RANGE

100 Hz	+7.8, -7.9 dB
10 kHz	+6.8, -8.0 dB

DIGITAL-INPUT LINEARITY ERROR

at -90 dBFS* -0.25 dB

DIGITAL-INPUT EXCESS NOISE

(without/with signal)

16 bits (EN16)	+3.81/+3.81 dB
20 bits (EN20)	+20.9/+20.9 dB

DIGITAL-INPUT DISTORTION

re 0 dBFS* (100-watt output) 0.01%

re -20 dBFS* (1-watt output) 0.039%

DIGITAL-INPUT NOISE

(0-dBFS*, re 100-watt output)

A-wtd, de-emphasis off/on -91.9/-93.0 dB

DIGITAL-INPUT FREQUENCY RESPONSE

(de-emphasis off/on)

20 Hz to 20 kHz +0.71/+0.76, -0.03/-0.15 dB

* decibels referred to digital full-scale

TUNER SECTION

All figures for FM only except frequency response.

SENSITIVITY (50-dB quieting)

mono	32 dBf
stereo	41 dBf

NOISE (at 65 dBf)

mono	-74.5 dB
stereo	-69 dB

DISTORTION (THD+N at 65 dBf)

mono	0.12%
stereo	0.22%

CAPTURE RATIO (at 65 dBf) 1.75 dB

AM REJECTION 63 dB

SELECTIVITY

alternate-channel	66 dB
adjacent-channel	13 dB

PILOT-CARRIER LEAKAGE

19 kHz	-75 dB
38 kHz	-65 dB

CHANNEL SEPARATION (1 kHz) 44 dB

FREQUENCY RESPONSE

FM	20 Hz to 15 kHz +1, -1.5 dB
AM	100 Hz to 3.4 kHz +0.5, -6 dB

for more automatic system operation. If codes for the component you wish to control aren't already in the handset, they can be downloaded by telephone (the remote "listens" to the commands over the telephone ear-piece). More on the remote later.

On the whole, our lab measurements only backed up what we found in our listening tests. The Kenwood 1080VR was a powerful, clean-sounding receiver in all operating modes. Along with the output-power figures, note the low noise levels in both Dolby Pro Logic (measured through an analog input) and Dolby Digital modes. Even when it was measured like a CD player with our special CD-player test tones, the results for such parameters as linearity and 16-bit excess noise show that the 1080VR's digital-to-analog (D/A) converters, which are employed in all modes except stereo and source-direct playback from an analog source, performed particularly well. Tuner performance was average.

With one rather startling exception to be discussed later, the 1080VR sounded great. Dolby Digital soundtracks were as stupendous as always, with spectacularly wide dynamic range. The same sonic cleanliness was also characteristic of stereo playback* from digital sources and even of ambience-enhanced playback using the DSP modes (Jazz Club, Theater, and so on). In fact, the DSP modes of the 1080VR were among the best I have found in an A/V receiver, providing a useful degree of enhancement to a very wide variety of music without exaggerated effects. It was difficult to make the added ambience sound really gross, which seems to be the default DSP setting of most A/V receivers. Just choose the basic ambience mode carefully, and you'll do fine. As usual with such processing, ignore the names of the DSP modes. Try all of them to find the one that works best with your program material.

Kenwood takes great pride in the versatility of the 1080VR's remote control. The pride is justified, but only in part. Following the component chart in the manual, I could indeed program the handset to control a CD player, a DVD player, and our sound-room TV monitor. But I found the multiple button presses required for the handset to emit foreign-component commands to be extremely offputting, not to mention easily forgettable and difficult to teach to significant others or progeny.

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*Wes Philips on the PS-1000,
Stereophile Guide to Home Theater Vol. 2, Number 2*

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TEST REPORTS



Besides, you'll eventually require the foreign-component's original remote to activate the many features that the 1080VR *can't* control.

Furthermore, the remote's versatility seems to have complicated operating the receiver itself! Selecting an input component or surround mode may require cycling through quite a few

other manufacturer, I mentioned that each company seems destined to make a few errors when it introduces a new Dolby Digital product category to its line. That has occurred with Kenwood and its 1080VR, too, and the error could have unpleasant consequences unless you take a simple precaution.

Say you're using a DVD player for both CD and DVD playback and you slip in a DVD after playing a CD through one of the DSP modes via a digital input. You will be "treated" to rapid bursts of full-level noise, which is what a Dolby Digital data stream sounds like undecoded. If your volume was turned up high enough and you were standing near one of the speakers, such outbursts could be literally deafening, though most likely only temporarily. As I can attest, the effect is certainly attention-getting when first encountered. Fortunately, you can avoid this problem simply by remembering to switch to Dolby Digital decoding *before* (repeat, *before*) playing a DVD (or a Dolby Digital laserdisc). Going in the opposite direction, playing a standard audio CD when the 1080VR is set for Dolby Digital decoding, doesn't pose a problem, as the receiver rightly mutes until you switch it into stereo or a DSP mode. Kenwood has also discovered the problem, and it will be fixed in future units.

Now to place this in perspective. The nonmuting of Dolby Digital output at inappropriate times prevents me from being able to recommend un-

Dolby Digital soundtracks were as stupendous as always with the Kenwood 1080VR, and its ambience-enhancement modes were among the best I've heard.

choices before you get to the one you want. The multiple-function buttons mean that you can too easily place yourself accidentally into a mode for controlling one component when you want to control another, or the receiver. Even for a computer-savvy user like me, the remote's setup procedure was unnecessarily complicated — and it wasn't made any easier by Kenwood's confusing and poorly organized manual. The remote is a relatively minor problem, however. Use it just to control the receiver, and you won't have too much trouble.

A while back, when reviewing an earlier Dolby Digital product from an-

qualifiedly the 1080VR that I tested. You should look for an up-to-date unit in which the nonmuting is fixed, however, because this is a damn fine receiver otherwise, with ample power for all but the largest listening rooms, very low background noise in all processing modes, useful and unexaggerated ambience processing, and a simple yet comprehensive on-screen setup system. Now if only Kenwood would rewrite the manual and supply a second, dedicated remote control. That would greatly enhance the exceptional value already provided in the 1080VR, and the company would really have a winner on its hands. □



LOOK R. LEUNG

Celestion A1 Speaker

JULIAN HIRSCH • HIRSCH-HOUCK LABORATORIES

Celestion, the highly respected British manufacturer, recently introduced its A Series of loudspeakers, which currently consists of three ported systems featuring a new family of drivers specially developed for them. The speakers in the A Series were designed to meet the needs of home-theater installations as well as of conventional music systems, and the drivers are magnetically shielded to prevent interference with the picture quality of a TV or video monitor.

The Celestion A Series was developed with the aid of advanced techniques such as Finite Element Analysis, used to design portions of the drivers, including the proprietary titanium-dome tweeter in all three models. A Faraday ring reduces impedance variations in the tweeter voice coil, thereby maximizing its power-handling ability. For better imaging, the tweeter is located very close to the woofer's edge (portions of their structures actually overlap). A cast bar in front of the tweeter dome prevents damage to the delicate dome from contact with the closely spaced grille.

The subject of this report, the A1, is the smallest and least expensive member of the new series. It is a compact two-way system intended for stand

mounting, which ideally should place it about 24 inches above the floor. The middle member of the family, the A2, is a compact floor-standing speaker, and the top-of-the-line A3 is a large floor-standing system.

The A1, though small, is surprisingly heavy (31 pounds). Its construction is robust, to put it mildly. Although no specific information was provided on its internal construction, it has probably the most rigid, solid-feeling enclosure we have encountered in a long time. Knuckle raps on any part of its exterior had the tactile and audible effect of rapping a marble block.

The driver complement is a (nominal) 7-inch cone woofer, with an active portion of just under 6 inches in diameter, and a 1-inch titanium-dome tweeter. The front panel of the speaker

is normally hidden by a black grille cloth, which is easily removed to reveal the drivers. The Celestion A1 is fully finished in wood veneer on all exterior surfaces, including the bottom (the cherry finish is shown in the photo), and has rounded front and rear corners.

The rear panel of the cabinet contains the bass port and two pairs of recessed gold-plated binding posts paralleled by gold-plated jumper straps. If the jumpers are removed, the system can be driven in a biwired or biamplified mode (with separate power to the tweeter and woofer sections). The connectors accept wires, lugs, or single or dual banana plugs.

The A1, which is recommended for use with amplifiers delivering between 30 and 150 watts into 4-ohm loads (its nominal impedance rating), carries a sensitivity rating of 88 dB sound-pressure level (with 2.83 volts input) into free space and 90 dB SPL in a semi-reverberant environment, which is essentially its normal operating condition. Our measurement confirmed the 90-dB rating.

Minimum system impedance measured just over 5 ohms at 45 Hz and between 150 and 250 Hz. The maximum readings were 42 ohms at 75 Hz and 34 ohms at 26 Hz, and there was a broad peak to 20 ohms in the 1.5-kHz range. The combination of high sensitivity and a comfortable impedance characteristic makes the A1 an easy speaker to drive with any amplifier.

Following our usual practice, we placed the two speakers on stands about 7 feet apart and 3 feet in front of the room wall. The room response was measured separately for each channel with the microphone 12 feet in front of the left speaker, and the two curves were averaged to obtain a "typical" room response. This definitely non-standard measurement, made in much the same way for every speaker we test, is intended to indicate a more or less typical frequency response from the speaker in a fairly good "normal" home acoustic environment.

The resulting curve indicated an overall variation of ± 4 dB from 32 Hz to 20 kHz, with a broad maximum located between 150 Hz and 1 kHz. The higher frequencies remained strong and relatively uniform all the way to 20 kHz, with a ± 3 -dB variation over the range from 1 to 20 kHz.

Quasi-anechoic (MLS) response measurements at distances of 1, 2, and 3 meters resulted in curves that had

DIMENSIONS: 16 inches high, 9½ inches wide, 14 inches deep

WEIGHT: 31 pounds

FINISH: cherry, black ash, or rosewood veneer

PRICE: \$1,499 a pair in cherry and black ash, \$1,699 in rosewood

MANUFACTURER: Celestion, Dept. SR, 89 Doug Brown Way, Holliston, MA 01746; telephone, 508-429-6706

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TEST REPORTS

the typical rather ragged appearance, but they nevertheless demonstrated the exceptional high-frequency qualities of the A1's tweeter. They clearly confirmed the system's exceptional performance in the uppermost octave of audibility, with a strikingly uniform output up to 18 kHz and an actual *rise*, by another 4 dB, from 18 kHz to the 20-kHz measurement limit (a region where the response of most tweeters is well on its way *down*).

Celestion's response rating for the A1 is 43 Hz to 20 Hz ± 2 dB. We would expect a good metal-dome tweeter to handle the treble range competently, and this one certainly did. But what about the low bass? How much bottom end can you expect from a single small driver in a modest-size enclosure?

Listening provided a clear indication that the woofer went down at least to the 50-Hz range, but as you head deeper into the bass, each additional hertz of extension becomes more difficult to achieve (and to hear, for that matter). We measured the low-end response using two microphones, close to the woofer cone and port, weighting and combining their outputs in proportion to their respective areas.

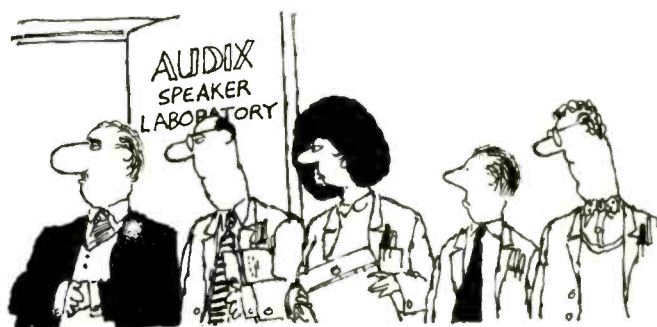
The resulting curve was virtually ideal in its shape and smoothness. As the Audio Precision system stepped downward from 100 Hz the response curve rose smoothly by 3 dB, leveling off between 50 and 40 Hz and then falling at 12 dB per octave from 40 Hz

to the 20-Hz lower measurement limit. It is especially satisfying, and unusual, to find the measured performance of a speaker actually meeting or surpassing its manufacturer's ratings despite the numerous inevitable differences in details of the measurement process.

As always, the ultimate proof of a speaker's performance is in the listening. Not too surprisingly in view of our test results, the Celestion A1 sounded very much the way it measured, using a variety of program material. Its stereo imaging was excellent, as natural as we have heard from any speaker in the same environment, with a totally seamless and believable image across the front of the room.

We were especially curious to learn whether the subjective bass response corresponded to the near-ideal measurements (it is not uncommon to find inconsistencies between the measured and audible qualities of speakers). The low-bass response of the A1 proved to be quite real, however, and actually contributed useful output down to the range of 32 Hz or so. This is definitely *not* typical of small speakers with cones only 6 inches in diameter!

Although the Celestion A1 is not inexpensive, its performance indicates that it is an excellent value for the money. In fact, our experience with the junior member of the company's A Series makes us wonder about the sound of the top-of-the-line A3 (which costs more than twice as much and weighs over 100 pounds). □



NOW THAT'S A LONG THROW SPEAKER!!!





DANN WAGNER

Harman Kardon PT2500 A/V Preamp/Tuner

DANIEL KUMIN • START LABORATORIES

Preamplifier/tuners are enjoying something of a resurgence these days, under a new guise: the A/V preamp/tuner, in essence an A/V receiver without the power amplifier. The genre saves weight, cost, and size while freeing the owner to pick and choose from the vast ranks of stand-alone power amps with one, two, or more channels.

Combining the preamp, surround-processor, and tuner functions in one box makes good sense. The consolidation reduces clutter and complexity, and chassis and power-supply resources are used more economically. The result can make for some excellent values, such as Harman Kardon's \$529 PT2500, which the company calls an A/V Surround Tuner Controller.

The PT2500 combines conventional preamp functions. Dolby Pro Logic surround decoding, two ambience-enhancement music modes, and an AM/FM tuner. It features Harman Kardon's trademark sculpted front panel and a simple layout with clusters of rocker-type pushbuttons for surround-mode and input selection as well as tuning. A large, motor-driven knob

controls master volume, while three smaller ones handle bass, treble, and balance. A front-panel convenience set of A/V jacks is provided (these can override the rear-panel VCR2 connections when you push the front-panel VCR2 button), but there is no headphone jack.

Around back there are audio-only inputs for CD, aux, two tape loops, and a moving-magnet phono cartridge. Audio/video options consist of one VCR loop, a second, play-only VCR input, and an input for a laserdisc player. All of the PT2500's video connections, including the dual monitor outputs, are composite-video RCA jacks; there are no S-video ports.

The PT2500 has the expected outputs for the front left and right channels and dual surround outputs. It also

provides dual center-channel outputs, but Harman Kardon rightly warns that in most cases only one should be connected. (Then why include two?) There is a pair of subwoofer jacks, too, and the manual advises that these should either be connected to a dual-input powered sub (or a sub amplifier) or joined via a Y-cable for a single-input sub. This is unusual. It seems that the PT2500 sends separate left- and right-channel signals (plus the center-channel bass when the center-speaker mode is set to "small") to its two sub jacks instead of summing the channels internally. Combining the outputs with a simple Y-cable works, but it seems to me that if you were to play a stereo recording with true stereo bass this configuration could cause some lower-octave cancellation.

The PT2500 does not provide a six-channel input (and switch position) to accept signals from an outboard Dolby Digital or other 5.1-channel decoder, which means that it is not capable of easily integrating the new medium. The manual does, however, briefly describe connection to an external Dolby Digital decoder with pass-through capability such as Harman Kardon's own ADP-303 processor (see "Digital Surround à la Carte," January 1997). The preamp/tuner's six outputs are routed to the DD box, which then takes over as the signal source only when DD programs are played back. Otherwise, stereo and surround signals alike pass straight through to the power amps. This means, though, that the outboard

DIMENSIONS: 17³/₄ inches wide, 6¹/₄ inches high, 16¹/₂ inches deep

WEIGHT: 17 pounds

PRICE: \$525

MANUFACTURER: Harman Kardon, Dept. SR, 80 Crossways Park W., Woodbury, NY 11797; telephone, 1-800-645-7484

TEST REPORTS

processor's master volume control must be used for DD playback, complicating system operation slightly.

Other rear-panel features include three convenience AC outlets (two are switched), AM and FM antenna connectors, intercomponent remote ports for intelligent control of other Harman Kardon gear, and a DC-trigger output for auto-on amplifier integration with HK (or compatible) power amps.

The supplied remote control provides a complete command set, including up/down buttons for master, center, and rear volume. It also includes keys to dim or turn off the preamp's front-panel display, to select among Dolby Pro Logic, 3-Channel Logic, two music surround modes, and plain stereo operation, and to invoke a sleep-timer auto-shutoff routine. In addition, the remote supplies basic transport commands for CD players/changers and tape decks, presumably working only with Harman Kardon components as it is not a programmable or "learning" controller.

Setting up the PT2500 required nothing more demanding than connecting six RCA cables to my power amps and subwoofer, and a few more to my Digital Satellite System receiver, laserdisc player, TV tuner, and video monitor. The preamp's only bass-

management feature is the center-mode option, which you can set to "wide" (full-range), "small" (for an unspecified rolloff), or "phantom" (if no center speaker is used). I chose "wide" for my relatively full-range center speaker.

Channel-balance calibration using the on-board test-signal sequence and a sound-level meter was achieved quickly, and the result held the relative balance between channels quite well over a wide, 20-dB master-volume range. At the highest knob settings (above 12 o'clock), the left and right outputs lagged behind the center and surround channels by up to 2 dB, though in my system these very high volume settings corresponded to a peak sound-pressure level (SPL) of more than 100 dB. Within the range of what would be "normal" volumes in most systems (assuming the speaker or power-amp sensitivities aren't unusually low), channel-balance accuracy should be very good.

The PT2500's center- and surround-channel adjustments only deliver 2-dB precision between the minimum setting (a value of 22) and the maximum (100). That absolute range is huge — far more than I could imagine needing — but 2-dB steps are really too coarse for fussy home-theater types like me

(I can easily hear level differences of 1 dB in full-surround playback). Depending on your luck with room size, placement, and speaker sensitivity, you may have to compromise a bit, or use your power amps' input-level trims, if any, which is what I did. Another minor beef: Center/surround-level values are not stored in memory but are displayed on the preamp's front panel. You'll need to write down or remember these values if you wish to change them temporarily.

All of these criticisms are nit-picking, relatively speaking, and performance-wise the PT2500 was tough to fault. Dolby Pro Logic surround results were very fine, thanks at least in part to Harman Kardon's use of the Analog Devices SM-2126A decoding chip found in many higher-end analog processors. Leakage of center-channel material to the sides (into the surround channel) was exceptionally low, and the small residue was relatively free of pumping or transient "spitting." Pro Logic steering was smooth and accurate, resulting in a cohesive, believable front stage with well-produced soundtracks, and ambience delivery was of a similarly high caliber.

Overall, Pro Logic reproduction was bright, well-etched, and transparent, with a degree of low-level detail on

MEASUREMENTS

On the test bench the PT2500 proved a good performer. Noteworthy are the low noise levels in stereo and Dolby Pro Logic operation (except for the surround channel). Frequency response with the tone controls set at their center detents was not as flat as I would like, but pressing the front-panel Direct button, which defeats the tone controls, produced much flatter results. If you don't want to do that, you can turn the bass and treble controls to the 1 o'clock and 1:30 positions, respectively, for similarly flat results. The FM tuner measured a tad below average overall. Stereo noise, in particular, was around 10 dB worse than we have been seeing lately from other units, a difference that is quite audible.

—David Ranada

DOLBY PRO LOGIC PERFORMANCE

FREQUENCY RESPONSE

front 20 Hz to 20 kHz +0.65, -1.11 dB
center 20 Hz to 19.6 kHz +0, -3.0 dB
surround 41 Hz to 8.1 kHz +2.3, -3.0 dB

NOISE (A-wtd)

front -78.2 dB
center -70.0 dB
surround -67.6 dB

DISTORTION (THD+N, 1 kHz)

front 0.024%
center 0.037%
surround 0.20%

SURROUND-DECODER INPUT-OVERLOAD MARGINS

front (re 2-volt input) +1.0 dB
center (re 1.4-volt input) +3.5 dB
surround (re 1.4-volt input) +2.75 dB

SURROUND-CHANNEL NOISE-REDUCTION

CALIBRATION ERROR (at 3 kHz; see text)
re Dolby level (247 mV) -8.0 dB

CHANNEL SEPARATION (worst case)

left output, center driven >36 dB

STEREO PERFORMANCE

OUTPUT AT CLIPPING 6.2 V

DISTORTION (THD+N, 0.5-V input and output)
1 kHz 0.002%

INPUT-OVERLOAD LEVEL (re 2-volt input)

line-level inputs 12.75 dB

NOISE (re 0.5-volt output, A-wtd)

CD (500-mV input) -97.6 dB
phono (5-mV input) -74.4 dB

SENSITIVITY (for 0.5-volt output)

CD/laserdisc 122 mV
phono 1.73 mV

RIAA PHONO-EQUALIZATION ERROR (with tone controls off, 20 Hz to 20 kHz)
+0.25, -2.7 dB

FREQUENCY RESPONSE (20 Hz to 20 kHz)

tone controls on +0.55, -1.03 dB
tone controls off +0.03, -0.66 dB

TONE-CONTROL RANGE (with tone controls on)

100 Hz +10.2, -9.7 dB
10 kHz +9.7, -9.6 dB

TUNER SECTION

All figures for FM only except frequency response

SENSITIVITY (50-dB quieting)

mono 16 dBf
stereo 35 dBf

NOISE (A-wtd, at 65 dBf)

mono -62 dB
stereo -56 dB

DISTORTION (THD+N at 65 dBf)

mono 0.22%
stereo 1.35%

CAPTURE RATIO (at 65 dBf)

2 dB

AM REJECTION

52 dB

SELECTIVITY

alternate-channel 60 dB
adjacent-channel 11 dB

PILOT-CARRIER LEAKAGE

19/38 kHz -46 dB

CHANNEL SEPARATION (1 kHz)

43 dB

FREQUENCY RESPONSE

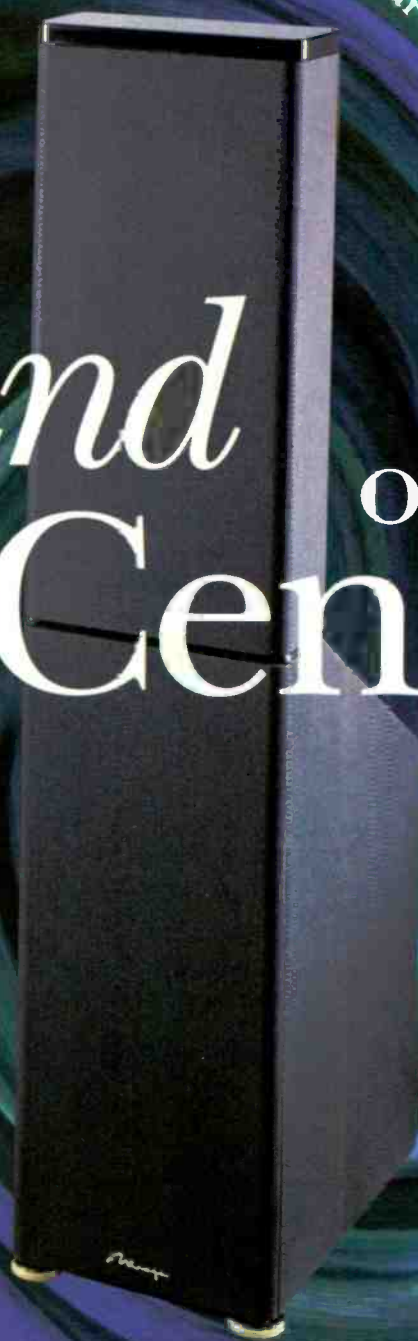
FM 20 Hz to 15 kHz ±1 dB
AM 100 Hz to 3 kHz +0, -6 dB

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STEREO REVIEW AUGUST 1997 45



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TEST REPORTS

speaker cabinet is finished in black, and it is attractive enough to be used without the grille if desired.

We installed the MA-301 speakers on stands that placed the tweeters 32 inches above the floor and 3 feet in front of the wall behind them, with 7 feet between the left and right speakers. We measured room response with the microphone 12 feet in front of the left speaker, driving one speaker at a time and plotting the two response curves on the same coordinates.

The smoothed and averaged room response varied ± 3 dB from 100 Hz to 10 kHz, dropping off by another 7 dB at 20 kHz. That is fairly typical for this measurement, which is intended to roughly approximate the system's average response in a more or less ordinary and normally furnished room.

Room-response measurement at the low audio frequencies is impractical, so we evaluate a speaker's bass performance with the microphone close to the woofer cone. Since the MA-301 is

We drove the Monitor

Audio MA-301 speakers at very high levels

without audible distress.

a vented system, we used two microphones, one at the cone and one at the port, and combined their outputs in proportion to the areas of the respective sources.

The resulting bass-response curve varied only ± 1.5 dB from 200 Hz down to 70 Hz, dropping off at 6 dB per octave below 70 Hz. Listening to test tones and music from CDs confirmed that the MA-301 produced a clean, usable bass output down to approximately the 50-Hz range, certainly highly creditable performance for a woofer of its size.

The quasi-anechoic (MLS) frequency response, measured at distances between 1 and 3 meters, was better than ± 5 dB from 300 Hz to 16 kHz, with much of the variation occurring in the uppermost octave. The tweeter's horizontal dispersion was excellent over a ± 45 -degree angle, with a mere 2-dB dropoff at 15 kHz.

The nominal impedance rating of the MA-301 is 6 ohms. In our measurements, 6 ohms was its *minimum* impedance, between 200 and 300 Hz.

