

THE WORLD'S #1 A/V MAGAZINE

Stereo Review®

HOME THEATER CLOSEUP

3 Dolby Digital Receivers and How They Work

DIGITAL RADIO
The Future of Audio Broadcasting

FIX IT!
Troubleshooting Tips and Tricks

TEST REPORTS
Cerwin-Vega Sub, Onkyo TH-X Receiver, M&K Speaker, more



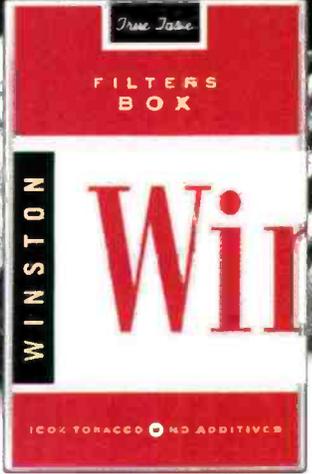
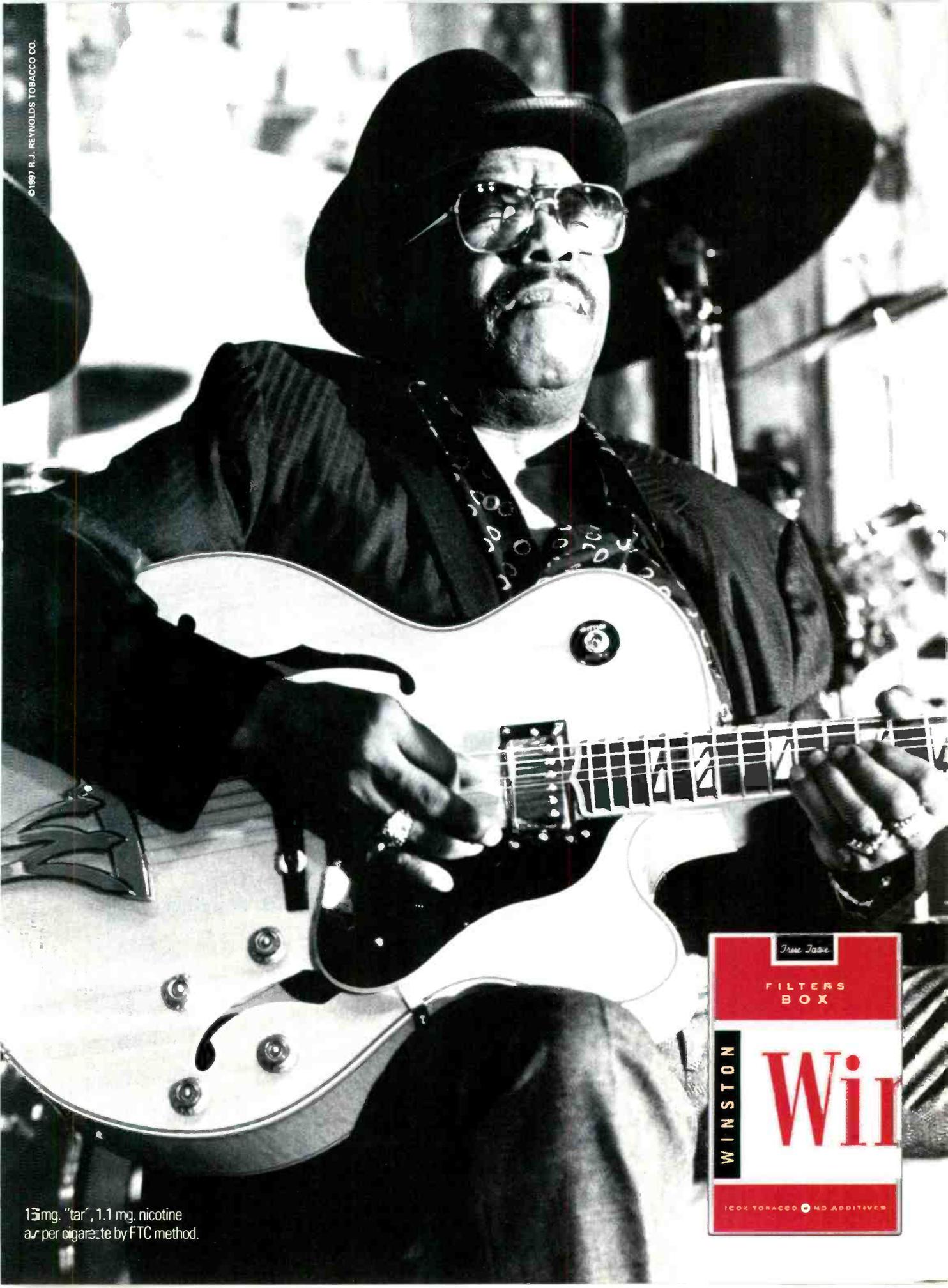
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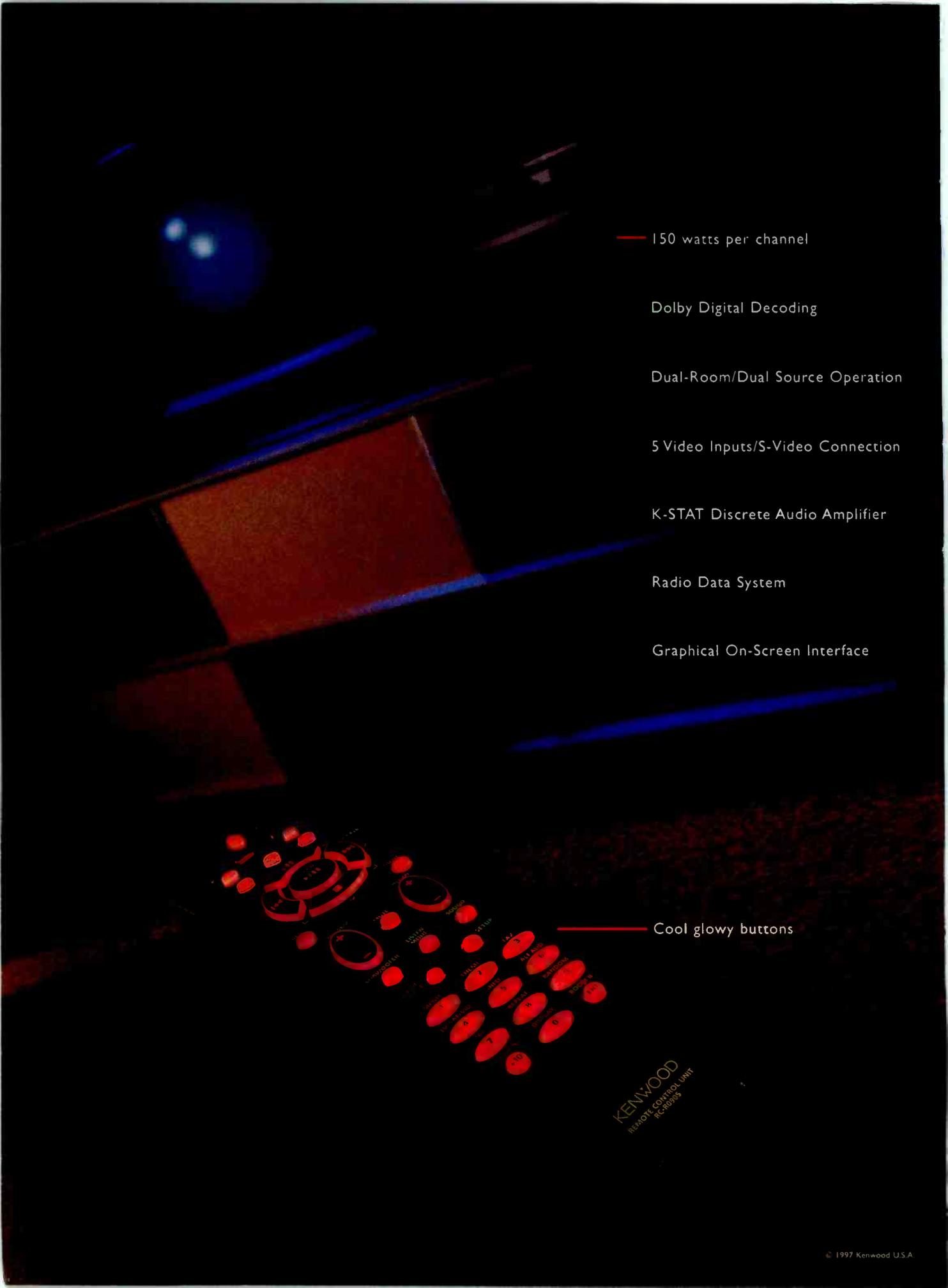
upgraded to Dolby® Digital) and complete audio and video source switching, you've got movie theater quality sound. Or build an all-Adcom system from the ground up starting with a GSA-700 and one of our legendary Adcom stereo power amplifiers and experience the ultimate in separate components.

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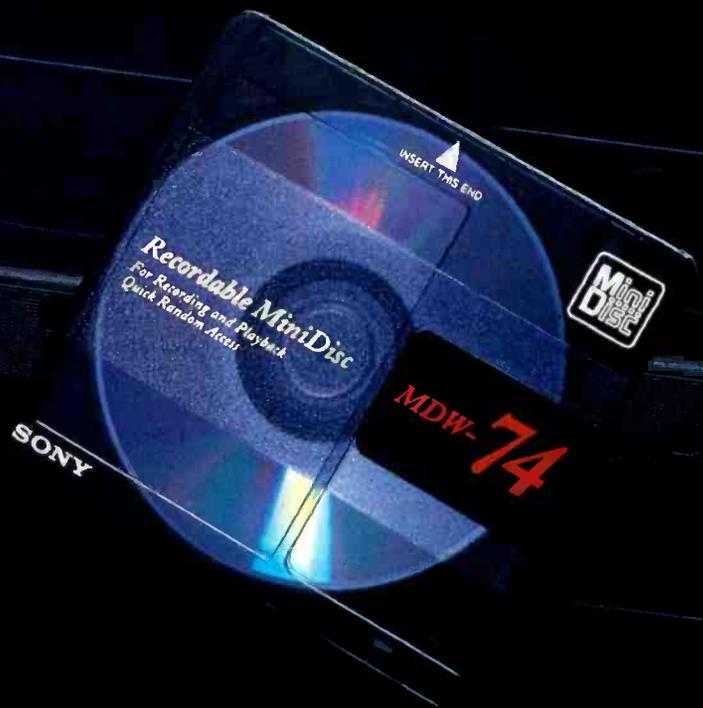
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Stereo Review

INCORPORATING HIGH FIDELITY

October 1997

Cover: Pioneer's VSX-D606S, Denon's AVR-3200, and Yamaha's RX-V2092 represent different price points in Dolby Digital receivers. See page 64 for details of what they have to offer and how they performed in the lab and a home theater.

Photograph by Chris Gould

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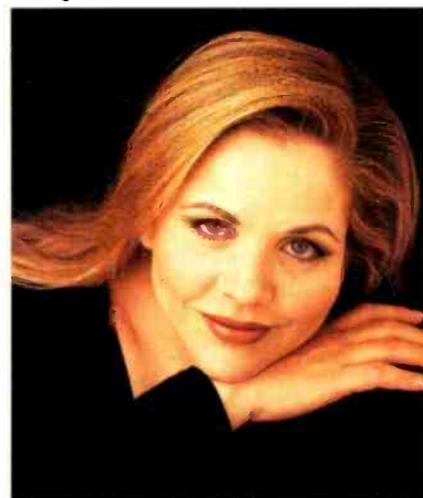
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- Radiohead's *OK Computer*, Mahler's complete *Das Klagende Lied*, Jen Trynin's *Gun Shy Trigger Happy*, and Schoenberg's *Transfigured Night*



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BULLETIN

BY BOB ANKOSKO & WILLIAM LIVINGSTONE

MORE DVD MOVIES

Universal Studios Home Video will join the DVD party in November with the release of its first four titles — *The Shadow*, *The Land Before Time*, *Beethoven*, and *The Paper*. That leaves Disney/Buena Vista, Fox, and Paramount as the last of the major Hollywood holdouts. *Jurassic Park* and five more Universal DVD titles are slated for later release, all at \$24.98.

Meanwhile, Warner Home Video is expanding its DVD offerings and expects to have more than 200 DVD titles by Christmas. It is also making all of the titles it distributes — those from Warner Bros. as well as MGM/UA, New Line, and HBO — available to stores nationwide. Until late August, Warner distributed DVDs only in seven major markets. Forthcoming Warner Bros. DVD movies include *Batman & Robin* and *Conspiracy Theory*. Columbia TriStar Home Video has added another dozen or so titles to its 1997 DVD release schedule, including *The Fifth Element* and *Anaconda*.

A/V DIGEST

Bose has launched a Web site (www.bose.com) that contains more than 300 pages of photos and information on the company and its products. . . . Delos has released *DVD Spectacular* (DV 7001). Hailed as the first audio-only DVD, the \$24.98 disc features musical selections, including Tchaikovsky's *1812 Overture*, recorded in Dolby Digital 5.1-channel surround sound as well as a series of audio and video test signals developed by Dolby Labs.

DIRECTV TO THE RESCUE

DirectTV is offering a free Digital Satellite System (DSS) to the 15,000 U.S. subscribers of the failed AlphaStar satellite TV system, which went dark in early August. To receive the 18-inch DSS dish and satellite receiver/remote

control, former AlphaStar subscribers need commit to only one month of DirectTV's Total Choice programming package (\$29.99). Installation can be arranged through O'Rourke Bros. of Moline, IL (309-762-9251), or Satellite Receivers Ltd. of Green Bay, WI (800-432-8876). Customers are responsible for shipping, handling, and installation costs as well as applicable taxes.

GEEK SPEAK

Gareth Branwyn's *Jargon Watch* (HardWired, \$8.95) is a collection of exec lingo and memo slang from high-pressure workplaces of the 1990s culled from *Wired* magazine. Included are such phrases as "Elvis year" for a peak of popularity (as in, "1993 was the Digital Compact Cassette's Elvis year"), and "betamaxed," applied to a technology overtaken by one that is inferior but better marketed (as in, "Apple was betamax'd by Microsoft").

HARD COPY

The 17th edition of Bruce F. Elving's *FM Atlas*, a 224-page listener's guide to radio stations, is now available for \$18.50 from FM Atlas, P.O. Box 336, Esko, MN 55733-9413. For credit-card orders call 800-605-2219. . . . Simon & Schuster has published *Doo-Dah! Stephen Foster and the Rise of American Popular Culture* (\$30) by Ken Emerson. . . . The subject is brought up to date by Reebee Garofalo's *Rockin' Out, Popular Music in the USA* (Allyn and Bacon, \$24.95). . . . Book and record stores are stocking *The Kiss Years* (Studio Chikara, \$29.95), with photos of the band (in makeup) and memories by their photographer, Barry Levine. . . . *The Metropolitan Guide to Opera on Video*, edited by Paul Gruber (\$35 from the Metropolitan Opera Guild), evaluates more than 350 videos of 150 operas.



BUY NOW, UPGRADE LATER

Relax. The transition from TV-as-we-know-it to digital TV (DTV) — a.k.a. high-definition TV (HDTV) — with its wide-screen picture and 5.1-channel surround sound won't happen overnight. According to the FCC, DTV service will be available to only 14 percent of U.S. households by Christmas 1998 and just over 50 percent a year later. What's more, commercial stations have until 2002 to begin DTV broadcasts, public stations until 2003. Even though all TV stations are required to broadcast conventional TV signals along with the digital signals for at least nine more years, at least one major TV maker is going out of its way to "allay unfounded fears" that TVs purchased today will be obsolete when the first DTV sets hit store shelves. Zenith's "Ultimate Cutting-Edge Pledge" gives anyone who buys a 32- to 60-inch Zenith TV between now and December 31 the right to trade in that set and apply its purchase price toward a Zenith DTV set. Its first model will hit stores late next year, at \$5,000 to \$7,000. Those who buy Zenith big-screen TVs this year will also receive a \$100 rebate on a digital converter box, planned for 1999, that will enable analog TVs to receive digital signals at a lower resolution.

MILESTONES

Audio pioneer Fritz Sennheiser has turned 85. Still on the board of the German company that bears his name, famous for pioneering "open-air" headphones, he now finds time to cultivate orchids. . . . When Lena Horne turned 80 this year, the Society of Singers gave her the Ella Award, named for Ella Fitzgerald. . . . Among the presents to Kurt Masur, music director of the New York Philharmonic, on the occasion of his recent 70th birthday was an honorary doctorate from the Juilliard School of Music. . . . A jury of 140 music professionals, including the likes of Paul McCartney and Tina Turner,

voted the Beach Boys' "Good Vibrations" the greatest single in rock history.

SAVE THE CASSETTES!

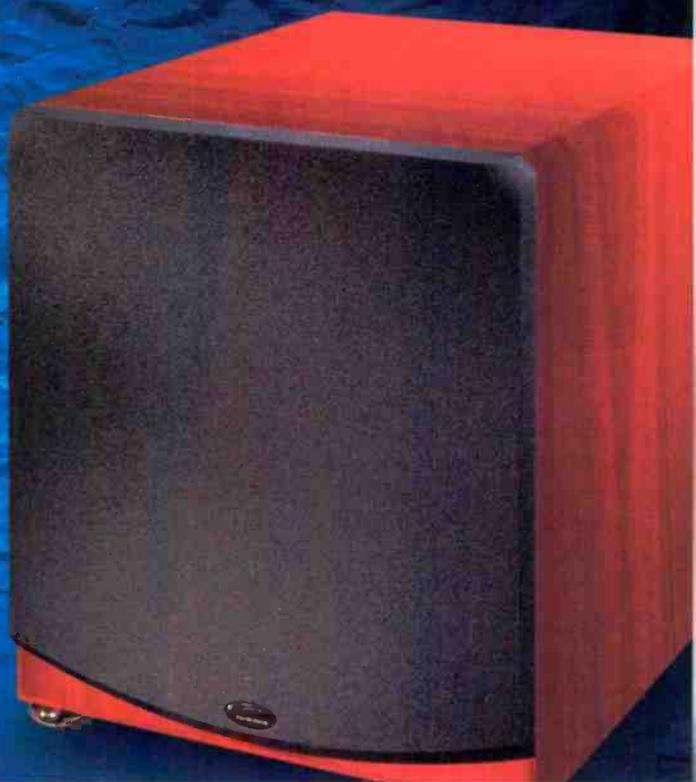
Consumers still want audio cassettes, primarily for use in Walkman-type portables and car players, according to market research from the International Recording Media Association. Major labels, such as Sony and BMG, are working to revive the cassette format by lowering prices. Russ Solomon, president of Tower Records, says, "We are having enormous success selling inexpensive tapes by good artists." At RCA the campaign is affectionately called "Save the Whales."

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-Andrew Marshall, Audio Ideas Guide

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- Tom Nussaine on the PS-1200, Video Magazine

"...POWERFUL AND IMPRESSIVE."

- Andrew Marshall on the PS-1200, Audio Ideas Guide

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THEM BEFORE."**

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

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LETTERS

Dolby Digital and DTS

I plan to get into Dolby Digital in the future. I hope to get a receiver that has built-in decoders for both Dolby Digital and DTS and understand that such a receiver will be out soon. Do any current DVD players have a DTS output? Is DTS compatible with Dolby Digital? I would hate to invest in a DVD player that has an AC-3 (video) output and does not have a DTS (audio) output.

BILLY MCCARTER
Inman, SC

Technical Editor David Ranada replies: First, both Dolby Digital (AC-3) and DTS are audio formats; they represent different ways of digitally encoding 5.1-channel surround sound. So if you're interested in DTS mainly because you think Dolby Digital pertains to video and not audio, you may not need it after all.

If you want to play DTS-encoded CDs on a DVD player, you should have no problems. The encoded DTS signal will emerge from any DVD player's digital output and can be decoded with an external DTS decoder. When it comes to DTS-encoded DVDs, however, the outlook is less certain, partly because there are no commercial DTS-encoded DVDs at this writing and thus no way to test how they would work. As I understand the situation, you can't simply put a DTS signal disguised as a quasi-PCM signal onto a DVD (which is what happens with DTS-encoded CDs) and expect it to emerge from every DVD player unscathed by the player's digital processing.

Remote Note

In the August comparison of "super remote controls," Daniel Kumin criticized the automatic sensor for the back-lighting in the Marantz RC 2000, saying it "flip-flopped on and off as I moved the remote through a varying light field." Although it doesn't have a light-sensitivity adjustment, it does have several configurable lighting options. The problem Mr. Kumin had can be avoided simply by turning off the automatic illumination and relying on button presses to illuminate the remote for a user-defined period of time.

DAVID MEYER
Joliet, IL

You're right. Thanks for the clarification.

Buying New Music

With respect to Ken Pohlmann's August "Signals" column about the recorded-music industry:

1. While he may have 170 TV channels and an endless array of entertainment options on the Internet, I doubt the majority of those channels or options are very useful, entertaining, or valuable. Quantity doesn't equal quality.

2. If Mr. Pohlmann is having difficulty finding music to his liking, I suggest he read your music reviews. I find them quite useful for discovering new music I enjoy.

3. If you can't find the time or energy to visit and shop your local CD/tape/record store to search for that special piece of music, then I have serious doubts about your interest in music. Having to do all my music buying over the Internet is not my idea of a quality shopping experience.

4. Music-reproduction systems have, to my ears, made tremendous progress over the past thirty years, and I look forward to continued progress, but I have no intention of ceasing to buy music if the progress is not fast enough for me. I'll continue to purchase music, 5.1 channels and DVD or not.

GREG MARGERUM
Ft. Myers, FL

Home Theater Hookups

There is no way I would invest a dime in any home-theater setup at this point. How can anyone realistically get through the madness of all the different formats — Dolby Pro Logic, Dolby Digital, DTS, THX — let alone figure out how to hook up such a system without having an engineering degree from MIT?

ALEX TRESSOR
New York, NY

Although it can appear daunting, hooking up a DVD player to a Dolby Digital-equipped A/V receiver and connecting that to the five speakers needed for theater-quality surround sound doesn't have to be that big a deal. You run one wire from the DVD player's digital output to the receiver's digital input, and then one cable from the receiver to each of the five speakers. Adding a subwoofer to the system can be a little more complicated depending on the kind of subwoofer.

Can You Trust Your Ears?

Readers like Michael Kiewin, whose letter lauding LPs over CDs appeared in the same August issue as Tom Nousaine's superb article "Can You Trust Your Ears?," should read the article thoroughly, wake up, and try a double-blind listening test.

When I purchased my first CD player, in 1985, I brought two Sheffield CDs of Frederick Fennell conducting the Cleveland Symphonic Winds in Holst's band suites with me to the highest-end stereo shop in Vancouver. I am a wind musician and have played and listened to these works live over a hundred times. We performed double-blind listening tests of CD players — neither I nor the person switching between the playback units knew which was playing — using the same amp and speakers for both units and adjusting the preamps so that the volume would be identical. We could not tell the difference between the inexpensive

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player I eventually purchased and a high-end model costing ten times as much.

When the salesman tried to convince me to purchase the store's top turntable as well, I pulled out a never-played direct-to-disc LP from the same recording session. He blanched but agreed to repeat the test with the turntable and my new CD player. It was ludicrous. We could not hear the quiet passages from the LP over the hiss, and the room-shaking bass-drum shots didn't even rattle the windows.

The "scratchy or thin violins" and "strident trumpets" that analog lovers complain about on CDs can be attributed to poor engineering that is revealed by the new digital technology but used to be masked by the limitations of the analog medium, or else to the ignorance of those who rarely listen to live music and don't know that in real life violins can indeed be scratchy and thin sounding and high brass passages can be strident and, well, brassy. **CHUCK CURRIE**
Vancouver, BC

Tom Nousaine's article regarding listener bias in August was very informative and useful, clearing up many misconceptions that people have regarding audio equipment and sales schemes.

ERIC WONG
Fallston, MD

I wish Tom Nousaine had used a better example of differential perception than entering and leaving a swimming pool. Because of evaporation, your skin really is cooler just after you come out than it was before you went in. For a better example, consider the last time you adjusted the water temperature in the shower.

That minor cavil notwithstanding, you have done your readers a great service by publishing his article. It should be reprinted and handed out to everyone entering an audio emporium.

ALLEN WATSON III
Sunnyvale, CA

Home Repairs

I bought my stereo system some seventeen years ago. About five years ago I started noticing a severe degradation in my speakers, and not long after that my cassette deck stopped operating. I haven't had the money to get them repaired or to invest in new equipment, so last year I decided to take matters into my own hands, figuring I had nothing to lose.

Examining the speakers, I discovered that the surrounds were shot and that one of the woofer cones had a puncture. I gently pushed the cone back to its original shape and applied clear fingernail polish to seal the hole. I tried using foam inserts for the surrounds, which didn't work at all, but then thought of using bicycle inner tubes! A bike shop in town let me have several tubes of different sizes. I removed the woofers, cut the tubes to fit, and installed them using a hot-glue gun. When I powered the system up (I hadn't used it in some time), it was as though my speakers had been reborn!

Feeling very confident at this point, I carefully opened up my cassette deck and

found that the drive belt had gone limp over time. So I replaced it with a fat, heavy rubber band. After I closed the deck back up, I anxiously put a cassette in to see if my home repairs had worked. To my delight, it played just like new! It's as if I have a new system again.

ROBERT DONNELLY
Monterey, CA

We're glad you're happy with the results of your "home repairs." For more orthodox repair tips, see "Fix It!" on page 73.

Overrated Tubes

In his August review of the Jolida SJ-101A amplifier, equipped with EL84 (68Q5) tubes, Daniel Kumin described the manufacturer's power specification of 25 watts as "optimistic, considering that the unit yielded only 16 watts in the midrange at clipping on the test bench." I believe Mr. Kumin let Jolida off too easy. As a 14-year-old electronics hobbyist in 1969, I built a push-pull tube amplifier based on the EL84. I later built several such amps for friends. Back then, during what was still the heyday of tube amps, the highest usable output that could be obtained from a single pair of EL84 tubes was 17 watts. To obtain more power you had to use the larger, octal-base tubes such as the EL34 (6CA7) and 6L6GC.

GLEN C. BARTHOLOMEW
Brooklyn, NY

Platform Bias

James Willcox's misrepresentation of the state of PC (personal computer) technology in June "Peripherals" is unacceptable. Intel has finally developed a version of its Pentium processor (MMX) that allows DOS/Windows computers to handle audio/video signals with reasonable accuracy. However, he should have noted that the 603e-604e chips developed jointly by Motorola, IBM, and Apple for PowerPC computers have been capable of doing so for at least the past two years.

BERNARD J. A. MILLETTE
North Battleford, Saskatchewan

"Hidden" CD Tracks

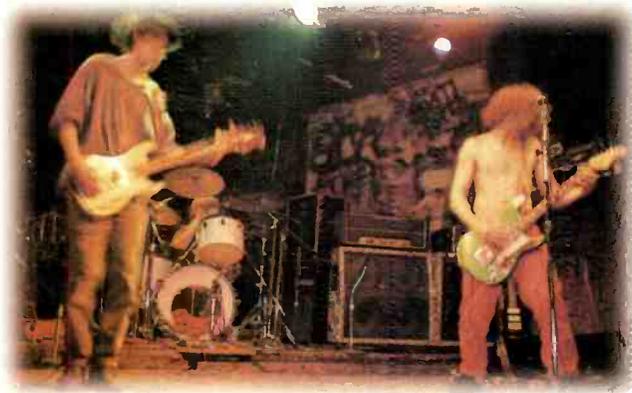
I recently purchased *Coil* by Toad the Wet Sprocket on Columbia. It is a great album, but I was really irritated when I found out I needed to play the CD on a computer to hear one of the songs. I work on a computer in an office all day, and the last thing I want to do when I get home at night is look at another one. I think the "enhanced CD" thing is great for those who want to use it, but it is unfair to penalize those of us who just want to listen to good music by hiding tracks on the disc.

ROGER RUTTEN
Carlos, MN

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.



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30 YEARS AGO

Hi-Fi/Stereo Review

THE EXPERTS DISCUSS YOUR FM-ANTENNA PROBLEMS
Music for Piano in Perspective: A Basic Library
Paderewski: A Genius Who Also Played the Piano



The October 1967 cover showed "twelve great pianists who, in the not-too-distant past, made regular appearances on the American concert scene," including, at bottom left, Sergei Rachmaninoff and, to his left, Ignace Paderewski. Inside, Robert Offer-geld evaluated the career of Paderewski, "the most successful pianist who ever lived."



Crowncorder portable, 1967

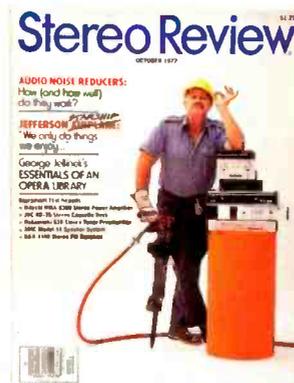
Among new products was the Crowncorder CSC-9350 portable radio/recorder (\$190) with AM and stereo FM tuners, a cassette deck, and two mikes. Hirsch-Houck Labs hailed the "effortless, natural sound" of two Jensen bookshelf speakers, the X-40 (\$57) and X-45 (\$63). And in a transcript of the radio

series *Men of Hi-Fi*, ways to improve FM reception were discussed by panelists including technical editor Larry Klein and Marantz chief engineer Richard Sequerra.

In "The Critics Confess: Ten Composers I Hate," the overall loser, with four mentions, was Max Reger, whose music "ought to be first on anyone's list as an example of purest ennui," said Eric Salzman. The runner-up, with three mentions, was Olivier Messiaen, indicted by William Flanagan for "those godawful birdcalls."

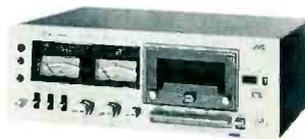
Reviewed were the debut records of violinist Itzhak Perlman (in Prokofiev and Sibelius concertos) and the Doors, of whom critic Nat Hentoff said, "They have yet to understand that shouting about 'breaking on through' is not in itself an act of breakthrough."

20 YEARS AGO



Direct-to-disc albums came under fire in the October 1977 issue. Editor William Anderson decried the one-take recording process as "not free, spontaneous musicmaking but pussy-

footing *carefulness*." Reviewer David Hall wrote, "The best recording techniques in the world are of no benefit if their virtues are covered by noise derived from mechanical flaws in the record itself."



JVC cassette deck, 1977

The first audio gear from the David Haller Company, the DH-101 preamp kit (\$200), appeared in new products. Test reports included JVC's KD-75 cassette deck (\$380), which represented "an impressive combination of performance, versatility, and unique operating features." And an article on "Noise Reducers" said "authorities predict that they will be routinely built into all audio components at some time not too far in the future."

Interviewed for the feature "Jefferson Airplane/Starship," Paul Kantner claimed, "I would live in a flophouse before putting up with music-business pressure."

10 YEARS AGO

"The Digital Revolution" was the theme of several articles in the October 1987 issue. Technical editor William Burton eyed the proliferation of CD changers. Craig Stark took "Another Look at DAT" by way of Onkyo's prototype DT-2001 recorder, and Richard Jaccoma examined "Video's



Itzhak Perlman, 1967

New Image." Ian Masters, in a survey "From Compact Disc to Digital Audio Tape — and Beyond," covered products like the Technics SL-P1200 CD player (\$1,295). He summed up, "Perhaps fifteen years from now we will take all-digital audio systems for granted and be bowled over by some new audio technology that most of us today have never heard of."



"Ho, hum! Another super CD player from Sony — the company makes it look easy," wrote Julian Hirsch in testing the CDP-605ESD (\$1,000), which he deemed "a gem." New products included the Model I speaker from Now Hear This (\$299 a pair), with a 6-inch woofer and a 3/4-inch tweeter.



Technics CD player, 1987

"Most people look forward to a time at 60 or 65 when they can stop working," the then 75-year-old conductor Georg Solti told William Livingstone, "but the musician must continue because of the tremendous urge to make music. It's as deep-seated as the urge for eating and loving."

Steve Simels recommended the "Mope Rock" of the Smiths' *Louder Than Bombs* only to "fans of that immortal B.B. King song 'Nobody Loves Me but My Mama, and She May Be Jiving Me Too.'"

— Ken Richardson

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NEW PRODUCTS

▼ PARASOUND

The Parasound HCA-2105A is a THX-certified five-channel home-theater amplifier. Each channel is rated at 200 watts into 8 ohms, or 300 watts into 4 ohms. The amplifier's peak output-current capacity is rated at 60 amperes per channel, thanks in part to its 30,000- μ F total output capacitance. While it

operates in Class A mode at low and moderate volumes, it switches to Class AB operation at high volume levels. The amplifier can accept 12-volt trigger signals for auto turn-on. Price: \$2,395. Parasound, Dept. SR, 950 Battery St., San Francisco, CA 94111.

• Circle 120 on reader service card



▲ KEF

KEF's RDM One acoustic-suspension bookshelf loudspeaker makes use of the company's fourth generation of Uni-Q driver technology. A 1-inch soft-dome tweeter is placed at the apex of the woofer's 6½-inch cone, which is said to allow the speaker to act as an acoustical point source. Frequency response is rated as 100 Hz to 18 kHz \pm 2 dB

and the sensitivity as 87 dB. The RDM One measures about 12 x 12 x 9 inches and is finished in high-gloss red or gray lacquer or real cherry veneer on the sides, matte gray on the top, bottom, and back. Price: \$900 a pair. KEF, distributed by Adcom, Dept. SR, 11 Elkins Rd., East Brunswick, NJ 08816.

• Circle 121 on reader service card



HSU RESEARCH ▶

The Hsu Research TN1225HO and TN1220HO ported subwoofers are both 12 inches in diameter, the same as their drivers. The smaller TN1225HO (32½ inches high, rated down to 25 Hz) is available unpowered (\$350), with a 150-watt amplifier (\$575), or with a 250-watt amplifier (\$800). The TN1220HO (51½ inches high, rated to 20 Hz) is available in the same configurations for \$450, \$675, and \$900, respectively. Both models are covered by a seamless black knit cloth with a black metal grille top. Hsu Research, Dept. SR, 14946 Shoemaker Ave., #L, Santa Fe Springs, CA 90670.

• Circle 122 on reader service card



▲ McINTOSH

The McIntosh MAC-3 Dolby Digital surround processor has four pairs of digital coaxial and optical inputs (for DVD, laserdisc, satellite receiver, and CD player) plus one analog input. It automatically switches between Dolby Digital and Pro Logic decoding

depending on the input signal. Signals to the center and surround channels can be time-delayed to compensate for different listening distances. Price: \$2,500. McIntosh, Dept. SR, 2 Chambers St., Binghamton, NY 13903.

• Circle 123 on reader service card

NEW PRODUCTS

▼ ESCIENT

Escient's TuneBase system allows users to play a CD on any CD jukebox that uses an RS-232 or RS-422 control bus by selecting a thumbnail image of its cover from a TV or VGA monitor screen. With a modem, TuneBase can access the Escient Server, which contains a continually updated database of information

about CD releases, including cover-art thumbnails. Optional accessories let the controller work with whole-house audio systems from AudioAccess, AMX, or ADA. Price: \$5,000. Escient, Dept. SR, 12955 Old Meridian St., Suite 107, Carmel, IN 46032.

• Circle 124 on reader service card



◀ OPTIMUS

The Optimus PRO-100 wireless headphones receive signals in the 900-MHz band at distances up to 150 feet for up to 5 hours with rechargeable Ni-Cd batteries. The transmitter plugs into either a line-level or headphone jack. Price: \$130. RadioShack, Dept. SR, 700 One Tandy Center, Fort Worth, TX 76102.

• Circle 126 on reader service card

FAROUDJA ▶

The Faroudja VP 100 TV enhancer is designed to bring sharper colors and crisper images to large-screen TVs. It accepts a standard composite-video input and produces two S-video outputs. Its comb filter is said

to be able to remove dot crawl, seen at the boundary where two colors meet on screen. Price: \$799. Faroudja Laboratories, Dept. SR, 750 Palomar Ave., Sunnyvale, CA 94086.

• Circle 128 on reader service card

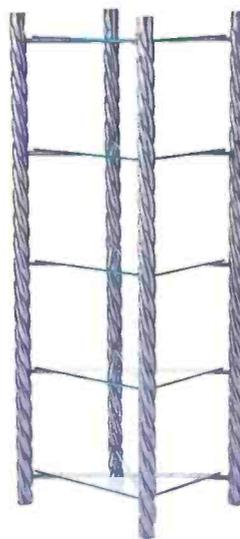


▲ B-I-C AMERICA

The B-I-C Super PowerPoint MPS-3 home-theater speaker system consists of the V-800A powered subwoofer, four satellites, and a center-channel speaker. All are magnetically shielded to prevent TV picture distortion. The subwoofer, with a 10-inch driver and a 70-watt amplifier, is finished in black vinyl laminate.

Each satellite has a 5 1/4-inch woofer and a 1/2-inch dome tweeter, and the center speaker has two 4-inch woofers and one 1/2-inch tweeter. The center and satellite enclosures are black molded ABS plastic. Price: \$799. B-I-C America, Dept. SR, 458 Second Ave., Tiffin, OH 44883.

• Circle 125 on reader service card



◀ STANDSIGN

The legs of the Standesign Trezza 60 audio-system rack are made of braided steel coated with lacquer. Its five glass shelves, held by sturdy X-shaped steel supports, have 11 inches of usable space between them. The rack's overall height is 58 inches, its width and depth both 18 inches. Price: \$499. Similar Trezza audio and A/V racks and tables are available in other sizes. Standesign, distributed by Melody Audio, Dept. SR, 1940 Blake St., Suite 101, Denver, CO 80202.

• Circle 127 on reader service card





Patented Acoustimass® module. Helps make a 60-ton runaway train sound like, well, a 60-ton runaway train. Hides out of view.

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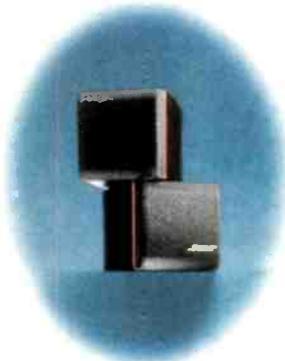
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NEW PRODUCTS

▼ IMPACT

Impact's IT! multimedia/computer loudspeakers have 4-inch woofers and 1-inch tweeters in wood-composite cabinets that measure 25 x 10³/₄ x 6 inches. The speakers have a rated frequency response of 41 Hz to 23 kHz \pm 3 dB and a sensitivity of 88 dB. Impact's Labyrinth Induction System is said to eliminate the need for a subwoofer. Unlike most multimedia speakers, they have no built-in power amplifier. Price: \$595 a pair, plus \$30 shipping, factory-direct from Impact Technology, Dept. SR, P.O. Box 616, Ambler, PA 19002; phone, 215-653-7440.

• Circle 129 on reader service card



DEI AUDIO ►

DEI Audio's Model 4000 four-band quasi-parametric equalizer can adjust the tonal balance of any car audio system. The front panel has eight rotary controls, including master volume, front-rear fader, level control in each of four EQ bands (30-70 Hz, 150-400 Hz, 1.5-4 kHz, and 10-20 kHz), and



▲ AUDIOCONTROL

AudioControl's BLD-10 four-channel balanced-line-driver/receiver is designed to allow a car stereo system's line-level signals to be extended up to 1,000 feet over twisted-pair wiring. The driver accepts standard unbalanced line-level signals and converts them to balanced

outputs. The receiver converts the signals back to unbalanced RCA outputs. The system's common-mode rejection ratio (CMRR) is specified as 65 dB at 1 kHz. Price: \$249. AudioControl, Dept. SR, 22410 70th Ave. W., Mountlake Terrace, WA 98043.

• Circle 130 on reader service card



◀ MUSIC INTERFACE TECHNOLOGIES

MIT's speaker modules include the company's Output Terminator Networks, which are said to insure signal integrity over cable runs. The in-wall module (shown, \$100) mounts to a wall stud and has a 20-inch tail to connect to an in-wall speaker. The on-wall module (\$100) mounts in an



SONY ▲

Sony's TCD-D1000 Walkman DAT portable player/recorder is being introduced in celebration of the tenth anniversary of digital audio tape. It features different digital automatic-gain-control (AGC) modes for music and speech, which can prevent distortion by automatically adjusting the recording level. Three adjustable levels (automatic, mic limiter, and manual) are also featured. The recorder's power consumption is said to allow operation for 4 hours on a pair of AA batteries. Price: \$1,000. Sony, Dept. SR, 1 Sony Dr., Park Ridge, NJ 07656.

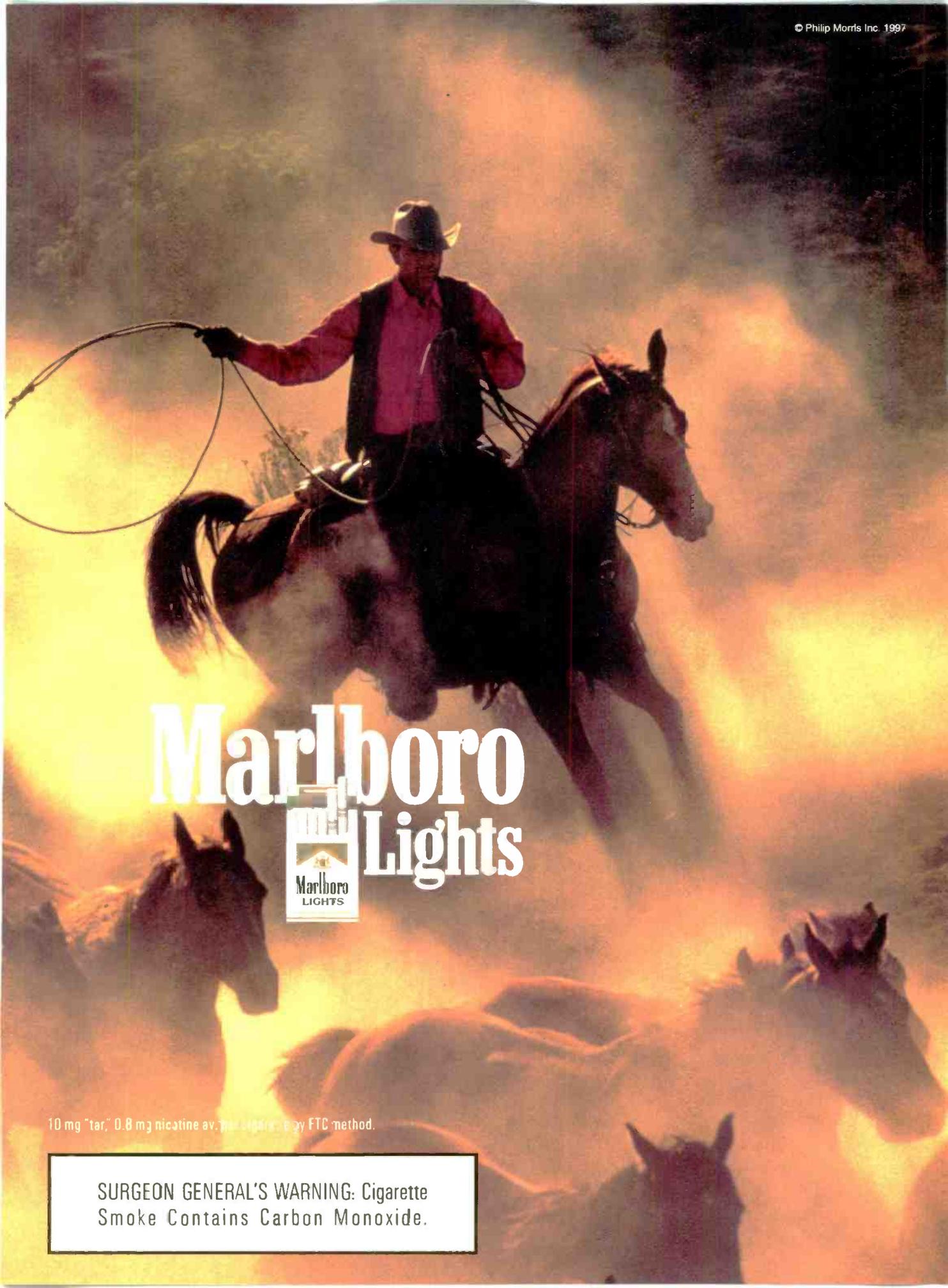
electrical box and has a 12-inch tail to connect to a surface-mounted speaker. A module for free-standing speakers (\$150) has a 10-foot tail. MITerminator 12-gauge cable is \$1.50 a foot. MIT, Dept. SR, 13620 Lincoln Way, Suite 320, Auburn, CA 95602.

• Circle 131 on reader service card

frequency cutoff and output level for the dedicated subwoofer output. Additional controls behind the front panel set the center points of the four frequency bands. Price: \$210. Directed Electronics, Dept. SR, 2560 Progress St., Vista, CA 92083.

• Circle 132 on reader service card



A cowboy wearing a hat, a red shirt, and a dark vest is riding a dark horse. He is holding a lasso and herding a group of other horses. The scene is set against a dramatic, golden sunset sky with silhouettes of trees in the background.

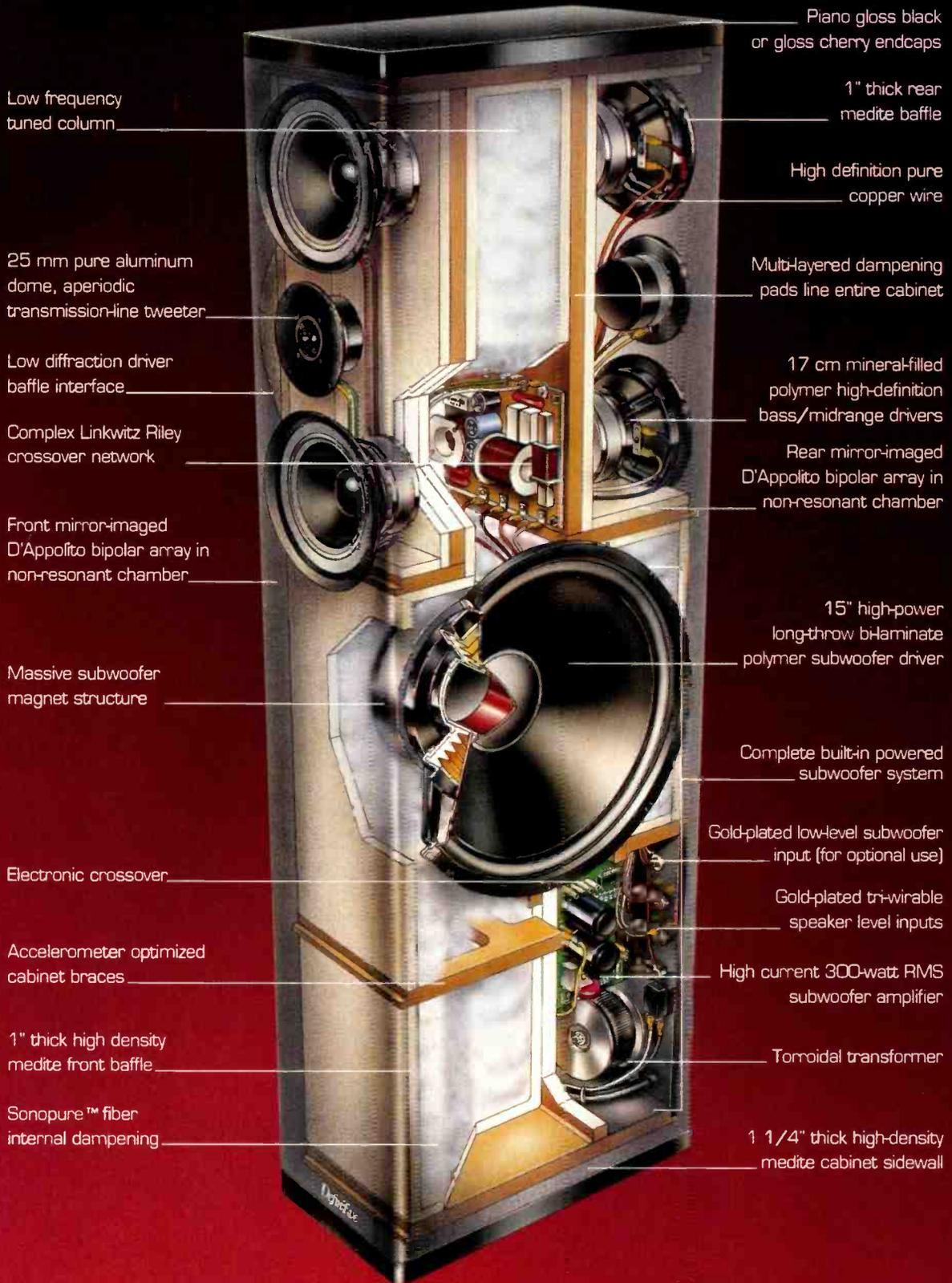
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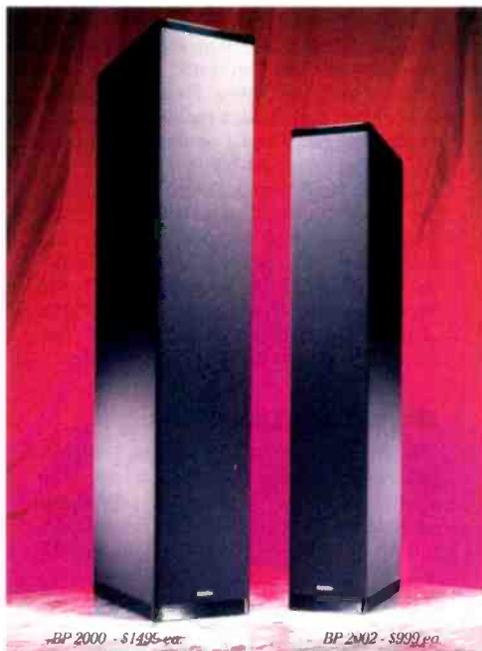
-Home Cinema Choice, England

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.

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"The Best Performance You Can Get"

-V.T.V., England

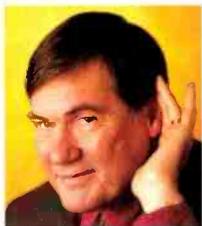
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- GA- Laser Disc Enterprises: Atlanta• Merit TV: Columbus• Stereo Connections: Valdosta• Stereo Festival: Atlanta.
- HI- Sam Sung Electronics: Honolulu, Waipahu.
- IA- Audio King: Cedar Rapids, Des Moines• Archer Audio Video: Ft. Dodge• Audio Video 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- Dvation Audio: Lexington, Louisville.
- LA- Alterman Audio: New Orleans, Metairie• Lake Charles Music: Lake Charles• Mike's Audio: Baton Rouge• Wright's Sound Gallery: Shreveport.
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- 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 Designs: 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 Waves 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: Manhasset• Audio Den: Lake Grove• 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 Stereo Shop: Greensburg.
- RI- Stereo Discount Ctr.: Providence.
- SC- A/V Design: Charleston• Custom Theater & Audio: Myrtle Beach• Upstairs Audio: Columbia.
- SD- Audio King: Sioux Falls• Sound Pro: Rapid City.
- TN- College HiFi: Chattanooga• Hi Fi Buys: Nashville• Now Audio Video: Knoxville• Modern Music: Memphis• Sound Room: Johnson City.
- TX- Home Entertainment: Dallas, Houston, Plano• Audio Tech: Temple• 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• Audiophonics: 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• Harrington Audio: Peterborough, Ont. • Kebeeson: Montreal• Lipton's: New Market, Ont. • Sound Decisions: Duncan, B.C. • Sound Room: Vancouver• StereoLand: Windsor• Treble Cliff: Ottawa.
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AUDIO Q & A

IAN G. MASTERS

Subs and Surrounds

Q Does connecting a powered subwoofer to line-level or speaker-level outputs make any noticeable sound-quality difference? And is there a major sonic difference between dipole and front-firing surrounds playing Pro Logic material?

DANIEL WILLIAMS
Albany, NY

A Ideally, whether you feed a subwoofer from the line or speaker outputs should make no difference. The speaker-level inputs on the sub are simply fed to resistors that bring them down to the same level as the line signal; the two are treated identically after that. If the subwoofer is to be placed a long distance from the amplifier, however, using speaker-level signals might be preferable because they would be less susceptible to hum pickup. If you wish to use the dedicated subwoofer output provided in many decoders and receivers, on the other hand, you will have no option but to feed it to the sub's line-level inputs.

As for dipole surrounds, the theory (first advanced by the devisers of the Home THX standard) is that by aiming the "nulls" of the speakers at the listeners and the actual sound away from them, the surround information would reach their ears only after having been bounced around the room, thus becoming more diffuse. In my experience, there isn't much difference, and what there is becomes apparent only in direct comparisons. (THX "decorrelation," on the other hand, makes quite a difference.) That said, I admit that a number of the best-sounding surrounds I've heard have been dipoles.

What's Up with CD-Text?

Q I recently purchased a CD player, and its owner's manual refers to CD-Text capability. If I understand this correctly, certain discs contain information about the individual tracks that can be displayed in the machine's window. However, I own more than 200 discs, and nothing is displayed other than what I have programmed into the player myself. Shouldn't I be seeing some information about all those discs?

STANLEY C. SWICORD
Jefferson City, MO

A The CD-Text system, which requires a special CD-Text-capable player and CD-Text-encoded CDs, was devised by Philips and Sony to provide song titles, performer names, and other information. However, text information is encoded only on new releases, and, unfortunately, not all new

releases at that. Your older CDs are certainly not encoded — the format extension was made official only in June 1996 — so you'll have to continue adding the information yourself.

When more CD-Text-compatible hardware becomes available, the record companies will presumably add text information, including album and track titles, to some or all of their new releases. As of last May, for example, all new full-price releases from Columbia, Epic, and other Sony Music labels have included CD-Text.

THX for Music

Q I've often heard that Home THX surround-sound systems have poor performance when it comes to listening to music. Since music plays an integral part in any good movie soundtrack, how can THX systems have poor music performance?

CLARE WILHELM
Corvallis, OR

A First of all, just to get this out of the way, there are lots of THX-certified systems that reproduce "ordinary" music superbly, so the generalization, like most generalizations, doesn't really hold water.

But it's true that music is often processed differently for a movie soundtrack than for the subsequent CD release, and if a piece of THX-certified equipment must favor one over the other, the film sound wins out. The whole purpose of Home THX is to deliver to your listening room a replica of the sonic experience the movie's producers heard on the mixing stage. At home, this requires a deliberate restriction of the vertical directivity, a characteristic foreign to most "music speaker" designs. It is probably the one trait that makes THX speakers sound "different" (not necessarily better or worse) with music recordings. The music used in soundtracks is mixed and processed to sound "good" under theatrical (hence THX-like) conditions.

High-Pass/Low-Pass

Q Try as I might, I cannot seem to understand low-pass and high-pass filters on a powered subwoofer. What is the difference between them?

KIRSTEN ELLINGSON
Provo, UT

A A low-pass filter passes low frequencies. In other words, it allows signals below a nominal frequency (sometimes called the crossover point) to pass from the amplifier to the speaker and blocks frequencies above that. In most subwoofers, the

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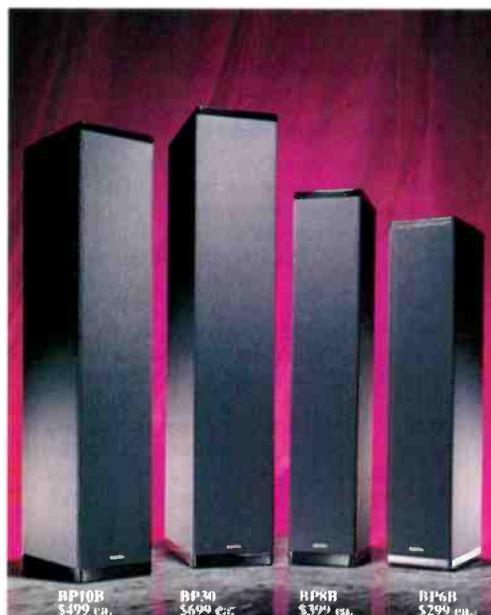
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crossover point is variable to let you match the bass unit to satellite speakers with different low-end cutoff points.

Generally, it's best to set the crossover point as low as possible to prevent the subwoofer from producing sounds that can be localized. But with some satellites that would create a low-frequency gap between where the main speakers leave off and the sub begins. In that case, the filter has to be set to a higher frequency; if that results in disturbing localization effects, the cure is often to move the sub to the front of the listening room.

High-pass filters do the opposite — they pass high frequencies and block frequencies below a certain point. Such filters are by no means universal in subwoofers, but where they are included, the purpose is to feed a signal back to the main system with the low-bass frequencies removed. Most satellite speakers can't reproduce the bottom octaves without very high distortion, and amplifiers use up a lot of their power trying to get them to, so cutting the lows before the signals to the satellites are amplified maximizes the power available to drive the satellites in the frequency range that they can reproduce cleanly.

Long-Play MiniDisc

Q *In some of the descriptions of MiniDisc recorders I've read, it's stated that they can record 74 minutes of stereo audio or 148 minutes of mono. Can such recorders record the longer time without interruption? Or must you record 74 minutes and then reset something to record 74 minutes more? And can such recordings be played back on all MD machines?*

TIMOTHY HENDEL
Huntsville, AL

A On those machines that offer the feature, mono long-play recording (for lectures and such) can be done in a single pass without having to switch anything halfway through. The recordings will play only on machines that have the feature, however, not on all MD units.