The maximum impedances were 24 and 26 ohms at 35 and 100 Hz, respectively, and there was a broad 18-ohm reading at around 2 kHz, probably related to the crossover between woofer and tweeter.

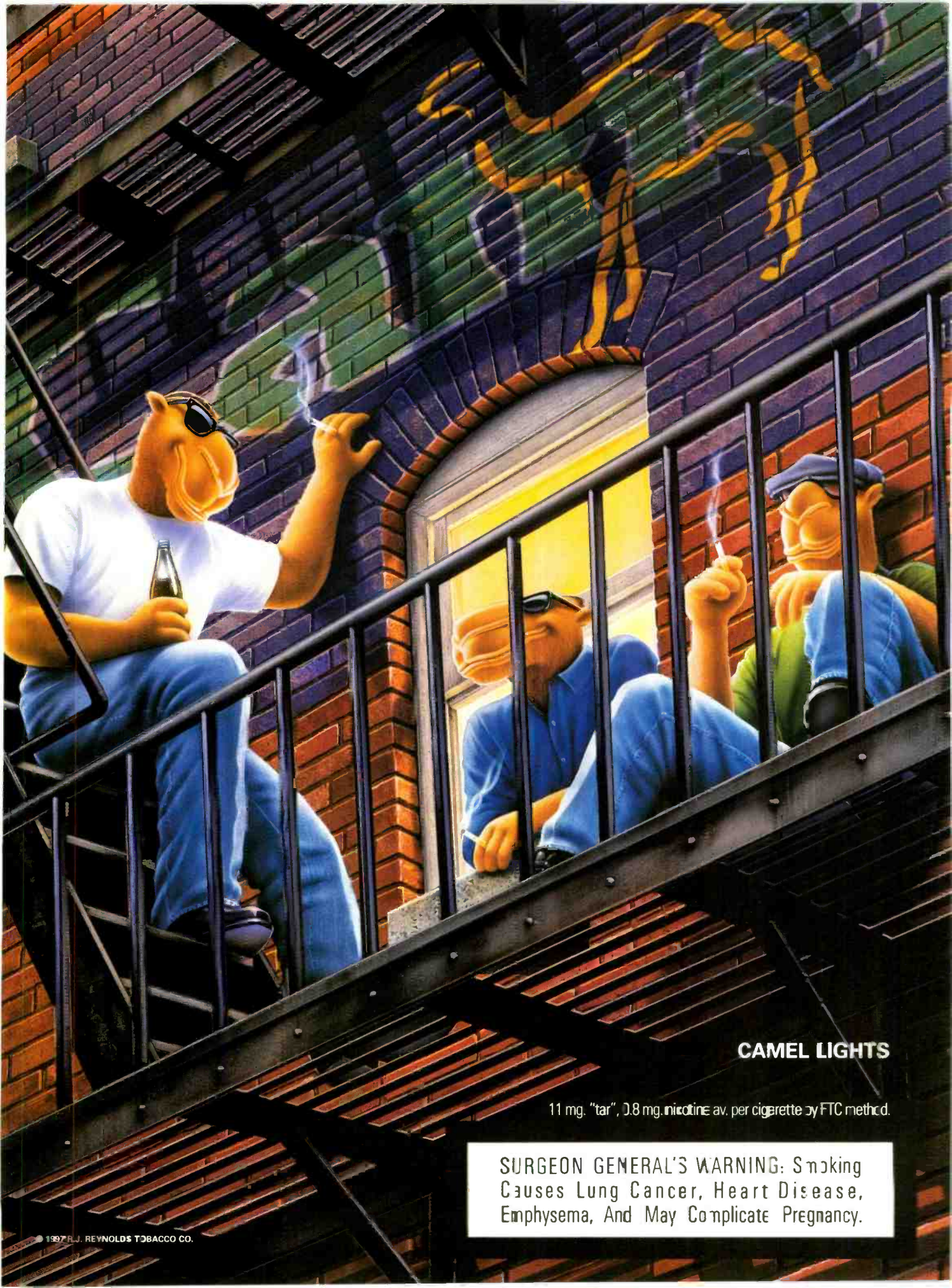
According to the manufacturer, the MA-301 is magnetically shielded to permit its use close to video displays in home-theater systems. Scanning the exterior of the speaker with a gaussmeter confirmed that over most of its surface the external flux was less than 1 gauss and entirely negligible. In the vicinity of the tweeter, however, the magnetic flux rose sharply, exceeding the 2-gauss maximum of the meter's range. To evaluate the practical significance of this reading, we placed the speaker close to a TV set. Although it caused a slight color shift when it was very near the front of the screen, the effect was completely eliminated when the speaker was moved 5 or more inches away from the TV.

The MA-301 speaker is rated for 100 watts maximum input, and it had a measured sensitivity of 88 dB sound-pressure level (SPL) with a 2.83-volt input signal — right on spec. In our 300-square-foot room, we drove the MA-301s with a 100-watt amplifier at very high levels (higher than we would normally use in a room of that size) without audible signs of distress or damage to the speakers or to our listening sensibilities.

Obviously, a speaker of this size has its limitations, as dictated by the laws of physics. While it sometimes seemed to perform miracles of sound reproduction, you cannot expect to shake the room with deep bass from a 4-inch cone. Nor can you expect to play music at lease-breaking volume with impunity, although we reached uncomfortably high levels on occasion without mishap.

Although it might seem expensive for its size, the MA-301 can easily hold its own against most competitively priced speakers in respect to listening quality. The chief exception to this statement involves low bass, below 50 or 60 Hz, where some competitively priced speakers deliver a deeper or stronger response. They are also considerably larger than the MA-301, however, and often lack the natural tonal qualities of this little giant.

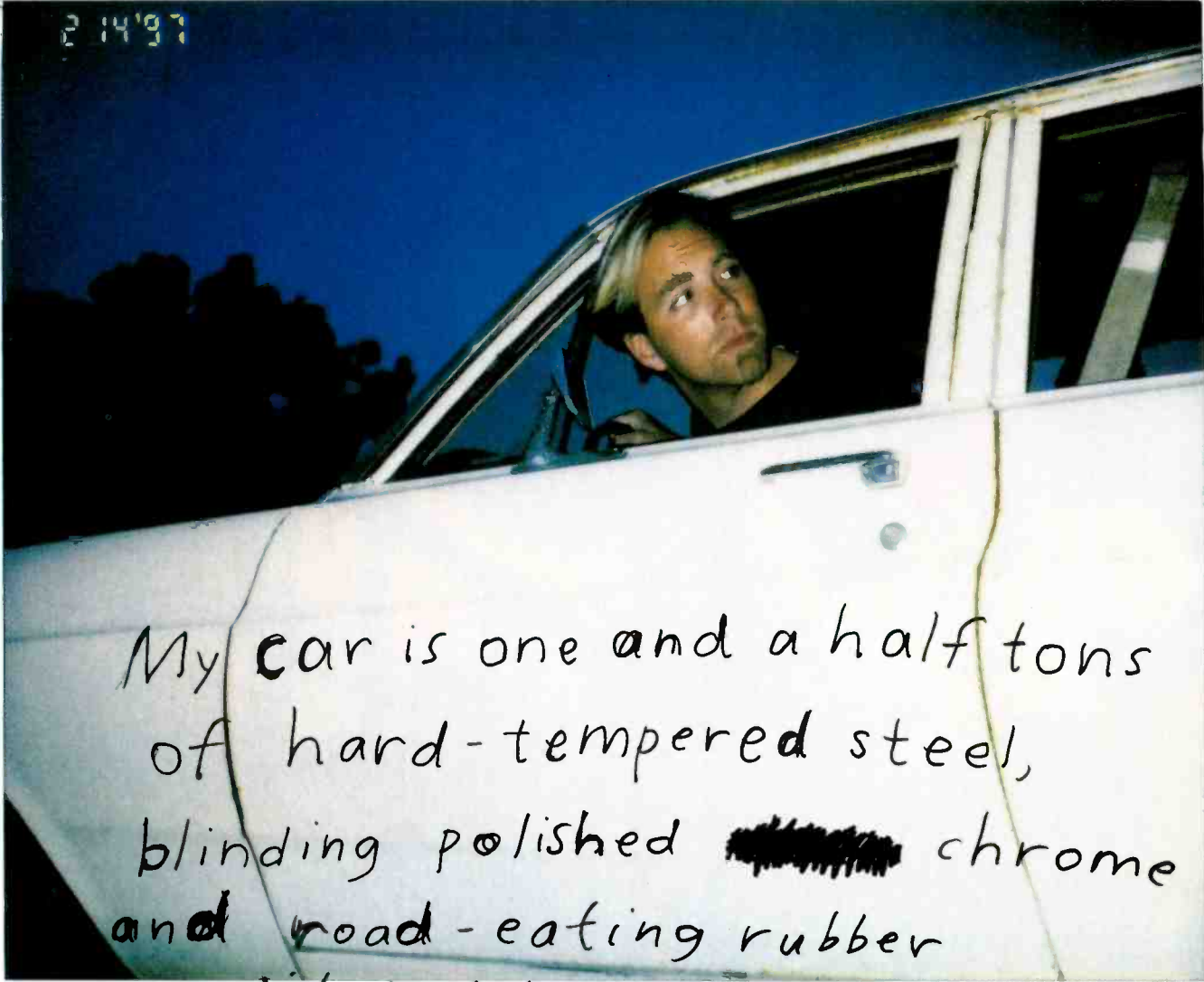
For someone who has a modest budget and limited space, and who is not addicted to the lowest musical octaves, the Monitor Audio MA-301 speaker could be an ideal choice. □



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Jolida SJ-101A Integrated Tube Amplifier

DANIEL KUMIN • START LABORATORIES

It wasn't so terribly long ago that pretty much every hi-fi amplifier looked a lot like the Jolida SJ-101A. In those dimly remembered days most amplifiers were very nearly as simple, too. A heavyweight sheet-metal chassis, a couple of knobs, a handful of tubes, and three hefty transformers were about all you saw, and that's precisely the pattern followed by the Jolida design.

If you think I sound nostalgic, you're right — I have a soft spot in my heart for tube amps. It's not for any mystical ability to make audio signals sound "sweeter" or "more musical" than they might otherwise. Instead, I love tube amps because I can pore over their innards (and schematics) and tell you with reasonable accuracy what each and every blessed component in there is doing, something I most assuredly cannot do with even the simplest A/V receiver in these days of microprocessors and digital surround.

Jolida is a small Maryland-based firm whose mission is to bring tube

sound, if not exactly to the masses, at least to a wider population of serious music listeners (already a fairly select group). And at \$499, the SJ-101A is astonishingly low-priced for a tube amp — *any* tube amp. Yet this exceedingly simple integrated amp will do everything a minimalist, aspiring tube-head hi-fi buff needs: amplify signals, adjust volume and balance, and accept two line-level inputs, period.

And the SJ-101A delivers all the power an HO-scale audiophile could demand — assuming that he or she listens at modest levels in a near-field layout (with speakers within a few feet of the listening position) or uses high-

sensitivity speakers. Jolida rates the maximum 8-ohm output of the SJ-101A as 25 watts per channel at 1 kHz and 20 watts from 20 Hz to 50 kHz. Total harmonic distortion plus noise (THD+N) is given as less than 1.75 percent from 39 Hz to 9 kHz at 15 watts into 8 ohms.

The amp's Lilliputian output is derived from four EL-84 (6BQ5) tubes, one pair per channel, an ultra-compact design originally developed some years ago for efficient operation in small radios and the like. The tubes are deployed in a push-pull (Class AB1) pentode circuit, with a single 12AX7 dual-triode tube for each channel performing input/driver-stage chores. Overall, the SJ-101A is rather nicely made and finished for its modest price, especially in view of the cost of tubes these days; you'd pay about \$40 for its tube complement alone.

Unpacking and hooking up the SJ-101A was simple and straightforward. Three pairs of RCA jacks on the rear edge of the chassis are marked CD, aux, and line out. The last is a simple preamp output, after the volume and balance controls, presumably for connecting an auxiliary amplifier. (Jolida's rather sketchy, inconsistent, and occasionally inaccurate manual makes no mention of a line output. Instead it shows three inputs. Come on, guys.) The CD and aux inputs mix together,

DIMENSIONS: 12 inches wide, 5 inches high, 8 inches deep

WEIGHT: 18 pounds

PRICE: \$499; CG-101 tube cage, \$35

MANUFACTURER: Jolida, Dept. SR, 10820 Guilford Rd., Annapolis Junction, MD 20701; telephone, 1-800-783-2555

presumably via passive, resistive loads, so you will hear both sources simultaneously if both are playing. This arrangement is certainly simple enough, and does save the cost of a stereo switch (and the circuit complication of buffer amps), but it seems a bit kludgy to me. In addition, you might inadvertently be adding noise to the signal path, and the impedance-loading effects of the paralleled components are unpredictable. If the SJ-101A was permanent in my system, I'd use only one input at a time and terminate the empty jacks with shorting plugs.

Following tube-amplifier practice since time immemorial, Jolida provides both 4- and 8-ohm speaker outputs by way of a banana/binding-post trio for each channel. These correspond to different taps on the dual out-

MEASUREMENTS

Hirsch-Houck Laboratories

All data for one channel in either single- or dual-channel operation into 4- or 8-ohm loads.

SENSITIVITY (for 1 watt output) ... 130 mV

FREQUENCY RESPONSE

20 Hz to 50 kHz +0, -1 dB

OUTPUT AT CLIPPING (1 kHz) ... 16 watts

CLIPPING HEADROOM

(re 20-watt stereo rating) ... -1 dB

DYNAMIC POWER ... 20 watts

DYNAMIC HEADROOM ... 0 dB

NOISE (re 1-watt output) ... -70 dB

DISTORTION (THD+N)

at rated power (20 watts) ... 3.5%

at 1 watt (1 kHz) ... 0.07%

put transformers. Misloading a transformer-coupled tube amp like the SJ-101A can affect frequency response fairly dramatically, reducing usable power somewhat as well, and it isn't all that healthy for the output trannies, either.

In keeping with the spirit of Jolida's design, I did the bulk of my listening in a near-field layout in which the amp's 8-ohm outputs drove a pair of NHT Super-One compact two-way speakers. The speakers were placed at ear level, about 4 feet apart and a similar distance from my head. The audio source was a Marantz CD-17 CD player connected directly to the amp's CD jacks (I shorted the aux input jacks as mentioned earlier).

Jolida indicates no special requirements for warm-up or break-in other than suggesting that users wait a half-

minute or so for the tubes to become more or less linear. While EL-84s are quite fast in this regard, I still played the SJ-101A for several hours at solid levels before doing any serious listening. My experience with EL-84s (mostly with guitar amps, but a tube is a tube) is that they assume their true nature only after a few hot hours, and infant mortality is not exactly unknown.

But the Jolida amp's complement of EL-84s lit up and played cheerfully from day one, no problem. The manual recommends that you check and fine-tune power-tube bias — the idle current drawn through a tube to "bias" it into linear operation. A screw-trim and probe-point (to check voltage) are provided for each of the four output tubes, though you have to supply your own digital multimeter (about \$50), something any self-respecting tubeophile is going to want in the toolbox anyway. It's a simple procedure, which Jolida says will not require repetition until tube-replacement time — several years down the road with typical usage. My inspection revealed the need for very slight adjustments to two of the four tubes' bias, though I can't say that I heard any difference before and after.

The Jolida SJ-101A did a fine job driving the NHT speakers, which have a typical sensitivity of about 86 dB. The amp's affordable price cast no reflection on its performance. Much as I expected, it did not play terribly loud. Output before audible clipping was sufficient to reach very satisfying levels with dynamic musical material, but no more. Like most tube amps, however, the SJ-101A clipped quite gradually, making the onset of audible distortion a bit of a moving target. This takes some getting used to if you're habituated to solid-state gear — transistor amps usually clip hard and fast when they run out of gas, making their limits easier to identify. That said, the SJ-101A provided plenty of level for serious auditions, giving reasonable punch and impact to pop and rock recordings. While the little amp did not have quite enough oomph to deliver a near-field concert hall-level orchestral experience, it did play loud enough for enjoyable, intent listening.

Did the SJ-101A evidence any intrinsic "tube sound?" Well, to my ears it had a distinct sonic "signature." The sound was warm, slightly punchy, yet undeniably extended and airy, with excellent ambience and depth. Transient speed and sparkle were not quite as

etched as I've heard from the finest amplifiers I've tried in my system. Bowed strings — especially in fine chamber-music recordings — sounded gorgeous. Bottom-octave reproduction was very solid and "rich," with the kind of natural-acoustic roundness so often associated with tube amplifiers — maybe even a slight surplus. String bass sounded particularly beguiling; is there perhaps good reason that so many tube nuts are jazz fans — and vice versa?

Most of these sonic elements — all of which were, by the standards of normal folk, decidedly subtle variations on "plain old" accuracy — can probably be illuminated by Hirsch-Houck Labs' bench tests, which revealed typical EL-84 results: a slight top-octave droop in response (-0.3 dB at 15 kHz) along with rising distortion at both ends of the spectrum, with 15 watts producing 2 percent THD+N at about 25 Hz and 13 kHz; mid-band distortion and noise was typically a few tenths of a percent below the clipping level. The Jolida delivered about 16 watts per channel at clipping level in the midrange, which is excellent for an EL-84 pair but proves the maker's spec of 25 watts per channel "maximum" to be rather, ummm, optimistic.

Although noise measured -70 dB at 1 watt output — decidedly mediocre by modern solid-state standards — the Jolida SJ-101A "sounded" much quieter than that. Much of this might be explained by its being a low-gain design. Its line inputs require solidly more than 1 volt to reach full output, which means that your source component will need ample output capability.

It should come as no surprise when I say that the Jolida SJ-101A will not suit the average music listener's needs for flexibility, power, and multipurpose amplification. It has strictly limited output, lacks effective source-selection options, and omits tone controls, signal-routing for tape-dubbing, remote control, and a dozen other features that are all but universal among affordable amps and receivers nowadays. The SJ-101A supplied to me also lacked a protective "cage" to guard its tubes from damage and inquisitive fingers from burns, though one that covers the entire top of the amplifier is available as an option. Nevertheless, for the budget-challenged audiophile yearning to examine the whole glass-audio thing firsthand without making a punitive financial commitment, the SJ-101A is truly unique. □



Evolution: A gradual process in which something changes...



...into a different and more complex form.



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Can You Trust Your Ears?

Perhaps — if you use your head, too **BY TOM NOUSAINE**

“Relax, listen carefully over the long term, and, above all, trust your ears.” So goes the most often repeated advice from friends, reviewers, and salespeople about the right way to evaluate sound quality. An often quoted corollary is that you may have to “learn” to hear certain differences by listening over extended periods. It all sounds so logical, too. We use our ears constantly, and they serve us well — at least they saved our ancestors from being eaten by tigers. Isn’t it natural to rely on them to help us pick out audio equipment?

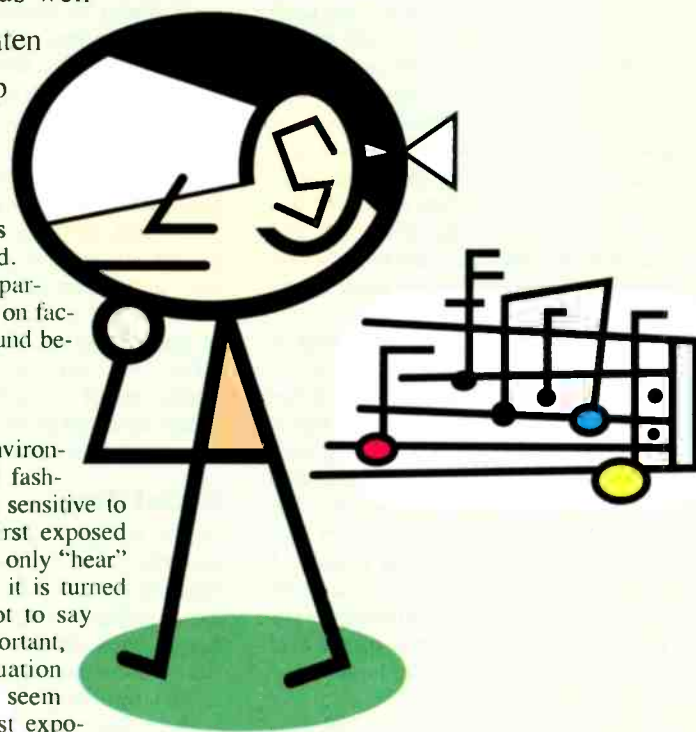
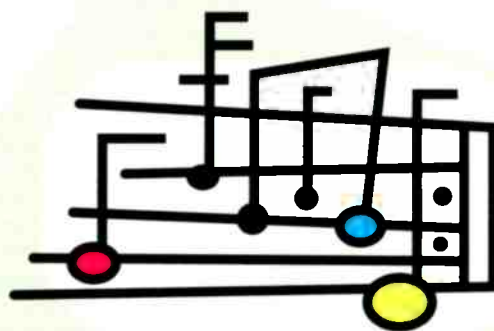
Unfortunately, our ears can’t always compensate for some of the error mechanisms that are present during typical open listening sessions in living rooms and audio salons. By “open” I mean without control mechanisms to prevent listener bias from influencing the results. I call open listening sessions “plug-and-play” because you just disconnect the old amplifier (or whatever), plug in a new one, and let ‘er rip. That’s what you usually do when you get a new piece of gear in your living room, and, with a few clever twists, it’s the standard operating procedure on the sales floor.

Listener bias can be sorted into three primary categories: sensory, psychological, and social. The bias mechanisms might remain hidden in the plug-and-play environment, but they are always there, and

they insure that the listening evaluations will be contaminated. The results will be partially or wholly based on factors *other* than the sound being produced.

Sensory Bias

Humans sense the environment in a differential fashion, and we are most sensitive to any stimulus when first exposed to it. For example, we only “hear” or notice a fan when it is turned on or off. That is not to say training is never important, but for sound-evaluation purposes differences seem more dramatic on first exposure. Furthermore, with continued exposure we quickly adapt or equalize ourselves to any stimulus. We stop hearing a fan after a



short while, and it turns into sonic wallpaper. We can even have different sensory responses to the same stimulus. You feel cold both when you first jump into a pool and again when you get out, even though the air temperature hasn't changed at all.

These simple examples show how our differentially based sensory system can respond in different ways to the same stimulus and how those responses can vary over time. Try a little experiment to highlight this point. Repeat a 30-second musical passage several times and notice how you hear different things each time. We can hear differences with the same music because we are constantly scanning for differential information and will often sense a change just to help us avoid that one fatal error with the tiger. Sound is simply another physical stimulus, and our ability to assess the actual sound being produced is what we are interested in evaluating here. That long-term listening is a good idea when choosing audio equipment is starting to look like a myth.

Any plug-and-play comparison, with no mechanism for side-by-side comparisons, will be inadequate. We are most sensitive to sound differences in a side-by-side comparison. Think of your ability to evaluate shades of white. With paint chips side by side, even subtle differences are apparent and easy to detect. But separate the comparisons by time and distance, and your sensitivity to the differences decreases. Have you ever tried, for example, to pick out the paint chip that matches the color of your living-room ceiling while you're at the paint store? It's nearly impossible.

The best way to evaluate sound is also through direct side-by-side comparisons. It is the only way that allows us to notice and identify subtle differences. But there are other aspects specific to the interpretation of sound that can get us in trouble. For example, we tend to interpret small changes in volume as changes in sound quality. I conducted an experiment several years ago where thirty-one subjects were asked to listen to ten sets of musical passages, with each set containing two 30-second samples.

In half of the sets, both samples were played at precisely identical volumes. In the other half, there was a 1-dB difference in level between them. Although people had a strong tenden-

cy to "prefer" the louder alternative (especially when it came as the second of two), not one of the subjects reported volume or level as a discriminating factor. All comments on how the sound changed were couched in quality terms such as "cleaner" or "more harsh" even though volume was the only thing that had changed.

Psychological Bias

Our psychological biases make us susceptible to cognitive errors in judgment. We are, for example, programmed to make choices and are perfectly happy choosing a favorite from identical alternatives. In the experiment described above, the subjects said that they "preferred" one of two identical sound clips more than 75 percent of the time, even when there was a "No Preference" box to check on the score sheet.

We also tend to make decisions very early in the game, with only a tiny portion of the possible evidence accumulated. Some researchers estimate that we make most of our decisions with about 5 percent of the available evidence. Most of the time that works just fine — you can't go too far wrong choosing coffee filters this way. But people routinely make such important decisions as buying a car the same way. There is evidence that most of the information people gather about cars they buy is done *after* the purchase — to justify a decision already made. We humans are imperfect in this respect, too, willing to discount or ignore overwhelming contradictory evidence to avoid admitting to ourselves that we made a wrong decision. So once you have decided to "hear" the marvelous effects of placing a brick on top of your power amplifier or painting green stripes around your CDs, you will be psychologically hard-pressed to "unhear" them even when confronted with evidence that the sound didn't change.

Social Bias

So far we have concentrated on characteristics that can influence our judgment in private. The plot really thickens in group settings, where our social biases allow group dynamics — and not sound — to shape what we "hear."

The best way to illustrate this is with an anecdote. I attended a press conference unveiling a new speaker a couple years ago. When my seatmate leaned over to tell me what he was hearing and to ask my opinion, I just

made up something that sounded plausible. Sure enough, after the next sequence we reconvened, and he intimated that he had "heard" what I had told him I heard. He seemed a trifle miffed, though, when I refused to acknowledge what he had heard or to negotiate an agreement. You can try this one at home too. Just be careful about whom you use as a subject!

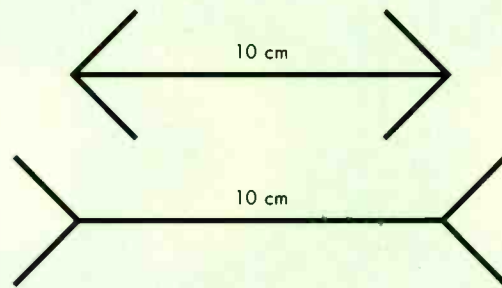
The scenario that I just described is played out over and over again in audio demonstration rooms and living rooms across the country. When the host fires up the system with his hot new amplifier, guests initially report hearing different things, but after a few replays the group negotiates a consensus about how the new amplifier "sounds." What we have with this kind of open interaction is an exercise in group dynamics, not an exercise in sound evaluation.

The potential for error here is large, especially when someone present has a special status. If Neil Young were in the crowd, you can bet that many would defer to his judgment. I know I would. But the authority figure doesn't even need to be present. A salesperson will gladly prime the pump by telling you in advance what "most people" and favored reviewers hear when they listen to this amplifier. He will also skillfully negotiate differences: "Well, maybe you didn't perceive the better rhythm and pace, but surely you heard the improved liquidity in the mid-range." It happens all the time.

Now let's check out the more crassly commercial aspects of group behavior and audio evaluation. First of all is the hidden assumption that the product being demonstrated actually does sound different from some other product. In an audio salon "no difference" is not an acceptable answer. You can argue over what the differences are, but never question whether differences actually exist. Woe be unto the audiophile who can't hear differences — even inaudible ones.

Another often hidden factor is the agenda of the host. Whether he's a salesperson or a good friend, he wants your concurrence that something sounds good. The salesman wants you to buy the product — that's his job. He may be your friend, too, but he will tend to confuse his sales commission with sound quality. If he didn't he wouldn't be a good salesman. Likewise, your buddy wants your approval of his investment or his latest tweak. If he really wanted your true opinion, he

MÜLLER-LYER FIGURE



Yes, both horizontal lines are the same length, even if your built-in bias won't let you see it.

would give you a private score sheet and let you write down comments that he could evaluate later. Your approval and confirmation are being solicited. The high sound quality of the equipment being demonstrated is a given.

How It Plays Out

Now that we know what to watch for, let's see how all these bias factors play out in the sales routine. Here's what happened to me several years ago when I dropped into a suite at the Consumer Electronics Show to audition a certain loudspeaker. I was in the wrong suite, but the product demonstrator there suggested that his cable conditioner, costing several hundred dollars, would improve the sound more than a change in speakers. He then offered to let me "audition" the effects of this device by comparing a conditioned interconnect cable with an unconditioned one. Always the skeptic, I allowed him to demonstrate the cables, but I asked him to select music where the differences would be as large as possible right from the start.

So we had a "blind" demo where the demonstrator hooked up one cable and then another seemingly identical one and played a minute or two of a CD using each of them. There were two other people present during the demo. Afterwards the host asked expectantly which cable we "preferred." The other two people were split. One "liked" the first, the other the second. I just said they sounded the same. And they did. The host responded that he would repeat the demo with "better material." What? Hadn't I asked for the "killer demo" on the first run?

The demo ran for two more trials. The other listeners didn't "like" the same cable until the last trial. After they acknowledged that they both preferred the conditioned cable on the third try, the demo was over.

Let's look again at the routine used for the presentation to spot where bias was introduced: 1) The host carefully primed the pump by telling us what we were going to hear in the demo. 2) The scoring was heavily prejudiced by the "which one did you like" format; there was no easy way to say they were the same. 3) The host always started the demo with the volume control at full off and turned it up slowly as he began each music seg-

ment. He turned it down when he swapped cables and between trials, so there was no way to insure that levels were closely matched. Although it wasn't blatant, the second sequence was always just a little louder than the first. 4) The 15 to 20 seconds between each comparison and the 2 minutes between the segments were way too long for us to have good sensitivity to any differences. 5) The conditioned cable was always presented second. 6) Listeners were allowed to chat before deciding their preferences. 7) When "wrong" answers were given, the process was simply repeated until the "right" answers were obtained. Past results were then ignored, and the demo was brought to an end.

There were no records kept, and no scientific controls of any kind were applied. Yet the other two listeners (one of them a professional audio reviewer who should have known better) declared their amazement that such a device could "change" the sound of a cable, conveniently forgetting that neither of them had agreed on what was what during the first two trials where the most revealing material was used. Plug-and-play at its best! No "sound" was being evaluated here. The answers were known in advance, and the routine was guaranteed to leave many listeners thinking they had heard differences when there were none. It is tempting to think, "Maybe they did hear differences." But if so, why didn't they hear them in the first trial? Why not with the best material?

When you are shopping for audio gear you will experience this routine, in one form or another, again and again. It can't happen to you? If you are really honest, you know that it can because it *has* in the past. Watch carefully for the clues, and you will see it played out over and over — even at

your own house when you have friends over to hear your new Gizmotron.

Unfortunately, you can't overcome bias just with willpower and good intentions even when you are aware of it. There is a common notion that if you hear something you didn't expect to hear, then you have become an experienced listener who is able to tune out bias. Well, it doesn't work that way even with bias that you know about.

Optical illusions like the Müller-Lyer lines shown here give us insight into sensory bias. The center lines are exactly the same length. But even after you measure them yourself, you won't be able to "see" the lines as being equal no matter how hard you squint. You cannot just tune out audio level mismatches, either. You cannot avoid the differential nature of human hearing, which is constantly scanning for changes. The moral is that humans cannot just tune out bias. Some cognitive errors are built in. Furthermore, much of our prejudice is buried in the subconscious, safely out of the reach of willpower. So where does that leave us?

Once we understand how bias works, plug-and-play auditions at an audio salon will never carry the same level of mystery. It is relatively easy to produce a situation where people can be induced into hearing differences between sonically identical products. We also know that a fair listening comparison is very difficult to arrange. Level matching and other procedures needed for bias-free evaluations are not easy tasks even for experienced testers. Knowledge of our innate error mechanisms will go a long way toward keeping the quest for perfect sound headed down the right road.

No one has ever produced a scientifically controlled listening test showing that well-designed amplifiers (flat response, no clipping), preamplifiers, integrated circuits, and speaker wires (16-gauge and bigger) have the slightest effect on the sound being produced. Special capacitors, absolute polarity, dots, clamps, green pens, bricks, and assorted other things also won't change the sound from a stereo or home-theater system, although people can be made to think so. Why? Listener bias can make people hear unverifiable "differences" in sound. □

in con



HOW MANY remote controls are scattered about *your* living room? At my house we've got five: TV, VCR, DSS receiver, laserdisc player, and A/V receiver. And that's just in the family room, not my studio/listening room, which on any given day is littered with another dozen or so remotes. Assuming I can retrieve all five from the depths of the sofa, my eyes, brain, and fingers then have to cooperate to remember which controller is currently under my thumb and which button, where, does what. All too often the result is an open laserdisc drawer when all I really wanted to do was change the TV channel.

So I find the idea of a full-system, multicomponent "smart" remote control very attractive. It is not a new concept, of course. So-called universal remotes have been with us in various guises for more than a decade, and today many A/V receivers, preamps, and TVs include infrared (IR) handsets adapted, at least to some degree, for full system control. When you kick back in your easy chair and press buttons on the handset, pulsed infrared light conveys digital control codes to an IR sensor in the component's front panel.

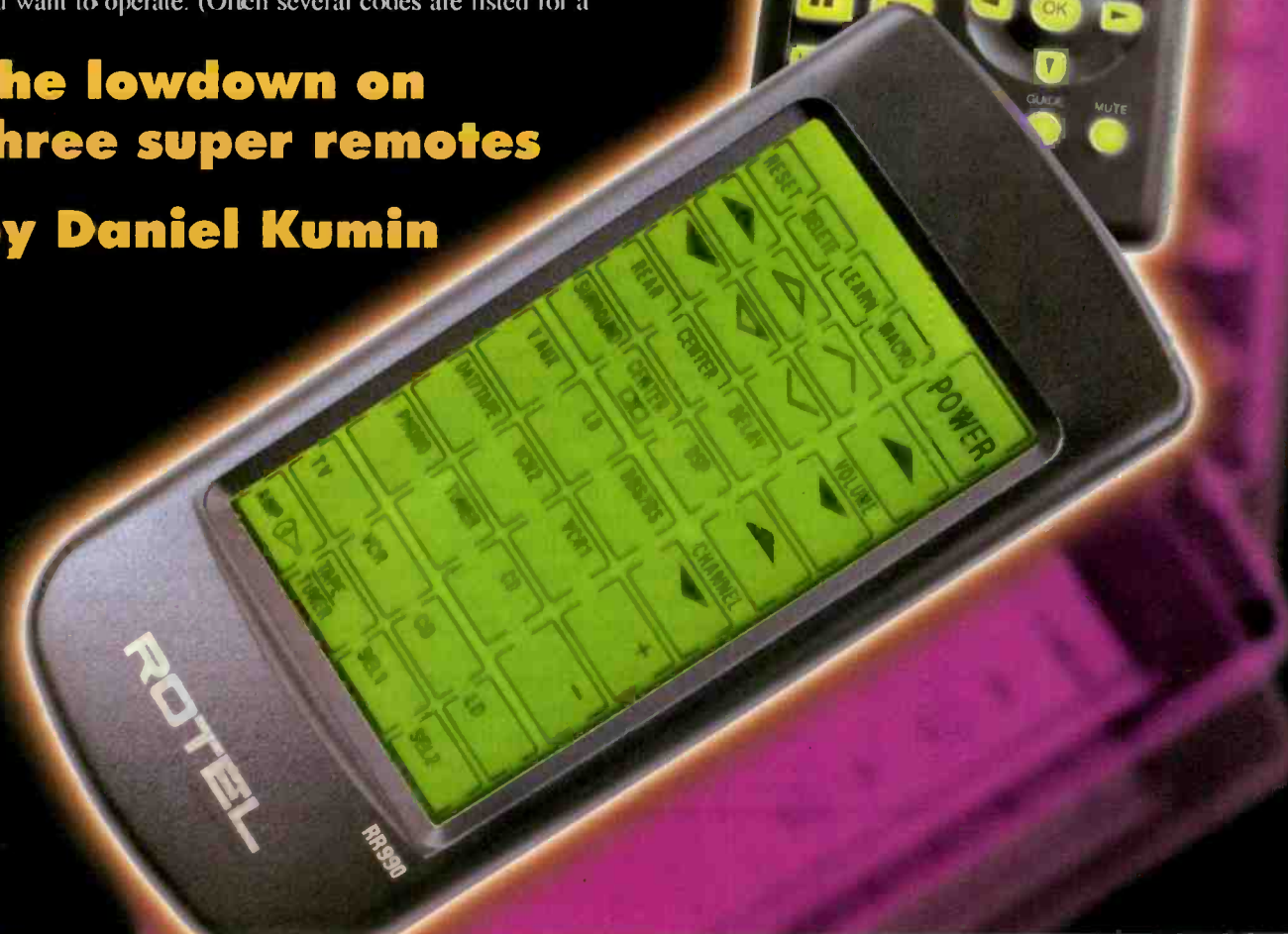
Universal remotes come in two varieties: "learning" and preprogrammed. Learning remotes cannot control A/V equipment until you "teach" them the IR control codes for each component you wish to operate. The learning routine is pretty standard. You place the remote of the component whose commands you want to learn end to end with the learning remote and press its "learn" button followed by the destination key (the button you want to use for a particular command); then you press and hold down the corresponding key on the "teaching" remote until the learner signals successful acquisition,

troll

usually with an LED flash or an icon if it has an LCD screen. You have to repeat this process for each and every command from each and every component you wish to control. Laborious, yes, but you only have to do it once. If all goes well, you wind up with a single remote that masters all of your gear.

Preprogrammed remotes are just that: They're already programmed at the factory to control most popular-brand A/V components. You look up the brand of the component you want to control in the owner's manual and key a three- or four-digit ID code into the master remote. You have to repeat the process for each component you want to operate. (Often several codes are listed for a

The lowdown on three super remotes by Daniel Kumin



given brand, and you'll have to try them in sequence until you find the one that "unlocks" the component in question.) Once the proper ID code is keyed in, though, *all* of the included command codes for that component are automatically energized in the master remote.

Curious to see just how useful the latest crop of super remotes are in controlling a fairly sophisticated multi-component setup, we rounded up three popular and relatively affordable models for a hands-on evaluation: the Marantz RC 2000 (\$250), Rotel's RR990 (\$200), and the Home Producer 8 (\$120) from Universal Electronics, maker of the One For All brand. (We skipped elaborate multiroom controllers costing \$1,000 and up on the

hunch that most readers wouldn't be willing to spend that much on a control device.) Each of these remotes has its own unique styling and functionality, with specific strengths and weaknesses. Here's how they stack up.

Universal Electronics Home Producer 8

The Home Producer 8 is a far cry from the inexpensive One For All replacement remotes that Universal Electronics is known for. It's a powerful, eight-component preprogrammed device with an ergonomic layout, the deepest library of codes I've encountered, and a handful of innovative features, including a small, AC-powered RF-receiver/IR-translator that facilitates whole-house through-the-walls operation. (Without the RF box, it's called the A/V Producer 8 and costs \$80.)

The Producer's sculpted form includes underside finger notches that ease one-handed operation. I could work the full surface with my thumb, and even found this a bit easier left-handed than right. (Could some denizen of Universal's engineering department be a fellow southpaw?) Each key group gets a distinctly different keytop shape, and while several of the variations feel pretty much the same, their distinct groupings help the Producer earn high marks for tactile operability.

Another worthwhile ergonomic feature is the Producer's LCD screen. Normally this shows the currently selected component and the time (there is a built-in clock), but it can also display the steps of the setup process as well as the three-digit product codes as you select them. The Producer runs on four AAA alkaline batteries.

Setup is straightforward. You look up your components' ID codes in the owner's manual (there are nearly 400 for TVs alone!) and assign one to each of the Producer's eight mode keys: Amp, Tun(er), TV, CBL, CD, VCR, Sat, and Aux1. The display removes much of the doubt associated with preprogrammed setup by permitting you to display the currently loaded code. Without such confirmation, when a code fails to work as expected you're never quite sure what went wrong.

Universal also endowed the Producer with a number of useful features. The crescent-shaped Home Theater key offers a sort of meta-mode in which you can mix and match commands, so that one component responds to volume adjustments, another to channel selection, and a third to the

transport controls (play, stop, pause), while picture-in-picture (PIP) is available for a TV. I set it up so that the volume keys worked my A/V preamp, the channel up/down keys controlled my Proton TV, and the transport cluster ran my Pioneer CD/laserdisc combi-player. (The TV doesn't have picture-in-picture capability, or I would have assigned it to the PIP key, too.)

Similarly, Universal allows you to "map" keys from one mode to another. You can, for example, configure the Producer's volume key to work your A/V receiver even while it's in CBL (cable-box) mode. You can also reassign modes so that, for example, the VCR position operates a second television with a full complement of TV commands. Additional features include two macro keys to which you can assign multikey sequences, Aud and Vid, and a timed-sequence routine running off the Producer's internal clock to trigger unattended events — such as VCR or satellite-TV recording — involving multiple components.

I tried the Producer with nearly a dozen components, and it managed most operations without stumbling. It is the first preprogrammed remote I've encountered that included an ungarbled set of control codes for my Paleolithic (1983) Proton component TV, and it successfully operated several other relatively obscure components. But there were anomalies. For example, the remote would not activate certain functions on my Pioneer CLD-D702 combi-player, a common model. The basic transport functions worked fine, but controls like on-screen display and side-A/B did not respond. I also had trouble with the Producer's Sat mode, which I programmed for my RCA Digital Satellite System (DSS) receiver. I couldn't get the critical DSS Select function (shift-Disp on the Producer) to work properly, and the owner's manual was not terribly helpful in this regard. Fortunately, a call to Universal's toll-free help line quickly straightened me out.

The Producer stumbled in a couple of other component trials. Even its manual search routine, which steps you through every available ID code in its library, failed to turn up codes to operate a Lexicon DC-1 preamp/processor or a more recent (but still fairly old) Proton VT-331 TV. Fortunately, such blind spots are not permanent. Universal Electronics has a generous update policy. Anytime within a year of purchase, you can return your Pro-



LEN LAGUNA

UNIVERSAL ELECTRONICS HOME PRODUCER 8

KEY FEATURES

- Preprogrammed remote with codes for major-brand A/V components; factory can add more at no charge
- Infrared (IR) and radio-frequency (RF) operation
- Controls up to eight components
- Two macro keys
- One-hand operation
- LCD screen with clock

PRICE: \$120 (\$80 without RF interface)

MANUFACTURER: Universal Electronics, Dept. SR, 1864 Enterprise Pkwy. W., Twinsburg, OH 44087; telephone, 216-487-1110

ducer to the company and have codes for any components added, no charge; Universal will even cover the return-shipping costs. (After a year expect a "nominal" fee.) Turnaround is said to run four to seven days, and the company guarantees success. In fact, if you have a component so obscure as to be absent from Universal's master database, you can send its remote control along with the Producer, and Universal will extract the control codes, transfer them to the Producer 8, and return both handsets at no extra charge.

Ergonomically, I found the Producer to be very strong. In dim light the keys are illuminated with a blue glow as soon as you press any key; the light goes out after about 5 seconds of inactivity. There's also a Lite key to activate the back-lighting regardless of ambient light level. The blue light looked odd at first but proved quite visible even in low-light (not dark) conditions, and the tactile layout helped expedite the learning process.

After a bit of head-scratching, I got the Producer's RF interface (a Walkman-size box with an antenna) to work perfectly. At first it wouldn't work in my studio/listening room, though I was able to operate a bedroom TV from another room in the house just fine. Eventually I discovered that if the RF-receiver/IR-blaster is placed too close to some components, their IR receivers overload (or *something*). When I moved the receiver/blaster across the room, the RF interface worked fine. Universal supplies a single, hard-wired IR flasher that plugs into the RF box for use with components inside a cabinet or whose IR receivers are otherwise obscured. And while the company quotes a range of up to 100 feet for RF operation, I found the limit to be about 50 feet, even with fresh batteries. Even so, that should be plenty for most any domicile short of San Simeon.

There's a downside to any preprogrammed remote control. If, for whatever reason, a command is missing from the data set for a particular component, there's no way you can get it in there. For example, the Harman Kardon A/V preamp I used includes direct-access keys for each surround mode. But the Producer provides only for single-key, sequential changes of surround mode, so to change surround programs I had to (God forbid) walk over to the preamp's front panel or dig out its remote, which sort of defeats the purpose of a full-system controller.

Yet, in general, Universal Electronics has made intelligent choices with its Home Producer 8 remote control. Sure, there are a few nonintuitive key assignments, such as the use of Keys 1 through 9 for Amp-mode input selections (tuner, CD, aux, etc.), but there are limitations to any preprogrammed design. And it's certainly a better solution than cluttering the remote with another dozen or so rarely needed buttons. Frankly, the Producer's fifty-odd keys struck me as being about the maximum that can usefully be learned and retained. Thanks in large part to its logical layouts, the Home Producer 8 is easy to use and should provide ample control over most A/V systems. In terms of control-options-per-dollar, it's tough to beat.

Marantz RC 2000

Marantz's full-system control solution is a learning-type remote that's big, handsome, and very deep. With the ability to learn more than 300 commands, the RC 2000 is able to control just about any system, however complex — provided you've got the patience to teach it. Note that the RC 2000 also has an RC-5 mode in which it is preprogrammed with codes for Marantz, Philips, and Magnavox components. If your system contains some or all of those brands, you're halfway home without lifting a finger.

Sorting out so many instructions is a challenge, but the RC 2000 does a very credible job. The handset's surface has six distinct key "families," each distinguished by spacing, size, shape, or some combination thereof to ease in-the-dark tactile operation. Nevertheless, the RC 2000's substantial size and weight make it more comfortable to use two-handed. I eventually got the hang of working even its lower buttons with just one thumb, but it always felt a bit awkward.

The remote's main key field is for the most part well organized. There are ten source-component keys (LD, TV, VCR1, DSS/VCR2, Aux, Tuner, CD, Tape1, Tape2, and Amp), a 0 to 9 numeric keypad, a transport-control cluster, and an intuitive cursor-key/enter array (which might be easier to use if it were more centrally located). The two largest keys on the RC 2000, for volume up/down, are fixed: They always control the same component regardless of the selected mode. Even smarter, the source-select keys simultaneously remap the RC 2000's own controls to the selected component

and change the active input on the main A/V component with a single keypress — this is a rare feature among universal remotes, most of which require you to set their own "local" mode to "Amp," select an input, and then switch modes again to control the source component. In the not-quite-so-smart department, the RC 2000 has no channel up/down keys. Channel selection is relegated to "paged" keys, discussed below.

These obvious control features only



MARANTZ RC 2000

KEY FEATURES

- Learning remote with memory for more than 300 commands
- Controls up to ten components
- Preprogrammed mode for Marantz, Philips, and Magnavox components
- Four dedicated macro keys (more macros possible with programming)
- LCD screen with "paged" displays

PRICE: \$250

MANUFACTURER: Marantz, Dept. SR, 440 Medinah Rd., Roselle, IL 60172; telephone, 630-307-3100

scratch the surface of Marantz's super remote. Centered between two vertical rows of keys is an LCD screen that serves two purposes. It identifies the selected component even when the remote is in sleep mode, which is engaged whenever there are 10 seconds of inactivity. The LCD also shows the RC 2000's selected operating mode (such as Learn or Use) and a battery icon. The rest of the window serves as a "paged" display that changes for each of the remote's ten component modes. What's more, four entirely dif-

Kenwood Looks Ahead

SEPARATE, add-on remotes are not the only ones capable of innovative system control. Several manufacturers are bundling highly capable preprogrammed or learning remote controls with their better A/V components. (In fact, Marantz includes the RC 2000 with its flagship A/V receiver.)

One of the more interesting efforts is Kenwood's ergonomically designed RC-R0905 remote, which is included with its top 1090VR and 1080VR A/V receivers. (Because the 1090VR includes a dual-zone feature, the remote is available separately for \$50 for use as a second-room controller.)

The RC-R0905 is preprogrammed to operate Kenwood receivers and as many as ten auxiliary components, though because the remote requires a Kenwood receiver for full function, it is not useful in other systems. The symbiotic relationship with the receiver permits some unique features, however, such as displaying the current control mode on the receiver.

But the RC-R0905's most interesting feature is the FutureSet upgrade option. This is a phone-link system that lets you call an 800 number listed in the remote's manual, tell the operator the brand and model number of new or obscure components, and get their codes added to the remote's repertoire. You hold the remote's rear-top panel up to the telephone earpiece, and an audible modem-tone loads in the requisite data.

I tried the FutureSet feature, asking for codes for the brand-new (at the time) Sony DVP-S7000 DVD player. No problem: The operator talked me through a preparatory key sequence and instructed me to hold the phone to the remote as shown in the manual. The RC-R0905 flashed merrily in response to the screech of the incoming data. The entire call took 90 seconds, after which

the Kenwood remote could control a Sony DVD player — if only I had one. Pretty dang'd clever. — D.K.



used control functions can be assigned to clearly titled LCD page keys, while everyday stuff — the numeric keypad, the transport keys, and the cursor keys — are logically assigned to perform their natural functions for each component. A well-conceived system, for the most part it works excellently.

This is an imperfect world, however. Although the RC 2000's back-lighting system is superb — it illuminated both the LCD window and the control keys clearly and brightly — the sensor that automatically activates the lighting when it deems conditions sufficiently dim can be annoying. The back-lighting flip-flopped on and off as I moved the remote through a varying light field. I eventually taped a piece of tissue paper over the sensor, forcing it to see a dark world, which kept the light on but looked funky. (There is a key on the left edge of the remote that can be used to turn on the back-lighting regardless of ambient light.)

The RC 2000's capabilities include a sophisticated macro option that enables you to automate complex command sequences at the touch of a button. Strings of up to twenty commands can be stored in any of the four numbered keys at the top of the LCD window, and you can include commands from any of the ten component modes. You can even adjust the time interval between command executions, allowing time for a turn-on relay to unmute, for example. Macros can also be stored in any of the ten source-component keys (except Amp) and are executed by holding the button down longer than 2 seconds.

If unrestricted remote-control power and flexibility is your goal, then you should consider taking the Marantz RC 2000 for a test drive. Putting aside its occasionally flaky illumination sensor and the unavoidable complexity that so fully configurable a design entails, it's a tough act to follow for those who want one remote control capable of handling all facets of a multicomponent system. If Marantz were to add a rechargeable-battery option and an adjustable light sensor, the RC 2000 would be damned close to perfect.

Rotel RR990

Rotel's take on the universal remote control is decidedly different. The RR990 learning remote has a smooth, 2 x 4-inch LCD touchscreen that immediately sets it apart from other remotes. "Virtual" keys are displayed across the screen's surface. There are

LEN LACRUA

ferent "pages" are possible for each component, each with commands corresponding to the eight inward-pointing arrow keys arrayed on the edges of the LCD window. The outward-facing arrow keys at the bottom of the LCD screen are used to step through the control pages.

Each of the eight commands on each page displays a name up to five characters long. Preprogrammed names are loaded at the factory: For instance, the first LD (laserdisc) page shows Sid-A, Sid-B, Disp, and AMS along the left side. You can freely rename these labels as well as the titles displayed for each component mode and for each page. To create a name you have to step through letters and numbers using the keypad — tedious, but you only have to do it once, unless you change components or lose battery power for an extended period (the

RC 2000 has a 1-hour battery backup).

Speaking of battery capacity, the RC 2000 is powered by four AAs, which are said to provide two to four months of "normal-use" operation, depending on back-light usage. Fortunately, Marantz provides an early-warning system: When the battery icon appears, you are alerted to change the batteries soon, and the Learn mode is disabled as a gentle inducement; when the icon begins flashing, the RC 2000 goes dead, but the LCD remains lit and memory is preserved, meaning change those batteries . . . now! Let matters slide much longer, and the window goes blank — along with the backup memory and everything you have painstakingly entered into it.