Ceiling Speakers

Q *In the house I am having built, I plan to put two speakers in the ceiling of almost every room. Where should I place them to get the best sound?*

CHRISTOPHER R. FEDELE
North Massapequa, NY

A Permanently mounted speakers may pose problems because you can't move them if you change the position of the primary listening seat, or if you find after they're installed that they create standing waves that affect bass performance. On the other hand, they are appealing because they take up virtually no space and can be made almost invisible.

Because they have fewer room boundaries to interact with, the placement of ceiling-mounted speakers (and wall-mounted ones, too) is less critical than for speakers in box enclosures. As long as you mount the

ceiling speakers a reasonable distance from the side and back walls, at least the treble and midrange should behave themselves. If there is a problem with the bass, the only solution may be the addition of a boxed subwoofer, which can be placed wherever it smooths the low-frequency response.

Otherwise, you should decide before mounting the speakers where your main listening position is going to be, and make sure the speakers are equally distant from it so that you will get some sort of imaging. It would also probably be a good idea to place them reasonably close to the listening seat, rather than at the other end of the room, as the tweeters will be firing downward and you'll tend to lose a lot of treble if you are sitting too far off-axis. This is particularly true in a "dead" room with a lot of carpeting, heavy drapes, and overstuffed furniture to absorb high-frequency energy.

Vinyl Woes

Q *When I listen to some of my LPs, I hear feedback in the lower frequencies. With others, I hear a sort of scratchiness that occurs at all volume levels. I've experimented with moving my subwoofer, which normally lives behind my entertainment system, and I have cleaned my stylus, but nothing helps. Any suggestions?*

ROY L. CALVIN
Phoenix, AZ

A You seem to have two unrelated problems. In many setups, the combination of a vibration-sensitive transducer (the phono cartridge) and a large diaphragm (the LP) makes for a dandy microphone, especially at low frequencies. If the system produces a lot of bass (and, given the subwoofer, I assume yours does), and if the recording itself contains the right frequencies to excite resonances, acoustic feedback can result.

Replacing the mat on the turntable with one that supports only the playing area — not the edge or label — might help tame airborne vibrations, as might keeping the lid shut when playing, or using a disc clamp. Structure-borne vibrations can often be reduced by placing the turntable on an absorptive mat. Or you might find that simply backing off on the bass a bit solves the problem. If you really want the big boom, tape the record, making sure the speakers are playing low enough during the recording so that the feedback won't end up on the tape. Then you can listen to the recording as loud as you like without feedback.

The "scratchiness" you mention sounds like record damage, probably caused by mistracking sometime in the disc's past. If a stylus doesn't maintain good contact with a record's surface, it can bounce out and come crashing back in, breaking off bits of vinyl. It sounds terrible when it happens, and the damage is, unfortunately, permanent.

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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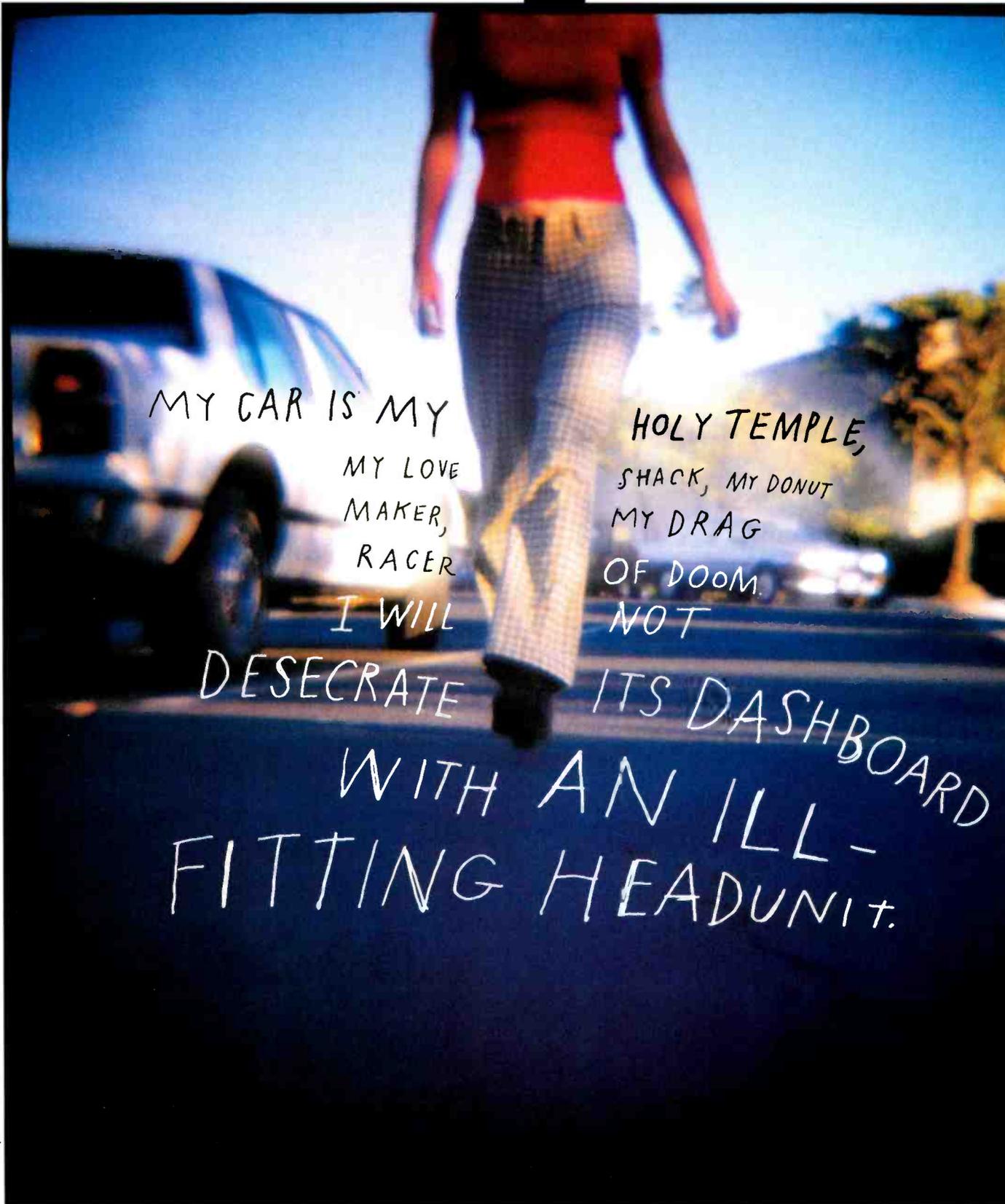
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SIGNALS

KEN C. POHLMANN

Procrustes' Bed

In Greek mythology, there was a rather unsavory character named Procrustes. He lived somewhere near Eleusis, and it was said that the god Poseidon was his father. Procrustes owned an inn near the road, and he extended his hospitality to travelers. He served them savory meals and invited them to sleep there, in a very special bed — a bed that would exactly fit whoever lay down in it. What he did not mention, until it was too late, was the exact operation of his adjustable bed. If the traveler was shorter than the bed, Procrustes stretched him to make him fit. If the traveler was longer than the bed, Procrustes chopped off his legs. In either case, when ill-fitting victims were dead, Procrustes robbed them and disposed of the bodies (in some versions of the story he ate his victims). Like most Greek myths, this one had a happy ending, or at least one that was fitting. The young hero Theseus, who spent his time killing monsters and catching thieves, and who would later slay the Minotaur, caught Procrustes in the act and adjusted him to fit his own bed.

Although the innkeeper Procrustes is long gone, the concept of his bed lives on. We still speak of a Procrustean bed as any arbitrary method that forces individuals to conform to an unnatural scheme. Unfortunately, Procrustean beds are all too common in modern society. For example, whether we're short or tall, we work at desks with a standard Procrustean height of 29 inches. Left-handed people everywhere struggle against a Procrustean system of right-handed scissors, doorknobs, and other implements. And any air traveler who's ever sat in coach class knows that airlines use a very short Procrustean spacing between seat rows.

Equally disturbing to me is the Procrustean attitude that pervades the world of audio. As I travel that world, I continually see otherwise free-spirited individuals positively enslaved by a host of audio dictates. They rearrange their living rooms (and sometimes wreck their marriages) so that their special listening chair (with a low back so that rear-wall reflections are not blocked) is precisely aligned in an isosceles triangle with the two main speakers, which are exactly toed in and spaced away from the wall at the manu-

facturer's recommended distance. In extreme cases, these wretches calibrate the entire arrangement using laser equipment they've borrowed from the local university's physics department, all in an effort to insure excellent sound quality.

Another all-too-common sight is receivers with their bass and treble tone controls rigidly set at 12 o'clock. Well-in-doctrinated listeners are afraid to touch those knobs because turning them would violate the sanctity of flat frequency response. Golden-eared audiophiles seem particularly indentured to audio rules. Vinyl enthusiasts, for example, seem to spend all their time ritually cleaning and recleaning their records, adjusting and readjusting their turntables, aligning their discs so that they are exactly parallel to the force of gravity, and so on. It's tragic.

Sadly, even professional engineers are

There are no rules in audio, only guidelines.

And you should feel free to depart from them any time you want to.

bound by audio rules they regard as inviolable. I was once asked to fine-tune the design of a new car's factory sound system in order to overcome some severe peaks and dips in the frequency response caused by phase cancellation. I discovered that if I reversed the polarity of one of the speakers, the cancellation was almost entirely removed: the system's frequency response measured almost flat, and it sounded absolutely great. However, the chief engineer was horrified. He protested that all speakers *must* be wired in phase. I pointed out that a phase reversal was simply a form of time alignment, but he would have nothing to do with it. He put the speaker back in phase, the horrible sound returned, and the car went into mass production.

Although a measure of engineering precision is certainly helpful when dealing with audio, it's important to remem-

ber that the sheer quantity of variables renders any fixed rules counterproductive. At best, so-called rules are simply points of departure. For example, unless your room and its furnishings are all symmetrical, an isosceles triangle probably isn't the best arrangement. You have to experiment to find the best listening position.

Likewise, although flat tone controls may yield a nominally flat output signal to the speakers, something entirely different reaches your ears thanks to the speakers' own response and the acoustical characteristics of your room. Even if you use a real-time analyzer to obtain a flat acoustical response at the listening position, you probably wouldn't want to listen that way. You see, as we grow older (and except for Tony Randall and Dick Clark, I have not found anyone growing younger) our hearing acuity inevitably dims. In particular, high-frequency response rolls off, and frequency notches may appear. Because the changes occur very slowly over many decades, we are usually not aware of the degradation. An acoustically flat response is useless if your ears have evolved their own hearing response. For best results, you'll want a decidedly *non-flat* response.

The point is this: There are no rules in audio, only guidelines. And you should feel free to depart from the guidelines any time you want to. Listening to music is one of the most intensely personal things you can do. You should set up your system any way you want it, and twist the knobs to your heart's content, regardless of the outcome, as long as it sounds good to *you*. Frankly, many audio rules are throwbacks to the past, when engineers struggled to make analog circuits behave as linearly and cleanly as possible. If they were ever lucky enough to approximate a flat frequency response, they immediately cautioned everyone to duplicate those settings exactly and then leave them alone. Today, with the advent of digital audio recording and processing, accomplishments like flat frequency response are trivial. And now that we've achieved flatness, we should feel free to deviate from flatness.

I certainly hope you wouldn't buy jeans labeled "one size fits all." And you wouldn't wear eyeglasses with a generic prescription (or generic frames). So you shouldn't listen to generic stereo systems, either. Go ahead — break free. Crank up the treble control if you want to, wear your headphones reversed if you feel like it, and sit closer to one speaker. Throw off all those deep, dark myths that conspire to harmonize healthy individual dissonance! As you start down that road of audio freedom, consider it the first step toward a new, liberated life, free of conformity. Travel freely in that world, live freely! And don't spend the night at Procrustes' Bed 'n' Breakfast. □

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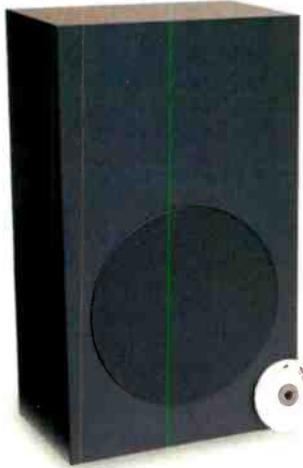
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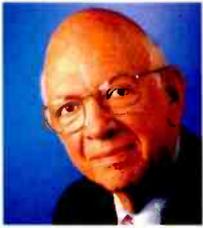
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TECHNICAL TALK

JULIAN HIRSCH

Comparing Speakers

One of the more rewarding aspects of my long association with STEREO REVIEW has been the feedback from readers. It has often (as in the present instance) been the inspiration for a column. After nearly four decades of "Technical Talk," it sometimes seems as though every possible subject has already been covered. But there are always new readers and new questions, or sometimes new readers with the *old* questions!

Sometimes, however, there are no answers to give. For example, the question may be phrased in an unanswerable form, something like "How high is up?" One reader actually asked me to recommend "the best-sounding" speaker at *any* price. He listed some twenty-odd categories of music he likes to listen to, including (with apologies to Dave Barry, I am *not* making this up!) "rock, pop, dance, blues, jazz, classical, country, rap, hip hop, r&b, reggae, metal, 1950s, 1960s, 1970s, and just about everything but alternative/punk" and said he listens at both soft and house-shaking levels. He asked for comparisons among more than thirty different speakers, priced up to \$30,000 and going back to the Klipschorn of the 1940s, few of which I had ever heard (and some I had never heard of).

Fortunately, most reader requests are more reasonable, and many have to do with some aspect of loudspeaker performance. In my view, the loudspeaker is unarguably the most critical and least definable part of an audio system. As I've said many times before, the performance of the active electrical components of a music system (tuner, amplifier, CD player) can be defined with reasonable confidence through various objective measurements, and in general it is many orders of magnitude superior to the distortions and spatial aberrations of even the finest speakers. But it is the speakers that, after considerable modification by the room environment, are the ultimate source of what we actually *hear*.

Wouldn't it be nice if we could *measure* the performance of a pair of speakers in a meaningful way? Of course, there are many aspects of a speaker that can be measured, but most of these involve the structure of the driver or enclosure and

have little or no *direct* relationship to the unique aspects of its normal output.

I assure you that I would like nothing better than to be able to measure the sonic performance of a speaker with the accuracy and validity that applies to electronic components. Thus far, however, speaker performance is the province of the human ear/brain combination, one of the most advanced acoustic-analysis systems (and computers) developed to date.

A letter from a reader raises a reasonable criticism of the current situation. He asks, "Doesn't your failure to give loudspeaker-accuracy results (for instance, the

**No verbal description of
a speaker's sound can tell
us as much as a few
minutes of listening to it.**

measured room response) over a consistent frequency range effectively prevent your readers from making useful comparisons among speakers? A frequency-response graph (with its procedure given) would solve this problem."

If it were only that simple! Our room-response measurements provide some of that information, though it is not published in graphic form. The trouble is that the curves would come out different in any other room, or even in different locations in the same room. Our room measurements do serve as a rough indicator of a speaker's response under very specific, unique conditions, and if there are any gross anomalies, they will turn up here. Their main value, though, is for comparing a speaker's response in a given, reasonably constant environment with that of any other speaker tested *under the same conditions*. The actual graphs are useful to me, since I have tested hundreds of speakers under essentially similar conditions, but they would be of little value to anyone else.

Other readers would like to know what a particular speaker sounds like. So do I, which is why I do a lot of listening using a variety of program sources. Although

many reviewers list the various amplifiers and other electronic components that are in their music systems, I consider this to be a waste of time and space. In almost every case, these make a negligible contribution to the final sound quality. As I see it, that is (or certainly should be) the goal of their designers, and it has been realized with remarkable success.

I understand why many people seek a verbal description of sound quality. After all, it is possible to describe verbally a component's shape, function, or color in terms that will be reasonably comprehensible to a reader who does not have the object in front of him. But sound is unique in the sense that (subjectively) it exists only in the listener's mind. Although we can measure the acoustic properties of a soundwave as it impinges on his ear, that cannot entirely account for what his brain does with that information. It seems to me, therefore, that in all probability no two people ever hear "the same thing," even when measurements show that the external sound fields are identical.

The point I am trying to make is that describing any sound as complex as music in unambiguous terms to someone who has not heard it is impossible. I would be the first to admit that no verbal descriptions of a speaker's sound tell us as much as a few minutes of listening to it. If that is the case, some general comments on tonal quality (muddy, bright, and so on) may well be the most practical way to convey some useful information about a speaker to someone who has never heard it for himself.

Letters from several readers remind me of another problem. The conventional advice to anyone shopping for a speaker system is to visit an audio dealer, if possible taking with you some favorite CDs for auditioning. A well-equipped dealer ought to have one or more sound-isolated demonstration rooms where speakers can be auditioned, but a couple of readers in different areas of the country have told me that their local dealers lack such facilities. In both cases the problem was aggravated by similar factors: inadequate sound isolation, inattentive sales personnel, and dominant public tastes that often ignore the classical-music listener.

Here I can only offer my heartfelt sympathy, since I almost never have to visit an audio dealer (a perk of the job). If it is any consolation, my experience suggests that loudspeakers as a class have already reached a level of sophistication that minimizes the risk of serious dissatisfaction, and they are still improving. You could probably buy any of a large number of speakers unheard without much risk of disappointment. Just don't consider such a purchase without an ironclad return guarantee — and before you make a final decision, listen to the speakers with *your* ears, in *your* room, with *your* music. □

Introducing MovieWorks.TM No-Compromise Home Theater Surround Sound Made Simple.



140 Watt, 12"
Powered Subwoofer

Dipole Radiator
Surround Speakers

Shielded, Two-Way
Main Speakers

Shielded, Low-Profile
Center Speaker

For many, many people, MovieWorks is the perfect home theater speaker system. It delivers incredible no-compromise performance that doesn't require disclaimers or apologies. We don't know of any other system in its price range that approaches its performance.

What Is MovieWorks?

MovieWorks is a set of carefully matched speakers – including a powered subwoofer – for Dolby Pro Logic[®] or Dolby Digital[®] (AC3) surround sound systems. Each speaker is designed to accurately reproduce music and movie soundtracks with outstanding realism.

Main Speakers.

The left and right speakers in MovieWorks use a two-way, shielded design. They are acoustically similar to the satellite speakers in our acclaimed Ensemble[®] speaker system, which Audio magazine called "the best value in the world."

The Center Speaker.

The center speaker is a wide-dispersion, high-output shielded design with two 3 1/2" midrange drivers and a tweeter identical to that in the main speakers. Its low profile makes it ideal for use above or below a TV monitor.

The Surround Speakers.

For the rear channel, we chose an acoustically matched dipole radiator speaker. Each speaker has two high-frequency drivers – one facing forward, one to the rear. They send out-of-phase signals to the front and rear of the room, where they reflect off walls, "surrounding" the listener. We feel dipole speakers are ideal for home theater – including Dolby Pro Logic and Dolby Digital (AC3) systems.

"The Cambridge SoundWorks dipole surround speaker sounded absolutely great. These will stay on my surround speaker shelves for a long time."

Home Theater magazine-3/96

The Powered Subwoofer.

For bass reproduction, we chose an amazing powered subwoofer. It uses a 12" woofer with a 140-watt amplifier for outstanding bass in music and soundtracks. Sound & Image says it's, "a winner, pounding out first-rate 108 SPL...a knockout."

Satisfaction Guaranteed.

At \$1,299, we think MovieWorks is the ideal home theater sound system for people who aren't willing to compromise on performance.

Try MovieWorks in your own home, with your favorite music and movies. If within 30 days you decide you don't love it, send it back for a full refund.

"Cambridge SoundWorks' Powered Subwoofer was clearly the best subwoofer of the pack...it blew them away on dynamics."

Stereo Review-9/96

HOW DOES *MovieWorks* COMPARE TO THE COMPETITION?

	DIPOLE SURROUND SPEAKER?	WOOFER SIZE	SUBWOOFER POWER	PRICE
CAMBRIDGE SOUNDWORKS	YES	12"	140 WATTS	\$1,299
BOSTON ACOUSTICS (MICRO 90, 90C, VRS MICRO)	YES	8"	75 WATTS	\$1,199
PCLK (RM7300)	NO	10"	125 WATTS	\$1,499
M&K S-85)	NO	12"	75 WATTS	\$2,365

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has time to stop and change CDs in



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Onkyo TX-DS939 Dolby Digital/THX A/V Receiver

DAVID RANADA • TECHNICAL EDITOR

Besides being the most expensive A/V receiver we have ever tested, the Onkyo TX-DS939 is also probably the best equipped receiver for delivering the full home-theater potential of surround-sound material, especially laserdiscs and DVDs with Dolby Digital (AC-3) soundtracks. Not only does it provide full Dolby Digital decoding and digital Dolby Pro Logic processing, it also incorporates such Home THX enhancements as re-equalization, surround-speaker equalization, and automatically switched surround decorrelation — enhancements that were designed by Lucasfilm to improve a home theater's sonic match with a movie studio's soundstage.

In addition to these "basic" decoding functions, the receiver's digital signal processing (DSP) circuitry provides ambience enhancement by generating artificial reflections that are fed through a system's five main speakers. For soundtracks the ambience modes are labeled Action, Drama, and Musi-

cal. For other material, primarily music, the modes are Concert Hall, Live, Night Club, Discotheque, Church, Stadium, Arena, and Open Air. All of these modes have several adjustable parameters for more precise ambience customization (such as hall size and shape, effect level, and reverb time and level). The digital circuitry is also employed to perform the functions of bass and treble tone controls as well as a mid-bass control that acts like a graphic-equalizer band centered at 180 Hz.

As technically advanced as all these functions may be, they hold less fascination than the TX-DS939's ability to

adjust speaker balances automatically, a process that otherwise requires a sound-level meter to perform accurately and that is crucial for the most theater-like playback of surround material. The receiver comes with a microphone that plugs into a front-panel jack via a long cord. You place the mike at ear level at the listening position, activate the start button in the appropriate on-screen menu using the remote control, wait while the TX-DS939 emits test tones through all five main speakers and any connected subwoofer, and you're done — in about a minute and a half! More on this later.

A uniquely styled stand-up programmable remote is supplied. It is used to control the very useful on-screen display (which uses a surprisingly cheap-looking typeface, however). Unless you're really good at memorizing sequences of remote-control button pushing, some receiver functions (like the surround-mode controls) will be accessible only if you use the on-screen menu, which means that the TV will have to be on even when you're just listening to music.

Input facilities are luxurious: there are seven (!) video-source connections, including three for VCRs, two for laserdisc or DVD players, and a front-panel A/V input. Audio connections are provided for a turntable, two ana-

DIMENSIONS: 17½ inches wide, 7¾ inches high, 18 inches deep

WEIGHT: 46½ pounds

PRICE: \$2,800

MANUFACTURER: Onkyo U.S.A. Corp., Dept. SR 200 Williams Dr., Ramsey, NJ 07446; telephone, 201-825-7950

TEST REPORTS

log tape recorders, and a CD player. Three digital audio connectors, two optical and one coaxial, are on the rear panel, and these can be assigned to various sources. All three accept Dolby Digital signals. There's also an AC-3 RF connector that accepts Dolby Digital signals from a recent-model laserdisc player (there's an internal demodulator).

The remaining rear-panel facilities are also unusually sumptuous. Multi-way binding posts are used for the speaker connections, all of which are doubled for driving two separate surround setups. There are also two parallel-driven line-level subwoofer outputs that feed signals from the receiver's extensive bass-management circuitry, which redirects low frequencies away from speakers that can't reproduce loud, deep bass to those that can. All A/V sources have connections for both composite-video and S-video signals. All speaker outputs are also available as line-level signals for feeding external power amplifiers "so you can play sources at even higher volume levels," according to the manual. As you'll see, it's a rare situation that will require such assistance.

Almost every entry in our panel of laboratory measurements (page 44) shows good to superior performance. Even the tuner measured slightly better than average overall. Note the very ample power outputs, especially in multichannel playback, which exceed not only the receiver's ratings but also the very stringent THX design criteria. At 147 watts per channel, all channels driven, during Dolby Digital operation, the TX-DS939 generated in-room peaks of greater than 109 dB sound-pressure level (SPL) for short durations without audible amp distortion using speakers of typical sensitivity (87 dB SPL at 1 watt). That is damn loud. With typical loudspeakers and using digital inputs, you won't have to worry about sending the amplifiers into clipping as long as you set the volume no higher than -2, which produces very loud levels. Also exceptional were the results of our stereo linearity test and the 16-bit excess-noise measurements. The latter show that the receiver adds very little noise to the signal when its digital inputs are used.

We checked the results of the TX-DS939's automatic speaker-balancing procedure against sound-level measurements made with our lab microphone and found that with a variety of



speakers it produced results that were within ± 0.5 dB of perfect. This is as good as can be expected given the 1-dB resolution of the receiver's channel-level adjustment steps. The subwoofer consistently came out balanced 3 to 4 dB too high for flattest overall response, even with a full THX speaker system. We attribute this discrepancy to interactions between the receiver's test-tone frequencies, the speakers' frequency responses, and our listening room's acoustics. However, the subwoofer balance was within 1 dB of what we obtained from balancing the speakers manually using the built-in test tones and a sound-level meter. If possible, the setup procedure should be performed with the measurement microphone placed as close as possible to where the listener's ears will be. Do *not* simply put it on the chair; tape it to a propped-up yardstick to get it close to your seated-ear height. The process will also bomb out if the initial subwoofer level is set too low for the receiver to compensate.

The speaker-distance-compensation portion of the auto-setup procedure, which calculates the correct delay time for each channel, was accurate to within 1 foot of the actual speaker distances, the best that can be done given the receiver's 1-foot distance increments. The vagaries of speaker positioning and room acoustics make it possible for the speaker-distance pro-

cedure to get things quite wrong, but it is easy to call up the relevant on-screen menu and set the actual distances manually (measure from where your ears are and round off the measurement to the nearest foot). On the whole, the TX-DS939's automation will get you within shooting distance of an ideal setup. It's certainly far better than balancing by ear (without a level meter). In most rooms, obtaining a better overall frequency balance will probably require the use of some equalization and the assistance of professional installers.

Once everything was set up in our listening room, the TX-DS939 proved to be as solid in performance as it seems to be in construction. The thing weighs so much you'd think it was armor-plated, but that weight is concentrated in the massive toroidal power transformer. And there's a nice feel to the volume-control knob even though it only controls a digital attenuator. I was pleased to find that the noise from the cooling fan, which turns on when any channel has to deliver more than 1 watt, was always masked by the program material.

The receiver's power reserves proved more than adequate for the stringent demands of playing music at live levels (within reason) and soundtracks at full theatrical levels, especially when we added a subwoofer. Dolby Digital decoding of action-movie spectacles (such as the *Batman* series) especially benefited from the seeming inexhaustibility of the TX-DS939's amplifier section. With older soundtracks the all-digital Dolby Pro Logic decoding sounded very clean thanks to its low noise and very low distortion. Surround imaging was extremely good up front, a consequence of the speaker-distance compensation.

If anything, the various DSP ambience modes for both music and soundtracks seemed too laid-back, although that was a very pleasant change from the usual receiver default settings, which tend to be too spacy in effect. It is possible to make the Onkyo's processing sound awful, too, but it usually required turning all of a mode's settings full-up. The ambience processing was particularly respectful of programs containing musical vocals or speaking voices. Voice intelligibility was preserved in the DSP video soundtrack modes, a rare outcome. The music modes' artificial echoes emerge principally from the center and surround speakers, leaving the imaging

“...by a wide and clearly audible margin, the Micro90t is the best small-satellite home theater speaker system I have ever reviewed.”

—David Ranada, *Stereo Review*, February 1997

Boston Acoustics Home Theater Options

Micro Reference

Big theater sound from small, sculpted satellites.