Marantz's payoff for all this preparatory work is a universal remote that requires nearly zero memorization on the part of the user. Arcane, rarely

eight different sets of keys, one for each of the two rows of source-component "buttons" running along the bottom of the screen: TV, VCR, CD, LD, Amp, Tape/Tuner, Sell, and Sel2. (Rotel's latest RR990s substitute a DSS "page" for Sell.) Touch a source button, and the key grid above it magically changes, providing a "layer" of control appropriate to the chosen component; a cute little icon — a smiling TV set, for example — also appears inside the source button to confirm your component selection.

That's cool, but cooler still is that each component's screen can be set for either a "full" or a "basic" display. The basic display hides all but essential keys — showing only the transport controls in VCR mode, for example — to cut down on visual clutter. The RR990 remembers your full/basic preference for each component. (You hold the component key "down" for 2 seconds to toggle between modes.) Another cool feature, Custom Panel, permits you to customize (duh . . .) the screens by replacing virtual keys you don't need with blank shadowboxes. So for my ancient Proton TV, for instance, I deleted a whole raft of irrelevant controls to create a streamlined control panel.

Programming the RR990 is simple — if you're a careful reader. Unlike most learning remotes, instead of requiring you to place it nose-to-nose with the source remote to transfer IR codes, the RR990 makes you place them nose-to-tail. This orientation is necessary because the RR990's IR-input eye is on its bottom edge, not the top edge, which is where its output IR-emitter is located. Once I had Einsteined that one, the Rotel successfully learned the codes of every remote I sent its way, including the old Proton, an NEC TV of similar vintage, and various up-to-the-minute A/V components. In most cases the RR990 seemed a quicker than average study, requiring only a second or two to pick up each new command. About every sixth "lesson," however, would yield an "Error" indication; fortunately, a simple redo rectified things virtually every time. Only twice did I have to delete program keys before I could successfully re-educate them.

The Achilles heel of any learning remote is that entering all those codes can be an arduous task. Teaching the RR990 how to run a simple CD player took only 10 minutes or so, but loading commands from a late-model A/V

receiver or preamp might well take half an hour. Depending on how much gear you have, you could easily spend several hours programming the RR990. Other limitations include the number of programmable commands per screen (twenty-eight) and the inability to relocate or relabel them. Inevitably, this means you'll end up having to remember, say, that the Amp screen's DSP key selects the Theater mode or that you've programmed the RR990's minus key with the receiver's mute function — since, unaccountably, the remote provides no Mute graphic on the Amp page.

But the reward for your patience is a high degree of flexibility. The RR990 gives you a lot of customizing options, and you can use two or more screens to absorb all the desired functions of a really complex A/V component. It can also store macros in any unused key of any screen, so at the press of one button it will automatically execute a whole string of commands from multiple component screens. Very cool. Once again, however, you must remember what you've programmed where.



ROTEL RR990

KEY FEATURES

- Learning remote
- LCD touchscreen with eight sets of programmable virtual "keys"
- Controls up to eight components
- Full or basic control-panel display with deletable keys
- Extensive macro-key capability

PRICE: \$200

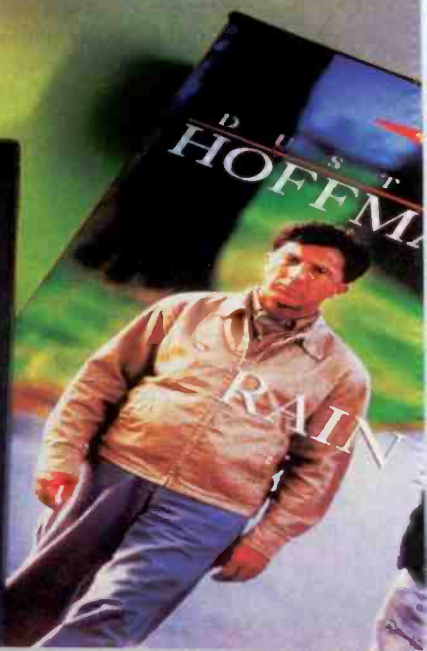
MANUFACTURER: Rotel, Dept. SR, 54 Concord St., North Reading, MA 01864-2699; telephone, 508-664-3406

Rotel's touchscreen design has its advantages and disadvantages. Among the pros are a strikingly smooth, uncluttered appearance and outstanding punch-per-square-inch. The main disadvantage is that since there are no physical buttons, tactile operation is out of the question. You *must* look at the RR990 to use it (though I did learn to operate the volume and channel keys by feel with reasonable reliability), and that means you have to take your eyes off the video screen.

Visibility proved good under most conditions. The fixed-contrast LCD provides adequate legibility in daylight, though I frequently had to tilt the remote a bit one way or another to improve readability or cut down on glare, which could make tabletop operation difficult. (A less reflective top surface would help a lot.) In darkness the RR990's green back-lighting, which is triggered by a sensor behind the screen and fades automatically after about 10 seconds of inactivity, worked very well, yielding sharp, relatively easy viewing. Unfortunately, there's no "official" way to override the sensor in brighter light, so in-between conditions gave the most trouble (though I quickly learned the trick of covering the sensor with the palm of my hand, which fools the remote into lighting up.) Nonetheless, the Rotel RR990 was always readable and only occasionally required a mildly vexing degree of effort.

Rotel equips the RR990 with an internal backup battery that retains the learned commands while you swap cells (it runs on four AAA batteries) as well as a low-battery icon that appears to give fair warning. (The manual does not specify how long the backup lasts; I can say that it's at least an hour.) Changing batteries dumps all your custom screens, however, requiring you to reconfigure them — no big deal, but an aggravation.

The bottom line: If you have a system in which simplicity is the key, you may well find the Rotel RR990's ability to pare each screen down to a bare-essentials control group to be priceless. It cannot accommodate every single command for a complex A/V system, but even if you owned such a system, would you want it to? And you do have to exercise a bit of care, as brushing against the screen at any point can inadvertently send a command, but otherwise the RR990's intuitive design and overall ease of use are outstanding. □



HOW TO BUY A DVD PLAYER

Now is a great time to make the jump to DVD quality audio and video. The number of models is small, and the number of truly different DVD-player designs is smaller still — several manufacturers are simply putting their faceplates on players made by other companies. The market has yet to fragment into single-disc, changer, portable, and computer-related product categories. As we go to press, all but two DVD players are of the single-disc, full-size, home-component variety; the

two exceptions add playback capability for laserdiscs.

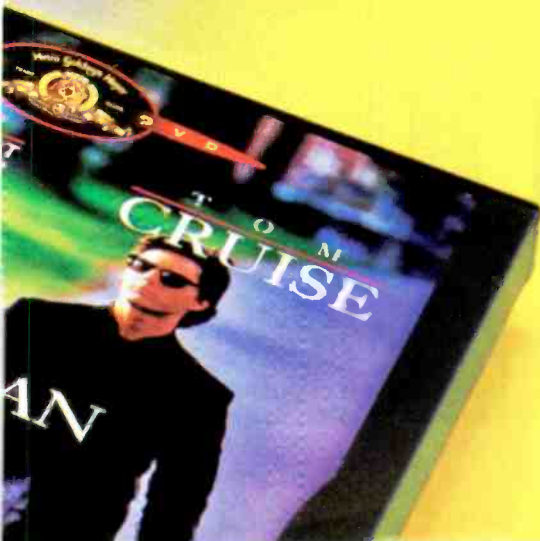
That doesn't mean all DVD players have been created equal. Making simple, systematic choices from among the major DVD options will considerably narrow the already small (but growing) field. First there is that division between DVD-only and DVD-plus-laserdisc combi-players. Then there's the schism between those players that have a built-in Dolby Digital (AC-3) decoder and those that don't. Another important distinction exists between players supplied with component-video outputs and those without. Next come operating features — literally dozens of them, many of them working slightly differently from player to player. Among these, the disc-navigation facilities are the most important. Then there are the remote controls, which range from

merely good to nearly unusable. Last, but certainly not least, there's audio and video performance — although, as we will see, only the latter should be a major concern when you select a DVD player.

Combi or Not Combi

The easiest of all the choices is to decide whether you want a DVD player that can also play laserdiscs. Seriously consider the two available combi models, both from Pioneer, if you have a large collection of laserdiscs, especially if they're rare or connoisseur classics that may take a long time to appear in the so far decidedly populist DVD medium. As with the transition from the LP to the CD, some recordings available in the older medium may never get transferred to the new one, or may take years to get there. Of course, the other option is to simply add a

BY DAVID RANADA



DVD-only player to your existing system and hold on to your laserdisc player. This option is particularly attractive if the laserdisc player has an AC-3 RF output (and you have an AC-3 RF demodulator, either outboard or built into a component), which is necessary to play laserdiscs that have Dolby Digital 5.1-channel soundtracks.

The Continental Divide

The primary feature that some manufacturers are using to distinguish their more expensive DVD player from their less expensive one (most companies now produce only two DVD models, if that many) is built-in Dolby Digital decoding. Whether you need or even *want* a player that is capable of decoding Dolby Digital soundtracks is probably the next most important DVD buying decision after laserdisc compatibility. You may be influenced by the capabilities of other parts of your home-theater system, and your DVD decision will in turn will greatly influence what other components you might want to replace or upgrade.

DVD players that have built-in Dolby Digital decoders convert the single

AC-3 multichannel digital-audio signal encoded on a DVD into six analog audio signals by means of an AC-3 decoder chip *and* six digital-to-analog (D/A) converter circuits. Such decoding is available in a handful of DVD players, in all separate-component Dolby Digital decoders, and in all Dolby Digital-capable A/V receivers and amplifiers (for simplicity, I will subsequently refer only to receivers). *Digital-ready* receivers, which seem to be getting quite a promotional push from some companies, have a six-channel input but no Dolby Digital circuitry and require the purchase of either a separate Dolby Digital decoder or a DVD player with built-in Dolby Digital decoding to deliver 5.1-channel surround sound.

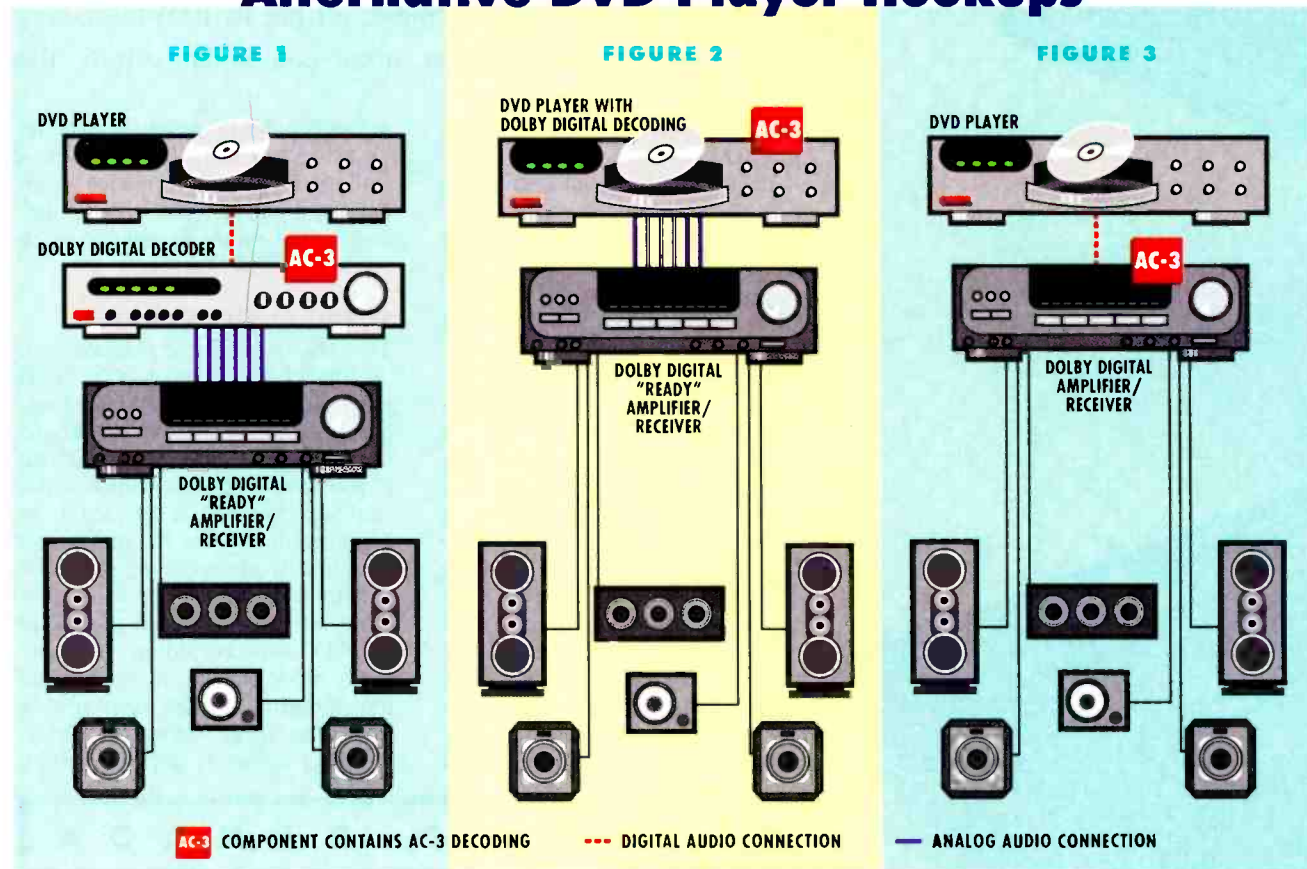
All this boils down to three DVD audio-hookup options, illustrated in the diagrams shown below. In these diagrams, the components containing Dolby Digital decoding are labeled by AC-3 in a red box. The first hookup (Figure 1) feeds a DVD player's *digital* output (either coaxial or optical depending on the player) to a stand-alone Dolby Digital decoder, which in

turn feeds its six line-level analog outputs to a Dolby Digital-ready receiver. If you're starting from scratch, this is probably the most costly way to go, but if you already have a Dolby Digital-ready receiver it may cost the same as the next hookup alternative.

Figure 2 illustrates a DVD player with built-in Dolby Digital decoding feeding its decoded multichannel, analog, line-level outputs directly to a Dolby Digital-ready receiver. This hookup is simpler than the first one and may be tempting to the uninformed as well as to salespeople who want to sell costlier DVD players. Both this hookup and the first one are inferior, however, to the one shown in the last diagram (Figure 3), in which a DVD player's digital output directly feeds a Dolby Digital-capable receiver. Such a hookup, which places the cost burden of Dolby Digital decoding on the receiver, not the DVD player or a separate component, has four very important advantages over the other hookups.

1. It is easier to get the connections right. There is only one digital connection between two components, and it

Alternative DVD Player Hookups



provides no chance to scramble the channels.

2. It is easier to get the sound right. A Dolby Digital-capable receiver is *required* by Dolby Laboratories to include certain functions that are essential for realizing the full potential of Dolby Digital sound. One is bass management, consisting of subwoofer-crossover and main-channel filters that move the decoded signals' lowest frequencies away from speakers that can't handle them and into those that can. Another is multichannel speaker-balancing facilities, which are more likely to keep the system balanced when you switch among inputs and decoding modes (going from a Dolby Digital DVD to a Dolby Pro Logic VHS tape, for example) than a Dolby Digital-ready receiver can. And often there are also multichannel speaker-distance compensation (time-alignment) facilities, which can greatly improve the frontal image in surround-sound operation.

In contrast, a DVD player with onboard Dolby Digital decoding is likely to have rudimentary bass-management facilities and no channel-balancing or time-alignment facilities. And in a system with an outboard Dolby Digital decoder that isn't a perfect manufacturer-intended match to its attached Dolby Digital-ready receiver, the bass-management situation could best be described as chaotic.

3. A Dolby Digital-capable receiver is likely to have more than one digital input capable of accepting Dolby Digital signals. This will be useful not only if you have more than one DVD player but also if you have a DVD player and a CD player or changer with a digital output. In addition, it will prepare you for the rapidly approaching era of digital and high-definition television with Dolby Digital soundtracks.

4. Concerns about audio quality are shifted from the DVD player to the receiver, because a player's digital audio output is just a data stream direct from the disc. You only have one component — the receiver — whose audio performance you have to worry about, compared to two components in the other two hookups.

It is difficult to overemphasize the superiority of the third hookup over the others. It does mean that you may have to upgrade your receiver to a Dolby Digital-capable model. But if you have a receiver from the pre-Dolby-Digital era, you're going to have to



The rear panel of Sony's DVP-57000 DVD player shows the wide variety of audio and video outputs that may be provided on a company's flagship model.

get a new one anyway, regardless of which hookup option you choose. Besides, Dolby Digital-capable receivers are coming down in price, and some now offer quite a big bang for your A/V buck. In the meantime you can use a DVD player's *analog* outputs and decode them with your present receiver's Dolby Pro Logic circuitry.

So you can eliminate from consideration DVD players with built-in Dolby Digital decoding *unless* they contain other features that you find worth the price difference. In that case, you still shouldn't use the player's Dolby Digital-decoded audio outputs. Instead, connect its digital output directly to a Dolby Digital-capable receiver as in Figure 3.

Video Connections

If you don't have one already, also think about upgrading your TV to a video monitor with at least one S-video input. For various technical reasons, the difference between composite-video and S-video hookup is more pronounced with DVD players than it can ever be with laserdisc players. So while DVD movies can look very good through a traditional composite-video connection, they look terrific with an S-video hookup. All of the DVD players we've encountered provide S-video outputs.

A few top players provide a third video-output option, component-video connections. DVD video looks even more fabulous through these than with S-video connections. That's because there's less signal processing between the DVD data stream and the picture-tube circuitry: A DVD carries its video

in component form, which must then be converted by the player to S-video and then to composite video.

As shown by the picture above, a player with component-video capability has three additional RCA-connector video outputs, each carrying a portion of the video signal. The output labeled "Y" carries the luminance (black-and-white) portion of the picture. Plug it into a standard composite-video input and you'll get a (very good) black-and-white picture. The other two component outputs carry "color-difference" signals. From these three signals, it is a comparatively simple process for a TV monitor to derive the red, green, and blue signals that drive its picture tube.

The problem is that only a few, very expensive TV monitors have component-video inputs (including a handful of two-piece front-projection units and some professional studio monitors, all selling for many thousands of dollars). But you can expect to find quite a variety of home monitors with component-video inputs by this time next year. If you want to get into DVD for its best-ever video quality, narrow your choices still further to the players with component-video outputs, and add a TV with component-video inputs to your Christmas wish list.

Deciding whether you want laserdisc capability, onboard Dolby Digital decoding, and component-video outputs are the most important choices you'll have to make when shopping for a DVD player today. You may even be able to eliminate most available models by deciding yes or no on these three features alone.

Operating Features

But your job isn't quite over. Each DVD player has a host of operating features, some standard (like play and stop buttons), others limited to only one manufacturer's products or to only one model (see the checklist below). We can't cover all of these features, but we can give some pointers on what to look for in the two most important areas, cueing facilities and the remote control. Fortunately, both of them can be usefully tested, at least in a general way, in a retail showroom.

Players can differ greatly in how their basic disc-navigation controls operate. Fast scanning, multispeed

playback, and slow motion may be available only in the forward direction, if they are available at all. Scanning itself may proceed by large jumps through the program on one player and more smoothly but slightly slower on another. Pressing "cue to the beginning of the chapter" while the player is paused may or may not release it from pause. The navigation/cueing controls may operate differently for audio CDs.

The importance of any of these characteristics is difficult to generalize about, as man/machine interaction is a rather personal affair. If you expect to play only DVD movies from start to finish without stopping, most of them

don't matter. On the other hand, if you like to see the trap door open before the Wicked Witch of the West disappears in a burst of flame, you might want a slow-motion or frame-step feature that operates in reverse.

Remote Controls

With DVDs, most movie cueing is via an on-screen menu of favorite scenes. Basic setup operations also operate through menus. Smooth operation of a menu system requires a remote control that is comfortable to operate yet capable of controlling all important features, preferably without having to open a button-hiding panel. Remotes have a special set of cursor keys for menu control, and some even employ a mini-joystick. Make absolutely sure that these controls are easy to operate (easy to reach with your fingers, difficult to make mistakes with, comfortable during repeated operations like still-stepping). Some of the fancier remotes supplied with top-of-the-line players may not be as finger-friendly as the remotes with less costly models.

Also look for remotes that allow you to select from among multiple DVD soundtracks and to switch subtitles on or off *while the disc is playing*. Some DVD movies have default coding that automatically turns subtitles on or enables Dolby Pro Logic instead of Dolby Digital unless you instruct the player otherwise with the remote. You should be able to change that without interrupting playback.

Video Quality

While you might think that saving DVD video quality until the last lines of this article is a miscalculation, it is deliberate. Until the DVD version of Joe Kane Production's *Video Essentials* laserdisc becomes available from Image Entertainment, which will enable very rapid in-store evaluation of video performance, it is difficult to give buying guidance based on video quality beyond the recommendations in my previous DVD article ("First Look at DVD" in May). When *Video Essentials* does come out — "any day now," says Joe — rest assured that we will have an article on how to use it for ultra-critical video test patterns on the sales floor.

In the meantime, following the preferences expressed in this article will automatically lead you to players with superior video quality. That's another advantage of having so few models to choose from. Happy hunting! □

DVD Player Feature Checklist

Brand: _____

Model number: _____

PLAYBACK CAPABILITIES

- Plays laserdiscs
- Plays recordable CDs (CD-R)

CONNECTIONS

- Optical digital audio output
- Coaxial digital audio output
- Digital output(s) can provide stereo PCM (for digital inputs on non-Dolby Digital-capable receivers)
- Component-video outputs

CONTROLS

- Remote comfortable to hold
- Remote has easy-to-reach menu controls
- Menu controls easy to activate repeatedly
- Fast scan forward
- Fast scan reverse
- Multispeed fast scan
- Fast scanning not too jerky (try near the end of a disc)
- Slow motion forward
- Slow motion reverse
- Multispeed slow motion
- Still-step forward
- Still-step reverse
- Changes subtitles while in play
- Turns subtitles off while in play
- Changes soundtracks while in play
- Buttons operate differently when playing CDs (or laserdiscs)

- Remote takes AA batteries for longer life
- Remote buttons light up in the dark
- No important buttons hidden by doors or panels
- Remote controls other products besides DVD player
- Easy-to-read on-screen display

OTHER PLAYER FEATURES

- Can memorize where you left off when the player was last on
- Such memory applies to CDs (and to laserdiscs in a combi) as well as to DVDs
- Front-panel display easy to read from a distance
- Front-panel display informative enough when playing CDs
- Enough repeat modes
- Enough programmed-playback steps
- Programming is a simple process
- Controls for DVD picture quality (color, brightness, etc.)
- Dolby Digital late-night viewing compression
- Parental-control lockout
- Manual easy to follow

OTHER FEATURES YOU FIND IMPORTANT:

- _____
- _____
- _____

WHAT'S NEW IN subwoofers

by Ian G. Masters

Variety and consistency at the low end

Back when stereo sound was first introduced, some cynical listeners thought that the audio industry was promoting the technology mainly to sell more speakers. That cynicism might have been helped along by the fact that the speakers of the day — the good ones, anyway — were huge. Who wanted two refrigerator-size boxes in the family parlor when the second one only contributed a bit more ambience?

Smaller speakers were developed to answer that objection, but when four-speaker quadraphonic sound raised its head in the early 1970s, it was greeted with a good deal of skepticism: More amps? More speakers? What gives?

Quadraphonic sound was a failure, of course, and everybody happily returned to two-speaker stereo. But after Dolby Surround was introduced for the home in 1982, people began to appreciate the need for more speakers. They could, of course, have littered the listening room with conventional speakers, but it seemed much more sensible to take advantage of what audio experts had known for years: The requirements of speakers are very different depending on whether they reproduce high- or low-frequency material. The lowest stuff (a) used up most of the watts and (b) was omnidirectional, so it didn't really matter where low-frequency speakers were placed . . . except when it came to the acoustic anomalies in the listening room.

The ability to position the bass reproducer to minimize certain acoustic effects, without compromising the di-



M&K's MX-350THX powered subwoofer (\$1,795) features two 12-inch drivers and a 350-watt amplifier in a single enclosure.

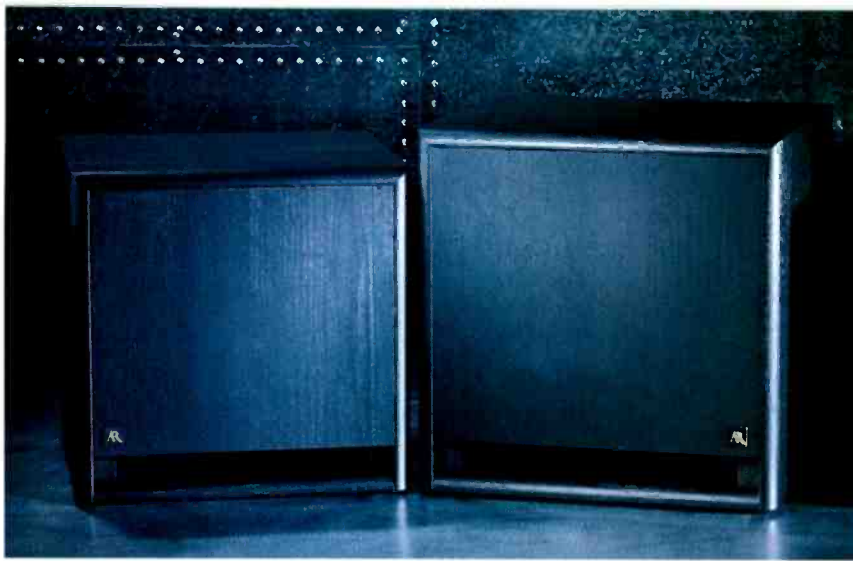
rectional cues in the higher-frequency material, meant that small speakers could be used for the upper part of the spectrum, and one or two larger — but position-uncritical — reproducers for the lower part.

Hmmm So now we had six speakers rather than two, but most were small and the big one, or two, could be hidden. But bass still required power, so a fairly hefty power plant — an amplifier — was necessary even if the bass unit was separate.

It didn't take designers very long to figure out that you could build an amplifier into a bass module, which could be matched to the speaker itself, and that would relieve the strain on the main system's amplifier. The powered subwoofer was born.

What's Out There?

To see what is available to the audio buyer who wants a lot of low bass, we surveyed a fairly representative selection of current subwoofers. We discov-



The slot-loaded Acoustic Research S 10 HO (left, \$439) has a 10-inch woofer and a 70-watt amp; the S 12 HO (right, \$549) has a 12-inch driver and a 140-watt amp.



Cambridge SoundWorks' 140-watt Powered Subwoofer (\$700) has a four-position crossover-frequency selector.

ered that they have a good deal in common — and one fairly major variation: low-end limits. The term “subwoofer” tends to be used indiscriminately both for speakers that can really reproduce the bottom octave — down to 20 Hz, or even lower in some cases — and for external woofers that can beef up the bass of small satellites but don't extend below 30 Hz or so.

Prices of subwoofers in our survey range from \$300 to \$2,000, but the large number costing between \$500 and \$700 indicates that prices have come down and that you can get decent bass without breaking the bank.

Watts Up?

The powered subwoofer is definitely king. In our survey, only the bottom model from B-I-C America and a sub from Parasound lack their own amplification. The latter, the Parasound CS/W-1002 (\$279), is an in-wall subwoofer. It uses a flat driver so that the whole unit can fit into the 4-inch depth of a standard wall. The powered HR-SW12Va from Hsu Research (\$1,000)

is also available in an unpowered (passive) version for \$550: it's the only one we encountered that offers the option.

The on-board amplifiers range in power from the 70 watts of the Acoustic Research S 10 HO (\$439) and the Rock Solid Sounds PB100 (\$449) up to the staggering 2,700 watts in the Sunfire True Subwoofer. A few other biggies include the Bag End Infrastub-18 (\$1,895) with 400 watts, the Definitive Technologies Powerfield 1800 (\$1,599) and PF18 (\$999) with 500 and 325 watts, respectively, the Paradigm Reference Servo-15 (\$1,500) with 400 watts, and the Velodyne F1800R-II (\$1,999) with 600 watts.

Paradigm's Reference Servo-15 and Velodyne's F1800R-II are both servo-controlled subs. They use a technology called motional feedback, in which an accelerometer is attached to the speaker cone to sense its actual movement and a comparator circuit detects any differences between that and the intended motion — the input from the rest of the system — and makes the appropriate corrections. Both subs are capable of producing very large amounts of very low bass. Ditto the Infrastub-18 from Bag End. It incorporates the company's Extended Low Frequency (ELF) processing circuitry, which uses electronic equalization to offset the speaker's tendency to produce less output as frequencies get lower; the result is said to be a linear response down to as low as 8 Hz.

The Mirage BPS-400 (\$1,300) includes a 400-watt amp that uses a pulse-width-modulated power supply. Because such switching power supplies are highly efficient, the amp can run cooler than a conventional one. Pinnacle's Digital Sub 350 (\$1,095) and Digital Sub 250 (\$850) use similar technology in their 350- and 250-watt amps. While Pinnacle's amp/crossovers are built in, the Mirage sub has an external crossover.

Similarly, the Paradigm Reference Servo-15 subwoofer has an external control unit, and the Jamo SW-400E (\$499), to simplify hookup, has a detachable jack panel with both speaker-level and line-level stereo inputs. The NHT SW2Pi sub (\$800) is supplied with an external amplifier.

Such exceptions aside, most of the subwoofers we considered are all-in-one boxes containing amplifiers rated from 100 to 200 watts. Virtually all provide signal sensors to turn the amplifier on automatically the moment there's an input signal and off when



The Boston Acoustics THX-certified VR2000 (\$1,200) has a 350-watt amp, a 12-inch driver, and a rated frequency response of 20 to 110 Hz \pm 3 dB. Weight is 70 pounds.



you've finished listening. That's important because you don't want to have to reach behind the box to turn it on, especially if you have it hidden behind or under a piece of furniture. A handful of subs, such as the Advent Granit (\$499), include an infrared remote control as well.

Most of the subwoofers in our survey include some kind of overload protection, such as the peak-limiting circuits in the the Eosone RSP-912 (\$750) and AudioSource SW Twelve (\$499), the thermal protection in the Energy ES-8 (\$300), the "concealment limiting" in the Bag End Infrabass-18, the compression circuitry in the Sonance DL1200V (\$999), or the "head-room maximizer" in M&K's MX-150THX (\$1,295).

The M&K is one of three THX-certified subwoofers in our assortment. It comes in both home and professional versions, the difference being a slightly larger amp in the pro version, which also has XLR balanced input connectors for compatibility with other professional equipment. Like the Boston Acoustics VR2000 (\$1,200), the M&K is designed to be used alone, even in a THX system, where you would usually expect to find a pair of subwoofers. More typical of THX-certified subwoofers is the Atlantic Technologies 352 PBM THX, which is sold in pairs (\$1,698) and can even be daisy-chained with more subwoofers to fill really huge spaces.

Most of the subwoofers mentioned here provide phase-reversal switches to help match them with the other speakers in a system. The Definitive Technologies Powerfield 18, the Sunfire, and the Klipsch KSW 200 (\$649) and SW 12 II (\$1,100) are distinctive in having continuously variable phase controls. There are an infinite number of relative speaker positions, so it's very unlikely that a subwoofer will be fully in or out of phase with the other speakers. Rather, it will be somewhere in between and can best be matched with a variable control — in theory, at least; adjusting such a control accurately is difficult without test gear.

Overall output-level controls are almost universal, as are continuously variable low-pass filters except in the THX models, which have a fixed 80-Hz crossover frequency. Even there, the Atlantic Technologies THX sub provides a variable control for use when it is not in a THX system. The Velodyne F1800R-II has a variable control that can be switched out if you



The B&W AS 6 (\$950) has a 12-inch paper-cone driver and a built-in 100-watt amp that features "soft limiting."



Definitive Technology's PF1800 (\$1,599) has an 18-inch cast-basket driver combined with a 500-watt amplifier.

want to use an external crossover, as does the B&W AS6 (\$950). In our sampling, only three non-THX subwoofers lacked continuous low-pass filter controls that allow the subwoofer to be matched with the other speakers in the system: The Cambridge SoundWorks Powered Subwoofer (\$700) has a 55/80/100/140-Hz selector switch, and the Rock Solid PB100 and the Klipsch SW 12 II are fixed at 80 Hz.

Typically, the low-pass filter controls start at 40 Hz and go up to about 150 Hz, the exception being the Boston Acoustics VR2000, whose control extends up to only 100 Hz. The Jamo SW-400E starts at a rather high 70 Hz, while the Hsu Research HRSW12Va begins at 28 Hz.

Except for the few subwoofers that require external processors, or pro models that accept only line-level signals, virtually all the subs in our survey will accept both line-level inputs (via RCA jacks) and speaker-level signals, for which standard terminals are provided. The majority also provide speaker outputs for satellites and line-



The Energy ES-8 (\$300) has an 8-inch woofer, a 100-watt amp, auto power on/off, and clipping-protection circuitry.

Pinnacle's Digital Sub 250 (left, \$85) has a 12-inch driver and a 250-watt amp; the Digital Sub 350 (\$1,095) packs two 12-inch drivers and a 350-watt amp in a two-chambered box of the same size. Both amps are efficient digital-switching types.





The Sunfire True Subwoofer (\$1,250), an 11-inch cube, has two flat-diaphragm 8-inch drivers and a 2,700-watt amplifier.



Paradigm's Reference Servo-15 (\$1,500) has a 15-inch Kevlar-reinforced driver and a 400-watt amp in a sealed box.



Cerwin-Vega's HTS-15 (\$799) has a 15-inch driver and a built-in 200-watt amplifier with an auto-on feature.



The NHT 5W2Pi (\$800) has a 10-inch polypropylene driver in a vented enclosure and a 120-watt external amplifier.



Bag End's Infrasub-18 (\$1,895) is rated down to 8 Hz ± 3 dB. It features a 400-watt amplifier in its sealed enclosure.



The Eosone RSP-912 powered subwoofer (\$750) has a 12-inch woofer driven by a 120-watt auto-on/off amplifier.

level outputs that can feed back to the system amplifier or receiver, which are usually associated with a fixed-frequency high-pass filter that removes much of the bass from the signal to conserve the system amp's power. One of the benefits of using a powered subwoofer, in fact, is that it can relieve strain on the main amplifiers.

Pumping It Out

Single-driver units dominate our survey, although some have dual voice coils, such as the Parasound in-wall model, or even triple coils, such as the Cerwin-Vega HTS-15 (\$799). There are some multidriver models, however. The DCM Sub-710ii (\$399) has two 6½-inch woofers, the Pinnacle Digital Sub 350 and M&K MX-150THX have two 12-inchers, and the Mirage BPS-400 has two 12-inch drivers in a bipolar

configuration, which is said to cancel out cabinet and speaker-to-floor vibration.

The Sunfire True Subwoofer has a pair of 8-inch flat-diaphragm drivers, also in a bipolar arrangement. The drivers of this distinctive subwoofer are housed in a diminutive 11-inch-cube cabinet, and each can produce a 2½-inch excursion. According to Sunfire, its subwoofer can move something like four times as much air as a typical 15-inch sub. That's why it incorporates an amplifier rated at 2,700 watts, which may in turn explain why such a tiny box weighs in at 48 pounds.

There is some disagreement as to the direction a subwoofer should aim. Most of the manufacturers in our survey offer front-firing subs; AR, Advent, B-I-C, Cerwin-Vega, Jamo, and several others choose to aim the sound

at the floor. The Sonance DC1200V has it both ways, with a front-firing 12-inch woofer and a downward-firing 15-inch passive radiator.

Subwoofers come in two broad categories of enclosures: sealed and ported. Traditionally, sealed enclosures allowed good bass from relatively small boxes, but at the price of requiring higher amplifier power. Ported enclosures made for more efficient speakers, but they were larger. Technology has largely removed such distinctions, however, and today there are compact, efficient subs of both kinds.

A small number of the subwoofers in our survey use sealed enclosures, notably the models from Atlantic Technology, Bag End, Cambridge SoundWorks, and M&K. The majority, however, use ports of one sort or another. Several models, in particular those

from DCM and Definitive Technology, use transmission lines, which reduce resonance and increase bass extension by means of a tapered internal chamber stuffed with absorbent material to simulate the effect of an infinitely long tube.

Several subwoofers use more than one port, and MB Quart's D1200S (\$799) and Klipsch's KSW 200 (\$649) use flared ports to eliminate audible rushing sounds caused by turbulence. Like the Sonance DC1200V, the Klipsch SW 12 II uses a passive radiator, in this case a 12-inch cone to complement the 12-inch driver.

It's often been observed that subwoofers are sometimes more woofer than sub. Many fill in the bass missing from small satellite speakers but don't extend all that low. In our survey, a number of models specify quite modest bass extension — the Advent and Jamo subs claim 40 Hz, for instance, and the majority specify a lower limit between 25 and 30 Hz.

Some do go way down, though. The Bag End is definitely the champ, extending to 8 Hz thanks to its distinctive equalization circuitry. The Definitive Technology sub claims 13 Hz and the Paradigm 14 Hz. The Mirage, the Sunfire, the Velodyne, and the Yamaha YST-SW300 (\$599) are all rated to go down to 18 Hz, and several others specify 20 Hz.

Practical Matters

Like any speaker, a subwoofer has to sit in the listening room. Because you can't always tuck one into an inconspicuous spot, appearance is not totally irrelevant.

Most manufacturers agree that a subwoofer should be black. In our survey, more than half of the subs are finished in black vinyl, black laminate, or "black ash" — the last usually referring to woodgrain vinyl. The NHT SW2Pi comes in high-gloss black or white laminate or oak veneer, the Klipsch SW 12 II comes in oak, wal-

nut, or cherry veneer, and the Paradigm Reference Servo-15 is available in light cherry or rosenut wood as well as black-ash laminate.

A typical subwoofer tends to be pretty close to a 16-inch cube, although only the NHT model hit those dimensions exactly. Some are bigger, like the Bag End, Mirage, and Paradigm, or smaller, like the 11-inch Sunfire. Tallish models include the Advent, which has a 12 x 12-inch footprint and is 20 inches high, and the Klipsch SW 12 II, which is 2 feet high on a 16-inch-square base. The only cylindrical speaker in our survey is the Hsu HRSW12Va, which is 22 inches high and has a diameter of 23 inches, making it one of the biggest models.

Whether you're into home theater or just listening to music, a subwoofer is one of the most dramatic upgrades you can give your audio system. The selection is now large enough that you'll definitely find something out there to suit your tastes and budget. □



Velodyne's F1800R-II (\$1,999) has an 18-inch driver and a 600-watt amp. The internal crossover can be bypassed.



Jamo's SW-400E (\$499) has an 8-inch woofer and a 90-watt amplifier. It also features a detachable connector panel.



The Klipsch KSW 200 (\$649) has a 12-inch woofer, a tuned-port bass-reflex enclosure, and a 200-watt amplifier.



JBL's PSW1200 (\$500) has a 12-inch driver housed in a bass-reflex enclosure and driven by a 120-watt amplifier.



The Polk Audio PSW150 (\$649) has a 125-watt amp and a 10-inch driver. Its rated response is 30 to 150 Hz +0, -3 dB.

Memphis Legacy

Most people would consider a car accident to be a misfortune — especially if it left them injured and hurting. But Jason Scheuner, a freelance trade-show planner from Memphis, Tennessee, found a way to channel his pain into his passion for good sound.

Because a back injury suffered in a 1993 car accident made him unable to lie down for long stretches, Scheuner often found himself awake on his living-room couch in the middle of the night. Knowing that he was going to

be spending a lot of time there as he healed, he decided to make it as pleasurable as possible by putting together an A/V system for listening to his extensive collection of live recordings.

While this system did make his couch-sitting more enjoyable, things didn't really get going until a couple of years later when his pain had subsided and his insurance settlement came in. That's when he sprang for a pair of Legacy Whisper loudspeakers, which made every other speaker he'd ever heard "sound like a turkey."

The Whisper (\$12,500 a pair) is a ten-driver, four-way speaker system.

The top end is handled by a ribbon tweeter, while a 1¼-inch soft-dome driver and four 7-inch Kevlar-cone drivers handle the midrange. Two pairs of unenclosed 15-inch woofers, mounted back to back in a dipole configuration, take up the bottom end. Although impressed by the sound that the Whispers could deliver, Scheuner wasn't as thrilled with their appearance — those four yellowish Kevlar drivers just didn't look good against the beautiful dark-cherry-finished walnut, he thought. So he had Legacy special-order rare, dark green Kevlar drivers from the German manufacturer Eton.



PHOTOS BY GREG KINNEY



Waiting for the drivers delayed his order for six months, but he is more than satisfied with the results — especially when he listens to his system with the speaker grilles removed.

According to Scheuner, the main benefit of the Whisper speakers is that they react with the room less than other speakers. He agrees with Legacy's claims that the Whisper's radiation angle never exceeds 90 degrees and that a pair can provide better channel separation at the listening position than most other speakers.

The center channel is covered by another Legacy speaker, the Silver Screen (\$1,248), a four-driver, three-way system. It features a 4-inch ribbon tweeter, a 1/4-inch soft-dome midrange, and two 7-inch Kevlar woofers, which Scheuner also had replaced with green drivers.

Scheuner put as much importance on the surround speakers as on the front trio. He chose the Legacy Focus (\$5,200 a pair), a seven-driver, four-way system. If you haven't already guessed, the two 7-inch yellow Kevlar midrange drivers were replaced by green ones. The Focus also features a ribbon tweeter, a 1/4-inch midrange, and three 12-inch woofers.

The powered subwoofer, placed on a side wall, is a Legacy Pacemaker (\$2,450), which contains two 15-inch fiber-reinforced pulp-composite woofers fed by a 350-watt amplifier. The bandwidth is given as 16 to 90 Hz, but the high end is user-adjustable to as low as 40 Hz.

Scheuner didn't abandon Legacy for the electronic portion of his setup. He chose a pair of Legacy Monobloc amps (\$2,400 each) to feed the Whispers and a Legacy 4/3/2 multichannel amplifier (\$1,495) to feed the Focus surrounds and the center speaker (two channels running in biamped mode). He rounds out his audio setup with a hand-wired Wright Audio LGP-1 Class A tube preamplifier, a Pioneer Elite PD 65 CD player, and two cassette decks, a Tascam Model 103 with three heads and an NAD Model 6325 with two heads.

For home theater, he uses a Pioneer Elite PDR-99D Dolby Digital processor, a 27-inch NAD video monitor, and a Sanyo multimedia projector. A trio of JVC S-VHS VCRs (HR5800, HR6600, and HR7100) are used to view, edit, and record concerts.

Between videotapes, DATs, CD-Rs, and standard cassettes, Scheuner estimates that he has close to a thousand concert recordings in his collection. The main purpose of his system, he says, is to deliver the sound of a live concert — something that his system does better than any other he's ever heard. He's got plenty of experience hearing the real thing, having attended hundreds since his first Rush concert in 1982, when he was twelve years old. His tastes run from Eric Clapton and the Red Hot Chili Peppers to the Grateful Dead and Branford Marsalis. Concert posters and lithographs line the walls of his listening room, and he's kept the ticket stub of every show

he's attended — someday he may even get around to counting them.

Unlike many audiophiles, Scheuner doesn't spend much time tweaking his system, feeling that time spent doing that is time not spent listening. "If you buy the right equipment to start with, you don't need to tweak it," he says.

But he isn't afraid to tweak his equipment *before* he buys it. Replacing the Kevlar drivers is one example. Having his amplifiers (and his home theater) rewired for 220-volt operation is another. At 220 volts, he says, the "amplifiers can be much more themselves," though he admits that he can't explain how or why it makes an audible difference.

Proud of his nearly \$50,000 investment, Scheuner enjoys auditioning his system for others. His belief in Legacy Audio is so strong that he volunteered to demonstrate his system to potential customers of the company, which sells its products factory-direct. He likes being able to help people appreciate audio, too, especially those who thought they would not be able to hear the difference a high-end audio system can make. "Instead of their stereo systems being limited by their ears," he says, "their ears are limited by their stereo systems." —Brian C. Fenton



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BEST OF THE MONTH

**STEREO REVIEW'S
CRITICS CHOOSE THE OUTSTANDING
CURRENT RELEASES**



Antonio Hart's Eclectic Trek

Inspired by a Randy Weston comment that jazz can incorporate almost any sound, saxophonist Antonio Hart has shed any idiomatic limitations he may have had and recorded a marvelous album that makes many stops but never goes off the jazz track. Like so many of

his contemporaries, Hart has a taste in music that goes beyond what he's usually identified with — so why stay on the Coltrane? "They have a lot of us young musicians making records with nothing but standards and tunes that aren't very personal to us," he complains in his press

bio, going on to suggest that his previous efforts were often designed to satisfy the audience rather than himself. *Here I Stand*, named after Paul Robeson's autobiography, shows he can do both.

Hart has made excellent recordings before, with Roy Hargrove and on his own (all available on Novus), but his debut for Impulse! outshines everything else he's done. You won't find a single throwaway track here, nor a note of fluff, as Hart and his carefully selected musicians crystallize the thoughts of his fertile musical mind in a variety of instrumental combinations. Listening to *Here I Stand* is like moving through a gallery of absorbing art: You will want to return to each work, and you will hear something different each time you do.

Hart's fondness for organ trios and the 1951 Earl Bostic hit "Flamingo" is reflected in a mellow version of that tune, his smooth alto sax blending perfectly with Shirley Scott's organ. Shirley Scott? Yes, this is indeed the lady who helped make the instrument part of club inventory a few decades back. She reappears on piano in "Like My Own," a soulful blues number that is dedicated to Hart's godson. Pianist James Hurt is outstanding in all the other tracks; the same goes for bassist John Benitez and drummer Nasheet Waits. Although Hart wrote "Brother Nasheet" with Waits in mind, he wisely made it a tribute rather than a percussion showcase. Waits does have an opportunity to step up front in "Riots . . . The Voice of the Unheard," however, where Hart and seven other musicians express their impressions of the Los Angeles riots: trumpeter Patrick Rickman in particular helps make this a highlight of a consistently fine album.

More variety is introduced in "Ven Devorame Otra Vez," a jukebox favorite from a time when Hart worked with Latin bands in Boston. And I should mention one more selection, because "The Words Don't Fit in My Mouth" is yet another departure. Here Hart teams up with poet Jessica Care Moore, whom he describes as "another developing artist," for words and music harking back to the Beat Generation. He has found a source of inspiration in the current renaissance of poetry, but the slightly hip-hop blend he and Moore give us (with help from trombonist Robin Eubanks) is no mere imitation of past coffeehouse fare.

Here I Stand is an extraordinary album by an artist who is only 28 — and that bodes well for the future of American music. *Chris Albertson*

ANTONIO HART: *Here I Stand*.

The Community; True Friends; Flamingo; Brother Nasheet; Ven Devorame Otra Vez; "Riots . . . The Voice of the Unheard"; Millennium; Like My Own; The Words Don't Fit in My Mouth. IMPULSE!/GRP 208 (56 min).

BEST OF THE MONTH

Enchanting Early Beethoven

Recently EMI released an unusual CD on which the young German pianist Lars Vogt plays Beethoven's first two concertos with conductor Simon Rattle and the City of Birmingham Symphony Orchestra. What's unusual about it is that Vogt plays Beethoven's cadenzas in the Second, but in the First he plays cadenzas written in 1954 by the young Glenn Gould and heretofore recorded only by Gould himself. Otto Friedrich, in his biographical study, quoted Gould as having remarked that he had written "vastly inappropriate cadenzas . . . in the general harmonic idiom of Max Reger." Gould's detailed statement, reprinted in EMI's annotative leaflet, makes a stronger case for them, and they do relate clearly and effectively to the Concerto No. 1.

Yet the Gould cadenzas are actually one of the least interesting features of this marvelous recording. Vogt's playing suggests great reserves of power judiciously applied to bring out the warmth, wit, and poetry inherent in the music. He and Rattle are more than compatible; they seem to enjoy these concertos immensely, but their performances are no mere romps. Their refreshing approach emphasizes the substance and variety of these early works without a trace of condescension or any misguided attempt to turn them into "Emperor" Concertos. Both opening movements reveal a broader and deeper range of mood than we have come to expect — a range that definitely includes, but is by no means limited to, charm, lightness, and playfulness. The slow movements glow as seldom before, and the vitality of both finales goes way beyond mere friskiness (though that element is never given short shrift).

What all this adds up to is out-and-out enchantment, and it is not likely to wear thin with repeated exposures. Since the recorded sound is beautifully tailored to the musical content, this disc must supersede most earlier recommendations for either or both concertos. It will also provoke more than a few delighted listeners to check out the same team's earlier recording of the Grieg and Schumann concertos, and to be on the watch for whatever Vogt may offer in the future.

Richard Freed



Pianist Lars Vogt

BEETHOVEN: Piano Concertos Nos. 1 and 2.

Lars Vogt (piano): City of Birmingham Symphony Orchestra. Simon Rattle cond. EMI 56371 (64 min).

Sex, Hiatt, and Rock-and-Roll

The biggest surprise on John Hiatt's previous record, *Walk On*, was the unlisted bonus track at the end, a late-night torch ballad that sounded smokier than anything he'd done in the past. His new album, *Little Head*, picks up where that left off. The opening title track plugs into the same groove, this time with sly humor (a certain rock star gets name-checked) and plenty of double-entendre (nope, the "little head" isn't the one on his shoulders). After a stack of records about his domestic bliss and sobriety, it's good to hear that Hiatt still has a sex drive — and a strong one, from the sound of things.

Little Head isn't exactly the most serious album he's ever made, but it sure is the most fun since his shamefully overlooked supergroup project, *Little Village*. Hiatt's current band — including guitarist Da-

Hiatt (near left) and band: Immerglück, Faragher, Ferguson



vid Immerglück, bassist Davey Faragher, and drummer Gary Ferguson, with guest keyboardist Peter Holsapple — is a full-throttle rock outfit, and he gives it material to match. "Woman Sawed in Half" and "Sure Pinocchio" feature garage-rock guitars and quirky lyric angles (in the latter song, it's a former rock star who gets name-checked). Even tougher is "Pirate Radio," a timely rant on the state of the airwaves. When he returns to familiar themes, Hiatt still sounds rejuvenated: "Feelin' Again" and "After All This Time" both celebrate long-term love affairs, the first a lively rocker and the second a late-Sixties deep-soul number.

For someone often pegged as the king of sensitive adult rock, John Hiatt sounds pretty young and feisty nowadays.

Brett Milano

JOHN HIATT: *Little Head*.

Little Head; *Pirate Radio*; *My Sweet Girl*; *Feelin' Again*; *Graduated*; *Sure Pinocchio*; *Runaway*; *Woman Sawed in Half*; *Far as We Go*; *After All This Time*. CAPITOL 54672 (41 min).

Giya Kancheli's Soul Music

Following a series of seven highly dramatic symphonies written between 1965 and 1986, the composer Giya Kancheli developed his own special version of what might be called "holy minimalism." This more or less coincided with his decision to settle in Germany, where he had been living on a government stipend, instead of return-

HIATT/COURTESY CAPITOL

ing to his native Georgia in the disintegrating Soviet Union. The works that have come from his pen since 1990 bespeak a sadness beyond tears, interspersed with unquenchable rage and bitterness. Most are written for small ensembles, usually with voice or solo instruments.