Compact Reference

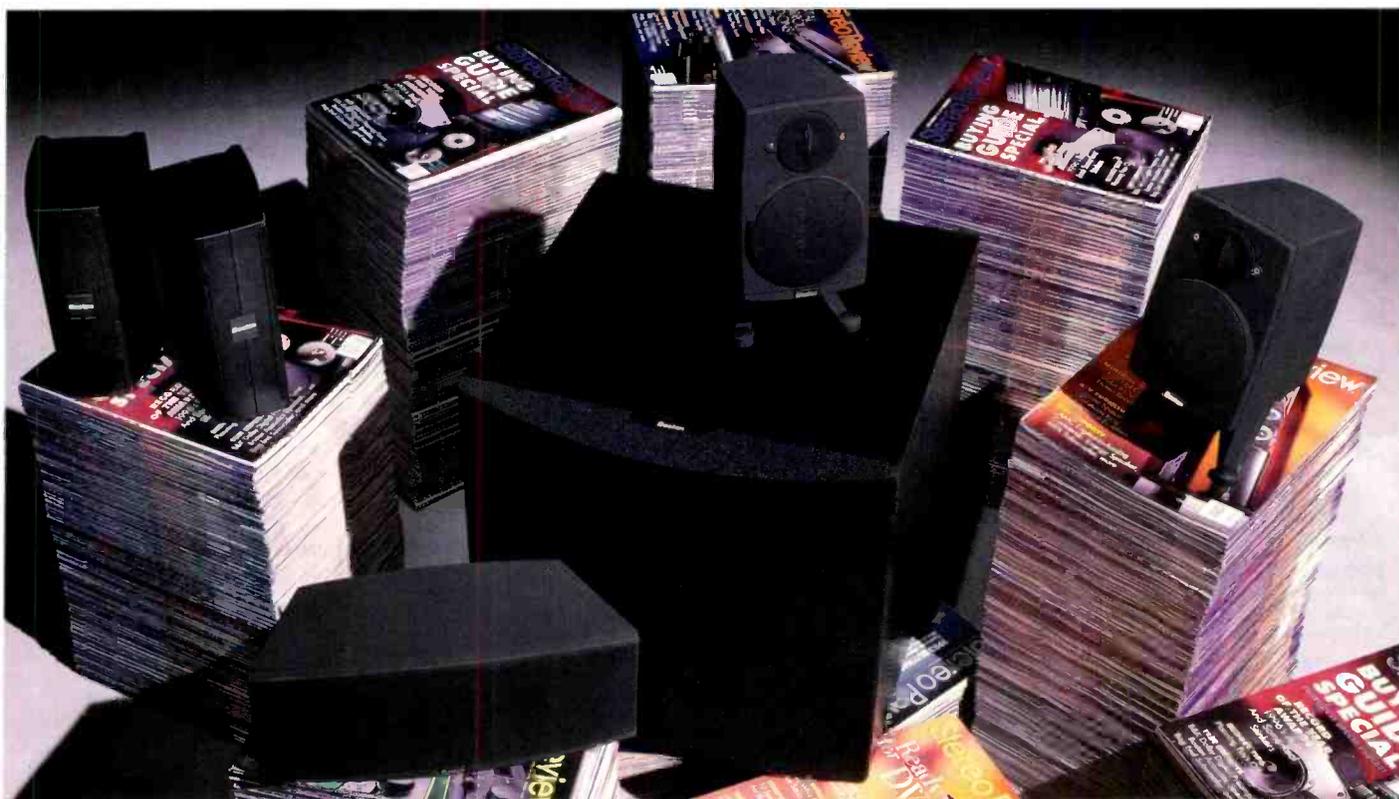
Incredible sound from compact speakers.

Lynnfield VR™

Audiophile sound with the full impact of Dolby® Digital.

Boston Acoustics THX®

Dubbing-studio-quality sound.



The experts at *Stereo Review* listen to literally hundreds of home theater speakers each year. So it stands to reason that the Micro90t must be pretty special to warrant such praise.

The reason for this enthusiasm? Good old-fashioned engineering know-how.

Take the Micro90 satellites, for example. They feature a die-cast aluminum housing of incredible strength and rigidity. So the drivers' energy is projected as pure, clean acoustic output instead of being wasted as cabinet vibration. The result: a satellite that can fit in the palm of your hand, and still fill a room with astonishing sound.

Its anodized aluminum tweeter with AMD handles lots of power, yet reproduces highs with virtually zero distortion. And its swivel-mount pedestals make for simple shelf or wall mounting. The Micro90 powered subwoofer, with its clean 75-watt amp and 8-inch DCD™ bass unit, produces ample amounts of deep, tight, powerful bass.

Add the tonally matched Micro90 center channel and either direct or diffuse-field surrounds and you've got a system that beats all other satellite home theaters "by a wide and clearly audible margin." You can test-listen the Micro90t at your local Boston dealer. But rest assured, you won't be the first to listen with a critical ear.



This Micro90t home theater system includes: Two Micro90 satellites, sonically matched center channel, powered subwoofer, and a pair of VRS Micro diffuse-field surrounds (available separately).

Boston Acoustics

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TEST REPORTS

and distance qualities determined by the original recording, which emerges relatively unscathed from the front left and right speakers. This prevents excessive spacyness, but it also inhibits the creation of the kind of completely enveloping spatial effect produced by the best ambience processing, the kind provided by, say, the \$4,500 Lexicon DC-1 A/V preamplifier.

For all the basic receiver functions (input switching, volume adjustment, and so on), the TX-DS939 was easy to use. I not only liked the shape, feel, and organization of the remote control — I also liked being able to access nearly all of its functions from the front panel as well. For more advanced users, however, the sequential selection

of ambience-processing modes and the couple of seconds of muting that accompanies each mode change make it difficult to compare modes or processed vs. unprocessed sound. It would enhance the ambience modes and benefit users with unusual setup situations if there was some provision for changing speaker balances individually while playing an external signal (the receiver's test tone must be on to change balances). And subwoofer setup (by a professional) could be improved if the receiver allowed the installer to play external test tones while changing the speaker-distance settings.

As my mention above of the Lexicon DC-1 suggests, the chief competition for the Onkyo TX-DS939 is not

other receivers, for at present no other A/V receiver we're aware of is clearly superior. It may not even have any peers. Its true competition comes from A/V systems composed of high-end separates. But you'd have to choose those separate components extremely carefully in order to get the Dolby Digital, power-amplifier, ambience-processing, bass-management, learning-remote-control, on-screen-display, and auto-setup capabilities that Onkyo has managed to fit into the TX-DS939. You would undoubtedly end up with a system that costs more than this Onkyo receiver — and you'd still have to connect everything! In comparison, even at \$2,800 the TX-DS939 looks like a bargain. □

MEASUREMENTS

DOLBY DIGITAL (AC-3) PERFORMANCE

All data obtained with Dolby Digital signals from Dolby Labs' AC-3 test DVD using "small" speaker settings. Except for maximum output-power measurements, the volume control was set to produce 2.83 volts into 8 ohms from a -20-dBFS* signal. Maximum outputs were determined with the volume at its highest step below clipping with 0-dBFS* input signals. All inputs were dithered (which sets limits on noise and distortion performance).

OUTPUT AT CLIPPING

(per channel, at 1 kHz, into 8 ohms)
 one channel driven approx. 186 watts
 all channels driven (10 seconds) 147 watts

DISTORTION (THD+N, 1 watt, 1 kHz)

worst case 0.047%

LINEARITY ERROR (worst case)

at -90 dBFS* -0.42 dB

NOISE (A-wtd)

worst case -73.2 dB

EXCESS NOISE (worst case, with signal)

16-bit (EN16) +4.1 dB
 18-bit +13.8 dB

FREQUENCY RESPONSE (20 Hz to 20 kHz)

worst case +0, -0.14 dB

SUBWOOFER OUTPUT FREQUENCY RESPONSE

24 dB/octave rolloff above -6-dB point at 84 Hz

HIGH-PASS FILTER FREQUENCY RESPONSES

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

MAXIMUM SUBWOOFER OUTPUT

(peak-limiting off) 7.8 volts

SUBWOOFER OUTPUT DISTORTION

worst-case signal 3%

THX RE-EQUALIZATION ERROR

<0.5 dB

THX SURROUND-EQ ERROR

<0.5 dB

* dBFS = decibels referred to digital full-scale

DOLBY PRO LOGIC PERFORMANCE

Except where noted, all data obtained with digital input signals. Other test conditions same as for Dolby Digital.

FREQUENCY RESPONSE

front 20 Hz to 20 kHz +0.01, -0.03 dB
 center 20 Hz to 20 kHz +0.01, -0.23 dB
 surround 20 Hz to 6.8 kHz +0.03, -3.0 dB

NOISE (A-wtd)

worst case -68.4 dB

DISTORTION (THD+N, 1 kHz)

worst case 0.058%

SURROUND-CHANNEL NOISE-REDUCTION CALIBRATION ERROR

re THX level (-23.01 dBFS*) -1.75 dB

SURROUND-DECODER INPUT-OVERLOAD MARGINS (analog inputs, at 1 kHz)

front (re 2-volt input) +0.7 dB
 center (re 1.4-volt input) +3.8 dB
 surround (re 1.4-volt input) +3.8 dB

* dBFS = decibels referred to digital full-scale

STEREO PERFORMANCE, DIGITAL INPUTS

Same test conditions as above.

OUTPUT AT CLIPPING (at 1 kHz)

8 ohms 176 watts
 4 ohms 274 watts

CLIPPING HEADROOM (re 120-watt rating)

8 ohms 1.5 dB

DYNAMIC POWER

8 ohms 205 watts

DYNAMIC HEADROOM (re 120-watt rating)

8 ohms 2.15 dB

DISTORTION (8 ohms, 1 kHz)

at rated power (120 watts) 0.032%
 at 1 watt 0.051%

LINEARITY ERROR

at -90 dBFS* -0.15 dB

NOISE (re 1-watt output with -20-dBFS* input)
 A-wtd, de-emphasis off/on -73.4/-75.6 dB

EXCESS NOISE (without/with signal)

16-bit (EN16) +2.15/+2.35 dB
 quasi-20-bit (EN20) +16.9/+16.6 dB

TONE-CONTROL RANGE

bass control, 100 Hz +8.74, -8.79 dB
 mid-bass control, 280 Hz +9.15, -9.19 dB
 treble control, 10 kHz +8.54, -8.61 dB

FREQUENCY RESPONSE

de-emphasis off 20 Hz to 20 kHz +0, -0.18 dB
 de-emphasis on 20 Hz to 20 kHz +0, -1.08 dB

* dBFS = decibels referred to digital full-scale

STEREO PERFORMANCE, ANALOG INPUTS

SENSITIVITY (for 1-watt output)

CD 13.54 mV
 phono 0.4 mV

INPUT-OVERLOAD LEVEL (re 2-volt input)

CD 1.6 dB

NOISE (re 1-watt output, A-wtd)

CD (500-mV input) -76.8 dB
 phono (5-mV input) -76.9 dB

RIAA PHONO-EQUALIZATION ERROR

(20 Hz to 20 kHz) +0.53, -0.1 dB

ANALOG-INPUT FREQUENCY RESPONSE

20 Hz to 20 kHz +0.01, -0.09 dB

TUNER SECTION

All figures for FM except frequency response.

SENSITIVITY (50-dB quieting)

mono 16 dBf
 stereo 35 dBf

NOISE (at 65 dBf)

mono -76 dB
 stereo -70 dB

DISTORTION (THD+N at 65 dBf)

mono 0.14%
 stereo 0.19%

CAPTURE RATIO (at 65 dBf)

1.5 dB

AM REJECTION

66 dB

SELECTIVITY

alternate-channel 66 dB
 adjacent-channel 14 dB

PILOT-CARRIER LEAKAGE

19/38 kHz -74/-70 dB

CHANNEL SEPARATION

1 kHz 51 dB

FREQUENCY RESPONSE

FM 30 Hz to 15 kHz +1.5, -0 dB
 AM 100 Hz to 2.3 kHz +1, -6 dB

Ace Ventura, Aladdin, Night of the Living Dead. This is serious stuff.

Micro Reference Series

Big theater sound from small, sculpted satellites.

▶ **Compact Reference Series**

Incredible sound from compact speakers.

Lynnfield VR Series

Audiophile sound with the full impact of Dolby® Digital.

Boston Acoustics THX® System

Dubbing studio quality sound.



**THE BOSTON CR HOME THEATER PACKAGE.
A SERIOUS SYSTEM FOR \$999.**

If you take your movies seriously, this is for you: the Compact Reference Home Theater Package. It features our much-touted CR7 main speakers. They impressed *Audio* magazine enough to call them "Great Performers." Plus, they said, "[The CR7's] sound is smooth and well balanced, and their bass competes with that of larger speakers." In the center: the CR1 center channel. Its tweeter is identical to the CR7's, and both speakers' bass units are tonally matched. So left/right pans are seamless, tonal balance is smooth and dispersion is broad. For surrounds, choose between our compact, flexible CR6 monitor with swivel-mount bracket or our award-winning CRX diffuse-field surround. Finally, there's the newest CR family addition: the CR400 powered subwoofer. It's a serious subwoofer in a compact package. The CR400's 75-watt amp and 8-inch DCD bass unit produce remarkable bass effects down to 35Hz (-3dB). And it offers volume control, a variable crossover and a polarity switch—features you'd only expect to find in larger, more expensive subs. Test-listen the CR Home Theater Package at your local Boston dealer. You won't hear anything else like it. Seriously.



Our \$999 CR Home Theater Package includes: a pair of CR7 mains, a CR1 center channel speaker, CR6 surrounds with brackets and a CR400 powered subwoofer.

Boston Acoustics

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M&K Bookshelf-75 Speaker

JULIAN HIRSCH • HIRSCH-HOUCK LABORATORIES

Miller & Kreisel Sound Corporation (M&K) has a well-established reputation as a manufacturer of high-quality loudspeakers for serious audiophiles. Like the high-fidelity industry as a whole, the M&K product line has expanded considerably in recent years to meet the demands of the growing home-theater market.

Traditionally, most M&K speakers have been priced well above the range of more popular, broader-market audio components. However, the rapid growth of home theater has spurred the development of affordable, high-quality components for that application, such as the Bookshelf-75.

The Bookshelf-75 is a two-way speaker that can be used for either the left/right front or surround channels in a music or home-theater installation. The companion Center-75 speaker is designed to be acoustically compatible with the Bookshelf-75 in a home-theater setting, as are several of M&K's powered subwoofers.

As its name suggests, the Bookshelf-75 is a compact speaker. It has a nominal 6½-inch woofer (actual effective diameter is 5 inches) and a 1-inch soft-dome tweeter, the same that is used in M&K's more expensive speakers. There is a port on the speaker's front panel, but it comes blocked by a removable plastic-foam plug.

With the plug left in place, the Bookshelf-75 effectively operates as a sealed (nonvented) system, and M&K says that in this mode the speaker will deliver the best transient response, tightest mid-bass, and flattest overall frequency response. It is the recommended operating mode for systems that include a subwoofer. When the plug is removed, the speaker operates as a vented system, adding about 2 dB more output in the range around 80 Hz. This mode is suggested for systems without a subwoofer. Nevertheless, the manual suggests experimenting with the plug, which can be removed or inserted as often as desired, to obtain the best overall sound.

To insure compatibility with home-theater video components, the Bookshelf-75 is magnetically shielded. Additional installation flexibility is provided by a threaded insert on the back of the cabinet that can be used with an optional OmniMount 53-RST bracket

DIMENSIONS: 14¼ inches high, 8¾ inches wide, 9 inches deep (including grille)

WEIGHT: 15¾ pounds

FINISH: black ash woodgrain vinyl

PRICE: \$450 a pair

MANUFACTURER: M&K Sound, Dept. SR, 10391 Jefferson Blvd., Culver City, CA 90232; telephone, 310-204-2854

(\$80 a pair) for mounting the speakers on a wall or on M&K LDM series stands (\$250 a pair).

The cabinet exterior, including the front panel, is finished in black ash woodgrain vinyl. The curved black metal grille is easily unsnapped for access to the drivers or the removable vent plug. Despite the speaker's relatively light weight, our knuckle-rap test suggested that its construction is exceptionally rigid.

The Bookshelf-75 has a rated impedance of 4 ohms and is recommended for use with amplifiers rated between 50 and 200 watts output. Although the sensitivity rating was not stated in the otherwise comprehensive installation and operation manual, we measured the sensitivity as 89 dB sound-pressure level at 1 meter, a typical figure for this category of speaker.

We measured the impedance with the vent plug both inserted and removed. With the plug in place, the maximum impedance was just over 13 ohms at 75 Hz, reaching the rated minimum of 4 ohms between 150 and 300 Hz and returning to the vicinity of 5 or 6 ohms at the lowest audio frequencies. The impedance rose at higher frequencies into the range of 7.5 to 9 ohms between 1.5 and 20 kHz. This combination of moderate impedance characteristics and good sensitivity indicates that the Bookshelf-75 can easily be driven by any properly functioning amplifier.

With the plug removed, the most significant impedance change was the characteristic double-humped curve of a vented speaker, with the single bass resonance replaced by two peaks, 16.5 ohms at 28 Hz and 13 ohms at about 100 Hz. The rest of the impedance curve was unaffected.

The corresponding acoustic effects were equally distinct, though perhaps not as obvious as the impedance changes. With the plug inserted, the close-miked woofer response was ±3 dB between 55 Hz and 200 Hz. Removing the plug slightly increased the output below 100 Hz, which confirmed the manufacturer's statement that the principal effect of the vent is to add a couple of decibels of output in the mid-bass region around 80 Hz.

When the system is used with a subwoofer, however, the manufacturer strongly urges that the Bookshelf-75's plug be left in to provide the smoothest transition between the bass and middle frequencies, and our measurements confirmed that, too. The aver-

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aged room response of the left and right speakers, with their vent plugs in, was very smooth, with a ± 2 -dB variation over the range of 100 Hz to 15 kHz, although the typical response above 2 kHz was 2 or 3 dB less than at lower frequencies. The room response dropped about 15 dB between 10 and 20 kHz, presumably because of absorption by the room surfaces and furnishings (that effect is typical for this measurement).

The horizontal dispersion was also typical of systems using 1-inch tweeters, with less than 2.5 dB total variation in output up to 8 kHz over a ± 45 -degree horizontal arc. Above 8 kHz the on-axis response increased by 4 dB up to 20 kHz, while the off-axis response fell off steeply above 10 kHz, to about -15 dB. It is important to note that this behavior is quite typical of virtually every conventional (forward-facing) speaker we have tested, even though the response deviations might seem large compared with, say, typical amplifier measurements.

Our MLS quasi-anechoic frequency-response measurement, which minimizes the effect of room boundaries, was made at distances of 1, 2, and 3 meters on the forward axis of the speaker. These tests showed an overall response variation of less than ± 4 dB from the lower measurement limit (300 Hz) up to 20 kHz.

These and other measurements can serve to verify the qualities of a speaker, but it is surprisingly difficult to evaluate the sound of a speaker from any (or all) measurements. As always, the ultimate proof is in the listening. Although there is little in its appear-

ance, size, price, or driver complement to distinguish the Bookshelf-75 from a number of comparable systems we have used and tested, like every other speaker it has a character of its own, which can only be appreciated by listening to it. What I can tell you, without hesitation, is that this M&K speaker fully lived up to its pedigree. Not

M&K recommends that the Bookshelf-75 speaker's plastic-foam vent plug be removed for use in systems with a subwoofer.

often do we encounter an unassuming and affordable product whose performance belies its price and modest exterior as unequivocally as this one.

It became obvious after only a short period of listening that the speaker's components (specifically, its drivers and crossover) were thoroughly optimized in the development process. With most program material whose low-frequency content was above 50 Hz or so, the Bookshelf-75 held its own against far costlier speaker systems we had on hand for comparison.

In a marketplace presently blessed with a number of excellent small speakers, don't be misled by the plain Jane appearance of the M&K Bookshelf-75. If you're shopping for speakers in the under-\$500 range, be sure to consider a pair of Bookshelf-75s. □



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RALPH MASULLO

Cerwin-Vega HT-S15 Powered Subwoofer

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When it comes to performance, there are basically two kinds of subwoofers: those that go way down with some sacrifice in output, and those that trade deep-bass extension for maximal output. Cerwin-Vega's HT-S15 powered subwoofer is from the school of maximal output.

A relatively big sub that occupies 2 1/3 square feet of floor space, 4 cubic feet of volume, and weighs 48 pounds, the HT-S15 sports a 15-inch paper-cone driver with a rugged die-cast aluminum frame. The woofer fires from the bottom of the enclosure, which is elevated a couple of inches off the floor by four rubber-tipped feet. The speaker is driven by an internal power amplifier rated to deliver 200 watts maximum, and it has an electronic low-pass crossover that is continuously variable from 50 to 150 Hz, with a nominal 18-dB-per-octave rolloff.

The HT-S15 also contains a "sub-sonic" filter, which is said to limit its output below 30 Hz at the rate of 18 dB per octave. Such high-pass filters are common in subwoofers and keep the speaker from self-destructing at

very low frequencies with high output levels.

All of the HT-S15's connectors and controls are located in the top left corner of the rear panel, next to the amplifier's heat sink and above one of two 3 7/8-inch-diameter ports. There is a volume-control knob, a calibrated crossover-control knob, a phase switch, an auto/on/off power switch (which when set to auto will activate the sub whenever an audio signal is present at its inputs), speaker-level inputs and outputs, line-level RCA-jack inputs and outputs, and a 5-foot power cord.

The volume and crossover controls are of the click-stop variety, which makes it very easy to duplicate previous settings — just count the clicks.

DIMENSIONS: 20 5/8 inches high, 18 1/2 inches wide, 18 1/2 inches deep

WEIGHT: 48 pounds

FINISH: black woodgrain vinyl

PRICE: \$799

MANUFACTURER: Cerwin-Vega, Dept. SR, 555 East Easy St., Simi Valley, CA 93065-1805; telephone, 805-584-9332

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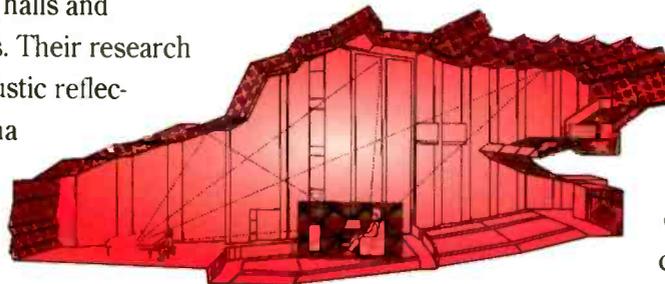
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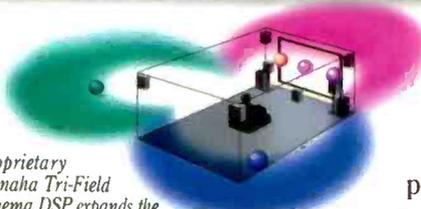


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JOCK P. LEUNG

Tannoy Mercury m2 Speaker

JULIAN HIRSCH • HIRSCH-HOUCK LABORATORIES

Tannoy is one of the oldest companies in the audio industry, with over seventy years of experience in the design and manufacture of loudspeakers. Through its long history the Tannoy name has been associated with virtually every category of loudspeaker application.

In the last few years, Tannoy speakers marketed in the United States have been principally upmarket models, priced from several hundred to several thousand dollars a pair; the Westminster Royal carries a staggering \$30,000 price tag! Recently, however, the company introduced the Mercury series of speakers, which are considerably more affordable.

The Mercury speakers look quite similar to any number of other compact, inexpensive speakers. Currently there are four models. The two smallest, the m1 and m2, are two-way systems with small cone woofers and 1-inch dome tweeters operating in rear-vented enclosures. Differing slightly in their dimensions and driver characteristics, they are both designed to be mounted on stands or shelves. The largest model, the m3, is a floor-standing columnar speaker with a slightly larger woofer and a front-vented en-

closure. There is also a center-channel speaker, the Mercury mc, for home-theater installations.

The Mercury m2, the subject of this report, has a woofer that the manufacturer describes as 160 millimeters in diameter, although we measured its effective diameter as just over 5 inches, or 130 mm. Nevertheless, the compliant suspension of its paper cone allows a considerable excursion for a driver of its size. The m2 has a rated bandwidth of 48 Hz to 20 kHz and is recommended for use with amplifiers rated for 10 to 80 watts per channel.

The front panel of the cabinet is normally fully covered by a black cloth snap-on grille. Removing the grille reveals the drivers, with the soft-dome tweeter above the woofer. On

the rear of the cabinet are the woofer port and insulated binding-post terminals. Although our test speakers were fitted with binding posts for the European market, which do not accept dual banana plugs, Tannoy says that those sold in the United States and Canada are fitted with standard five-way binding posts that *will* accept dual plugs.

We measured the room response of the two speakers, mounted on 18-inch stands 8 feet apart and 3 feet in front of the wall behind them, with the microphone located at a point 12 feet in front of the left speaker, at the height of its tweeter. The output of the microphone was smoothed and averaged separately for each of the speakers, and the two curves were plotted on the same graph coordinates.

The resulting averaged room-response curve was a very good ± 2.5 dB from 45 Hz to 10 kHz, falling off above 10 kHz to about -8 dB at 20 kHz. We measured the horizontal directivity 1 foot from the tweeter, at angles of 45 degrees to either side, and averaged the two measurements. The off-axis curves were generally quite similar to the high-frequency rolloff of the room-response measurement.

Quasi-anechoic MLS frequency-response measurements at distances of 1, 2, and 3 meters confirmed the excellent dispersion and range of the speaker's frequency response. Except for some irregularity at 9 kHz, which appears in all speakers we measure in this way and is obviously a measurement artifact, the speaker's response was within ± 3 dB over the full measurement range of 300 Hz to 20 kHz.

The close-miked woofer response was measured using two microphones placed close to the woofer cone and its port, respectively, and the two outputs were summed in proportion to their respective areas. The resulting bass response curve was consistent with what we heard from the speakers, fully confirming the manufacturer's ratings, which actually turned out to be quite conservative. The combined bass response from the cone and port varied less than ± 0.5 dB from 100 Hz to 40 Hz and rolled off at 12 dB per octave below 40 Hz. This is impressive performance for a single small driver in a box of this size. Obviously, the output below 40 Hz falls off rapidly, and the Mercury m2 cannot generate room-filling sound at those frequencies, but it acquires itself admirably.

The m2 has a rated impedance of 8 ohms and a sensitivity of 88 dB sound-

DIMENSIONS: 15 inches high, 8 inches wide, 10 $\frac{3}{4}$ inches deep (including grille)

WEIGHT: 13 $\frac{3}{4}$ pounds

FINISH: black, with cherry or gray bird's-eye vinyl front panel

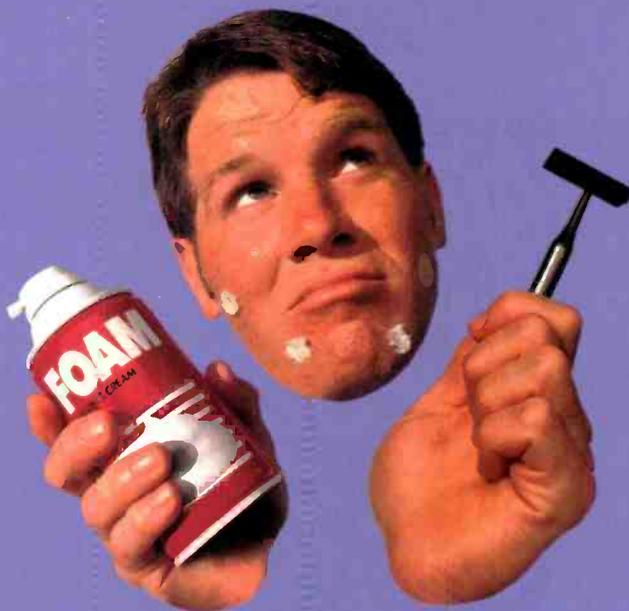
PRICE: \$350 a pair

MANUFACTURER: Tannoy, Dept. SR, 300 Gage Ave., Unit 1, Kitchener, Ontario N2M 2C8; telephone, 519-745-1158



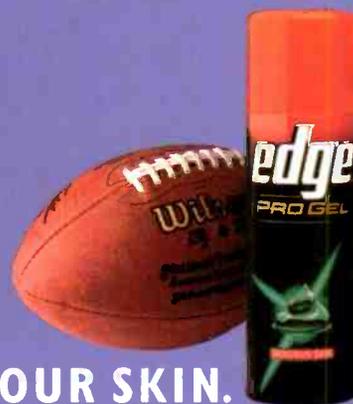
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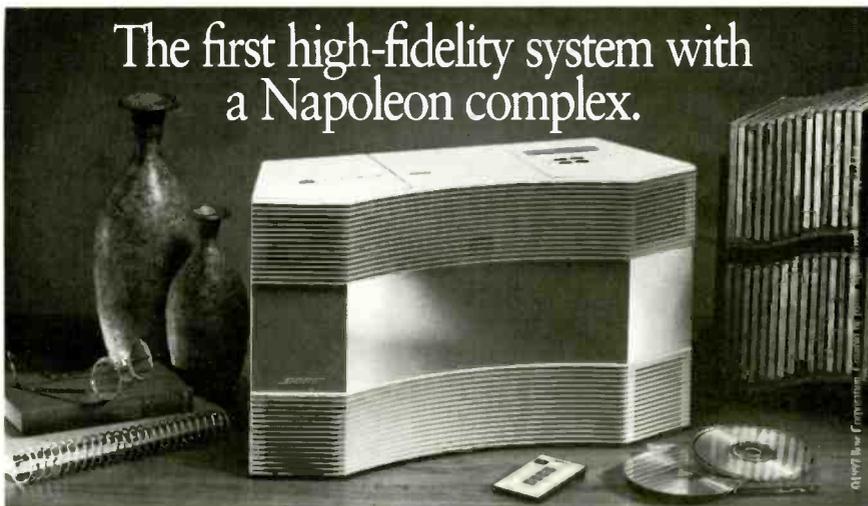
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pressure level (SPL) with a 1-watt input level. We confirmed the sensitivity rating, and the measured impedance came very close to the rated value, dipping to a low of 7 ohms at 200 Hz and with maximum readings of 33 ohms at 25 Hz and 38 ohms at 75 Hz.