Life Without Christmas is a four-part cycle composed between 1990 and 1994. The first two parts, *Morning Prayers* and *Evening Prayers*, have been available on an ECM disc, and the label has now released a CD containing the other two, *Midday Prayers* for clarinet, soprano, and nineteen players and *Night Prayers* for soprano saxophone and string orchestra. In both, the soloists and members of the Stuttgart Chamber Orchestra are conducted by Dennis Russell Davies. The two are separated by an 8-minute piece called *Caris Mere (After the Wind)* for soprano and viola.

The harrowing sorrow and rage expressed in the greater part of *Midday Prayers* give way toward the end when a soprano voice intones, in Latin, the last words of Christ on the cross, leading to a quietly radiant C Major conclusion. *Night Prayers* features the remarkable Norwe-

gian jazz saxophonist Jan Garbarek, whose ECM recording *Officium* with the Hilliard Ensemble was one of the outstanding CDs of 1994. Here the pauses carry as much intensity as Garbarek's primal screams and ululations. Again a solo voice is heard near the close, this time petitioning, in Latin, "O Lord, hear my voice." The annotation describes the work as "a demonic nocturne shaken by the madness of dreams."

Caris Mere is even more powerful. The text, in German, draws from the gospel descriptions by Mark and then Luke of the darkness that came over the land between the sixth and ninth hour of the Crucifixion. In between are words of the German poet Hölderlin, "Over the flowers of our spirit the present blows like a howling wind, blasting them even in the bud."

The performances by all involved speak for themselves. They are beyond praise, and the recorded sound does full justice to music and performers alike. Let me note, too, that these works and those by Kancheli in a similar vein are not for casual listening. They are best heard, like much of Arvo Pärt's music, in meditative mode — alone or with a congenial soul close at hand.

David Hall

JEFFREY HENSON/SCALES/AL FALCONE



Conductor Dennis Russell Davies

KANCHELI: *Midday Prayers;*
Caris Mere; *Night Prayers.*

Eduard Brunner (clarinet); Maacha Deubner (soprano); Kim Kashkashian (viola); Jan Garbarek (saxophone); Stuttgart Chamber Orchestra. Dennis Russell Davies cond. ECM 1568 (54 min).

NOW ON CD

POPULAR

BOSTON: Greatest Hits.

EPIC 67622. Twelve hits and album favorites — including five of the Boston debut album's eight tracks — plus four new cuts with singer Brad Delp rejoining guitarist Tom Scholz.

MILES DAVIS: Kind of Blue.

COLUMBIA/LEGACY 64935. A landmark album reappears yet again, but this time with a bonus track (alternate take of "Flamenco Sketches"), new liner notes by Robert Palmer, rare photos, and, most important, remixed and 20-bit-remastered sound that corrects pitch problems of earlier editions.

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Up-Up and Away —

The Definitive Collection.

ARISTA/MASTERS 18961 (two CDs). The title track, "Stoned Soul Picnic," "Sweet Blindness," "Aquarius/Let the Sunshine In," "Wedding Bell Blues," "One Less Bell to Answer," and thirty more.

RUSH: Retrospective I — 1974-1980.

MERCURY/CHRONICLES 534 909.

Retrospective II — 1981-1987. 534 910.

Part of the overhaul of Rush's entire Mercury



catalog, these two CDs replace the double set *Chronicles* and include excellent "non-hits" like "Xanadu" and "The Body Electric."

BLIND PIG RECORDS — 20TH ANNIVERSARY COLLECTION.

BLIND PIG 2001 (two CDs). The blues/rhythm/roots label celebrates with tracks by John Lee Hooker, Otis Rush, Otis Clay, Buddy Guy and Junior Wells, Debbie Davies, Deborah Coleman, Joanna Connor, James Cotton, and others, a few in newly issued sessions.

CLASSICAL

BACH: Mass in B Minor.

Felicity Palmer, Helen Watts, Robert Tear, Michael Rippon; Amor Artis Chorale; English Chamber Orchestra. Johannes Somary cond. VANGUARD SVC 58/59 (two CDs). "Somary's

tempos are all superb . . . [and] the balance is excellent" (January 1975).

LEONARD BERNSTEIN: The Early Years, Vol. 4.

RCA VICTOR 68101. Recordings from the late 1940s of Stravinsky's Octet for Wind Instruments with members of the Boston Symphony, Milhaud's *La Création du Monde* with the Victor Chamber Orchestra, and early Bernstein works sung by mezzo Blanche Thebom with the composer at the piano.

MOZART: Horn Concertos Nos. 1-4.

Alan Civil (horn); Philharmonia Orchestra, Otto Klemperer cond. TESTAMENT/ALLEGRO 1102. Among the first stereo recordings of these basic works, made in 1960, and a splendid one. The CD also includes Civil with pianist Gerald Moore in Rossini's Prelude, Theme, and Variations and leading the horn section in an excerpt from Mendelssohn's *A Midsummer Night's Dream*.

RACHMANINOFF: Symphonies Nos. 1-3; Vocalise.

USSR Symphony and Bolshoi Theater Orchestras, Evgeny Svetlanov cond. MELODIYA/BMG 40064 (two CDs). "Rachmaninoff with all stops out. . . the sound is brilliant and spacious" (July 1969 review of Symphony No. 1).



POPULAR MUSIC

NEW RECORDINGS REVIEWED BY CHRIS ALBERTSON, FRANCIS DAVIS,
WILL FRIEDWALD, PHYL GARLAND, RON GIVENS, BRETT MILANO,
ALANNA NASH, PARKE PUTERBAUGH, KEN RICHARDSON, & STEVE SIMELS

ERYKAH BADU: *Baduizm*.
UNIVERSAL 53027 (58 min).

★★★★

Much of the buzz surrounding the 26-year-old Erykah Badu has focused on her vocal resemblance to Billie Holiday. There are similarities in the newcomer's vinegary timbre, and like Holiday she shapes lyrics and twists notes to emphasize meaning, but otherwise Badu is very much a product of her own time. She draws from contemporary urban pop and underscores it with hip-hop rhythms, the only suggestion of jazz being in the way she occasionally scats or otherwise uses her voice wordlessly. And she has combined these ingredients tastefully on her debut album, *Baduizm*.

Badu co-wrote all but one of the selections and was involved in the production, which always centers on her vocals. That's as it should be, for her lyrics are well worth listening to. Trained as an actress and a dancer, she pulls you into her private sphere with a sense of drama. This is most apparent in the record's outstanding track, "Other-side of the Game," a compelling story about a woman's love for a man who makes his living illegally, with a heavy hint of drug-dealing ("Whatcha gonna do when they come for you"); here, Badu translates social issues into powerful personal terms.

Some songs tend to sound alike, but Badu

Bettie Serveert: sunny exuberance



compensates with style and in the strength of her words. With her arrival, popular music has gotten a rejuvenating jolt. P.G.



BEKKA & BILLY.
ALMO SOUNDS 80012 (45 min).

★★★★

JOHN & AUDREY WIGGINS:
The Dream.

MERCURY 534 286 (40 min).

★★★

BILL & BONNIE HEARNE:
Diamonds in the Rough.

WARNER WESTERN 46514 (47 min).

★★★

Brooks & Dunn probably don't have to worry yet, but country duos are popping up like daisies, and at least three of them have plenty to offer.

On *Bekka & Billy*, Bekka Bramlett, the 29-year-old daughter of Delaney and Bonnie Bramlett, joins forces with 43-year-old Billy Burnette, son of Dorsey Burnette. Brief members of Fleetwood Mac in the early Nineties, the two are a sometime romantic couple, and the roots of their friendship run all through this occasionally remarkable, always uplifting album of raw-boned country, soul, and gospel. Bekka is the focal point, with her mama's astonishing vocal power and with writing skills that fully equal Billy's. When she cuts loose in the midsection of "Better Days," her untamed soprano is so thrilling that you'll remember why you listen to music in the first place.

John and Audrey Wiggins share important bloodlines, too. Their father, Johnny

Wiggins, was known as the Singing Bus Driver when he steered the coach for Ernest Tubb in the Sixties, and the Texas Troubadour invited him onstage for his own number. On their second album, *The Dream*, the brother-sister team scores a good radio hit with "Somewhere in Love," despite the inevitable awkwardness of a first-person love song sung by a male-female duo; it seems strange to hear Audrey singing strong, prominent harmony lines like "I never dreamed losing that girl would ever hurt so much." The two move on to a solid program of fairly sophisticated mainstream country, but they never quite ring the chimes.

Bill and Bonnie Hearne are probably old enough to be parents to most of country's newcomers — the husband-and-wife duo was part of the Austin folk scene of the Sixties and Seventies — but some of the artists whose talent they nurtured then, including Lyle Lovett and Nanci Griffith, consider them so hip that they showed up to sing on their major-label debut, *Diamonds in the Rough*. The Hearnes more than live up to that title in their lack of vocal polish, but their lovely brand of unvarnished Texas folkabilly and blues has a quiet power. Spare portraits of characters eking out their lives on the fringes of society ("Alison Lives by the Big Bend," "Grapes on the Vine") may leave you questioning your own domestic decisions.

All three albums celebrate friendship: Bekka and Billy in two generations of Bramletts and Burnettes, the Wigginses in what is often an adversarial sibling dynamic, and the Hearnes in marriage and in a now-completed circle of musician acolytes. Family, like love, wears many faces. A.N.

BETTIE SERVEERT: *Dust Bunnies*.
MATADOR 55227 (41 min).

★★★

In a nutshell, Bettie Serveert's third album is better than their second but not as good as their first. The Dutch quartet made a sparkling debut with 1993's *Palomine*, crossing pristine vocals with dirty guitar in emotionally grabbing songs that made the record more than the sum of its parts. Two years later, *Lamprey* repeated the formula, but with a slower tempo and less memorable material.

On *Dust Bunnies* the approach gets shaken up a bit. Most of the songs are kept in the three-minute range, with a surprising downplaying of guitar solos, while producer Bryce Goggin (Lemonheads, Breeders) gives the band a bigger, radio-friendly sound. Moody instrumentation is toned down in favor of hook-oriented pop, in the same ballpark as Juliana Hatfield and Velocity Girl.

Most of it works fine, though there was still more depth to the first album. Then

STAR SYSTEM

Excellent ★★★★★
Very good ★★★★
Good ★★★
Fair ★★
Poor ★

again, Carol van Dijk's voice remains a thing of beauty, and *Dust Bunnies* jumps from haunting minor-key melodies to moments of sunny exuberance (the catchiest of which, "Story in a Nutshell," runs 70 seconds). "Everybody loves a band that sells," Van Dijk sings in the bubblegummy, non-ironic "Rudder." No argument here. *B.M.*

DENNIS BRENNAN: Iodine in the Wine.
UPSTART 036 (48 min).

★★★★★
Nils Lofgren, Graham Parker . . . Dennis Brennan. Never heard of him? His previous album, 1995's *Jack-in-the-Pulpit*, was seen and heard by a precious few, but it had "A Name to Remember" written all over it. Remember I did, and now comes the even better *Iodine in the Wine*, recalling Lofgren and Parker but never sounding borrowed. Brennan's years in Boston bar bands serve him well in the no-nonsense guitar-based rock-and-roll of "Familiar Surroundings," "Youngstown," and "Ones & Fours," and he shows a fine sense for rich balladry in the harmony-laced "Mighty Long Time" and "Pill of Love." Other delights in this tightly played, crisply produced set include the hoedown of "The Worried Man" and the crazy sax honks in "Blue Sky, Red Song." That a talent like Brennan can stay relatively unknown is one of the travesties of the biz, but it also makes his music special for those lucky enough to find it. *K.R.*

THE CICADAS.
WARNER BROS. 46498 (41 min).

★★★★★
The Cicadas may not be as startlingly original as fellow insect bands the Beatles and the Crickets, but they're bound to make a buzz. A supergroup headed by singer/songwriter Rodney Crowell and including guitarist Stuart Smith, bassist Michael Rhodes, and drummer Vince Santoro, the Cicadas as individuals have long hung around the hipper side of Nashville, but now they move from its twangier neighborhoods to its harder, urban center. This is pop music with a steely core under its melodic and at times very Beatlesque sheen.

Crowell lost his footing in mainstream country several years ago, but here he sounds like a man who's found himself again. Although the Cicadas operate very much like a band, they draw their strength from his writing, which they embroider with stunning musicianship, particularly Smith's shimmering guitar work. After "We Want Everything," a hard knot of a song about a friend who has apparently killed himself, Crowell shifts gears for the early Paul McCartney-like pop of "Through with the Past" and then for the intense "Our Little Town," which he co-wrote with old friend Guy Clark. It's a credit to Crowell that only one of the three outside songs, cousin Larry Willoughby's pounding rocker "Blonde Ambition," measures up to his own.

Nashville can boast of several smart part-time superbands like this one, but with the exception of the recent Dead Reckoners sampler, *A Night of Reckoning*, none of them have made it to record. Here's hoping

the Cicadas come around more often than their namesakes: Seventeen years is too long to wait for something this good. *A.N.*

THE JAYHAWKS: Sound of Lies.
AMERICAN 43114 (56 min).

★★★★★
The realignment in the Jayhawks caused by the departure of Mark Olson — who, along with the remaining Gary Louris, co-founded the group and shared writing, singing, and guitar-playing duties — hasn't turned out to be such a cataclysmic schism after all. *Sound of Lies* is a worthy companion to its stellar predecessors, *Tomorrow the Green Grass* and *Hollywood Town Hall*. The group has risen to the occasion with

another album welded to the deliberate rhythms and cadences of a well-paced life, so evocative of Northern woodsmoke, autumnal hues, and dusky introspection.

Louris strikes a plangent bull's-eye in the gorgeously doleful "Stick in the Mud." Piano and fiddle frame his confessional vocal in this sweet, unguarded tune that wouldn't have seemed out of place on Neil Young's *After the Gold Rush*. A more aggressive-sounding Jayhawk dives headfirst into "Big Star," a musician's tale of great (and dashed) expectations. "Poor Little Fish," another song about esteem lost and recovered, soars into an arty pop-rock ether.

No doubt knowing that a fine showing was essential to maintaining career equilib-

CATALOG UPDATE

XTC



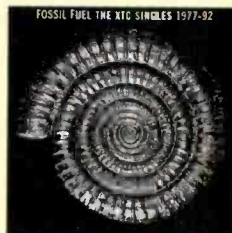
KEVIN WESTENBERG/GEFFEN

Singles 1978-85 (band comments on each *Fossil* track are on the Internet at <http://reality.sgi.com/relyph/chalkhills/articles/XTCMM.html>). In the States, Geffen has just put out *Upsy Daisy Assortment*, a nearly 80-minute CD of nineteen tracks skimming *Fossil*'s most important post-Go 2 entries and adding winners like "Funk Pop a Roll," "Seagulls Screaming Kiss Her, Kiss Her," "Earn Enough for Us,"

and — at Andy Partridge's own request — "Chalkhills and Children." Meanwhile, Mobile Fidelity Sound Lab, which already has an Ultradisc II of the 1986 album *Skylarking* in its catalog, has given the gold treatment to 1989's *Oranges & Lemons*. MoFi's clear remastering helps you revel in the post-psychedelic guitars and other instruments packed into one of XTC's most densely layered recordings. All of these releases should keep diehard fans satisfied until the band is back in full operation, with plans apparently including not only a new album but also an official bootleg and even — can it be true? — a tentative return to live performances.

— Ken Richardson

The last studio record by XTC was *Nonsuch* way back in 1992, but the band has kept relatively active, collaborating with artists like Harold Budd and Aimee Mann, doing a track for its own tribute, *A Testimonial Dinner — The Songs of XTC*, and reportedly stockpiling three albums' worth of new material. In recent months, with the trio finally wrapping up legal troubles and now poised to sign a new record deal, their imminent rebirth has been prepped by several releases. First came the Virgin U.K. import *Fossil Fuel — The XTC Singles 1977-92*, a two-CD collection (with lyrics and sleeve reproductions) that expands on the earlier British disc *The Compact XTC — The*



POPULAR MUSIC

rium, the Jayhawks don't back off of their high standards for even a track on *Sound of Lies*. More power to them for digging deep and coming up with a winner. *P.P.*

MIKE OLDFIELD: Voyager.
REPRISE 46487 (59 min).

★★★

DUO SONARE:
Plays Mike Oldfield's Opus One.
MDG SCENE 630 0628 (53 min).
Distributed by Koch.

★★★

Mike Oldfield, no stranger to the folk music of his native England, comes up with a full-fledged Celtic album in *Voyager*. Although the ten traditionals and originals occasionally have nice flourishes, their trad/modern development is too often pedestrian compared with works like *Ommadawn* and "Taurus II." And enough already with the big bagpipes! Sounding mostly like a New Age variant of world music, this voyage has Oldfield treading water.

Just how much melodic and instrumental invention he once had is clear whenever you go back to the still-impressive *Tubular Bells*. Oldfield himself did a smashing remake/rewrite in *Tubular Bells 2*, and now we have *Duo Sonare Plays Mike Oldfield's Opus One* on two classical guitars. This

version may seem routine at times, since much of the original is written for acoustic guitar, but tempos and arrangements are altered enough to keep things interesting — certainly more interesting than *The Orchestral Tubular Bells*. *K.R.*

ORQUESTRA WAS:
Forever's a Long, Long Time.
VERVE FORECAST 533 915
(51 min: enhanced CD).

★★★★★

Jazz and r&b were always important ingredients in the Was (Not Was) grab bag, and so they are in the new Orquesta Was — as is Hank Williams. *Forever's a Long, Long Time* is largely based on Williams's music, including such lesser-known songs as "I Ain't Got Nothin' but Time," "I'm So Tired of It All," "Lost on the River," and "Never Again (Will I Knock on Your Door)," which, along with the title song, translates perfectly in a funky treatment by singer Sweet Pea Atkinson. Other tracks are by Don Was, who seems to have a grasp on it all, and among the guests are Merle Haggard, Herbie Hancock, Terence Blanchard, and Sheila E. The music is so richly textured as to defy stylistic definition. I'm all for eliminating those silly borders anyway — just enjoy the broad creativity.

This enhanced CD also includes a 15-minute movie directed by Was and "presented" by Francis Ford Coppola. It's a deliberately low-resolution, black-and-white tale starring Atkinson and, as a spectral Hank Williams type, Kris Kristofferson. Was sees the movie as more than just an added attraction: "Specific songs were chosen in order to work with the film," he points out, "and the story line was created to work with this treatment of Hank's music." It all works together, and there is no extra charge. *C.A.*

PAVEMENT: Brighten the Corners.
MATADOR 55226 (46 min).

★★★★★

The title is *Brighten the Corners*, and indeed Pavement casts slanting rays of light into hidden places on its current album, no less enchanting but measurably more accessible than *Wowee Zowee*. No doubt the recruitment of Mitch Easter as associate recordist by head Pavement Stephen Malkmus meant he wished to project a more agreeable temperament without losing the edge, and that's just what this album does; it is funny, unpredictable, and deliciously surreal.

There's also an undercurrent of poignancy to these songs about connections fantasized, desired, pursued, and broken, as Malkmus reports it all like a postmodern Lou Reed. His turns of phrase roll off his tongue in an almost intuitive way, without losing their intellectual weight to the play of words. I especially like a sudden reference in "Stereo," as the singer wonders, apropos of nothing, how the voice of Rush's Geddy Lee got so high.

Somewhere in between the lines, glinting off the angular chatter and crosstalk of guitars in numbers like "Passat Dream," "Star-

lings of the Slipstream," and the vivacious anthem "Embassy Row," is the oblique but affable essence of Pavement. Without stooping to reveal more than they intend, Malkmus and band nonetheless manage to brighten the corners of their intellectual cubicle on this coyly captivating disc. *P.P.*

THE RANCH.
CAPITOL 55400 (43 min).

★★★★★

Some folks are already calling the Ranch country's answer to the Police, and it's easy to see why: The three-piece band makes more music than you'd normally coax out of a group that size, they share the Police's manager, Miles Copeland, and their creative muse sits left of center.

The brainchild of guitarist/songwriter Keith Urban, an Australian, the Ranch had four No. 1 singles in its homeland before Urban and drummer Peter Clarke moved to the U.S. and picked up West Virginian Jerry Flowers on bass. The rhythm section accents Urban's guitar lines rather than anchoring the band in the traditional way, which adds to their fresh approach. Think of it as country with an R&B backbeat, or "funkry," as Urban likes to call it.

Urban co-wrote most of the songs with lyricist Vernon Rust, and their influences (Don Williams, Mark Knopfler, Jimmy Webb) tend to poke out. But Urban and Co. are serious about capturing the essence of American country and tweaking it, from the impressive Ventures-Go-Hoedown instrumental "Clutterbilly" to the infectious, Dixie-fried "Hank Don't Fail Me Now" and the bluegrass-on-Prozac "My Last Name." They also serve up an affecting and spooky "rock Opry" in "Ghost in This Guitar."

The Ranch hasn't been in the States very long, but it sounds like Urban and Rust are also picking up some of our less honorable habits: They say they wrote "Freedom's Finally Mine," a rave-up about driving in the outback, as an attempted commercial jingle. Artistic reservations gave them pause, but they decided to work up a complete song that could be adapted "if a car company ever was interested." Watch out, Alan Jackson. You may be crazy 'bout a Ford truck, but you've got some wild Australians nipping at your heels. *A.N.*

THE SKELETONS: Nothing to Lose.
HIGHTONE 8080 (48 min).

★★★★★

Now this is how rock-and-roll should be made: for fun, with spunk, and by accomplished musicians who don't take it all too seriously. In the old days, a band like the Skeletons and an album like *Nothing to Lose* would have been described as frat rock, and the label still fits. Offered with collegial humor and the pure-and-simple objective of having a good time, the disc plays through like a portable party-in-a-jewel-box. Its baker's-dozen nuggets of frisky pop are driven by enlightened beat-group bopping and flecked with tart rock-abilly licks from the fingers of the great, unheralded D. Clinton Thompson.

Cue up the first track, "Downhearted."

THE SATIRE STRIKES BACK

Now that the Special Edition of the *Star Wars* trilogy has receded from theaters, it's likely you're either (a) already counting the days until the premiere of the first prequel, or (b) sick of being Force-fed. Whichever, we heartily advise you to see *Hardware Wars*, the side-splitting

spoof made by Ernie Fosselius and Michael Wiese in 1977. Long thought to have been lost (or suppressed), this legendary 15-minute trailer parody has just reappeared on home video — in, naturally, a Special Edition, with twenty new "special defects." All your favorite characters are

back: Fluke Starbucker, Princess Anne-Droid, Auggie "Ben" Doggle, Artie Deco, Darph Nader, and, of course, Ham Salad and his sidekick, Chewchilla the Wookie Monster. If you can't find the tape at your video store, you can order by calling 1-800-833-5738. And get ready for the jump to Laugh Speed. *K.R.*





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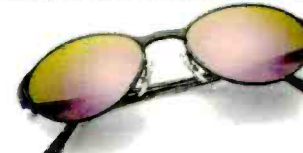
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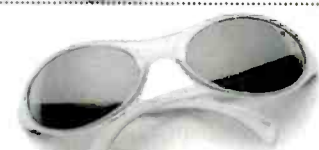
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MARY J. BLIGE: *Share My World*.

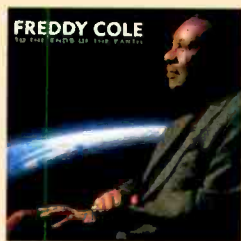
MCA 11606 (69 min). ★★☆☆
The hip-hop/soul queen opts for a softer, more mature sound with first-tier producers Babyface, Rodney Jerkins, James Mtume, and Jimmy Jam and Terry Lewis. Blige weaves a spell of danger and sensuality with the liberal use of guest rap vocals, but she deserves credit for fostering self-discovery and self-esteem in a genre that too often finds inspiration in violence. *A.N.*

DAVID BYRNE: *Feelings*.

LUAKA BOP 46605 (49 min). ★★☆☆
Talking Heads has now been defunct for ten years, and Byrne still isn't out of his *Graceland* period: He's apparently more interested in being a musicologist than a songwriter. There are just enough hints of brilliance here (the doomsaying "The Civil Wars," the funny "You Don't Know Me") to suggest what he could do if he still had collaborators to hold him in check. Come to think of it, his ex-bandmates, now calling themselves the Heads, could really use a frontman. *B.M.*

FREDDY COLE: *To the Ends of the Earth*.

FANTASY 9675 (68 min). ★★☆☆
Cole moves ever so gently through a program of familiar songs, accompanied by pianist Cyrus Chestnut and various combinations of musicians. When it comes to



spinning a tale of love, Cole belongs right up there with illustrious predecessors like Johnny Mathis, Tony Bennett, Frank Sinatra, and older brother Nat. *C.A.*

CRAVIN' MELON: *Red Clay Harvest*.

MERCURY 534 305 (55 min). ★★☆☆
This quartet of South Carolinians is refreshingly uncontaminated by anything that could be termed trendy. When you've got good songs, a great lead voice, and solid supporting players, you don't really need attitude, tattoos, and studio tomfoolery. Cravin' Melon is more about durability than flash. *P.P.*

DEPECHE MODE: *Ultra*.

MUTE 46522 (60 min). ★★☆☆
If you thought all the talk about Depeche

Mode moving to an edgier, more modern approach was just a nice way of saying, "They've started sounding like Nine Inch Nails," you're right, but that's not necessarily a bad thing. And like U2's *Pop*, *Ultra* turns somber soon after its jarring opener. Despite the band's three-year hiatus, the album comes across like the logical follow-up to the dark *Songs of Faith and Devotion*. *B.M.*

JONNY LANG: *Lie to Me*.

A&M 540 640 (51 min). ★★☆☆
Sixteen at the time of this recording, blues phenom Lang nonetheless has the voice of a 50-year-old (granted, a 50-year-old who's done pretty well for himself) and excellent guitar skills (his solo work on the title track is as structurally inventive as anything I've heard lately). In short, the kid's the real deal. *S.S.*

PETE MORTON: *Courage, Love, and Grace*.

FLYING FISH/ROUNDER 654 (56 min). ★★☆☆
The journeyman singer/songwriter delivers another solid set of British roots both winsome and grave. If he risks a certain sameness in this record's low-key approach, he still enchants with a voice that seems to resonate from the moors. *K.R.*



THE RAYBEATS: *Guitar Beat*.

BAR/NONE 073 (44 min). ★★☆☆
This was a pretty astonishing album when it was first released in 1981, an instrumental goulash of Ventures surf, Spaghetti Western twang, "Eight Miles High" Byrds, and James Brown-derived funk. Unavailable for years, it returns on a great-sounding CD, for which thanks should probably be given to original producer Martin Rushent, whose work has dated not one whit. An essential purchase. *S.S.*

BLACK NIGHT — DEEP PURPLE TRIBUTE, ACCORDING TO NEW YORK.

DEROCK 092 (55 min). 345 Ivan Pavlov Blvd., Laval, Quebec. Canada H7M 4H6. ★★☆☆
The street talk peppered here and there is just so much jive, but this tribute is better than similar studio-band projects because it *does* something with the material. Best cuts are the funkied-up "Fireball" and "Strange Kind of Woman" and the reggae-fied "Child in Time," with participants including T. M. Stevens, Bernie Worrell, and Living Colour's Will Calhoun and Corey Glover. *K.R.*

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and hang on tight till the crackling guitar solo, a veritable textbook on how to raise a controlled ruckus on the instrument. Then go for keyboardist Joe Terry's rippling "The World You Grace," which sounds like a Cryan' Shames B-side (high praise, in my book), and the glinting chords in Thompson's strummy "Pay to Play." A bit of not-misplaced nostalgia for the way things were crops up in "Mad Old Lady" and "Whiffle Ball," with the first song's vow that "I'm goin' home to where I used to live" seeming like a common-sense option in this unrecognizable world. Trust me: You need this record in your life. **P.P.**

SLEATER-KINNEY: Dig Me Out.

KILL ROCK STARS 279 (37 min).
120 N.E. State. #418. Olympia, WA 98501.

★★★★★

ALL OVER ME

(original motion-picture soundtrack).
TVT SOUNDTRAX 8110 (77 min).

★★★

If you've read any rock press lately, you've seen a lot of ink spilled over Sleater-Kinney, an Olympia trio that is getting more wide-eyed raves than any American outfit since Nirvana. And I'd hate to join a bandwagon, but damned if *Dig Me Out* isn't the most impassioned, the most melodically haunting, and the most potently guitar-slinging album I've heard so far this year. If it's been too long since you've heard a band play as if their life depended on every note, you need to believe this hype.

Like X's *Wild Gift* or Nirvana's *Nevermind*, *Dig Me Out* is both quintessential punk rock and something grander. Corin Tucker sings in a grabbably theatrical style; she and co-guitarist Carrie Brownstein lock into inventively quirky rhythms that make up for the lack of a bassist. The textured melodies on "Jenny" and "Little Babies" are well beyond punk's norm, and you get the sense that S-K is edging toward a lush sound — not for nothing is the cover design nicked from *The Kinks Kon-*

troversy, the last album the Kinks made before they turned from a beat group into an art group. At the moment, S-K is a little of both — and still unjaded enough to pull off the first convincing rock anthem in a dog's age. "Words and Guiar." And without getting too far into sexual politics, let's just say that a lot of rock's great love songs have been addressed to women and theirs are, too, but the sensibility here is more adventurous than Melissa Etheridge's will ever be.

Sleater-Kinney's wonderfully fannish "I Wanna Be Your Joey Ramone" (from its last album, *Call the Doctor*) turns up during *All Over Me*, an underground film about female friendship with a soundtrack devoted mainly to underground female rock. As usual for soundtracks, there are a few filler numbers by unheard-of bands, but tracks by Babes in Toyland, the Amps, and Ani DiFranco make it a good sampler for the curious. Collectors will want this for Helium's "Hole in the Ground" (its first single, previously non-CD) and a new song by underrated Atlanta rocker and Indigo Girls collaborator Michelle Malone. **B.M.**

Collections

POPTOPIA! POWER POP CLASSICS OF THE '70s.

RHINO 72728 (60 min).

★★★★★

POPTOPIA! THE '80s.

RHINO 72729 (60 min).

★★★★★

POPTOPIA! THE '90s.

RHINO 72730 (65 min).

★★★★★

At the risk of sounding like Andy Rooney (actually, it's too late for that), have you ever wondered why the most listener-friendly rock variant — that is, post-Beatles, guitar-driven power pop — shows up so rarely on the radio? My colleague Parke Puterbaugh blames the advent of post-modernism, after which, he argues, everything



sounds like a train wreck. And he may be right. But I suspect this is one of those mysteries that will never be solved, like the miracle of Fátima, or whatever the hell that thing is on William Shatner's head.

In any case, Rhino's *Poptopia!* series gets about everything right. Song choices are almost invariably apt: Did the Bangles ever do anything better than "Going Down to Liverpool"? Is Tommy Keene's "Places That Are Gone" the best introduction to his work? Is the Wondermints' "Proto-Pretty" even more Hollies-esque than anything by the better-known Posies? (Answers: no, yes, and yes.) Liner notes are snappy, with input from Marshall Crenshaw, Eric Carmen, and Matthew Sweet. And the faux Roy Lichtenstein pop-art covers are a hoot.

Sure, I could carp: The Gin Blossoms and Material Issue are conspicuous by their absence (for licensing reasons), there are a few clunkers (Fotomaker? Sheesh!), and founding fathers the Raspberries are represented by "Go All the Way" instead of the more sublime "I Wanna Be with You." But if *Poptopia!* isn't perfect, well, hey, this is not a perfect world (see paragraph one), and I have had more fun lately with this series than with anything save the new album by Cheap Trick (who are represented on the first volume). Terrific stuff. **S.S.**



JAZZ

DOC CHEATHAM & NICHOLAS PAYTON.

VERVE 537 062 (63 min).

★★★★★

Nicholas Payton was in a high-school band seven years ago when he first met Doc Cheatham, and the music he heard the then 84-year-old trumpeter play remained in his memory. Recording with Cheatham was probably not something young Payton saw in his future, but here they are, co-leaders on a Verve album that was made nine months before Cheatham's death in June. The two had appeared together frequently in recent years, so the idea of teaming them in the studio was a natural one. Payton has two previous albums on Verve, but this collaboration, where the spirit of Louis Armstrong prevails, is by far the most interesting. A genuine rapport exists between these two trumpeters, so there is none of that anything-you-can-play-I-can-play-better

The late Doc Cheatham with Nicholas Payton: a genuine rapport



HERMAN LEONARD/VERVE

attitude, and they effectively wipe out the generation gap that separated them by sixty-eight years. Cheatham's mellow, whispery vocals add to the enjoyment, especially in "Save It Pretty Mama," "Jada," and "Maybe," but the entire album is a joy. **C.A.**

JACQUES GAUTHÉ:

Echoes of Sidney Bechet.

GOOD TIME JAZZ 1506 (56 min).

★★★

Bitten by the Bechet bug as a child growing up in France, Jacques Gauthé moved to New Orleans in 1968 and worked there as a chef until 1984. He now devotes his full time to music, and while his taste runs the gamut from the Original Dixieland Jazz Band to Sonny Rollins, Bechet is closest to his heart. *Echoes of Sidney Bechet* draws mainly from the soprano saxophone pioneer's repertoire, ranging from "Petite Fleur" and "Egyptian Fantasy" to trad classics like Kid Ory's "Muskrat Ramble" and Fats Waller's "Wild Cat Blues." Ably assisted by the spirited young Creole Rice Jazz Band, Gauthé captures the eloquence that always marked Bechet's playing, and although there's nothing like the real thing, this is close enough for jazz. **C.A.**

ROY HARGROVE'S CRISOL: Habana.

VERVE 537 563 (71 min).

★★★

Trumpeter Roy Hargrove's *Habana* was inspired by a 1996 visit to Havana but recorded at an opera house in Italy without an audience. That may have been a mistake, for the highly rhythmic, often torrid music of his ten-piece band, Crisol — many of whose members are Cuban — practically invites audience interaction. Hargrove's playing on other sessions often dazzles with its spark, but he seems almost intimidated here, rarely coming close to generating the excitement that permeated Dizzy Gillespie's collaborations with drummer Chano Pozo. Still, there are moments when the band takes off, as pianist Chucho Valdes and conga player Miguel "Anga" Diaz step out front and center and saxophonists David Sanchez and Gary Bartz interact. Hargrove hits a hot groove occasionally, but this disappointed fan prefers hearing him in a more pop-oriented environment. **C.A.**

EDDIE HARRIS: The Last Concert.

ACT 9249 (65 min). Blue Jacket.

322 Hicksville Rd., Bethpage, NY 11714.

★★

Eddie Harris was a versatile, gifted musician who moved freely — too freely, some think — between jazz and pop. He was best known for his saxophone work and was among the first to play the instrument with electronic attachments. All but one of the performances on *The Last Concert* were recorded at a Cologne show in 1996, where he was backed by the somewhat rigid WDR Big Band and a quintet that included drummer Bernard Purdie. The R&B vocals of Haywood J. Gregory in "When a Man Loves a Woman" and "Gimme Some Lovin'" fit in quite well with Harris's idiomatic crossings. It may be be-

cause Harris enjoyed his greatest popularity in the Sixties that the program consists mainly of material from that period, including "Sidewinder," "Moanin'" and "Work Song."

Harris plays tenor sax throughout, sometimes electrified beyond recognition, and mostly in a style that is robust to a fault, but he modulates to a mellower mode in the final track, a studio recording of his own "You Stole My Heart," made a day after the Cologne concert. Here, accompanied only by pianist Gil Goldstein, he sings, almost talks, in a fatigued voice, then follows it up with the album's best tenor solo, a moving last statement. He died a few months later. **C.A.**

HENRY THREADGILL

& MAKE A MOVE: Where's Your Cup?

COLUMBIA 67617 (66 min).

★★★★

Part of Henry Threadgill's genius as a composer and bandleader is his ability to showcase his sidemen not just as soloists but as contributors to a unique ensemble. *Make a Move* derives its identity from Threadgill's coloristic use of J. T. Lewis's drums, Tony Cedras's accordion and harmonium, Stomu Takeishi's five-string fretless bass, and Brandon Ross's electric and surprisingly gritty classical guitars. The only constants are the throatiness of Threadgill's alto saxophone solos and the headlong momentum of his themes, with their simultaneous allusions to tango, ska, and Sousa. Cedras proves to be an especially valuable member; his lengthy harmonium intro to "100 Year Old Game" is a fine piece of music in itself, majestic and suspenseful. *Where's Your Cup?* is Threadgill's best album since *Too Much Sugar for a Dime* four years ago, enjoyable for both its improvisational delirium and its painstaking compositional detail. Now, if only somebody would record his twenty-piece dance band! **F.D.**

SARAH VAUGHAN/LESTER YOUNG:

One Night Stand —

The Town Hall Concert 1947.

BLUE NOTE 32139 (65 min).

★★★★

The album title and cover might easily lead you to believe that Sarah Vaughan and Lester Young teamed up for this date. T'ain't so, McGee. These recordings are just part of a November 8, 1947, concert at which Vaughan and Young shared the program with trumpeter Max Kaminsky. We don't hear Kaminsky, but there is a good hour of Vaughan and Young, and they do appear together briefly in the final track, "I Cried for You." The rest of the set offers seven performances by the Lester Young Sextet and eight by Vaughan, whose pianist, Sammy Benskin, is assisted by three members of Young's rhythm section, including drummer Roy Haynes. The pliant, relaxed style that made Vaughan the diva of modern jazz had already taken shape at this early stage of her career, and she is in fine form throughout. The same can be said for Young, who took the tenor sax in a new, cooler direction and set the tone for Stan Getz and Zoot Sims, among others. The mostly irrelevant notes do this CD an injustice. **C.A.**

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CLASSICAL MUSIC

NEW RECORDINGS REVIEWED BY ROBERT ACKART,
RICHARD FREED, DAVID HALL,
JAMIE JAMES, GEORGE JELLINEK, AND ERIC SALZMAN

BARTOK: Piano Concertos Nos. 1, 2, and 3.

Andras Schiff (piano); Budapest Festival Orchestra, Ivan Fischer cond. TELDEC 13158 (76 min).

★★★★

Andras Schiff's interpretation of these concertos differs from that of most pianists who have recorded them. In his notes for the set he directs our attention to the liberties Bartok himself, as a performer, took within his precisely notated rhythms, to his use of rubato as "a speaking way of playing," to his pre-eminent lyricism, and in particular to his *not* using the piano percussively.

Schiff's playing, as always, is both assured and committed, and his rapport with conductor Ivan Fischer is very solid. He makes his points in subtle ways — with a



spontaneity and lyricism that bring an altogether engaging lightness to the First Concerto and an especially appealing radiance to the Third (already a more lyrical work than its two predecessors). He allows the more aggressively brilliant Second to smile and sing, almost as if, at some points, he is

mischievously spoofing that very aggressiveness. But I do miss a bit of that disdainful percussiveness, which seems so inherent in this work's coscutating character. The orchestra is in fine fettle throughout, and the recording benefits from up-to-date sound. R.F.

BRUCKNER: Symphony No. 5.

Berlin Philharmonic, Günter Wand cond. RCA VICTOR 68503 (77 min).

★★★★

Günter Wand is one of the finest Brucknerians in the business, and this, his third recording of the blockbuster Symphony No. 5, is his most fully realized interpretation. No small part of the credit for that should go to the superlative playing by the Berlin Philharmonic and the first-rate sound engineering in this concert recording made at the Philharmonie hall in January 1996. The orchestra responds flawlessly to Wand's impeccable pacing and infallible ear for textural-contrapuntal detail.

There are so many memorable moments. I find it hard to single out just a few. I am haunted by the broody coda of the slow movement and by the wonderfully robust scherzo with its gentle trio interlude. The colossal finale with its great chorale is simply overwhelming, but Wand keeps an iron grip all the way. For Bruckner purists, this should be a "dream" Fifth. If you want an extra shot of adrenalin, however, the hell-for-leather recording by Franz Welser-Möst with the London Philharmonic on EMI is the best alternative. D.H.

DEBUSSY: Images for Orchestra; Prelude to the Afternoon of a Faun; La Mer.

Los Angeles Philharmonic, Esa-Pekka Salonen cond. SONY 62599 (72 min).

★★★★

From one recording to the next, the Los Angeles Philharmonic is sounding more and more opulent and well disciplined these days, and conductor Esa-Pekka Salonen

consistently finds a distinctive character in whatever music engages his interest. The character he finds in these thrice-familiar masterworks by Debussy is an overtly and unreservedly sensuous one, almost dreamy. His readings are the very antithesis of crisp, clinical objectivity, but the expansive tempos and lush textures sacrifice no clarity or detail. The pacing is noticeably broad throughout the *Images*, most of all in the middle section of its centerpiece, *Ibéria*, where the perfumes spread all but motionlessly through the Spanish night.

This approach is pretty much the norm for the *Faun*, perhaps, but the "norm" cannot deliver what Salonen does here: an exceptional sumptuousness and all the languor implicit in Mallarmé's poem, supported by the most subtle underlayer of vitality,



with Janet Ferguson's enchanting flute solos the more effective for being so seamlessly integrated into the overall orchestral texture.

In *La Mer*, sensibly placed at the end of the program, the opening movement is actually a bit brisker than in several other performances, while disclosing little details here and there that I'd never noticed before. The speed of the two remaining movements is tempered just enough to allow the music to breathe naturally and to make sure that the otherworldly coloring of Debussy's music gets as much attention as its power. Salonen apparently opted to omit those still controversial comet parts in the climactic build-up toward the end. Some listeners may have strong feelings about that, but very few, I imagine, will feel it breaks the spell that prevails throughout this stimulating disc, whose sound quality does full justice to the musicmaking. R.F.

GOLIJOV: The Dreams and Prayers of Isaac the Blind.

David Krakauer (clarinet, bass clarinet, basset horn); Kronos Quartet. NONESUCH 79444 (32 min).

★★★

There are only 32 minutes of music on this CD, but I don't think anyone listening to this packed, unsettling, exquisite piece will feel shortchanged.

Oswaldo Golijov was brought up in Argentina and now lives in the United States. *The Dreams and Prayers of Isaac the Blind* was commissioned for the now defunct Cleveland Quartet and the famous klezmer clarinetist, Giora Feidman. Isaac the Blind was a medieval rabbi who expounded an early variety of Jewish mysticism known as Cabala. The composer describes his work as a kind of history of Judaism, but I would

STAR SYSTEM

Excellent ★★★★★
Very good ★★★★★
Good ★★★
Fair ★★
Poor ★

THE THIELEMANN TOUCH

In the last three or four years the German conductor Christian Thielemann has been stirring up a good deal of excitement in a broad range of operatic and symphonic repertory in Europe, Israel, and Japan. In our own country, he's conducted opera at the Met and in San Francisco, he's appeared with several of our big orchestras, and he's scheduled to be in New York in late July to preside over the belated American stage premiere of Pfitzner's *Palestrina* at the Lincoln Center Festival.



SUSSECH BAWAL/DC

Conductor Christian Thielemann

Deutsche Grammophon has released two CDs that constitute his recording debut in orchestral material. One offers preludes from seldom-performed operas by Strauss and Pfitzner, including *Palestrina*, with the orchestra of Berlin's Deutsche Opera. On the other he conducts the Philharmonia Orchestra in works from the very core of the symphonic repertory, Beethoven's Fifth and Seventh Symphonies. Either CD will make clear within a few bars what all the excitement is about.

It is largely about discovery, or rediscovery, and communicativeness. Thielemann believes profoundly in Pfitzner's music, and he is an effective champion. His radiant performances of the three preludes from *Palestrina*, which add up to a sort of symphony, the second-act prelude (labeled "Love Theme") from the opera *Das Herz*, and the fully formed symphonic poem written as overture to Kleist's drama *Das Käthchen von Heilbronn* suggest that the reason this music has been so unfamiliar to most of us may well be nothing more than its not having had such powerful advocacy before. The Strauss items — the preludes to *Guntram*, his first opera, and *Capriccio*,

his last, and the Love Scene from the early *Feuersnot* — are hardly more familiar and are realized on the same level of eloquence and conviction.

The Beethoven CD is no less remarkable. If Thielemann does not strictly observe the original metronome markings, he does not exceed reasonable flexibility in that respect, and his instincts are very sure. He makes no apology for investing the opening of the Fifth Symphony with unequivocal dramatic emphasis. He neither rushes the famous phrase nor attempts to disguise it, nor on the other hand does he seem to be "staging" it; he simply insists that it be clearly and forcefully delineated, with space to breathe and mold itself into something as emphatic and compelling as it has to be, and out of which the rest will follow with unquestionable logic. The Philharmonia, always a formidable and flexible orchestra, takes on (with violins divided right and left) a wholly new sonority, a sound especially apposite to this particular work: rich, warm, burnished, and resonant in a way that has little to do with hall acoustics or any other external consideration.

While Thielemann is clearly in no rush — he takes repeats, and the slow movement of the Fifth runs nearly 12 minutes — he is careful to maintain just proportions within the work's four-movement layout, and to give the lyric element its due. The Seventh Symphony, almost as stunning, is also dealt with on its own unique terms. Both rhythmic pulse and momentum are effortlessly maintained; the conclusion of the famous allegretto as heard here could encourage a new appreciation of Beethoven's regard for color and sensual effects (and his skill in exploiting such factors), and the driving force of the finale is the more convincing for avoiding the slightest hint of breathlessness. The recordings themselves, among the finest yet using DG's 4D system, are especially well tailored to these two works and these performances of them. —Richard Freed

PFITZNER: Palestrina, Preludes; Das Herz, Love Theme; Das Käthchen von Heilbronn, Overture. R. STRAUSS: Guntram, Prelude; Capriccio, Prelude; Feuersnot, Love Scene.

Orchestra of the Deutsche Oper Berlin, Christian Thielemann cond. DEUTSCHE GRAMMOPHON 449 571 (75 min).

★★★★★

BEETHOVEN: Symphonies No. 5 and No. 7.

Philharmonia Orchestra, Christian Thielemann cond. DEUTSCHE GRAMMOPHON 449 981 (76 min).

★★★★★

have thought it closer to the philosophy of Isaac, who thought that everything that exists or takes place in the universe is an incomprehensible mystery derived from combinations of the letters of the Hebrew alphabet. The extraordinary anguish of this mystery is conveyed by combining an extended klezmer-clarinet squeal/wail with the stricter rule of the string quartet.

The result is a most effective and uncompromising treatment of traditional Eastern music in a strong, contemporary Western musical setting. Not the slightest bit exotic or touristic, it is fiercely beautiful and, in its way, deeply disturbing. *Dreams and Prayers* is the only music of Golijov that I know, but repeated hearings of it reinforce the impression that he has created a highly original postmodern idiom of genuine power. The Kronos Quartet gives a fine performance, and David Krakauer's clarinet playing fully matches the reputation of the legendary Feidman. E.S.

HAYDN: Orfeo ed Euridice.

Cecilia Bartoli (Euridice, Sibyl), Uwe Heilmann (Orfeo), Ildebrando D'Arcangelo (Creonte), others: Academy of Ancient Music, Christopher Hogwood cond. L'OISEAU-LYRE 452 668 (124 min).

★★★★★

By the time Haydn turned his hand to the fable of the singer Orpheus and his lost lady-love Eurydice, it had already inspired two operatic masterpieces, by Gluck and Monteverdi. In comparison, Haydn's opera seems disjointed and weighed down with plot, but it abounds with exquisite vocal writing. Christopher Hogwood assembled a cast ideally suited to elicit its beauties. Tenor Uwe Heilmann is a warmly expressive Orfeo, and his Italian is surprisingly idiomatic, for a German singer, in his recita-



tives. Cecilia Bartoli is given many opportunities to show off her golden mezzo-soprano voice and flawless coloratura, which now seems beyond perfection. Ildebrando D'Arcangelo swaggers nicely through the bass role of Creonte, Euridice's father.

Hogwood is usually a stickler for authenticity, so it might seem strange that he also cast Bartoli, instead of a countertenor, as the Sibyl, a role written for a castrato. But he has two good excuses ready-made: First, the piece was never actually performed in the composer's lifetime. Second, the Sibyl's lone aria, "Al tuo seno fortunato," is one of the most spectacularly bravura numbers in the Classical repertory, so who better than Bartoli to do it justice? Her performance of it here is one of her most remarkable recorded accomplishments.

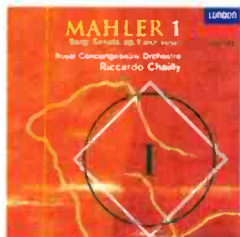
Hogwood is in the midst of recording the first complete set of the Haydn symphonies on period instruments for L'Oiseau-Lyre, and his deft, authoritative touch is evident throughout the opera. It is a real tribute to a recording with such distinguished vocal performances to say that the overture is one of the most exhilarating moments. *J.J.*

MAHLER: Symphony No. 1. BERG: Sonata, Op. 1 (orch. Verbey).

Royal Concertgebouw Orchestra, Riccardo Chailly cond. LONDON 448 813 (70 min).

★★★

Riccardo Chailly has been actively continuing his great orchestra's unique Mahler tradition, which goes back to its early years under the young Willem Mengelberg and the composer himself. His ac-



count of the First Symphony, agreeable as it is for the always impressive sound of the Royal Concertgebouw Orchestra in its own glorious hall, shows fastidious regard for dynamics, color, and overall balance, but very little in the way of passion. There is such restraint in respect to the score's more or less "built-in" expressiveness that I wonder if Chailly were to some degree embarrassed by it.

Certainly the sharp edges are smoothed away in the klezmer-like episodes of the third movement and in the rumbustious dance character of the second as well. The expansively treated opening movement comes across here as a fairly bland pastoral episode, cleansed of any of the demonic elements involved in an awakening of Nature, and the big finale is little more than a conventional "triumph." In sum, it is all a little too routinely warmhearted and uneventful.

Preceding the symphony on the disc is the young Dutch composer Theo Verbey's brilliant transcription of Berg's Piano Sonata, Op. 1, which succeeds in converting the material to a thoroughly orchestral idiom. It may strike some listeners as closer to Scriabin than to Berg, but Chailly unleashes an intensity in performing it that would have been welcome in the Mahler. *R.F.*

MENDELSSOHN: A Midsummer Night's Dream; Symphony No. 4 ("Italian").

Sylvia McNair (soprano); Angelika Kirchschlager (mezzo-soprano); Kenneth Branagh (narrator); women's chorus; Berlin Philharmonic, Claudio Abbado cond. SONY 62826 (78 min).

★★★★

Mendelssohn stunned the music world in 1826 when, at the age of seventeen, he composed his overture to *A Midsummer Night's Dream*, which launched

one of the most successful careers of the first half of the nineteenth century. He did not get around to writing the rest of his incidental music and songs for the play until seventeen years later. The work culminates in the famous Wedding March, one of the most popular pieces of music ever written.

Presenting this music in concert, without the play, has always been something of a problem for orchestras. This recording finds a just solution, with a nimble narration beautifully recited by the Shakespearean actor Kenneth Branagh. The Berlin Philharmonic plays with its usual precision under Claudio Abbado's direction, and with a good measure of elegance and midsummer caprice, the winds having a particularly lovely day. The Wedding March, often played with too-tasteful understatement, is here performed with a magniloquent splendor that would be worthy of Wagner's great wedding march. The songs are ravishingly performed by soprano Sylvia McNair and a young Austrian mezzo named Angelika Kirchschlager, who manages the Elizabethan diction with scarcely a trace of an accent. The disc is filled up with an exciting, virtuosic performance of the "Italian" Symphony taped at a concert in the orchestra's home, the Philharmonie. *J.J.*

SCHUBERT: Songs.