As we progressed through the measurements, it soon became obvious that the m2 is, at the very least, a highly competent small speaker, and certainly an excellent value at its price. Still, as always, the final proof is in the listening.

Over the past year or two we have tested a number of compact speakers that have performed quite well and of-

**The Tannoy Mercury m2
speaker gave a sense
of low-bass content that
seemed to belie
our measurements.**

ferred good value to the consumer. Indeed, the art of loudspeaker design has become refined to the point where good sound and affordability are no longer mutually exclusive, as the Mercury m2 demonstrates most effectively.

Nevertheless, reproducing the lower bass range cleanly and believably still imposes size, weight, and cost factors that inevitably limit the performance of every small speaker. Although the Tannoy m2 was no exception to this rule, it came remarkably close to circumventing it. Its measured bass response was clean and strong down to the upper 40-Hz range. And despite falling off at 12 dB per octave below 40 Hz, it managed to impart a sense of lower-bass content that seemed to belie our measurements.

This quality is not unique to the Mercury m2, but it is rarely achieved so successfully, especially in this price range. The lower range of the pipe organ in portions of the Reference Recordings CD of John Rutter's Requiem was reproduced with surprising success, lacking only the skin massage that comes with a strong response in the low 30-Hz range and below.

Our bottom line is that the Tannoy Mercury m2 is one of today's best values in compact speakers. Its emphasis is on performance rather than style, and the customer is the beneficiary. □

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Stereo Review, Dec. 96

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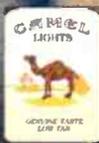


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USER'S REPORT



DIGITAL IMAGING BY CHRIS COULID

Paradigm Mini Monitor/ PS-1200 Home Theater Speaker System

DAVID RANADA • TECHNICAL EDITOR

Paradigm takes a mix-and-match approach to home theater, suggesting several speaker combinations that range in price from just over \$600 to just under \$2,700. When we asked the company to send us its best home-theater speaker system with a list price under \$2,000, Paradigm obliged with a package that can be had for the odd amount of \$1,986.

The system consists of a pair of Mini Monitors for the front left and right channels (\$339 a pair), a CC-350 center-channel speaker (\$329 each), a pair of ADP-350 surround speakers (\$699 a pair) and a PS-1200 subwoofer module (\$619 each). As you will see, there's more than a little family resemblance among these speakers.

The Mini Monitor is a two-way, bass-reflex (ported) design incorporating a 1-inch fluid-cooled titanium-dome tweeter crossing over at 1.8 kHz to a 6½-inch copolymer polypropylene-cone woofer. Anechoic system sensitivity is given as 86 dB sound-

pressure level (SPL) with a 2.83-volt input. Paradigm gives the impedance as "compatible with 8 ohms." Each speaker measures 13 x 8 x 10⅞ inches and weighs 15½ pounds. Its rear-panel port does not recommend it for wall mounting, but it works just fine on a stand or bookshelf, the closer to ear level the better. Connections are via multiway binding posts, as they are for all the main speakers in the system.

Aside from the addition of a second 6½-inch woofer, the driver complement of the CC-350 center speaker is identical to that of the Mini Monitor, as are its crossover frequency and stated impedance. It measures approximately 7½ x 22¾ x 9¾ inches and weighs 25 pounds. When it's placed upright (so that the rear-panel lettering is right side up), the front panel has a slight backward tilt, aiming all the drivers slightly upward. Sensitivity is 1 dB higher than the Mini Monitor (meaning 87 dB SPL, anechoic).

Take two Mini Monitors, connect them out of phase, mount them back

to back, remove the ports, and shrink the resulting enclosure volume by about half, and you'll have the basic configuration of the ADP-350, a dipole-radiating surround speaker. You guessed it, the ADP-350 has the same rated impedance and the same crossover frequency as its front-channel siblings, while its sensitivity is the same as the CC-350's. Dimensions are 13 x 11¾ x 8¼ inches, and weight is 25½ pounds (each). Hardware for wall mounting is provided.

Deep bass for the entire system is provided by the PS-1200 subwoofer module, which is rather large (19¼ x 17¼ x 21½ inches) and heavy (68 pounds). It contains a 12-inch cone driven by a 130-watt power amplifier in a dual-cavity enclosure. This means that you can't see the driver directly: the sound emerges only from three ports on the "rear" panel (the side of the otherwise plain box that contains the connections and controls).

The PS-1200 accepts signals at either line level or speaker level. The line-level inputs allow use of the module's line-level high-pass-filtered outputs for removing deep bass from any connected main or satellite speakers. The high-pass outputs roll off at 18 dB per octave below 80 Hz. The PS-1200's own low-pass subwoofer crossover has a rolloff frequency that is variable between 50 and 150 Hz with a rear-panel knob. A level knob and a continuously variable phase-alignment control are also provided. The latter adjusts the bass module's phase relationship through its crossover region relative to the main speakers. That is inherently a superior way of compensating for any distance mismatch between the bass module and the main speakers of the system, and the control can be used to obtain much flatter response in the primary listening area than the typical polarity-flipping "phase" switch can provide.

Hookup was quite straightforward, as was adjusting the subwoofer for the best frequency-response "splice" with the main speakers. Here the subwoofer's phase control proved its worth. By carefully adjusting it — while monitoring the sound with a lab-grade spectrum analyzer fed from our measurement microphone — I was able to get an excellent combined Mini Monitor/PS-1200 response at the listening position. The response measurement was both unusually flat (±3 dB) and unusually extended, especially in the low frequencies, ranging

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from 25 Hz to 20 kHz. We don't usually obtain such flatness and low-frequency extension simultaneously in our listening room.

The resulting sound quality was excellent: its basic neutrality served all manner of music very well, not to mention soundtracks. Vocals, if well recorded to begin with (an amazingly uncommon occurrence), seemed to be reproduced with particular clarity and



realism. As is usually the case with flat-responding speakers, the Paradigm system proved uncompromisingly critical of recorded material that was not quite up to snuff.

While the adjustment *procedure* was straightforward, the process itself took about 45 minutes. That's because I tried several combinations of settings for the main-channel high-pass filtering and the subwoofer crossover frequency in order to get the best crossover splice, all the while adjusting the PS-1200's level and phase controls as well as moving the bass module around in our normal corner location. I ended up with 100-Hz high-pass filters on the main channels (fortunately, a value typical of the filtering in many Dolby Digital A/V receivers), the PS-1200's crossover frequency dialed up to its 3 o'clock position, the phase control turned up about halfway, and the module placed along a side wall a foot away from the corner. In our room, using a lower high-pass frequency, such as the 80 Hz provided by the PS-1200, made it difficult to obtain the smoothest main-to-subwoofer transition. If your equipment allows it, you might want to try an even higher high-pass frequency, such as 120 Hz. The Mini Monitors distorted at high levels with frequencies of 50 Hz and below, so we wouldn't recommend them for use without a subwoofer or bass module or without high-pass filtering.

Our response measurements were made with the Mini Monitor tweeters close to my seated ear height, which

required placing the speakers on stands 30 inches above the floor. But unlike some home-theater speakers, whose vertical radiation is "optimized" for film-sound reproduction, the Mini Monitors' somewhat omnidirectional radiation produces a sound quality that shouldn't change all that much with their height, an advantage both when it comes to placement at home and during in-store auditions.

That dispersion pattern also tends to produce slightly less focused frontal imaging compared, say, with a THX speaker system, and this was evident with imaging test tones. But with typical music and soundtracks, the Mini Monitors' imaging was as precise in angle and depth as I would ever deem musically or dramatically necessary.

The identical drivers and matched crossover frequencies of all the main speakers in the test system probably had a great deal to do with their sonic consistency. In particular, the CC-350 center speaker was a very good sonic match with the Mini Monitors, which produced dividends in surround-sound imaging "tightness," positional accuracy, and stability. Even from their locations to the side of the main listening position, the ADP-350 surrounds produced the good response claimed for them in the Paradigm product brochures. I measured ± 4.5 dB from 100 Hz to 20 kHz, a response that is outstandingly flat and extended at high frequencies for a dipole speaker (which has all of its drivers pointing 90 degrees away from the listener and half of them out of phase with the others).

The bass output was usable to below 50 Hz. These characteristics, which enabled a good sonic match between surrounds and fronts, not only benefited soundtracks of all kinds but also noticeably increased the spatial realism of the digital ambience-enhancement music modes available on many surround-sound receivers.

Finally, the large driver of the PS-1200 was able to produce literally room-rattling sound levels with no sense of strain down to about 40 Hz. Below that, distortion increased to audibility with high-level test tones, but the system was able to produce usable output to below 25 Hz. Dolby Digital soundtracks drove the PS-1200 to only a few decibels short of full theatrical levels without any distinct signs of strain. In some sequences from *Star Trek: Generations* on Dolby Digital laserdisc, I obtained clean sound at volumes that would be frighteningly loud at home. Some of the wilder deep-bass passages in Messiaen's pipe-organ music (there are many such) were also reproduced with lifelike extravagance.

I can't imagine a combination of Paradigm speakers that could produce better overall home-theater sound for the asking price of this setup. Likewise, I can't think of a system from any other manufacturer that provides substantially better performance that doesn't also cost considerably more. Paradigm has done it again!

Paradigm, Dept. SR, MPO Box 2410, Niagara Falls, NY 14302; telephone, 905-632-0180



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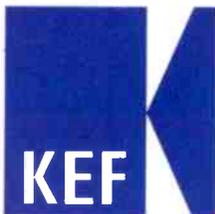
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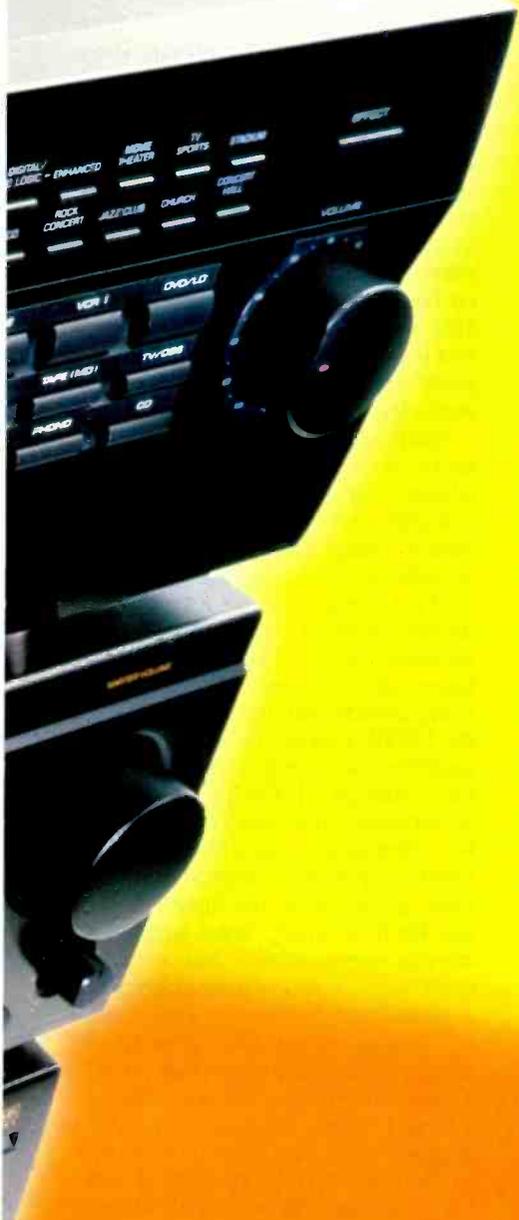
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THREE DOLBY DIGITAL RECEIVERS

WHAT DO YOU GET FOR YOUR MONEY?

Ever since Dolby Digital (DD) receivers first saw the light of day nearly two years ago, we've been prophesying that they would gradually reach the more affordable zones of consumer-electronics pricing. And lo, it has come to pass, with those groundbreaking early DD models begetting an impressive handful of 5.1-channel receivers over a far broader range of prices, including some that cost \$1,000 or less. To sample

this array we picked three receivers, each representative of the latest in its price stratum, for hands-on evaluation in a home theater as well as in lab tests. Pioneer's \$970 VSX-D606S, Denon's \$1,200 AVR-3200, and Yamaha's \$1,599 RX-V2092.

Before getting down to cases, a quick refresher. Dolby Digital provides "5.1" fully discrete digital channels, five full-range plus a bass-only low-frequency-effects (LFE) channel, of CD-quality sound. The full-range outputs — front left, center, and right and surround left and right — cover 20 Hz to 20 kHz with virtually perfect flat response; the LFE channel extends only to 120 Hz, serving primarily to carry a soundtrack's high-level low-frequency sound effects while enhancing the potential for deep-bass thunder from one or two subwoofers. All this is delivered by a digital bitstream of only 384 kilobits per second, about one-fourth the rate of a conventional two-channel CD,

thanks to a Dolby Labs-developed data-reduction process that's known as AC-3.

Currently, Dolby Digital is a home-theater format. Virtually all DVD movies include 5.1-channel DD soundtracks. There are also several hundred laserdiscs with 5.1-channel soundtracks, but these require a late-generation laserdisc player with an AC-3/RF output and a DD decoder with an RF input (or an outboard RF demodulator) in order to hear them in their full glory. Eventually, HDTV broadcasts will also deliver Dolby Digital audio, and it seems inevitable that the digital satellite broadcasters, such as DirecTV and Primestar, will eventually incorporate Dolby Digital in their downlinks, though this will require a new generation of set-top receivers with digital audio outputs.

To play Dolby Digital DVDs you need a DD decoder, which accepts a digital input from the DVD player and unravels the 5.1 channels of au-

DDDX3

COMPARISON TESTS

BY DANIEL KUMIN

PIONEER
VSX-D606S

DENON
AVR-3200

YAMAHA
RX-V2092

dio, plus five independent channels of amplification, preferably of equal power, or nearly so, since Dolby Digital's center and surround channels can be just as demanding as the front left and right. In the case of these three DD receivers (and many others), all that is built in: a DVD's digital bitstream is decoded and the resultant signals routed internally to the receiver's five power-amp paths, and hence to its speaker outputs, while the ".1" LFE signal (possibly with bass content from the other five channels mixed in) is sent to a line-level RCA output for connection to a powered subwoofer. Ultimately, HDTV and small-dish Dolby Digital satellite receivers would work identically, with a digital link between the set-top box or satellite receiver and an A/V receiver or preamp/decoder.

Don't confuse full Dolby Digital receivers such as these three, housing *on-board* 5.1-channel decoding, with Dolby Digital-*ready* receivers, which simply provide six-channel analog inputs so that you can hook up an outboard DD decoder or source component with a DD output. (Several outboard decoders are now available, beginning with the \$300 Technics SH-AC300 and rising in price to several thousand dollars.) Many current A/V receivers, including some very affordable examples, have this multichannel input, but only a handful produced before the Dolby Digital/DVD boom include it — or the requisite discrete, surround-channel amplifiers.

Each receiver was wired into a high-performance home theater so that I could give it a thorough workout. I focused on the use and listening part of the evaluation, while technical editor David Ranaña probed the receivers on the test bench (his results are summarized in "Measurements" at the end of this article). My reference system comprised a pair of B&W Model 803 Series 2 front left and right speakers, a B&W HTM center speaker, two Model 7.2 dipole surround speakers from Harman Kardon's Citation line, a B&W 800ASW powered subwoofer, a Pioneer CLD-D702 CD/laserdisc combi-player, and a JVC XV-1000 DVD player. I evaluated each system both with and without the powered subwoofer. I disconnected the subwoofer and drove the Model 803/2 speakers full-range in order to exercise the receivers' amp sections as fully as possible. I used a vari-

ety of music and movie soundtracks, including the Delos *Surround Spectacular* demo/test CD set (DE 3179) and *The Fugitive* (Warner) on laserdisc for Dolby Pro Logic and the laserdisc of *GoldenEye* (MGM/UA) for Dolby Digital. DVD titles included *Fly Away Home* (Columbia TriStar).

Pioneer VSX-D606S

Pioneer's first under-\$1,000 Dolby Digital receiver is the \$970 VSX-D606S. (The DD-*ready* VSX-505S is very similar, without the on-board decoding.) This stocky but compact receiver eschews a few extras to hit its beguiling price, but it still includes many of the features that most buyers consider important, beginning with ample power. The VSX-D606S delivers 100 watts each to all five main channels. It also includes an onboard RF demodulator to accept input directly from a DD-capable laserdisc player, a facility not all second-generation DD receivers have. (Some require the use of an external AC-3/RF demodulator, suggesting that the laserdisc's days as a mainstream medium are indeed numbered.) The interesting, ergonomically designed remote control comes with a good supply of preprogrammed control codes *and* the ability to learn codes for additional brands and models.

The Pioneer's front-panel controls are mostly pushbuttons, nicely grouped according to function, with three small knobs for tone and balance and a big one for master volume. A jog-wheel selects radio stations by frequency or preset number, according to how the adjacent mode keys are set. The panel layout is only slightly unconventional, and I liked it despite its barely legible gold-on-black labeling in tiny type.

The VSX-D606S's relatively basic set of inputs and outputs are all RCA jacks — there are no S-video options. Audio inputs include phono, CD, and one tape loop; for A/V sources you'll find a single VCR tape loop and three play-only positions marked LD/Sat, DVD/TV, and, on the front panel, Video (this one can be selected manually via an adjacent pushbutton). The only other audio outputs are single line-level jacks marked Center and Subwoofer — the former's a bit puzzling — so the use of outboard power amps would generally not be an option.

A nearby trio of RCA jacks handles digital inputs. Two accept either Dolby Digital or CD-type PCM bitstreams from a laserdisc or DVD; the third is

for an undemodulated RF signal from a DD-capable laserdisc player. There is no optical digital input — a bit surprising, since many current laserdisc players and some DVD players have only optical digital outputs. All of the speaker outputs are medium-duty snap connectors that accept cables as thick as perhaps 14 gauge. While I understand Pioneer's need to cut costs, I'm no fan of these things, especially in a 100-watt-per-channel multichannel receiver. Give me multiway binding posts or give me . . . well, not death, I guess, but *something* else.

Setup was easy enough, though Pioneer's occasionally confusing manual relegates setup instructions to the penultimate section, and the process was hardly straightforward. The D606S provides no on-screen displays; menus read out in the receiver's own window. Instead of direct access to bass-management options via separate small, large, and phantom modes for the front, center, and surround speakers, the D606S makes you step through a single menu offering eleven combinations, such as FL-CS-RS (front-large, center-small, rear-small) and FL-C#-RS (front-large, center-phantom, rear-small). All of the common combinations are included, but there's no option for front-small, center-large — an unusual setting, maybe, but one that I often use to audition front-stage cohesiveness, as it best matches the acoustic response of my three front speakers. And the two combos that include a large (full-range) surround-speaker setting are both matched only with a large-front setting. Large-surround and front-small may be unconventional, but it's not impossible — and certainly not "wrong."

Other key menu settings select subwoofer on/off, the subwoofer crossover frequency (100, 150, or 200 Hz), LFE attenuation (0, -10 dB, off), a low-cut filter, center and surround delays, and DD-mode dynamic-range compression (Max, Mid, off).

Once I decoded all of this, setup proved relatively easy. I wired up my speaker complement and connected AC-3 laserdisc and digital satellite source components.

The VSX-606S's channel balance was highly accurate, with less than ± 1 dB relative error over a very wide range of master volume settings. Equally important, this tight balance was consistent using both the receiver's own internally generated test tones and those from external DD and Dol-

by Pro Logic (DPL) sources. Its power potential proved impressive: the D606S played about as loud as I would ever consider desirable with no audible strain or distortion through the full-range five-speaker array, without the subwoofer. (All the speakers are of typical sensitivity.) Two-channel stereo playback drove my main speakers amply as well. Overall transparency was very good, though not quite the match of my usual separate-component setup (about five times the Pioneer receiver's cost).

The Pioneer's Pro Logic performance was generally quite good. Leakage of center information to the front left/right and surround channels was very low and stable, and noise performance was exemplary. Sound quality was very good. Dialogue was clear and balanced, and overall timbre was accurate — perhaps a touch less bright than some, which is usually a plus with movie soundtracks. Though it did not quite match the very best A/V receivers, auditioned alone the D606S's surround channel was above average in smoothness and freedom from pumping, in dynamic stability, and in clarity.

I did identify one DPL-mode problem: the D606S's surround channel was subject to input overload on the very highest-level recordings. This occurred consistently only with one of the sternest surround-channel tests I know: the *Fanfare for the Common Man* segment from Delos's *Surround Spectacular*, engineered by John Earle. Many of the timpani entries produced extremely audible "snapping" from the surround channel at any volume setting. This happened with both analog and digital signals from the CD player, but if I attenuated an analog source by 3 dB, the effect disappeared entirely. I did not hear this artifact in any normal movie playback but cannot guarantee that it will never occur — indeed, it would seem inevitable that some soundtrack will eventually have the same effect. The problem seems to be digital overload in the receiver's Dolby Pro Logic decoder, as I could not reproduce it in DD mode even with full-scale signals from the surround channels.

Naturally, Dolby Digital reproduction was better still, with noticeably quieter operation all around and rather substantial gains in vocal clarity, ambient realism, and — of course — zing from 3-D sound effects. The D606S's dual-level dynamic-range compensa-

tion, a standard DD feature, seemed very subtle indeed. I could not detect its impact: perhaps it wasn't working in my test sample.

FM performance was solidly average, with at least fair ability to pull intelligible speech from modestly weak or distant signals. Sound quality on strong, high-quality broadcasts was good, but not quite as open and defined as that of the best FM sections today. AM reception barely exceeded poor: with the supplied loop antenna I could manually coax about a half-dozen intelligible stations from the receiver (most of them barely so), but its auto-seek tuning found only one. There are thirty station presets. Direct-access and auto-seek tuning are available only from the remote.

cordings. Any mode can be combined with Pro Logic or Dolby Digital processing for some occasionally startling effects. Perhaps the best element of Pioneer's extra surround modes is that each independently stores relative surround- and center-channel levels as well as an overall "effect level," allowing you to tune up, say, Hall for the best sound with your system and room without requiring recalibration every time you load up a movie and switch to Pro Logic or DD mode.

The VSX-D606S attempts to do a good deal, and it succeeds admirably in most regards. Power output is generous, and performance in the important areas is generally fine; several extra features are genuinely useful. The unusual remote control takes only a



PIONEER VSX-D606S. RATED POWER PER CHANNEL: five channels driven, 100 watts into 8 ohms from 20 Hz to 20 kHz with 0.09% THD; two channels driven (stereo mode), 130 watts into 8 ohms at 1 kHz with 1% THD. **SPECIAL FEATURES:** AC-3 RF input for Dolby Digital-capable laserdisc player, two coaxial digital audio inputs, A/V input on front panel. **DIMENSIONS:** 16½ x 6¼ x 14¾ inches. **WEIGHT:** 20¾ pounds. **PRICE:** \$970. **MANUFACTURER:** Pioneer, Dept. SR, 2265 E. 220th St., Long Beach, CA 90801; telephone, 800-746-6337.

The remote itself is shaped somewhat like a joystick and well laid out for one-handed, thumb-centered operation. Modes for a laserdisc or DVD player, a satellite tuner, a VCR, and a TV/tuner are provided, each with the most important commands. Once you set the remote to the desired component, it switches the receiver's input correspondingly. There are also a couple of macro options for automatically turning multiple components on or off as well as performing more elaborate sequential tasks.

Pioneer supplies the VSX-D606S with five additional five-channel surround modes — Hall, Jazz, Dance, and Theater1 and Theater2 — that use the center channel for front-stage ambient elements. Of these, Jazz was probably the most musical, at least when used with small-ensemble re-

little getting used to, and in the end I liked it a lot. Overall, Pioneer's value-engineered Dolby Digital receiver hits its mark: the VSX-D606S is quite a good value.

Denon AVR-3200

Denon's flagship AVR-5600 receiver impressed me mightily last year. The company's foray into more affordable Dolby Digital territory is the smaller and more modest-looking AVR-3200. It offers 85 watts per channel all around in multichannel modes and includes a handful of surround options in addition to its Dolby Digital and digital-domain Pro Logic decoding: Matrix, Mono Movie, Rock Arena, Jazz Club, and Video Game.

The AVR-3200 comes with a rather imposing remote controller (the same one packed with the costlier AVR-

5600) that can call up a library of pre-programmed codes to establish hegemony over many popular brands and models of ancillary components. The handset can also be programmed manually to command more obscure gear.

The receiver's simple faceplate has knobs for master volume, bass, and treble and pushbuttons to select inputs and surround modes and to control tuner functions. Just about everything else, including setup, requires the re-

missed mostly by camcorder users and equipment reviewers, both inveterate pluggers and unpluggers. There is a headphone jack, and the receiver can select record-out and main-out video signals independently for flexible dubbing or simulcast viewing/listening.

The digital inputs include one coaxial SPDIF port and one optical port, and either can be assigned to any source, including the VCRs, except phono. There's also an RCA jack

tions for a subwoofer, for the LFE channel, and for redirected bass in all modes; the crossover is fixed at 80 Hz for both high-pass and low-pass filtering. Relative center- and surround-channel delays are set individually by entering the distance (in meters or feet) from your prime listening position to each speaker pair, probably the least confusing way to set up this subtle but potentially useful refinement. For channel-level setup the AVR-3200 lets you choose between the usual auto-circulating noise and a manual mode in which the test noise stays put until you command it to shift to the next channel. (Sound-level-meter-toting reviewers like me positively *love* this option.) Much more significant, the channel balance was consistent with both internal and external test-noise sources and stable over more than a 30-dB master-volume range.

The Denon AVR-3200 performed just about flawlessly. I was very impressed by the stereo and multichannel oomph of this "medium-power" receiver. In two-channel mode it drove my moderately sensitive B&W 803 Series 2 speakers to more than solid levels without strain, and in full surround playback it displayed equally surprising brawn. I proved this to my satisfaction using the receiver's 5Ch Stereo surround mode, which sends unprocessed stereo signals to both the front and surround L/R outputs and mono to the center channel — a far sterner test of all-channel amp abilities than movie playback. (This is the mode to use for events like big parties where maximum overall volume is the goal.) The Denon passed this test with flying colors. The sound was clean and punchy from all five speakers, and very loud indeed. The AVR-3200's output became unpleasantly "bright" before producing identifiable distortion. I could not make the surround amps stumble audibly until a level at which the front left/right speakers, hence the full system, were absurdly loud (my Citation Model 7.3 surrounds are perhaps 3 dB less sensitive than my B&W mains).

Surround decoding was exemplary. With DPL soundtracks fed via an optical PCM digital interconnect, the Denon receiver was extraordinarily quiet, fully dynamic, and very smooth and accurate. Channel leakage was low, stable, and balanced, and the sound was smooth and detailed even for low-level subtleties. The AVR-3200 includes the THX-derived Cinema-EQ



DENON AVR-3200. RATED POWER PER CHANNEL: five channels driven, 85 watts into 8 ohms from 20 Hz to 20 kHz with 0.05% THD; two channels driven (stereo mode), 105 watts "dynamic power" into 8 ohms. **SPECIAL FEATURES:** AC-3 RF input for Dolby Digital-capable laserdisc player, one optical and one coaxial digital audio input, S-video inputs and outputs, six-channel analog input for an external 5.1-channel surround decoder. Cinema-EQ mode. **DIMENSIONS:** 17 $\frac{1}{8}$ x 6 $\frac{3}{8}$ x 16 $\frac{3}{8}$ inches. **WEIGHT:** 32 $\frac{3}{4}$ pounds. **PRICE:** \$1,200. **MANUFACTURER:** Denon, Dept. SR, 222 New Rd., Parsippany, NJ 07054; telephone, 201-575-7810.

mote. The blue display is plain and legible, though a bit glare-prone. The gold-on-black panel graphics are only medium-small, which I suppose earns points, but still proved slightly bothersome to read.

Around back, connectors include composite- and S-video ports for all video signals. Phono, CD, and DAT/Tape audio inputs complement four A/V inputs marked DVD/VDP, TV/DBS, and VCR1 and VCR2. Both VCR connections are full input/output loops, simplifying copying between VCRs or a VCR and a camcorder.

Quite unusually, the AVR-3200 also supplies a six-channel analog input, presumably for an outboard DTS decoder. This input is selected as a surround mode rather than as an "official" input. Front- and center-channel line outputs make expansion to separate power amps easy for the front stage, but there are no surround-channel line outputs. Speaker connections are multiway binding posts all around — excellent.

The AVR-3200 has no front-panel A/V input, a convenience liable to be

marked Dolby Digital-RF for use with an AC-3-ready laserdisc player.

Setup was aided considerably by generally intuitive on-screen displays, though I selected the wrong item several times because the selection cursor's operation is a bit too subtle and the menu structure slightly inconsistent. There are "large/small" speaker options for the front L/R and center channels, plus "none" for the latter, but — astonishingly — only "yes/no" for the surrounds. From that I inferred that the 80-Hz high-pass crossover is always engaged for the surround outputs in all modes, and Denon later confirmed this. What if I want to connect my new receiver's not-insubstantial 85-watt surround outputs to large "rear" speakers expressly to exploit Dolby Digital's full-range surround-channel capability? I'd be flat out of luck as far as I can see. This mystifies me. Personally, I don't care much about having full-range surrounds, but for \$1,200 I sure as hell want to make the choice myself, not delegate it to some unknown engineer. *Hrrumph.*

You also get simple "yes/no" op-

feature, a gentle top-octave rolloff that can be applied to either DPL or Dolby Digital programs when dialed in from the setup pages. I'd prefer to have this option more easily accessible. Most films — and some music discs — definitely benefited from it, but some sounded better without; a root-level menu selection would be nice.

Dolby Digital sound was in the same major league: dead quiet, crystal clear, and very dynamic. The AVR-3200's DD dynamic-range-compression feature — unfortunately also accessible only through the setup menus — offers three levels of peak-limiting/low-level compression: Low, Mid, and High, plus off. It worked well and sounded fine. Simply put, every important aspect of the AVR-3200's movie-surround performance appeared to be state of the art.

Ergonomically speaking, the Denon is good — not poor, but not wonderful. The big, multimode remote is very effective and reasonably easy to learn, and though there's no back-lighting its master-volume and transport keys glow magically in even moderately dim conditions. (How do they do that? I'm not sure I'd want to leave this puppy in my lap for days at a time.) But the remote's organization was occasionally puzzling. For example, although each surround mode gets a direct-access key on the AVR-3200's front panel, on the handset there is only a Mode key to step through the nine possibilities (for non-DD sources) — and the receiver mutes its output for about 2 seconds at each change. The remote's volume adjustment is also too slow for me: 3 full seconds to go up or down 10 dB.

Two small slide switches atop the remote select audio or video mode and the component to be commanded by the transport keys — three choices. This can get confusing, since many keys have dual functions. For example, the main ten-key numeric pad also selects the receiver's input positions when it's in the audio mode. And the manual is not terribly helpful.

However, I forgive all this and more because of three keys positioned on the remote below master volume: Ch. Select and Ch. Vol. up/down. These cycle through all five DD channels, plus subwoofer, and let you modify each one's level by ± 12 dB. The best part is that your modifications are stored independently for each surround mode (and stereo) and are recalled whenever you select that mode.

This is especially valuable because a couple of the AVR-3200's "extra" modes are very good. Matrix, with the center channel set to -1 dB and both surround outputs at -2 dB, delivered an unusually listenable and musical general-purpose ambience enhancement. Jazz Club was also good for other nonclassical, small-ensemble music, though most studio-recorded pop/rock sounded best "straight."

The radio section was no record-setter but gave solidly adequate performance by current receiver standards. FM performance on strong stations was good: clean and comparatively dynamic. Weak-signal quality was average, which is to say *terrible* by old-timer standards. Like nearly all current receivers, the AVR-3200's FM section is clearly intended for casual listening to powerful, urban, commercial broadcasts, not to classical concerts on small or distant noncommercial stations. AM reception was fair.

Although the Denon AVR-3200 is hardly the feature leader in its \$1,000-and-up price range, it graphically demonstrates just what this range has to offer in up-to-the-minute A/V performance. If powerful, high-quality sound in both analog and digital formats tops your priorities, the AVR-3200 will be difficult to beat.

Yamaha RX-V2092

Yamaha's brand-new RX-V2092 is representative of the upper reaches of second-generation Dolby Digital receivers. The big Yamaha has all the requisite top-of-the-line attributes, beginning with serious power: 100 watts each to the five main Dolby Digital channels. It also has two *additional* speaker outputs for Yamaha's unique "front-effects" channels, used in the RX-V2092's proprietary Cinema-DSP-7Ch surround modes. Rated at 25 watts each, these drive a pair of small speakers positioned slightly behind and outside the front left/right pair.

The RX-V2092 is not as weighted by "extras" as some top-of-the-line A/V receivers, but then again, its price tag is considerably lower than some others. The receiver does, however, incorporate a few notable features. High on the list is dual-source, multiroom capability, which extends to audio *and* video sources; it even comes with a simplified, second remote for Zone-2 control. The main handset is rather futuristic, with an impressive array of controls behind a flip-up door for multicomponent, full-system command,

but it still offers relatively simple, basic functionality with the door closed.

Similarly, the V2092's clean, dramatically sculpted faceplate conceals a good portion of its controls behind a flip-down door along the bottom edge. Keys for source and surround-mode selection, the tuner presets, and the master volume knob are always accessible, as is a simple, highly legible amber display. Behind the door are tucked a camcorder convenience input (Video Aux, which includes S-video connections), manual and automatic tuning and memory controls, and small knobs for bass, treble, and balance. There's also a rotary selector to choose a record-out source independently of both main and remote listening selections, a headphone jack, and Speaker A and B switches (also commanded by the main remote).

The rear panel presents the usual forest of RCA and S-video jacks. Yamaha provides both composite- and S-video connections for all A/V sources. There are five A/V inputs altogether, including the front-panel set; two of them, VCR 1 and VCR 2, are input/output loops for recording convenience. The three audio-only inputs are phono, CD, and a tape loop.

Room-2 facilities provide independently volume-controlled line-level stereo audio and composite-video outputs plus mini-jacks for infrared-sensor input and remote-repeater output that follows the de facto "Xantech-compatible" standard. Line outputs for all six Dolby Digital channels, and pre-out/main-in couplers for the front left/right channels, earn the RX-V2092 high marks for expandability. Standard multiway speaker connectors for all outputs, which accept single or dual banana plugs, heavy wire, or pins with equal aplomb, earn it equal praise for connectivity. An adjacent, rather confusingly labeled toggle switch is said to optimize the V2092's amp sections for 4- or 8-ohm loads. Previous experience with a similar Yamaha receiver led me to select the 8-ohm setting for use with my system initially, as likely to give a cleaner sounding, more dynamic output.

There are three digital connectors, two coaxial and one optical. The V2092's DVD/laserdisc input can use the optical port, or one of the coax jacks, while TV/DBS uses the other coax jack. (The receiver polls the digital inputs first, with the optical input

taking precedence, and only then checks for analog signals, though this can be manually overridden.) There is no AC-3/RF input, so DD laserdiscs require an outboard demodulator.

A fairly extensive on-screen menu system with simple graphics made set-up reasonably easy. The V2092 provides complete DD bass-management options, including a 20-dB range of LFE-channel attenuation by 1-dB increments (DD mode only, of course). I mated the Yamaha receiver with my standard loudspeaker suite. As with the other two receivers, I omitted the subwoofer at first to test the Yamaha's own power amps with full-bandwidth demands. I supplemented this layout with a pair of RockSolid Monitors, two-way speakers with 5-inch woofers, for the "front-effects" channels used by the Cinema-DSP-7Ch modes. (If you do not deploy an extra pair, a rear-panel switch allows you to mix the front-effects signals into the main L/R speakers.)

Yamaha's RX-V2092 proved an exceptional performer in just about all respects. While it was not the single most powerful-sounding five-channel A/V receiver ever to cross through my door, wattage was ample in both stereo and surround modes to drive my middling-sensitivity speakers to satisfyingly high levels and beyond. When the V2092 reached its limits, the system began sounding a bit harsh and "squished," and beyond that the amps clipped fairly hard. (These limits were

reached audibly sooner with the receiver's speaker-load switch in the 4-ohm position.) Unsurprisingly, when I added my B&W 800ASW powered subwoofer to the mix, the V2092 had more than enough output to drive me from the room with both soundtracks and pure music.

Dolby Pro Logic performance was truly outstanding. Dialogue leakage from the center channel was extremely low (and stable), logic steering was smooth, defined, and sure-footed, and everything sounded open and detailed. When I auditioned the surround channel "naked" with top-grade Dolby Surround CDs, I heard a very smooth, clean sound that was remarkably free of the lumpiness and noise-pumping that frequently plague Dolby Surround. And the same held true in soundtrack reproduction, where the V2092 delivered detailed, transparent sound in even the subtlest, most ambience-filled scenes.

Dolby Digital performance was on the same high plane: clean, hugely dynamic, and crisp, yet listenable in terms of both intelligibility and effects localization. In fact, I only occasionally missed having recourse to THX Cinema-EQ or a similar rolloff. The V2092's DD dynamics-control feature worked well, delivering two stages of the format's "smart" compression/limiting, somewhat confusingly labeled Std and Min, while the uncompressed mode is dubbed Max.

Yamaha's two Cinema-DSP modes

are called Enhanced and Movie Theater, each of which can be superimposed over either Pro Logic or Dolby Digital processing. Enhanced is a bit subtler and often lent an audibly more spacious, open quality to the ambience — usually a pleasant addition without significant penalty. I found the Movie Theater mode considerably more aggressive. Its impact on overall timbre — including, usually, speech — and the echoey colorations it added were occasionally quite audible. Truth be told, for most films I think I'd be prone to stick with "plain" DPL and DD reproduction.

Seven additional surround modes complete the V2092's 3-D offerings. All except TV Theater are four-channel settings, including the usual Hall, Disco, and Jazz Club. Several of these sounded quite natural and musical, so it was even more annoying that the receiver does not store relative surround-channel levels independently by mode, but only keeps global channel balance. If you lower the surrounds by 2 dB to get the most believable Hall effect as I did, for example, you must reset the level every time you return to DPL/DD, and vice versa. The V2092 does store surround-delay settings separately for each mode.

Space prohibits a full discussion of the RX-V2092's elaborate, ergonomically designed main remote. In essence, it has two rather different "personalities," a simpler one when closed and a more complex but much more broadly powerful one when the full-face door is opened. (A nice touch is that the door folds all the way back and clips in place, reducing the otherwise all-too-likely chance of damage the first time someone sits on the remote.) The remote is not the most intuitive, but once you get it figured out and "teach" it your ancillary gear's codes, its operation is relatively straightforward, and it is very useful. The red back-lighting is spiffy, too, though the two dozen or so unlit keys can be hard to identify in very dim conditions.

FM performance was good. While selectivity and noise rejection were only marginally above average with weak or distant signals, sound quality with stronger signals was quite good. My local public-radio station sounded clean, dynamic, and musical. AM reception was a bit above average, with about twice as many intelligible stations (ten) as the usual abysmally bad receiver AM section can tune in. Talk-radio fans, take note.



YAMAHA RX-V2092. RATED POWER PER CHANNEL: five main channels driven, 100 watts into 8 ohms from 20 Hz to 20 kHz with 0.02% THD; front-effects channels, 25 watts each into 8 ohms at 1 kHz with 0.05% THD; two channels driven (stereo mode), 140 watts "dynamic power" into 8 ohms. **SPECIAL FEATURES:** Dual-source, multiroom capability with a second remote control for an alternate listening area, front-panel A/V inputs, one optical and two coaxial digital audio inputs, S-video inputs and outputs, pre-out/main-in jacks for the front L/R channels. **DIMENSIONS:** 17¼ x 6¾ x 18¾ inches. **WEIGHT:** 44 pounds. **PRICE:** \$1,599. **MANUFACTURER:** Yamaha, Dept. SR, 6660 Orangethorpe Ave., Buena Park, CA 90620; telephone, 714-522-9105.

MEASUREMENTS

	PIONEER VSX-D606S (\$970)	DENON AVR-3200 (\$1,200)	YAMAHA RX-V2092 (\$1,599)
DOLBY DIGITAL PERFORMANCE			
OUTPUT AT CLIPPING (one channel at a time)			
8 ohms	172 watts	99 watts	163 watts
4 ohms	246 watts	275 watts	272 watts
SHORT-TERM OUTPUT POWER (10 seconds, all five channels)			
8 ohms	92 watts	80 watts	116 watts
FREQUENCY RESPONSE (worst case)			
	all main channels 20 Hz to 20 kHz +0.13, -0.41 dB	front channels only 20 Hz to 20 kHz +0, -0.25 dB	all main channels 20 Hz to 20 kHz +0.06, -0.45 dB
NOISE (A-wtd, typical)			
	-72.8 dB	-79 dB	-76.2 dB
EXCESS NOISE (with signal) EN16 (16-bit)			
	+4.95 dB	+1.75 dB	+2.75 dB
SUBWOOFER CROSSOVER frequency			
	100, 120, or 150 Hz	80 Hz	90 Hz
slope	-24 dB per octave	-18 dB per octave	-24 dB per octave
SUBWOOFER OUTPUT (max)			
	5.6 volts	9 volts	approx. 6.5 volts
SUBWOOFER DISTORTION (max)			
	6%	4%	7.5%
STEREO PERFORMANCE			
OUTPUT AT CLIPPING (both channels driven)			
8 ohms	142 watts	98 watts	150 watts
4 ohms	180 watts	198 watts	236 watts
DISTORTION			
at 1 watt (8 ohms)	0.058%	0.03%	0.035%
at rated power (100 watts)	0.1%	0.04%	0.06%
NOISE (A-wtd, normal)			
	-68.0 dB	-76.3 dB	-72.8 dB
LINEARITY ERROR (at -90 dBFS*)			
	-0.5 dB	-0.55 dB	-0.06 dB
EXCESS NOISE (without/with signal) EN16 (16-bit)			
	+8.15/+8.16 dB	+1.65/+1.68 dB	+2.65/+2.65 dB
FREQUENCY RESPONSE normal (20 Hz to 20 kHz)			
	+0.12, -2.02 dB	+0, -0.4 dB	+0.05, -0.32 dB

* dBFS = decibels referred to digital full scale

All measurements were made through a digital input. Figures for noise and 1-watt distortion were obtained with the volume set to produce an output level in each channel of 2.83 volts into an 8-ohm load from a -20-dBFS input signal. Output at clipping was measured at the closest volume setting below clipping for a 0-dBFS signal. All main-speaker settings were "large" except for subwoofer output measurements, which

were made with all speakers set to "small." The Denon receiver compressed the top 10 dB of Dolby Digital dynamic range into an 8-dB span regardless of the volume-control setting, and the surround channels have undefeatable high-pass filtering. The Yamaha receiver's subwoofer output clipped 2.7 dB below the reference volume-control setting with a worst-case Dolby Digital signal. — David Ranada

The RX-V2092's basic performance on surround-sound discs, tapes, and broadcasts was very nearly faultless, while its power was more than adequate and its ease of use good to very good. The extra features are mostly useful, notably the Room-2 capabilities, which let you enjoy much of the receiver's A/V functionality in a second room for the cost of some wire and a couple of inexpensive infrared accessories. Overall, Yamaha's RX-

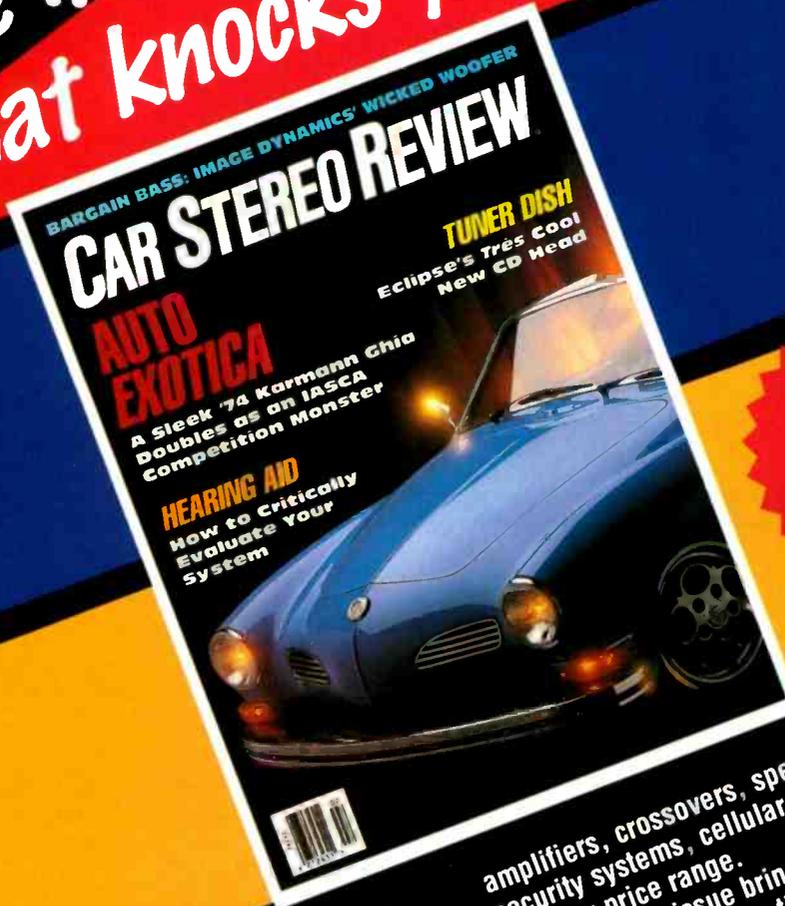
V2092 is unquestionably a flag-class A/V cruiser.

The Bottom Line

Here's the short form: The Dolby Digital era has raised the ante for home-theater sound significantly, but, as our three test receivers amply demonstrate, you can still get more and better A/V performance and features per dollar than ever before. Pioneer's VSX-D606S delivers solid basics, and quite

a bit more, for a reasonable price. As you move up the price ladder you'll get more inputs and greater flexibility, as in Denon's AVR-3200, and all of that plus multiroom capabilities and extensive DSP ambience modes from the Yamaha RX-V2092. Any of these receivers can deliver superb surround sound in either Dolby Pro Logic or Dolby Digital mode, along with all the power and functionality most of us will ever require. □

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It used to be simple. You had a car. It came with a radio. You listened. Period. Now you've got options. So many options, it's easy to get blown away just trying to find components that fit together — and fit your budget too.

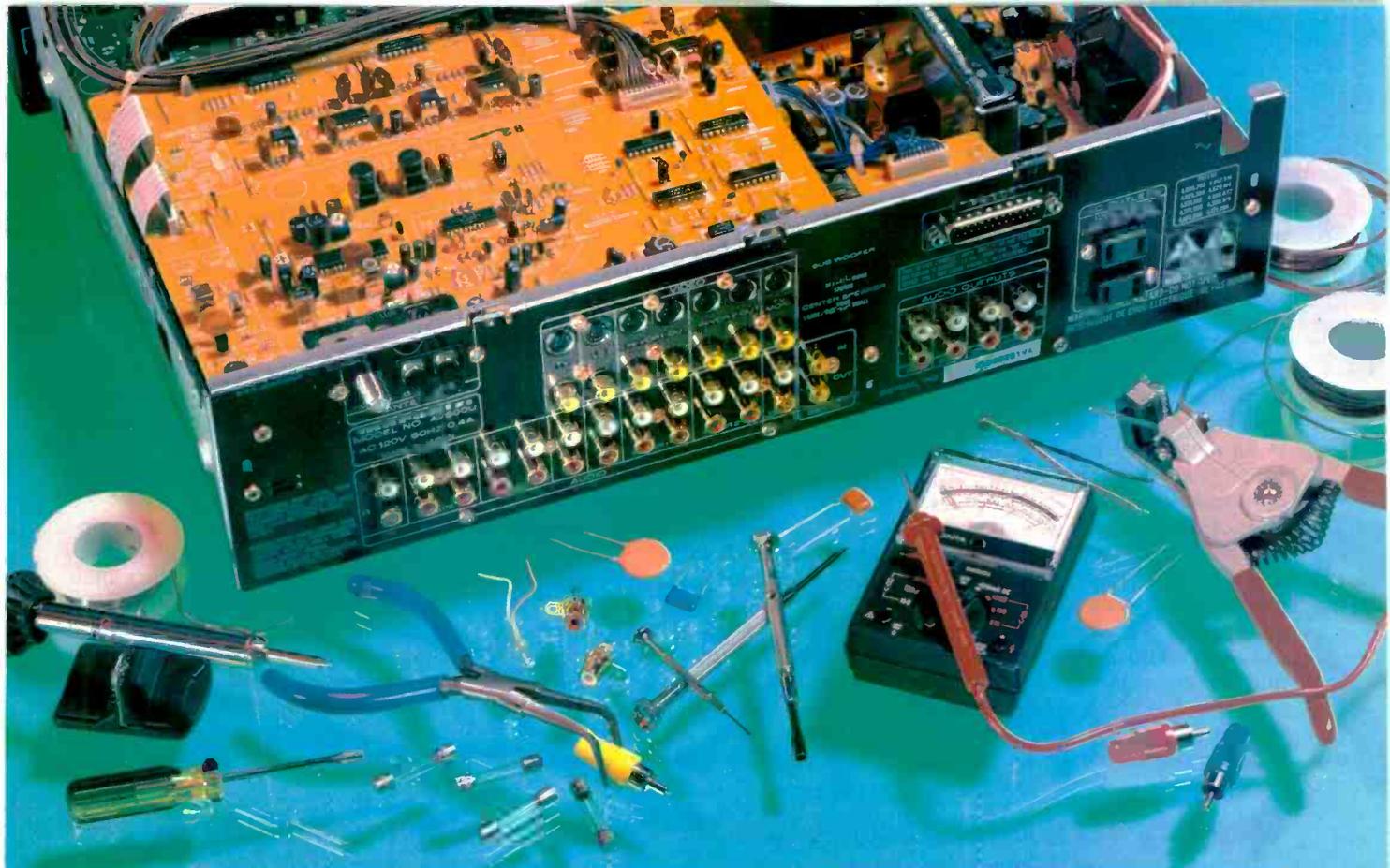
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FIX IT!

A/V gear has never been more reliable than it is today. But nothing lasts forever.

Although too many years have passed for me to remember his name with absolute assurance, I still remember the face of the TV repairman my parents used to hire, and the brown Chevy wagon that he used to take our TV chassis back to his shop for repair. I don't remember these things because my memory is particularly good (it's really just the opposite). I remember them because the man I'll call Mr. Luna was at our house rather frequently.

In those halcyon days, tubes caused most of the problems with electronic equipment — and those that were the easiest to repair. I remember that Mr. Luna would always carry two boxes. One box held his tools, and the sec-

ond held an assortment of the most common TV receiving tubes — as if we hadn't already run down to the corner drug store and tested the tubes ourselves.

Of course, the vast majority of television sets still use tubes to display their images, and some expensive tube-based audio gear is still being sold. But the disappearance of tubes from consumer-electronics products is the main reason they have become so much more reliable. On the other hand, electronic gear has also become increasingly complex, so when equipment *does* fail, repairing it can be much more difficult.

Is It Broken?

Despite the difficulty in repairing high-tech electronic gear, there are some easy problems that you can troubleshoot yourself. When a component fails or its performance deteriorates unacceptably, you should always look for the simplest solution first. Never overlook the obvious — you'll often find a list of typical obvious problems in the component's owner's manual — and don't always assume that it's actually broken.

Is the unit plugged in? Is power supplied to the outlet into which it is plugged? Are any other cables loose or disconnected? Have you made *any* changes to it or any other equipment in your system that could be causing

By Brian C. Fenton

PHOTO BY JEFFERY KREIN

FIX IT!

the problem? Did the cable out to your satellite dish get sliced by the kid who cuts your hedges? Do you need new batteries in your remote control?

Scott Wells, head of technical sales for E C Electronics, a service center in midtown Manhattan, says, "Don't bring any battery-operated equipment in for repair until you've replaced the batteries at least three times," citing the frequency with which consumers bring in perfectly functioning gear with dead "new" batteries.

A power surge can cause any equipment with a microprocessor to "forget" what it was doing. Just as a PC can crash for no apparent reason, your microprocessor-based A/V receiver can, too. Simply resetting it might bring it back to life. Look for a reset button on the device — it's usually a

meter, just replace the fuse with a new one. You'll know immediately whether it was the problem. But fuses don't usually blow for no reason. If you replace a fuse without fixing the underlying problem, it will just blow again.

Most outlet strips contain resettable circuit breakers instead of fuses. If your equipment is plugged into an outlet strip, check to see if its breaker is tripped.

A deteriorated picture on your television might not be the fault of the set but something external to it. Radio-frequency interference (RFI) generated by all kinds of equipment — computers, paging systems, and appliances, to name a few — can seep into your system, adding both audio and video noise. Make sure you're using shielded cables. Double-check the quality of all of your cable connections, and replace suspect cables that could be providing an entryway for outside noise.

A loose cable can even prevent some

Having problems with your remote control? One way to make sure that your remote is putting out a signal is to look at it through a camcorder. The camcorder's CCD imager is sensitive to infrared (IR) light, and you'll be able to see the remote flash if you look at it through the camcorder's viewfinder. And don't overlook cleanliness — a dirty lens on the remote or a dirty "eye" on the component could be hindering operation. If your remote is a universal model, it might have just forgotten its programming — perhaps you dropped it and the batteries became dislodged.

If your remote-controlled equipment starts behaving erratically, or refuses to respond to commands from a remote, the problem might not be with either the equipment or the remote. Some energy-efficient compact fluorescent light bulbs can interfere with a component's ability to "see" IR remote signals, or they can send erroneous signals to your equipment. Turn

Crackling volume controls are among the most common complaints about older A/V equipment, but the fix is usually an easy one.

small, recessed button on the rear panel that you'll need a ballpoint pen or the like to push. If the component doesn't have a reset switch, unplug it and let it sit for a few minutes. It might operate just fine when you plug it back in.

Wells says that his service center receives two or three pieces of equipment every day that can be fixed by simply pressing the reset button or by turning off the key-protect feature (a feature found on many portable CD players that prevents the accidental operation of their controls). To save time on such "repairs," E C Electronics performs quick tests of components right at the front counter before it accepts them for repair.

Easy Fixes

If a component that is plugged into an operating outlet seems completely dead, check its fuse. *Be sure to unplug the unit first.* Then remove the fuse and visually inspect it. If its filament is broken, replace the fuse with a new one of the same rating. Even if the filament appears good, check it for continuity anyway. It's not unusual for bad fuses to look good. If you don't have a continuity checker or an ohm-

meter, just replace the fuse with a new one. You'll know immediately whether it was the problem. But fuses don't usually blow for no reason. If you replace a fuse without fixing the underlying problem, it will just blow again.

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A loose cable can even prevent some

TVs from operating at all, because some TVs need to see an adequate input signal before they can be turned on. With those sets, it's especially important to make sure they are set to the proper signal source. For example, if your cable or antenna is attached to the Ant-1 input, but the source selection is inadvertently changed to Ant-2, the set won't see an adequate signal, and it won't operate.

Crackling volume controls are a common complaint with older equipment. If your equipment develops one, or if other controls become noisy when operated, the fix is easy — although you may have to open the component's cabinet. Spray some contact cleaner into the potentiometer or switch that's causing the problem, and move the control through its full range of operation several times. That should solve the problem.

If you haven't listened to your LPs in years, and then rediscover your favorite album of 1977 in your attic, you'll probably be disappointed when you fire up your turntable again and hear the slow, warbling sound. Don't worry, it's an easy fix. The turntable's motor is probably fine; you'll just need to replace the turntable belt.

off your fluorescent lights and see if the problem goes away.

If the picture delivered by your VCR starts to degrade, the solution might be as simple as using a head-cleaning tape to remove deposits from its video heads.

When an easy fix isn't available, it's time to seek help from a pro. You might be tempted to poke around inside the equipment to look for other causes of the equipment's troubles, but it's not a good idea. When is the last time you saw consumer-electronics equipment *without* a "No user-serviceable parts inside" sticker? The advice is especially true for TV sets, whose capacitors and picture tubes can deliver high-voltage jolts long after the plug has been pulled. Other solid-state equipment doesn't present the same shock hazard — as long as it's unplugged — but there are other good arguments for staying out: 1) It's unlikely that you will find anything fixable if you don't have the service manuals and the proper test equipment. 2) You have a better chance of damaging something further than fixing it. 3) You'll void any warranty that still applies. 4) If a service center suspects that you've tampered with a

component before bringing it in for repair, it might be unwilling to accept it because your "adjustments" may have put it too far out of alignment.

That said, there *are* some tasks that you might consider tackling if you're mechanically adept and don't usually end up with extra parts when you reassemble something. You might be able to replace a cassette-deck drive belt, for example, or a burned-out indicator light. See the sidebar "More Advanced Fixes to Tackle" at right for more on this topic.

Looking for Service

Despite the occasional newspaper or television exposé of service centers that are either incompetent or deliberately trying to rip off the public with fraudulent "repairs," most electronics service centers are honest and competent. But how can you be sure?

As with any other business, personal experience and recommendations from friends are usually good indicators of quality. If you've been happy with a repair shop in the past, you're well advised to stick with it. However, if your equipment is under warranty and your familiar service shop isn't factory-authorized for that brand, you'll have to find someone else.

Scott Wells, who ran a repair shop in rural upstate New York for twenty years before moving to E C Electronics in Manhattan, stressed that "service isn't a once-in-a-lifetime occurrence. You should build up a relationship with a servicer. Use a local source if you have a choice, especially if you want to keep him in your local area."