Renée Fleming (soprano); Christoph Eschenbach (piano). LONDON 455 294 (65 min).

★★★★

Titled "The Schubert Album," this is soprano Renée Fleming's first song-recital disc. It contains sixteen songs — including some of Schubert's greatest — and reveals

her as an astonishingly mature interpreter. Not surprisingly for an outstanding Desdemona and Fiordiligi, she excels in songs with a built-in drama. The eroticism and despair of her "*Gretchen am Spinnrade*" show an artist familiar with Gounod's Marguerite; in "*Die Junge Nonne*" she brings out the inner storm and final religious deliverance with communicative dramatic strength. The long-breathed lines in "*Nacht und Träume*" and "*Du Bist die Ruh*" are steadily sustained with tonal warmth and dynamic nuance, and the slower than customary "*Ave Maria*" is rendered with a beautifully sustained delicacy. There is seductive relaxation in "*Auf dem Wasser zu Singen*" and the right amount of unexaggerated drama in "*Die Forelle*."

Fleming's rich and glowing tone redeems her "*Frühlingsglaube*" from its rather slow tempo and sustains at least moderate interest in the excessively long "*Viola*." She sings "*Der Tod und das Mädchen*" beautifully, but it was unnecessary for her to attempt the contralto low-D ending. She has a sensitive and virtuosic partner in pianist Christoph Eschenbach, and the recording balances are exemplary. *G.J.*

SHENG: The Song of Majnun.

Houston Opera Studio; Houston Grand Opera Orchestra, Ward Holmquist cond. DELOS 3211 (74 min).

★★★★

Bright Sheng is one of the most successful — and accessible — of an exciting school of young Asian-American composers who are melding the musical idiom of the East with the modernist tradition of Western classical music. He first attracted

Golden Voices

Relased this spring on an NVC Arts laserdisc and VHS videocassette by Atlantic Records, *The Art of Singing: Golden Voices of the Century* provides a golden opportunity to see and hear twenty-seven of the greatest singers of the modern age in clips from movies and television. The 115-minute video program contains rare footage, much of it commercially available here for the first time, dating from 1907 to 1964. Other than the earliest clips — including Enrico Caruso in a silent-film performance of "*Vesti la giubba*" from *I Pagliacci*, accompanied by his 1907 Victor recording of the Leoncavallo opera, and the sextet from Donizetti's *Lucia di Lammermoor*, with actors lip-synching to an early recording — both sound and images are of remarkably high quality. The "Who's Who" of singers includes Jussi Björling, Maria Callas, Fyodor Chaliapin, Kirsten Flagstad, Beniamino Gigli, Leuzitz Melchior, Ezio Finza, Rosa Ponselle, Rise Stevens, Joan Sutherland, Richard Tauber, Renata Tebaldi, Jon Vickers, and Fritz Wunderlich.



Soprano Kirsten Flagstad as Brunnhilde

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widespread attention in 1987 with *H'UN (Lacerations)*, a shattering, dissonant tone poem based on his experiences during China's Cultural Revolution; other works have mined a lyrical, melodic vein. In *The Song of Majnun*, a chamber opera an hour and a quarter long, the two sides of Bright Sheng come together to create an emotionally satisfying, beautifully shaped music drama that is ideally suited for home listening.

Aptly subtitled "A Persian Romeo and Juliet," the opera has a libretto, by the

British music critic Andrew Porter, based on an ancient Islamic legend of two young lovers who are separated by their parents. Sheng deftly uses the dissonant idiom of *H'UN*, replete with clangorous percussive effects, to depict Majnun's madness and rage, alternating with tender, seductive melodies to suggest the joys of young love. The libretto is at moments a bit simplistic and plain-vanilla in its expression, but it has the virtues of being clear and singable.

Raymond Very uses his warm, supple

tenor to craft an impassioned performance as Majnun, making the boy's insanity altogether credible. Ana Maria Martinez, as Layla, Majnun's lover, matches him emotion for emotion; her duet with her mother, sung by Jill Grove, is one of the most moving scenes from a new American opera in years. You would never know the lucid, vibrant recording was made live, the Houston audiences are so wonderfully quiet and polite. The beautiful mood of the finale is broken by the brassy voice of a talk-radio host in an interview with Sheng and Porter — be ready to hit the stop button. *J.J.*

SIBELIUS: Symphonies Nos. 4 and 6.
Chamber Orchestra of Europe, Paavo Berglund cond. FINLANDIA 14951 (61 min).

★★★★★

No other current single CD pairs the Fourth and Sixth symphonies, Sibelius's two most personal statements in the genre. And I'll say straight out that the Fourth gets the best recorded performance here that I have heard in a span of sixty-five years, beginning with Siokowski and the Philadelphia Orchestra in 1932. For one thing, the Chamber Orchestra of Europe, a body of fifty players gleaned from the major orchestras of fifteen countries, is probably about the same size as the one Sibelius conducted at the symphony's Helsinki premiere in 1911. Under the direction of Paavo Berglund, now launched on his third recorded cycle of the Sibelius symphonies, rhythmic tension is combined with meticulously gauged phrasing and stunningly accurate playing — not only rhythmically but in terms of intonation in such episodes as the first-movement development and the corresponding passage in the finale, where all appears to collapse into nightmarish chaos. The tragic depths of the great slow movement are fully plumbed in this reading. As to the vexing question of bells vs. glockenspiel in the finale, Berglund follows the composer's wishes in sticking to the latter. The pacing of the whole work is dead on target.

The Sixth Symphony, a virtual hymn to Nature, is given a marvelously transparent reading, and as in the Fourth Berglund provides wonderfully clean phrasing and a sense of flow. The end is unadulterated magic. The recording itself, made in London's Watford Colosseum, is flawless. *D.H.*

R. STRAUSS: Thus Spoke Zarathustra; Till Eulenspiegel's Merry Pranks; Salome, Dance of the Seven Veils.

Berlin Philharmonic, Georg Solti cond.
LONDON 452 603 (58 min).

★★★★★

So far as I can determine, this is Georg Solti's first digital recording of these Richard Strauss staples. What I like about it, as with most of Solti's recent European recordings, is the relatively relaxed quality of the readings compared with his somewhat hard-bitten and hard-driven Chicago Symphony output. There are fireworks aplenty in this *Zarathustra*, for instance, but he also brings a sense of mystery and tenderness to the end of the "joys and pas-

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sions" episode, the introduction to the "Grave Song," and the ethereal and haunting finale. The climactic statement of the fugue theme, first hushed and then with the orchestra in full cry, has tremendous impact, as does the glittering "Convalescent" music. The famous opening "Sunrise" gains enormously from real organ-pedal sound, though I wish the timpani had been a shade more front and center.

Till Eulenspiegel has snap and sass galore along with just the right touch of whimsy, with rubato and portamento applied where it counts. In many respects the finest item on this CD is the much-abused Dance of the Seven Veils from *Salome*, which Solti seems never to have recorded before apart from his memorable Vienna recording of the complete opera. I don't believe I have ever heard as much inner detail of line and color as in this reading, and the erotic element is thereby all the more enhanced. Substantial credit for the success of this CD, which derives from concert performances recorded in January 1996, belongs to London's production staff. *D.H.*

TAVENER: Svyati; Eternal Memory; Akhmatova Songs; The Hidden Treasure; Chant.

Steven Isserlis (cello), others; Kiev Chamber Choir; Moscow Virtuosi, Vladimir Spivakov cond. RCA VICTOR 68761 (70 min).

★★★★

The intensely spiritual music of John Tavener, a British composer who moved to Greece and, in 1976, converted to the Eastern Orthodox Church, seems at first hearing to be difficult and unapproachable. But give it some time, and it seeps deep into your soul. Tavener's compositional vernacular is profoundly individualistic, standing apart from the generic modernism of most contemporary music, which often has the feel of a sonic quilt — a bit of Stravinsky here, a little Britten there, maybe a quote from jazz or a weird bit of non-Western music. After hearing two bars of any of his pieces, you know it's Tavener.

The British cellist Steven Isserlis has been one of Tavener's most committed champions; in 1989 he was soloist in the premiere of *The Protecting Veil* for cello and string orchestra, probably the composer's most celebrated piece. This new CD of works featuring his cello in some ways makes an ideal introduction to Tavener's music, representing the whole range of his work: from the haunting *Chant*, a seamless flow of pure melody for solo cello, to a string quartet, to a short, three-movement concertante work for cello and strings called *Eternal Memory*, sensitively played here by the Moscow Virtuosi conducted by Vladimir Spivakov. The austere beautiful Akhmatova Songs, setting verses by the great Russian poet, are sung with harrowing power and authority by the soprano for whom they were composed, Patricia Rozario, accompanied only by Isserlis on cello. The title work, *Svyati*, is a dialogue between the cello and a mixed choir based on the liturgy used at an Orthodox funeral when the coffin is carried out of the church.

That may sound depressing, but it's not. This is exalted, imaginative music of the first magnitude. *J.J.*

Collections

CHANSON DE TROUVÈRES.

Paul Hillier (voice); Andrew Lawrence-King (medieval psaltery, harp and portative organ). HARMONIA MUNDI 907184 (70 min).

★

The *trouvères* were thirteenth-century aristocratic poet-composers from northern France who sang about those hardy perennials, love, sex, and politics. The poems survive, and there are some portraits of the bards in action, but as far as what their songs *sounded* like, all we have are educated guesses. There is, first of all, the question of how to pronounce medieval French. And all that is left of the music is a melody line notated without meter, rhythm, or accompaniment. Harmony in the modern sense was, of course, not yet invented; all the other musical accoutrements were supplied on the spot by the performer/composer. Alas, no recordings of the period have survived.

Paul Hillier is a distinguished conductor of early vocal music, and he has a modest, pleasantly baritone voice. But his very cautious and almost painfully earnest reconstructions of this tantalizing music lack vocal panache. Here is a lively little number about a roll in the hay, another about the pain of unrequited love, and a third about the Antichrist, and all are sung with the same level of refinement and the same detached delivery. The carefully studied medieval French lacks believability; the accents are wrong, the music of the language misheard. Some elaborate instrumentals are added to the texts, not a bad thing in itself, but not enough to enliven the proceedings. *E.S.*

JERRY HADLEY: Vienna.

Jerry Hadley (tenor); Munich Radio Symphony, Richard Bonyngue cond. RCA VICTOR 68258 (61 min).

★★★★

Jerry Hadley, who has been performing at the Vienna State Opera for years, now regards Vienna as his second home. He admits to "shamefully" emulating such famous predecessors as Richard Tauber, Nicolai Gedda, and Fritz Wunderlich in interpreting the wonderful songs on this CD, all



from Viennese operettas, with enthusiasm and idiomatic style, enunciating their German texts with zest and clarity. In addition to several familiar selections by Lehár and Kálmán, his well-chosen program contains

two old Viennese favorites set to endearing-ly philosophical lyrics by Edmund Eysler (1874-1949). Full texts are provided, with apt translations, but the names of the lyricists are nowhere listed — a lamentable oversight.

Except for a few climaxes where he pushes his voice to the limit, Hadley's singing is pure joy, and he has the Tauber falsetto down pat. He is lovingly accompanied by Richard Bonyng and the excellent Munich Radio Symphony Orchestra. *G.J.*

HELEN HUANG: For Children.

Helen Huang (piano). TELDEC 13148 (68 min).

★ ★ ★

It wasn't a bad idea to have a very young pianist record music for or about children, but the results are a little uneven. Most effective are the bright-eyed, affectionate renderings of the first of the two suites of descriptive pieces Villa-Lobos called *A Prole do Bebê* (*The Baby's Family*)



and of the *Children's Corner* suite that Debussy composed for his own infant daughter. Liszt's *Gnomesweigen* and one of Mendelssohn's *Songs Without Words* (the "Spinning Song," Op. 67, No. 4) are almost as engaging and benefit from the realistic, intimately focused recording, but Mozart's *Variations on "Ah! Vous Dirai-Je, Maman"* (the tune we know as "Twinkle, Twinkle, Little Star") ought to yield more than the admittedly attractive surface that is displayed here.

Schumann's *Kinderszenen* is very clearly music that, for all its evocations of the world of childhood (or even *because* of them), requires great maturity and depth to bring out the poetry in its deceptively simple phrases. While it may be unreasonable to expect these qualities in even so gifted a 14-year-old as Helen Huang was when she made this recording a year ago, it is not unreasonable to expect them in recordings we choose to live with. *R.F.*

JOHN WILLIAMS: The Five Sacred Trees.

Judith LeClair (bassoon); London Symphony. John Williams cond. SONY 62729 (57 min).

★ ★ ★ ★

Gathering together a curious assortment of contemporary works on ecological themes, this intriguing collection is anchored by John Williams's own *The Five Sacred Trees*, subtitled *Concerto for Bassoon and Orchestra*. A programmatic work based on the legendary trees of Celtic myth, it is performed here with polish and sensitivity by the London Symphony and the bassoonist Judith LeClair. Williams, best

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BRAHMS/SCHOENBERG: Piano Quartet in G Minor.
BACH/SCHOENBERG: Prelude and Fugue in E-flat Major ("St. Anne"); Chorale Preludes (BWV 631 and 654).
 Houston Symphony, Christoph Eschenbach cond. RCA VICTOR 68658 (70 min). ★★ ★
 Schoenberg's 1933 orchestration of the Brahms Piano Quartet in G Minor marked the centenary of the composer's birth. Now, on the centenary of Schoenberg's death, it seems to be edging its way into the repertory, and it's quite an attractive addition, with all the stops pulled out in the Gypsy rondo finale. Christoph Eschenbach, who has played the piano part in the original many times, seems to be having a good deal of affectionate fun here, and the transcriptions of three Bach organ pieces make appropriate discmates. *R.F.*

LISZT: Les Préludes; Orpheus; Mazeppa; Hamlet; Battle of the Huns.
 Berlin Philharmonic. Zubin Mehta cond. SONY 66834 (73 min). ★★ ★ ★
 Zubin Mehta's affinity for Liszt's tone poems was manifest in recordings he made in the 1960s and 1970s in Vienna and Los Angeles for London/Decca. If the excitement level has dropped a bit since then, particularly in *Les Préludes*, which is a little self-conscious and ceremonial in the reading here, he still displays enough conviction to give the music a great ride, and both the orchestra and the recording team have really come through for him. *R.F.*



RAVEL: Le Tombeau de Couperin; Pavane pour une Infante Défunte.
SATIE (orch. Debussy): Gymnopédies Nos. 1 and 3. FAURÉ: Sicilienne; Pavane; Masques et Bergamasques.
 Orpheus Chamber Orchestra. DEUTSCHE GRAMMOPHON 449 186 (53 min). ★★ ★
 A pleasant run-through of pavanés, gymnopédies, and such takes on a special interest with the *Masques et Bergamasques* of Fauré, a delightful and highly original suite from a theater score that is neatly and vividly delivered by the excellent conductorless Orpheus Chamber Orchestra. The more familiar items are attractively played, but none of it has the distinction of the final four-movement suite. *E.S.*

RIMSKY-KORSAKOV: Piano Concerto.
TCHAIKOVSKY: Symphony No. 3.
 Jeffrey Campbell (piano); Royal Philharmonic. Gilbert Levine cond. TELARC 80454 (69 min). ★
 Jeffrey Campbell gives a fluid, assured account of the solo part in Rimsky-Korsakov's seldom-heard Piano Concerto, but Tchaikovsky is poorly served here. The orchestral balance is as crude as the phrasing of the usually ingratiating themes, and the rhythms are too often flabby for a work that, after all, reflects its composer's distinction as a creator of ballet scores. The sound quality, too, is far from Telarc's usual standard. *R.F.*



SHOSTAKOVICH: Suites — Moscow-Cheryomushki, The Bolt, The Gadfly.
 Philadelphia Orchestra, Riccardo Chailly cond. LONDON 452 597 (73 min). ★★ ★ ★
The Bolt has long been my favorite Shostakovich in satirical vein. The six-movement 1934 suite from the ballet is full of sass and vigor. The music from *Moscow-Cheryomyushki*, a musical comedy, shows that he still had a sense of fun in 1959 despite his difficulties in the interim. *The Gadfly* suite, put together a few years earlier from music for a film with an Italian rather than Russian background, is more conventional. Riccardo Chailly gets fine playing from the Philadelphia Orchestra and a good, clean recording. *D.H.*

TURINA: Piano Trios Nos. 1 and 2; Circulo. GRANADOS: Trio.
 Beaux Arts Trio. PHILIPS 446 684 (73 min). ★★ ★ ★
 More than a merely convenient collection, this is a little treasury of Spanish chamber music, and especially attractive for including the early Granados trio, a sprawling, uneven work filled with good tunes and solid craftsmanship. Consistently stylish performances and fine sound. *R.F.*

MANUEL BARRUECO: Pure Barrueco.
 Manuel Barrueco (guitar); London Symphony, Jeremy Lubbock cond. ANGEL 55315 (69 min). ★★ ★ ★
 With taste and authentic style Manuel Barrueco presents favorite guitar pieces from Bach to the Beatles. The Spanish works by Sor, Turina, Falla, and Albéniz draw especially winning interpretations from this elegant Cuban-American master who can cross over without a sense of slumming. *William Livingstone*

known for his exciting, brass-heavy soundtracks for the *Star Wars* epics, reveals a fine flair for subtle, sophisticated writing in a contemporary idiom. Each of the five movements has a distinct character, but they all shimmer and flutter with life, suggestive of sunlight shafting through a dense forest. Williams's mastery of colorful orchestral composition shines through in a few stirring moments; the folkish jig for fiddle and bassoon in the second movement whirls to an exuberant finale.

The luminous, emotionally charged music of the American composer Alan Hovhaness eludes categorization. Born in 1911, he belongs to Copland's generation, but his music has the eclecticism and dark, mystic spirituality characteristic of many composers dominating the scene today. Hovhaness has composed more than two dozen symphonies; Williams here offers a graceful, sinuous reading of the Second, better known as *Mysterious Mountain*, which evokes the radiant landscape painting of the nineteenth-century American school. The disc is filled out with a glistening tone poem by Toru Takemitsu called *Tree Line*, a sparsely orchestrated evocation of a row of acacia trees near his mountain retreat, and a lovely miniature by the young American composer Tobias Picker, *Old and Lost Rivers*, that skillfully (but too briefly) captures the warm serenity of the bayous of East Texas. *J.J.*

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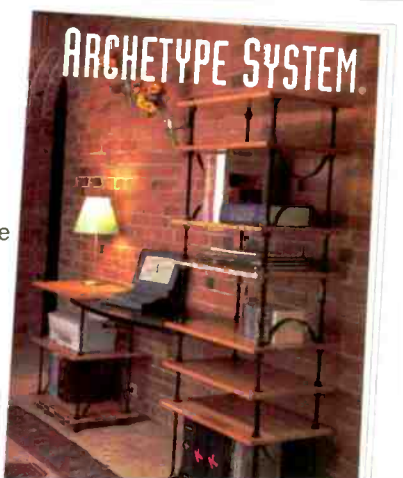
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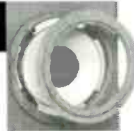
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THE HIGH END

COREY GREENBERG

A Bridge to the Twenty-First Century

As I write this, I'm smack in the middle of a tour of specialty audio dealers around the country. The pace has been pretty hectic, but my handlers have graciously scheduled my travel so that I can fly home every so often, just long enough to crack another tin of Fancy Feast for my cats and whip out the door again to catch a cab back to the airport.

Seriously, I'm having a great time meeting audiophiles of all walks of life on the tour, but I've noticed a strange thing at every one of the events: a smattering of obviously bored teens dragged along by their fathers, who were undoubtedly eager to expose them to the joys of high-end audio in hopes that they'd grow up to join the audiophile ranks and keep this hobby stocked with fresh blood into the twenty-first century.

People, this is a fine — nay, noble — thing you're trying to do, really it is. But I have to tell you that you're going about it all wrong. Think back to when *you* were in your teens and your own father heaped a lot of proactive encouragement on your slouching adolescent shoulders to join him in his hobby, whether it was stamp collecting, rock tumbling, or any other recreational pursuit that a right-thinking teen would and should have no interest in whatsoever. Did Pop's smiling encouragement make you want to just dive in and start a stamp collection of your very own while the other kids in the neighborhood stood outside your window laughing like hyenas? Of course not.

It doesn't even matter how much fun the activity is — if Dad's into it, it must be lame. That is Teen Law. It's as ageless and immutable as the Sphinx, and probably even more so. Long after the sands of time have eroded the once-proud feline goddess to dust, future teens will still be slouching their shoulders, scowling at the dinner table for no good reason, and auto-rejecting anything their parents say is good for them.

So here's what you do. You want a blueprint for turning your kid on to high-end audio? Then look no further than Martin "Marty" Greenberg, my dear ol'

dad. Marty was a very encouraging father — he strongly encouraged me to mow the lawn every weekend, get my feet off the table because I wasn't raised in a barn, and shovel 3 feet of snow off the driveway while he and the rest of the family sat in front of a roaring living-room fire watching *The Wizard of Oz* and eating a fine McDonald's dinner. I remember coming in after an hour or so, dripping wet and shivering like a street orphan, my hands too numb to hold the snow shovel anymore in the -60° Chicago wind chill.

"Well, *my* hands are numb from holding this Shamrock Shake, and you don't hear *me* complaining," Marty righteously encouraged me.

If you want your kids to follow in your audio footsteps, give them lots of grief if they show any interest whatsoever in music or hi-fi.

So it wasn't any wonder that when my love of music spurred me to assemble a good hi-fi system, Marty was right there to encourage me. He encouraged me to shut it off, encouraged me to turn it down, and encouraged me to stop wasting my time with that stupid stereo and go join the Webelos or something.

But above all, what Marty did to encourage my entry into the hobby of hi-fi was to have a really nice audio system in his bedroom that was strictly off-limits. My dad wasn't any kind of audiophile, but he did like his music, so he had a good pair of bookshelf speakers, a turntable, and a top-of-the-line Technics receiver with green, yellow, and red lights that blinked as the amplifier output went up and down.

Me, I had one of those all-in-one record-player things with a junky turntable changer mounted on springs on top of a crummy receiver even lower on the food chain than today's department-store rack systems, and a really bottom-feeding pair of old Lafayette speakers with the foam rotted away around the woofers. It made

music and it made me happy, but of course I lusted after my dad's system. So one day I talked to him about maybe swapping some of it out to reflect the fact that since I listened to music much more often than he did, naturally I should have the service of the better system. It made perfect teen sense. Marty, for his part, encouraged me to come closer so he could get a good look at my pupils, and then he encouraged me to go turn off my bedroom light if I was leaving the room because he didn't need to pay to keep the entire state of Illinois illuminated.

I guess what I'm trying to say is, if you really want your kids to become interested in audio, quit dragging them to see me at these dealer events. They're not going to have much fun, they're going to hate both of us for it, and frankly they make me feel old, and I'm not ready for that yet. If you want them to follow in your audio footsteps, the best thing you can do is give them lots of grief if they show any interest whatsoever in music or hi-fi, and keep up a steady barrage of cranky disinterest bordering on mild antagonism until they leave for college. Someday, when you arrive on campus for your first parents' weekend, you'll find that all those years of banging on the bedroom door and shouting, "Turn that cockamamie stereo down or I'll come in there and yank it out of the wall, so help me God I will!"

have turned Junior into a healthy, happy audiophile with a system that takes up most of his dorm room.

There's a lot of worrying in the high-end audio community over the future of this industry. Even now we're seeing an obvious movement away from the hardcore tweak mentality of the Eighties and early Nineties, and toward a more family-oriented, home-theater-dominated scene. Kids have a much wider array of electro-fun to consume these days, and many don't feel the need to assemble a music playback system more elaborate than a \$200 CD boombox. The threat of audiophile extinction is very real, and I hear this fear in the voice of every manufacturer, dealer, and member of the press I speak with.

As today's aging audio nuts grow older and become unable to change their diapers, much less their cartridge styli, the question becomes how we get the next generation of music lovers to fall in love with high-end audio. The answer, as my proud papa himself will tell you, is easy. The right kind of encouragement. □

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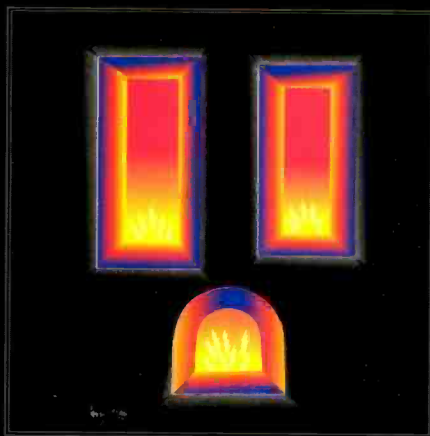
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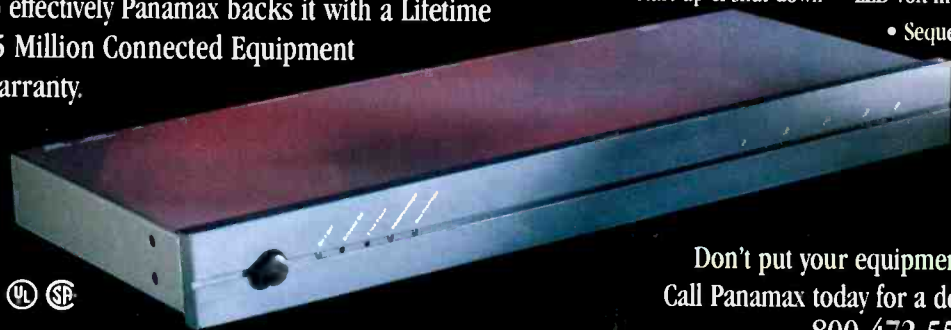


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