If personal experience and recommendations don't help, approach the decision-making process in much the same way you would to hire any other skilled technician or tradesman. Check if the business is a member of some self-policing state or local trade association such as the Better Business Bureau. Make a call and find out if there are any outstanding complaints against the company.

Also ask how long the company has been in business at its present location. Wells stressed this point, as did Luis Rojas, the proprietor of Color Vision, a TV repair shop in Manhattan. "I've been in this neighborhood for twenty-seven years," Rojas said, "and all of my customers are from the neighborhood. If I wasn't competent, I could never have survived this long."

Membership in a national trade association such as the National Elec-

More Advanced Fixes to Tackle

WARNING: RISK OF ELECTRIC SHOCK. DO NOT OPEN. NO USER-SERVICEABLE PARTS INSIDE.

There's a reason why consumer-electronics gear warns you not to try to fix it. Going inside can be dangerous! However, it is possible to repair equipment safely if you follow some important safety rules. First, never work on equipment that's plugged in unless you fully understand how to avoid contact with line-power voltages. Second, never open a TV set or monitor. Not only is there a risk of coming into contact with high voltages even with the power plug pulled, but carelessly banging the picture tube with one of your tools could cause it to implode, sending shards of glass flying in all directions.

It makes little sense to try to repair any component that's still under warranty — you'll undoubtedly void the warranty when you open the case. Even with out-of-warranty components, you should attempt to fix it yourself only if you are reasonably confident that you know what the problem is. There are exceptions, of course. For example, if you drop your portable CD player and you can't find a repair shop that is willing to tackle the job of putting things back together — at least not for less than twice the price of a new player — then you have little to lose by trying it yourself. Remember that if you don't know what you are doing, you will most likely just make the problem worse. And even minor problems can require a major disassembly — and subsequent reassembly.

All of that disassembly will require a good set of hand tools. To start, you'll need a variety of Phillips and flat-blade screwdrivers. Using the wrong size driver, or a poorly made one, can cause damage. Needle-nose pliers, tweezers, contact cleaner, alcohol, light machine oil, and silicone grease are also essential for many repairs. A multimeter is also a good investment, if only to check for continuity and short circuits.

Tape Decks

Whether cassette or open-reel, portable or rack-mounted, all tape decks require cleaning on occasion. Actually, most common tape-deck problems — including "tape eating" — can be cured with a



thorough cleaning. Cleaning swabs and isopropyl alcohol (*not* rubbing alcohol) can be used virtually anywhere inside a cassette deck.

Start by cleaning the audio head(s) and erase head with a swab and alcohol. Then clean the capstan(s) and pinch-roller. You might have to use a few swabs on each, because they can collect a lot of oxide that has flaked off of old tapes. But use only the swabs and alcohol; resist the urge to use any other tool to scrape off the oxide. Keep at it until the swab comes away clean. If the pinch-roller appears hard and shiny, or if it has a cracked surface, it should be replaced. Also clean any other guideposts that the tape passes over.

The idler, or idler tire, swings between the tape reels and transfers motor power to one or the other. A dirty or worn idler can prevent the take-up reel from turning and result in tape spilling into the deck and being "eaten." The idler should be cleaned, and so should the reel-table edges, which the idler contacts.

The deck's belts should also be inspected and cleaned. Take plenty of notes, and even draw diagrams, so that you'll be able to get things back together! If possible, remove each belt one at a time and clean it with alcohol and a swab or a lint-free cloth. Alcohol can degrade rubber, so don't *soak* the belts in it.

Any belts that appear loose or stretched should be replaced. All belts will need replacement eventually, so replace any that are the least bit suspect — the dollar or two it will cost is insurance well spent. On the other hand, if you don't have a replacement belt on hand, you can extend the life of a belt by months with rubber revitalizer, available at many electronics stores.

Belts are normally specified by their cross-sectional shape (square, flat, or round) and their inside circumference. Most small belts in A/V gear have square cross sections. To measure the inside circumference, hook the old belt on one end of a ruler and pull it just tight enough that it is flat, but not under tension. Read off the length, then double it for the inside circumference. Assume that the old belt is slightly stretched, and get a new one that is about 5 percent smaller.

You might be able to pur- 

chase a belt from a local service shop or electronics supply center. Belt kits are also available via mail order from MCM Electronics (650 Congress Park Dr., Centerville, OH 45459-4072; telephone, 800-543-4330 or 937-434-0031).

Tuners and Receivers

Has your receiver lost its memory? Do your station presets disappear every time you turn the power off? Some older stereo tuners and receivers used small internal batteries, typically lithium coin cells, to supply power to their internal memories for station presets and mode settings. While those batteries have a long service life — ten years or more — they don't last forever. Replacing a lithium coin cell in itself is pretty easy. But be warned — getting to the battery might require a fair bit of disassembly of the tuner or receiver. Take notes and work carefully.

Virtually any other problem with a tuner or receiver will require some knowledge of electronic circuitry, or at least the ability to solder. If your dial lights have gone dark, for example, you might enjoy the challenge of soldering in a new replacement. (You'll rarely find lamps mounted in sockets.) Soldering is not difficult if you follow three simple rules: 1. Make a good physical connection. 2. Heat the connection. 3. Let the connection — *not* the soldering iron —

set of relays in series with each output. The relays are there to protect the loudspeakers from power-on transients or some fault in the audio output circuits. However, the relay contacts can deteriorate over time, resulting in intermittent operation. It is possible to clean relay contacts with sandpaper or a file, but replacing the relays might be a better option.

If your receiver never comes on no matter how long you wait or how hard you whack it — assuming that everything else, such as the display and tuning, appears to be normal — the problem probably isn't the relays but the timing circuit that controls them. On the other hand, it could be that the relays are doing their jobs: If there's a problem in one of the output power amplifiers, the relays could be protecting your speakers from damage. In either case, this is one repair that is best left to a professional service center.

CD Players

Despite the technical complexity of CD players, they have proven to be, in general, very reliable. Yet there are some common problems that crop up, such as discs not being recognized, audible noise, erratic tracking, and sticking or skipping. Fortunately, although those symptoms could indicate a serious problem, they can also be caused by something as simple as a dirty lens.

the middle of a disc, the problem could be that the sled on which the optical pickup is mounted is dirty or gummed up. Cleaning the sled and its guide rails, and lubricating them with silicone grease, could restore it to operation.

Other Repairs

Some of today's A/V gear is virtually unusable without a working remote control. So when a remote fails to operate, it can render your entire system nonfunctional. Fortunately, many remote-control problems can be repaired, including the kind that are most commonly caused by physical abuse or accidents.

If you leave batteries in a remote control — or any other device — for too long, you can end up with leaking batteries and corroded battery contacts. Clean off the chemical deposits with a brush and then a damp lint-free cloth. Fine sandpaper or a nail file can be used to polish the contacts. If it looks like the battery leakage went beyond the battery compartment and into the case, you will need to open the remote and thoroughly clean the interior.

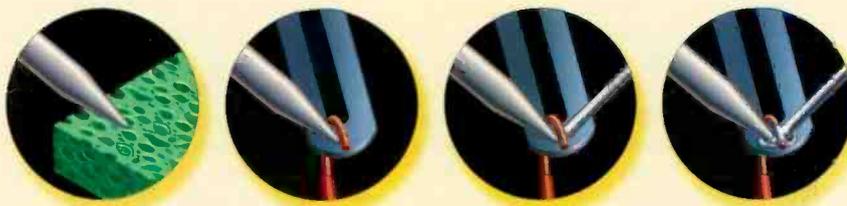
Unfortunately, it's not always obvious how to disassemble a remote or other small electronic component. Sometimes there are obvious screws — along with some not-so-obvious screws in the battery compartment. Screws are also sometimes hidden under decorative decals, rubber plugs, and the equipment's feet (if any). But even with all of the screws removed, the two halves of the case might not separate readily. They are likely held together by plastic catches. Probe along the seam between the halves with a flat screwdriver. If you find a catch, press it in to unlatch it.

Dropped remotes sometimes suffer broken or intermittent contacts between the batteries and the circuit board. Carefully resolder the contacts. Reinforce them with epoxy if necessary. Dropping remotes can also result in cracked solder joints. Inspect the joints with a bright light and a magnifying glass, and resolder any that look suspect.

Dirt and spills that enter a remote can prevent its keys from operating reliably. The solution is to disassemble the remote, wash all the parts with water, and dry them thoroughly; use a hair dryer if necessary, but not too hot.

The bottoms of the rubber keys of a remote control are covered with a conductive material. When a key is pushed, it bridges circuit-board traces and completes a circuit. The conductive material can, however, get worn — and it happens, of course, to the keys that are used the most. The solution is to coat the bottoms of the keys with new conductive material, such as conductive ink or even foil tape.

— B.C.F.



Soldering is easy, but practice with scrap wire before doing it for real. Keep the tip clean with a damp sponge and "tinned" with solder. Make a good physical connection between the pieces you want to join. Heat the connection, and let it, not the soldering iron, melt the solder. Use only 60/40 rosin-core solder.

melt the solder. You must be certain to use 60/40 rosin-core solder, which is made of 60 percent tin and 40 percent lead (*never* use acid-core solder). Thin-gauge solder will be easier and neater to work with. A 25- to 30-watt soldering iron should be able to handle almost any situation you're likely to encounter. Along with a soldering iron, you'll also want some desoldering braid, which is used to wick up molten solder when you need to remove a component from a circuit. Vacuum desoldering tools are also available.

Another problem commonly seen is a receiver that has no output unless the volume is turned up high or you give it a firm whack. In this case, the likely culprit is a

Although CD lens-cleaning discs are available, they're useful only for minor dust on the lens. Cleaning the lens by hand will produce better results. But be careful: the lens is suspended by a delicate voice-coil-actuated positioner. Start by using an air bulb, like the one you might use to clean your camera lens. Then clean the CD player's lens with a cleaning swab and isopropyl alcohol, and dry it quickly with a lint-free cloth.

If your CD player's drawer will not open or close, the problem could be caused by a loose belt, which is easy enough to remedy. But it could also be caused by a broken gear, which is better left to a pro.

If your CD player consistently stops in

tronic Service Dealers Association (NESDA) can also be something to look for in a service shop. NESDA backs its members' work by guaranteeing that you'll receive the services you pay for.

You might want to verify that the business employs a certified electronics technician (CET) in a position of responsibility. Look for certificates from the International Society of Certified Electronics Technicians (ISCET), the technical branch of NESDA. Perhaps more important, look for diplomas from manufacturers' training courses. According to Wells, "After technology has filtered down and is shared by all manufacturers, then any competent service shop can handle it. For the newest gear, instruction from the factory is extremely important."

What's It Gonna Cost?

That's what estimates are for! Remember, however, that many estimates are just *estimates*, not guarantees.

parts to be repaired, a turntable is \$41 plus parts, and a cassette deck is \$39 plus parts (single-well) or \$49 plus parts (dual-well). A detailed estimate that spells out the parts cost is available for \$20, which can be applied to the total cost of the repair.

If your broken equipment is new and still under warranty, you should not have any out-of-pocket expenses — if it's really broken. (You can't expect a manufacturer to pay for a service center's time in diagnosing that the problem with your VCR is that your 2-year-old stuck the latest Burger King kids' meal toy into the tape slot.) Be aware, however, that you will probably have to pay if a service technician must come to your home to examine, for example, a big-screen TV. Rates vary, but based on a random survey of several service shops, expect to pay \$35 to \$65 for a service call.

Unfortunately, it's a fact of life that the cost of servicing electronic equipment can quickly approach the cost of

economical to junk the old camcorder in favor of this year's model.

Service Contracts

There is a way to protect yourself against the unexpected expense of product failure: extended warranties and service contracts. Although these have gotten a bad name, they can be valuable and economical — if you're careful to read the fine print and you choose a reputable company.

Critics of extended warranties and service contracts contend that they are unnecessary because consumer-electronics devices have become so reliable that the percentage of equipment that breaks down after the warranty period isn't high enough to justify the cost of the "insurance" against it. These critics say that service contracts are used simply to increase store profits. Proponents of service contracts counter that the cost of the warranties is justified because unprofitable warranty companies won't survive to hon-

You shouldn't shy away from paying a technician for his time and expertise in diagnosing the cause of a problem with your gear.

Most service centers will be happy to give you an idea of the range of costs associated with a particular kind of repair, but it'll usually be a nonbinding "guesstimate." Be prepared to pay a flat diagnostic fee for a more detailed, usually guaranteed estimate. Charging such a fee is entirely reasonable — you shouldn't shy away from paying a technician for his time and expertise in diagnosing the cause of a problem. Most service shops will apply the diagnostic fee toward the repair if you choose to go ahead with it. If you don't, the diagnostic fee should be your total out-of-pocket expense.

Wells's center, for example, charges a fee for written estimates and applies the fee toward the cost of the repair. "Sure we charge a fee," he says. "But we do diagnostic work, and we provide you with useful information so that you can make an informed choice." Rojas, on the other hand, provides free, unwritten estimates, a service that his customers find invaluable.

The Repair Shop at Radio Shack, which has established itself as the nation's largest repair service, with more than 6,500 drop-off points, doesn't charge for ballpark estimates. A receiver, for example, will cost \$69 plus

replacing it with a new model. Electronics manufacturing is now an automation-intensive operation requiring little human intervention. It can take more time for a technician to gain access to a circuit board to take some signal measurements than it took for all of the components on the board to be auto-inserted, wave-soldered, and tested by industrial robots. Service centers must also keep sophisticated test equipment for measurements, and they must pay for service literature that can help them diagnose problems. And, of course, they must keep an adequate inventory of common repair parts on hand.

Fortunately, the cost of replacement parts is usually not the major expense in the repair of consumer-electronics equipment. But the inability to obtain model-specific replacement parts for older gear can be a major headache, turning an otherwise good component into useless junk. It is true, however, that some replacement parts *can* make you think twice about repairing a product. Replacing a camcorder's internal lens assembly, for example, can easily set you back \$400 or more for the parts alone. Add in the labor to replace it, and you might find it more

or their insurance when it's needed.

Wells has mixed feelings about service contracts. "For big-ticket items, they're absolutely worth it," he says, but he stressed the importance of choosing a reliable warranty company. The service center he works for, E C Electronics, is owed money by many apparently unscrupulous warranty companies that haven't paid for repairs E C has made. Therefore, E C no longer accepts equipment covered by those companies' warranties, and customers who have purchased them are simply out of luck.

Welcome Failures

Some equipment failures can actually be good. I remember a VCR that I used to own. It was an early clunker, inconvenient to program and a real hassle to use with cable TV. Heck, its remote control was *wired*. I couldn't wait for it to die — I just couldn't justify going out and getting a new, expensive, feature-laden VCR with a wireless remote until this one developed a problem.

One day, it finally happened. I put a tape in, pressed play, and saw nothing but snow. I didn't even check to see if Mr. Luna was still in business. □

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July 1997

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Musical Theater

Home theater might be the force that is driving the audio-equipment business these days, but Chuck Currie, an executive chef and musician in Vancouver, British Columbia, doesn't care. He has no plans to install a home theater and doesn't even own a TV. Music is his obsession, although diners who sample Chief Chef Chuck's Chicken Currie might not believe that the restaurant business is not his first love.

Currie doesn't see his music system as being overly exotic or overly expensive — he has invested about \$13,000 in his main listening-room audio system (that figure increases to \$21,000 when other stereo equipment in his home is included). In fact, he feels that

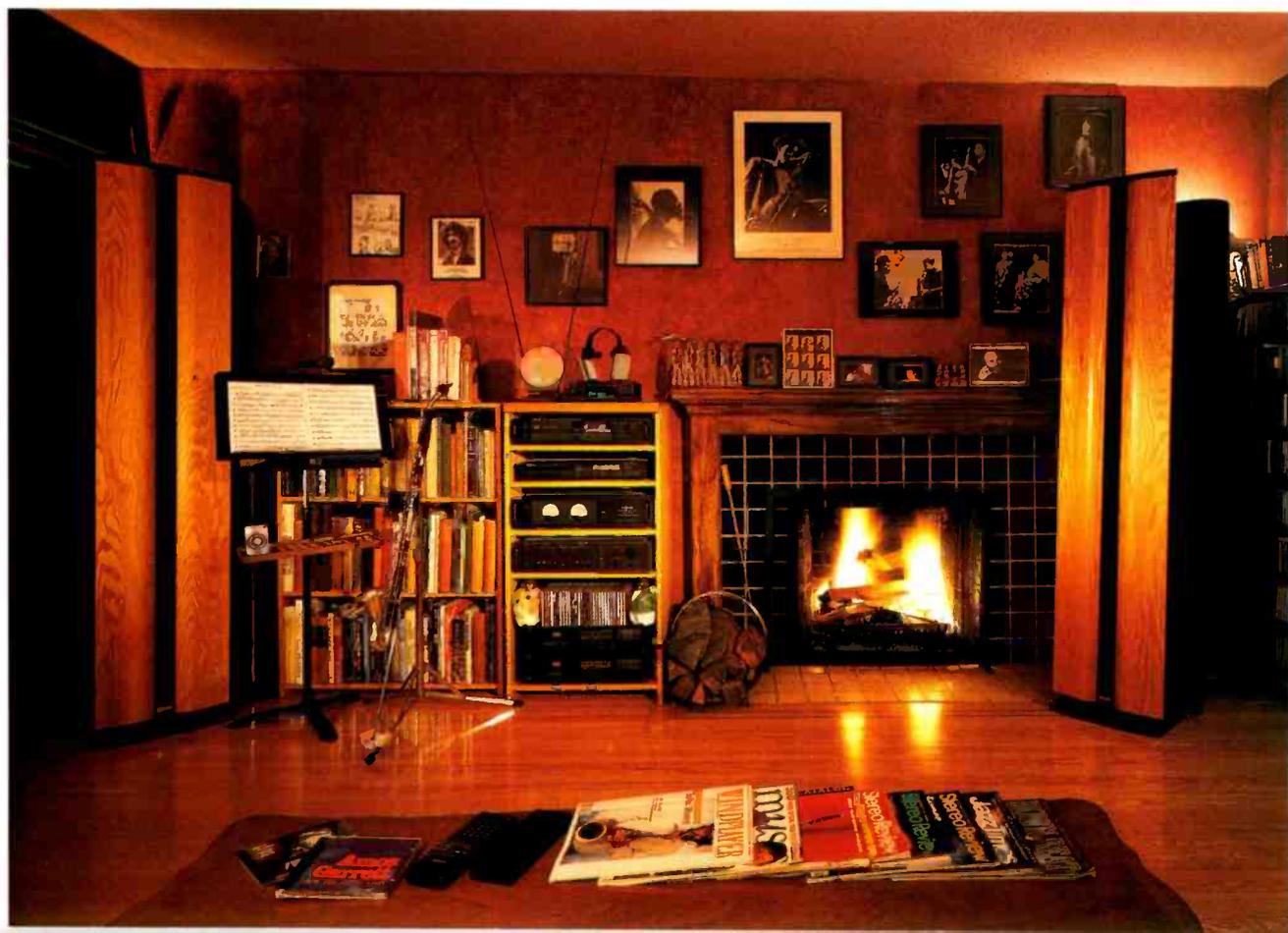
most audiophiles invest far too much in their equipment compared with what they invest in their recordings. Currie, who says that he's a music junkie, not an equipment junkie, insists on maintaining a minimum 2:1 ratio of software to hardware spending. Between his CDs and MiniDiscs, he estimates that he's invested close to \$50,000. For a total of his spending on music, add another \$4,500 for sheet music and a whopping \$51,000 for the instruments he plays: soprano, alto, tenor, and baritone saxophones, E-flat, B-flat, A, alto, and bass clarinets, and a basset horn.

Currie listens to his CDs on a Carver SD/A 490t CD player, which has a vacuum-tube output stage and a Soft EQ circuit that he says "prevents the loss of front-to-back imaging and ex-

cessive brightness sometimes associated with CD recordings."

Currie has a pair of Carver dipolar AL-III hybrid-ribbon speakers in his main listening room. He loves the speakers but says they show up the limitations of the 13 x 10-foot room. "Their superior bass response reinforced room modes, which made the sound unbelievably boomy on the low end," he says. "Anything but dryly recorded acoustic chamber music was almost unlistenable."

Unwilling to accept that great speakers in a bad room were a lost cause, Currie faxed a diagram of his room, including descriptions of the furniture and building materials, to Acoustic Sciences Corp. (ASC). After some discussion, he decided to install a few ASC Sound Tubes.



PHOTOS BY RAEF GROHNE/VISUAL SOLUTIONS

He mounted a 16 x 5-inch Half Round Sound Tube on the wall behind each AL-III speaker. "These worked like a charm," he says. He also added two Studio Sound Tubes, which are 4-foot round tubes that can slide up and down on their bases. Each tube, which is the same height as the magnetic-ribbon section of the AL-III, is divided vertically down the middle to create two semi-circular sections, one mid-range-reflective, the other mid-range-absorptive. The reflective side is turned directly toward the rear part of the ribbon, while the absorptive side faces the wall, reducing side-wall bounce into the listening area and improving imaging.

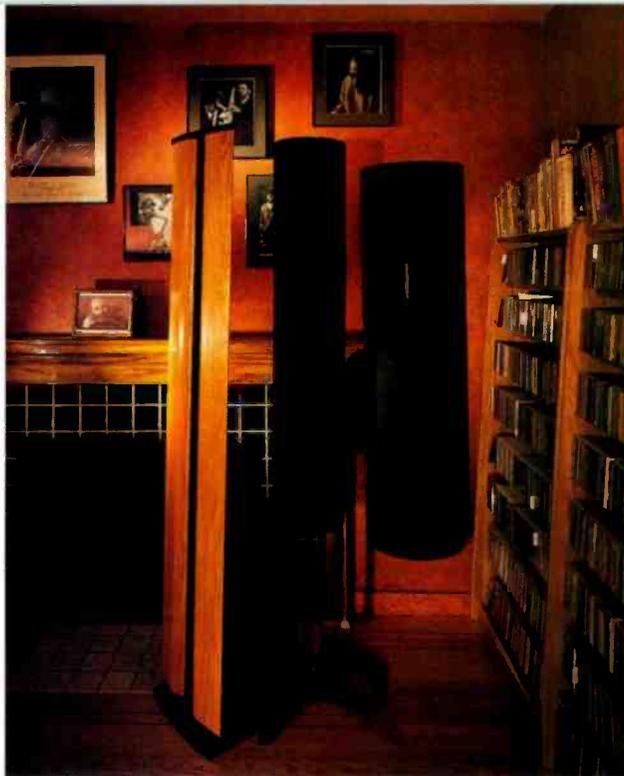
The resulting imaging is so good, says Currie, that with well-recorded CDs he and his friends can point to where the various instruments are in the soundstage and tell which ones are nearer and which ones are farther away. He says that their perceptions of instrument locations have matched up with photos taken of the recorded performances.

Besides the Sony MDS101 MD deck, other equipment in Currie's main listening room includes a Carver TFM-25 250-watt amplifier, Luxman K-100 and K-111 tape decks, Beyerdynamic DT-880 headphones, and a Yamaha TX-300u tuner.

Last year Currie retired his Thorens TD 160 turntable after dubbing the last of his vinyl records — those that had not been reissued on CD — to MiniDisc. He's become a firm MD convert. "Tape is dead," he says, "it just hasn't been buried yet."

With more than 2,500 CDs and 250 MDs, Currie's music collection takes up a lot of room. There's a lot of competition from books for shelf space in his home, though many of the book titles — including *Gustav Mahler in Vienna*, *Bird: The Legend of Charlie Parker*, and *The Harvard Dictionary of Music* — suggest that it is a friendly competition.

Finding space for such an extensive music collection is, of course, only half the battle. Currie also has to find a way to keep track of what he's got. For that, he uses a database program called Sound Librarian from Five Points Technology, which lets him en-



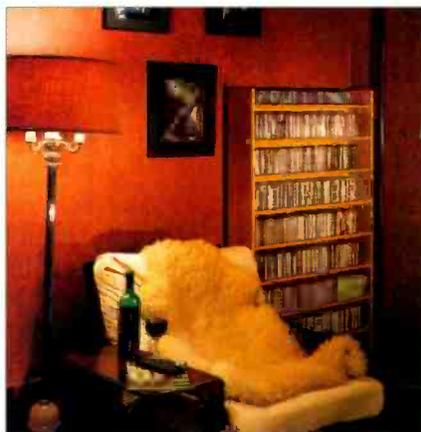
ter the title, artist, and label for each disc, and the composer, arranger, and sidemen for each track. Currie estimates that it will take him about 1,500 hours to complete the project. But, he says, it will be worth it. "When I'm done, I'll be able to print out a list of recordings by any parameters I can think of. For example, I can list all

of such jazz greats as Duke Ellington, Dexter Gordon, Ben Webster with Gerry Mulligan, and Eric Dolphy dominate his collection. His musical tastes run beyond jazz, however, as indicated by the photos of Frank Zappa and Charles Ives.

Professionally, when he can steal time away from the restaurant business, Currie plays alto clarinet with the Pacific Symphonic Wind Ensemble, multiple reeds with the Vancouver Philharmonic Orchestra, bass clarinet with the Vancouver Island Symphony, and baritone saxophone with Sax Noir, "an eclectic sax quartet."

For quieter listening when others are sleeping, Currie retreats to his library to listen on a system composed of

an Arcam CE200 preamp and an Arcam SA200 amplifier fed by a Yamaha TX-350 tuner, a Sony MZ-E2 MD player, and a Luxman D-351 CD player. He listens on a Cambridge SoundWorks Ensemble 2 sub/satellite speaker system and on AKG K-1000 headphones. A QED four-way speaker-switching unit allows him to switch



the recordings I have with tenor saxophonists soloing on 'Summertime,' or find clarinetists who have recorded Stravinsky's Three Pieces for Solo Clarinet."

His favorite recordings are CDs on Sweden's Opus 3 label, which he calls "the finest in the world," and on Japan's Three Blind Mice label ("a close second").

A quick glance at the walls of Currie's listening room tells you immediately that he is a jazz fan. Photographs

between the headphones, the sub/satellite system, or another pair of speakers he installed in his kitchen.

When he travels, he refuses to leave his music behind. He takes his Sony MZ-E2 MiniDisc player with him and listens to it through Grado Prestige SR60 headphones.

As far as Chuck Currie is concerned, home-theater enthusiasts can continue surrounding themselves with sound. He prefers to surround himself with music.

— Brian C. Fenton

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THE FUTURE

Digital audio broadcasting will change the way the world listens

OF RADIO

BY IAN G. MASTERS

Virtually all of our entertainment media will be digital in the near future. Compact discs and digital satellite television are already well established, of course. The digital videodisc is here, and the march toward digital television is under way.

But what about radio?

While most developed nations are preparing to launch digital radio later this year, and several have systems on the air already, the U.S. broadcasting industry is still grappling with such basic matters as which of several systems to adopt and where in the radio spectrum to put it.

An interesting contrast can be observed just next door in Canada, where a standard for terrestrial digital audio broadcasting (DAB) was adopted several years ago. Full-time digital radio is slated to be on the air in October, at least in Toronto, the largest market. Montreal and Vancouver, the next biggest markets, are expected to follow within six months.

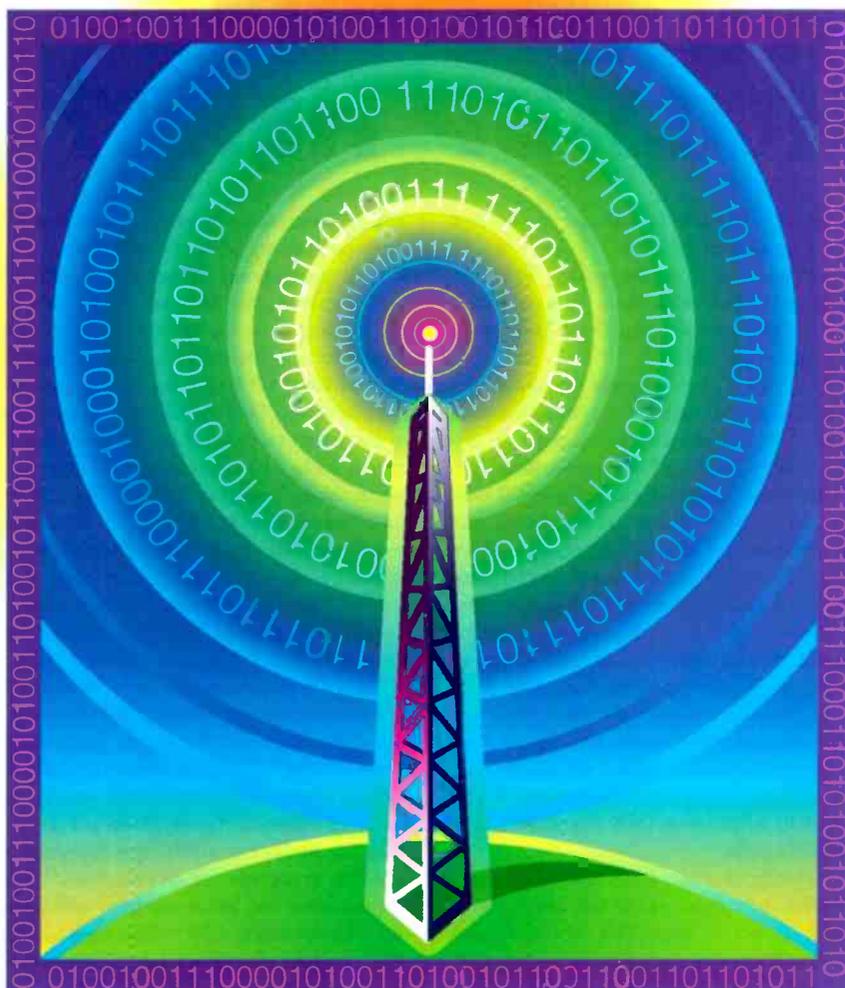
Because their land is vast and their population small, with communities far apart, Canadians have always lavished attention on their communications and transportation systems. From canals and railroads in the last century to radio, telephone, cable TV, and communications satellites in this one, Canada has often played a leading role.

When it comes to technological standards, however, it has usually made sense for Canada to follow the lead of the United States. Despite Canada's British heritage, for instance, it would lead to chaos if drivers had to switch to the other side of the road when they crossed the border, and there is a definite benefit to having a seamless continent-wide telephone system. As for entertainment, having

identical broadcasting standards means not only that Canadians can directly access U.S. radio and TV — which they have an avid appetite for — but also that they can tap into the huge selection of equipment made for the U.S. market. But in one technological arena, digital radio, Canada has decided to go it alone, at least as far as the rest of the continent is concerned.

That wasn't the way it was supposed to be. As the 1990s dawned, there seemed to be excellent prospects for an international standard for digital radio based on a system called Eureka 147, which originated in Europe but was developed with input from both the U.S. and Canada.

In the late 1980s, it became obvious that there would eventually have to be



MARY-ANNE GANLEY

a shift to some form of digital radio, and that it would be desirable if every country adopted the same system. That would make the production of both programs and receivers much simpler, and would avoid the sorts of international incompatibilities that still bedevil television.

The standard that began to emerge required some hard decisions on the part of broadcasters, who would need new equipment to operate on a whole new set of frequency allocations, but it also seemed to promise a Valhalla without scourges like multipath distortion and the vast difference in sound quality between FM and AM.

In Canada, the potential for a brand-new radio system took on an extra dimension because the government-owned radio service, the Canadian Broadcasting Corporation (CBC), suffered from a peculiar hybrid structure. The 60-year-old network had original-

ly consisted of a number of CBC-owned AM stations in the major cities and privately owned affiliates in smaller centers. When the CBC went non-commercial, it had to release the affiliates and set up its own network-programmed transmitters, most of which used the FM band. The result was that CBC programming was available only as low-fi AM in the major cities but as clear FM in the boonies.

Redressing that balance was important, but just as important was a general upgrade of the technology. To that end, a consortium was established in 1993 to choose and implement a digital parallel — and eventual replacement — for the existing radio system. The consortium, called Digital Radio Research Inc. (DRRI), included representatives of the CBC and about a dozen of the country's largest private broadcasters.

There was little doubt that the Euro-

ka 147 system was the technical front-runner. As early as 1990, some broadcasters offered demonstrations of the system to the press in Toronto and other cities, and since then additional test systems have been established in Ottawa, Montreal, and Vancouver.

Canada could, in fact, launch its digital audio broadcasting service today except for the lack of receivers. The experimental radios that now exist would retail for thousands of dollars, if you could get them, so the Canadian DAB system is mainly for demonstration. Even without listeners, however, a number of European nations, including the United Kingdom and several Scandinavian countries, have launched their own services. At press time there were still no digital radios available, but that's about to change.

The big push was planned for Sep-

WHAT'S THE HOLDUP HERE?

When WFMT radio in Chicago transmitted the first broadcast of a compact disc in North America, if not the world, during the Consumer Electronics Show in June 1982, it foreshadowed the obsolescence of analog FM broadcasting.

The wide dynamic range and extended frequency response of the compact disc and its digital progeny far exceed the capabilities of analog FM broadcasting. Yet, in the fifteen years since that first CD was played on the air, the United States has made little progress in improving radio's capabilities. As Canada and Europe leap forward into digital audio broadcasting (DAB) — sometimes referred to as digital audio radio (DAR) — the U.S. clings to noisy, multipath-riddled analog radio.

Broadcasters, equipment manufacturers, and the government ploy lip service to their desire for DAB, but behind the scenes they are busy stalling the changeover. If you want to experience DAB this millennium, go to Canada.

Actually, in some ways DAB does exist. Satellite broadcast music services such as DMX Direct or DirecTV's Music Choice beam CD-quality digital audio to home receiving dishes. Since the reception systems

are not portable, however, these broadcasts can't really be considered radio.

This past spring, after seven years of consideration, the FCC auctioned two S-band licenses in the 2,320- to 2,345-MHz range for satellite-delivered DAB. The auction winners, CD Radio, Inc., and American Mobile Radio Corp. (AMRC), plan to offer subscription services where listeners would pay a \$5 to \$10 monthly fee. The S-band's super high frequency permits the use of small antennas, but buildings, hills, and even trees, light poles, and billboards could block the signal. Thus, it would seem that for full national coverage these providers would need to erect hundreds of repeater towers to fill in the satellite-coverage gaps.

AMRC's president, Lon Levin, disagrees: "This is the first I've heard of that. I can assure you that we think the technology works." And FCC Commissioner Rachelle B. Chong applauded satellite DAB as a boon to rural listeners. As we go to press, neither CD Radio nor AMRC has launched a satellite to provide the service, nor is there a guarantee that either company will come up with the nearly \$90 million each bid for the spectrum allocations. Lynn Claudy, senior vice-president of science and technolo-

gy for the National Association of Broadcasters (NAB), doubted that "satellite digital radio is going to be a serious competitor to local radio in the near term."

The real action in the U.S. centers around an IBOC (in-band, on-channel) terrestrial broadcast system, which — depending on who you speak to — represents either the future or the fantasy of digital radio here. IBOC proposals exist for the AM and FM bands, but only the system proposed for the FM band promises CD-quality sound. Two competing in-band proponents merged last May. AT&T spin-off Lucent Technologies, owner of Bell Labs, which had been proposing an in-band, adjacent-channel (IBAC) system, agreed to develop a single IBOC system jointly with USA Digital Radio (USADR), founded in 1990 as a partnership between Westinghouse, CBS (now its subsidiary), and the Gannett newspaper chain. Research continues at the Westinghouse labs.

All IBOC systems run up against Shannon's Law, propounded by Claude Shannon at Bell Labs. Basically, it defines the theoretical maximum rate at which data can be transmitted error-free over a bandwidth-limited channel in the presence of noise. In other words, you can fit only so much information (or energy) into a given bandwidth (such as an FM channel) before something has to give.

The USADR system proved to be a disappointment in initial testing. From that experience, however, it's beginning anew with Lucent's help. That means further de-

tember at the huge Berlin Radio Fair (*Funkausstellung*), which was to mark the launch of the German DAB system. Major manufacturers — Sony, Pioneer, Blaupunkt, Philips, Grundig, Panasonic, Kenwood, and possibly Delco — planned to introduce affordable receivers at the fair. Once they're available on the market, the floodgates will open. Plans are to focus on digital car radios first — conventional reception is usually worst on the road — and then to broaden into home audio.

In Canada, stations in Toronto are to begin broadcasting digitally in mid-October, coincident with the start of a national broadcasting convention. The local broadcasters have already formed a consortium to get things rolling immediately, and as many as twenty stations could be up and running at the launch.

That's not such a big deal, as it turns out. For one thing, the city's stations al-

ready cooperate to broadcast together from the world's tallest structure, the CN Tower, so doing it digitally, even in a new frequency band, is not a new challenge. Then too, most of the major Canadian broadcasting companies are based right there in Toronto.

The CBC intends to cover 70 percent of the country in five years, and DRRRI estimates that it should take no more than seven years to blanket the country fully. It figures that conventional radio has a future of fifteen years, at most. But what happens if you live in Chibougamau, Quebec, and don't want to go digital just yet?

Nothing.

For now, all existing Canadian radio stations, AM or FM, have assignments in the new digital band but will simulcast at their old frequencies as long as it's necessary or desirable — which might mean forever. Canadian broadcasters, like those in Europe, look at

DAB mostly as an opportunity to do what they are already doing, but with a better delivery technology and thus better sound quality.

Nuts and Bolts

Digital radio, like much of the new audio and video technology, owes its existence to the possibility of digital compression or data reduction; in the Eureka 147 system, the "codec" (code-decode) segment performs a 6:1 compression of data. A group of listeners, including several audio journalists from Canada and the United States, took part in a series of blind listening tests conducted in Ottawa several years ago in which a number of DAB codecs were compared. At least one — the Musicam codec that became part of the Eureka 147 system — was absolutely transparent, with no unpleasant audio artifacts at all.

There are two basic technologies for

lay to allow for research and development of a new and better system, lab-testing, and field trials. But USADR president and CEO Bernee D. L. Strom expressed great optimism for the forthcoming joint system.

"We'll be lab-testing the system in January 1998 and field-testing by summer," he said. "We expect to deploy by the summer of 1999. We have totally revamped our system. We've chosen a new waveform that uses OFDM [orthogonal frequency-division multiplexing], which is similar to what Eureka 147 uses. The system we're now fielding in no way resembles the system that was tested in 1995. We've overcome our interference problems, and we feel we'll have a system that's very robust under multipath. We will not have problems from adjacent stations. We will not have host-to-digital problems or digital-to-host problems. Consumers will not have to throw out their 600 million radios, which Eureka would make obsolete."

The U.S. government grants a limited number of radio licenses in each market, free of charge, that allow commercial broadcasters to do pretty much as they please, an allocation system unique in the world. These licenses can provide windfall profits as the price of transferring them from one licensee to another steadily skyrockets. If you'd like to buy an FM station in New York City, for example, be ready to cough up \$60 million or more. Broadcasters go apoplectic at any suggested change in the status quo, such as adopting the Eureka 147 system. First, a new broadcast

band would devalue their existing gold mines, and, second, the FCC would probably auction licenses in the new band rather than give them away.

Lynn Claudy outlined the National Association of Broadcasters' position: "We're committed to making sure radio survives into the digital future, so we're certainly in favor of terrestrial digital audio broadcasting. While it is a major priority, it isn't urgent. The NAB endorses the IBOC approach to DAB, as opposed to the European approach of using a new band for digital radio. Beyond that we haven't endorsed any particular scheme, although it would seem that with the partnership of USADR and Lucent, there really is only one out there. We can't endorse it because they haven't produced anything yet, but we plan to be very involved in the testing."

The Consumer Electronics Manufacturers Association (CEMA) represents the receiving end of DAB. CEMA president Gary Shapiro said: "We've been consistently supporting DAB for five years. We think it's a wonderful technology. It's a shame that the broadcasters have done so much to try to delay it. They have no interest in seeing a transition to digital technology. We think an in-band solution would be easier to accept politically, and we hope it works, but we haven't been convinced by the test results so far. Once a feasible system is chosen, the receiver manufacturers could respond within a year, presuming there's broadcasting to be received."

I asked a couple of FM broadcasters in

my area, one public, one commercial, about the IBOC approach. Ed West, chief engineer of WILL Radio in Urbana, Illinois, helped USADR conduct some of its earliest tests back in the fall of 1992. He noted that the FCC mandated that the tests not increase the noise level of the analog transmissions — which they invariably did until the engineers reduced the injection level of the digital signal to the point where any resistance to multipath interference would have been destroyed. Guessing at the future of an IBOC system, West expressed a lot of respect for the Westinghouse engineers, but said, "Their problem still is in multipath robustness. Unless they have something that will beat multipath, I don't think anybody's going to buy it."

WFMT's chief engineer, Gordon Carter, questioned the value of DAB. "Is it going to be much better than what we have now?" he asked. "The analog signal, even with multipath, is always there. A digital system will mute out in a bad reception circumstance." He also cited the expense of converting an FM station to totally digital transmission from CD player to transmitter.

A well-placed source who requested anonymity told me, "If we don't get our sensibilities straight on DAB, there's going to be a severe and devastating impact on radio listenership. We either join the twenty-first century, or we just live with our fate." As to when we'll hear DAB, CEMA's Shapiro said, "There's no reason for any optimism at this moment. We're talking next century." — Rich Warren

digital audio broadcasting. One approach simply uses a separate chunk of the radio spectrum to rebroadcast digital versions of what is going out on the regular AM and FM bands. The Eureka 147 system is of this sort, having been allotted a portion of the "L-band" from 1,452 to 1,492 MHz. The alternative "in-band" approach, favored by U.S. broadcasters, would bury a digital signal on a subcarrier within an existing signal, AM or FM. However, no in-band system has been perfected yet.

Compressed, each signal uses up very little spectrum space. Although the 40-MHz-wide L-band contains only twenty-three channels, each one can broadcast up to five separate digital radio signals simultaneously. The initial plan in Canada is to determine which stations in each area have the most similar radiation patterns and place them together on transmitters that mimic those patterns.

DAB offers some real advantages over traditional analog broadcasting, both FM and AM. One, of course, is the near-CD sound quality. But sound quality is only a part of what DAB is all about. One of its intriguing characteristics is that receivers can choose from several almost-identical signals on the same frequency and reproduce the best one. That means that the broadcasters will be able to extend their coverage by having more than one transmitter in an area on the same frequency without interference. Alternatively, networks could use a single nationwide frequency, even in adjacent areas. Moreover, the system is capable of being delivered by satellite, which would allow a national broadcaster (such as the CBC) to fill in the gaps between ground-based transmitters and to provide digital service to remote areas. That's been suggested for reaching the sparsely populated northern parts of Canada, though it's not likely to happen until the terrestrial system is substantially complete.

The Eureka 147 system is also unaffected by analog broadcasting's nemesis, multipath reception, in which reflected signals interfere with the direct signal. If a reflected signal is better than the direct signal, the receiver will respond to it alone — no interference. In addition, the very high frequencies of the L-band are excellent at penetrating buildings instead of bouncing off them, which should reduce multipath



The Blaupunkt Hannover DAB106 car DAB radio system includes a screen for displaying received still and moving images.

to some degree. Another advantage is that a host of other data can be piggy-backed on a DAB signal, from the name of the record being played to traffic reports, stock-market prices, and weather information.

In anticipation of the changeover, radio stations have already been shifting to digital production and studio-to-transmitter links. Inexpensive digital memory combined with excellent data-compression techniques have allowed broadcasters to switch from the technology of the past — based heavily on magnetic tape — to a more computerized environment. A technical consultant to the Canadian Association of Broadcasters suggests that virtually every station already has at least a few "islands" of digital production capability, and some, like the new national headquarters for CBC Radio in Toronto, are digital throughout.

Home Alone

The progress north of the border and in Europe has not yet found an equivalent in the United States. There's a general conviction that DAB will come sooner or later, but the smart money at the moment seems to be on later. Despite some initial enthusiasm in the U.S. for Eureka 147, any official support for the system quickly vanished because of the objections of broadcasters.

Essentially, many broadcasters feel that a DAB system that uses new spectrum space, as Eureka does, would be in competition with existing stations. One FM company has acknowledged being "concerned that FM radio will eventually be at an economic and technological disadvantage" if an out-of-band system is adopted, while an in-band, on-carrier (IBOC) system, if perfected, would "offer the FM broadcaster a rapid and relatively inexpensive way to 'go digital.'"

Such political and commercial con-

siderations might well carry the day if the system actually worked. A series of laboratory tests on various proposed IBOC systems, sponsored by the Consumer Electronics Manufacturers Association and the National Association of Broadcasters (NAB), were performed in 1995 by NASA's Lewis Research Center in Cleveland. The results suggested that IBOC signals are still prey to many of the ills of FM, such as multipath interference, and cause significant degradation of not only the "host" signal but also adjacent stations.

When the action moved to San Francisco in 1996 for field-testing, as many as five in-band systems from USA Digital Radio, AT&T/Amati, and AT&T/Lucent were in consideration. Ultimately, all dropped out of the tests. Initial laboratory testing had indicated that in-band systems could degrade the performance of the main signal, and that made it impossible for the National Association of Broadcasters to find a volunteer station to host the tests.

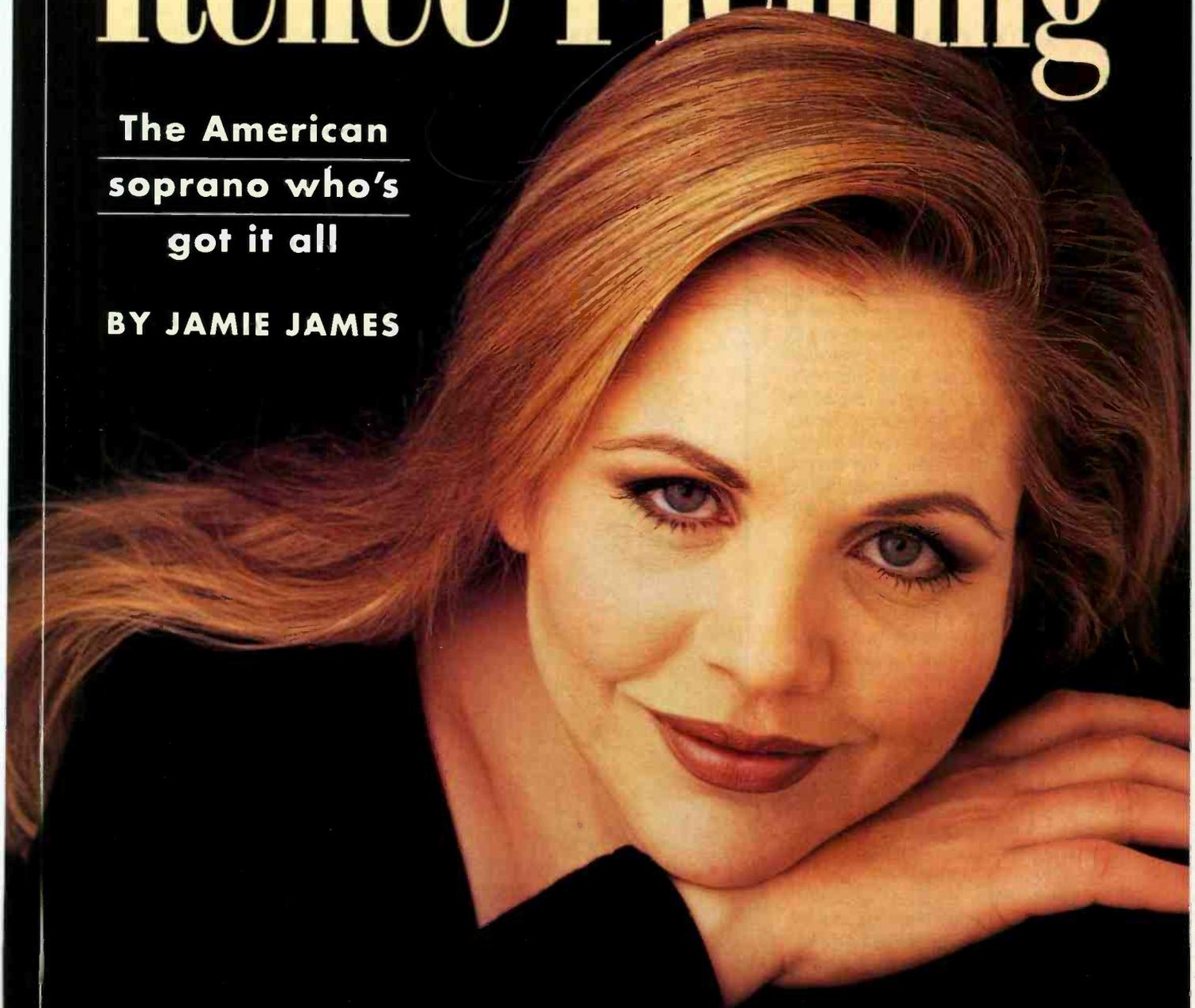
One of the contenders was an in-band, adjacent-channel (IBAC) system, developed by AT&T/Lucent, that put the digital signal not within the existing signal but next to it on the dial. Another was a Voice of America/Jet Propulsion Laboratory system that called for satellite delivery in the S-band (about 1 gigahertz up the dial from the L-band). The final system was Eureka 147, operated by the Canadian consortium.

Don't count in-band systems out yet, though. Although the various IBOC systems dropped out of the field tests, the technology still has its supporters, improvements are continuously being made, and there are rumblings of new trials in the future. But whatever happens, don't expect to hear a digital radio station in your U.S. neighborhood anytime soon. □

Renée Fleming

**The American
soprano who's
got it all**

BY JAMIE JAMES



In the opera world, talent and glamour don't always come in the same package. Over the years, some of the greatest voices have belonged to very large ladies with decidedly plain faces. Now comes Renée Fleming, an opera-lover's dream: a creamy, gold-

en voice that pours out of a face beautiful enough for a Hollywood close-up. Yet Fleming is no wispy, fragile waif; she dominates the stage with a powerful, womanly presence — the way Renata Tebaldi and Maria Callas did. When she walks into a room, the room is entered

Today Fleming makes her entrance at the Café Luxembourg, a chic French restaurant near New York's Lincoln Center, to talk with me about her burgeoning career. This fall is a very good season for her. In September, London Records is releasing her new album, *Signatures*, a collection

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BEST OF THE MONTH

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



TOBI SHEEHAN 1997/CAPITOL

Feed Your Radiohead

It's not my habit to go around quoting record-company ads, but Capitol's campaign for Radiohead is so on-the-money it bears repeating: "Remember when listening to an album was like getting lost in a world you never wanted to leave? In fact, remember albums?" Whether you remember the likes of *Abbey Road*, *Electric Ladyland*, or *Wish You Were Here*, you'll be heartened to know that the concept of The Album lives on in the excellent *OK Computer*.

This is not to say that Radiohead has scaled a Beatles pinnacle, but rather that the Oxford quintet has made a larger-than-life recording of mood and sound. *OK Computer* is intoxicating right from the start: A scary theme from Jonny Greenwood's "abusive guitar" ushers in Ed O'Brien's "polite guitar" as the song "Airbag" deploys, prodded by Colin Greenwood's stealth bass and the hold-it-all-together percussion of the album's MVP, drummer Phil Selway. Acoustic/electric

blankets unfold for the nearly 7-minute "Paranoid Android" until a metal riff barges through, yielding in turn to a hypnotic, droning midsection. "Subterranean Homesick Alien" meditates on high, sparkling guitars and then climbs into the kind of towering chorus that U2 just doesn't know how to do anymore. Later, the band rips it up ("Electioneering") and courts distortion and dissonance ("Climbing Up the Walls") before closing with "Lucky" and "The Tourist," two panoramic ballads that use simple guitar and voice, respectively, to build a grand melodic arch.

If you try to put your finger on the mindset of singer/lyricist Thom Yorke by considering the album title alone, you may get sidetracked. In this modern age, is the computer basically okay? Or do we shout, "Okay, computer, compute *this*?" Consider instead lines like "Let down and hanging around / Crushed like a bug in the ground" and "A heart that's full up like a landfill / A job that slowly kills you." It seems that in Yorke's modern age, people are merely okay computers. You can hear some of this on Radiohead's previous albums, the riff-heavy *Pablo Honey* (with its slacker hit, "Creep") and the crafty *The Bends*, but now the soundtrack is more convincing, blending better with Yorke's plaintive voice. Ultimately, the listening experience is cathartic. And for all the buzzing, whirring, and ticking going on, the record abounds with human touches. Just listen under the mechanics of "Airbag." Do you hear what I hear? Jingle bells.

Get out your headphones. Or lie down on the floor and let *OK Computer* reign.

Ken Richardson

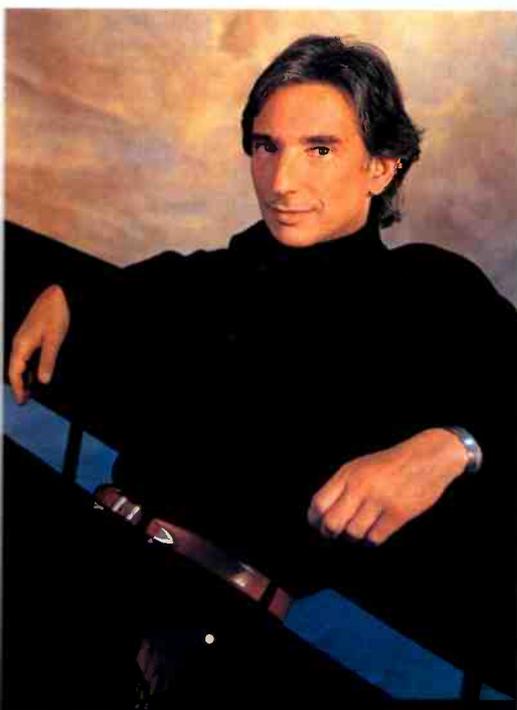
RADIOHEAD: OK Computer.

Airbag: Paranoid Android: Subterranean Homesick Alien: Exit Music (for a Film): Let Down: Karma Police: Fitter Happier: Electioneering: Climbing Up the Walls: No Surprises: Lucky: The Tourist. CAPITOL 55229 (54 min).

Mahler's *Das Klagende Lied*

Mahler's completion of his dramatic cantata *Das Klagende Lied* (*Song of Lament*) at about the time he turned twenty might well be compared with Mendelssohn's composition of his *Midsummer Night's Dream* overture at the age of seventeen. It is a remarkably mature work in which the composer's definitive style is already very much in evidence: remarkable, too, that at such an early age Mahler could adapt a folk tale to create the more than serviceable text. The story is of a young man who is mur-

BEST OF THE MONTH



DOROTHY LAW/RCA VICTOR

Michael Tilson Thomas

dered by his elder brother and returns to confront the killer, in the form of a disembodied voice issuing from a flute fashioned from one of his bones, on the day of the brother's wedding to the queen whose hand they had both sought.

Unlike Mendelssohn with his overture, though, Mahler was not able to get this precocious work performed when it was new. He had to wait more than twenty years for the premiere, and by then (1901) he had revised the score no fewer than five times. He made surprisingly few changes in his original orchestration, but he lopped off the first of the three sections, "Waldmärchen," which is nearly as long as the other two combined. He also went back and forth on the idea of assigning the voice of the murdered younger brother to a boy alto, eventually leaving it for a mature female singer. At one point, too, he eliminated the offstage band in the concluding section, but in his final version he reinstated it. Except for a single performance in 1934, the "Waldmärchen" was not heard again till 1970, when Pierre Boulez performed and recorded it in London. Clearly, it is indispensable, both musically and dramatically, in setting the stage for Parts II ("Der Spielmann") and III ("Hochzeitsstück").

Recordings present us with several options. The latest one, live from San Francisco under Michael Tilson Thomas, is without question the most vividly recorded, with particular benefit to the chorus

and the collapse of the castle walls at the end, though Riccardo Chailly's 1989 recording on London gives more point to the offstage band in Part III and his performance has a somewhat more natural flow. Thomas seems concerned with pointing up "pre-echoes" of Mahler's first two symphonies. His superbly detailed reading achieves a great deal of dramatic tension, and his orchestral and choral forces are at the very top of their form. Chailly did use a boy alto, and it worked splendidly. Thomas's soloists involve a number of tradeoffs: Thomas Moser strikes me as rather bland, and Michelle DeYoung, while more involved, is still not formidable enough. On the other

hand, Marina Shaguch and Sergei Leiferkus excel in both dramatic intensity and vocal opulence.

True-blue Mahlerians will seize upon the question of the boy alto as justification for having both versions, and perhaps the phenomenon of two such fine recordings will nudge the work a little closer to acceptance in the so-called standard repertory.

Richard Freed

MAHLER: Das Klagende Lied.

Marina Shaguch (soprano); Michelle DeYoung (mezzo); Thomas Moser (tenor); Sergei Leiferkus (baritone); San Francisco Symphony Chorus and Orchestra. Michael Tilson Thomas cond. RCA VICTOR 68599 (67 min).

Jen Trynin's Split Personality

On her first album she was Jennifer Trynin, on this one she's Jen Trynin — a more informal approach, perhaps? Not exactly. The Boston singer/writer/guitarist made a sharp debut with 1995's *Cockamamie*, a hard-edged and quick-witted set of loud guitar pop. But *Gun Shy Trigger Happy* is a real step forward, adding more depth and diversity to the mix. And Jen can turn a catchy hook at least as well as Jennifer could.

True to its title, the album has a split personality, alternating guitar-driven numbers with introspective ones. On the whole it's more melancholy than the first record, although Trynin's old wisecracker persona does show up — notably in "Bore Me," which chides an ex-lover for trying to be friends. But there's no irony in "I Don't Need You," an old-fashioned, emotive torch ballad that makes the most of her lower vocal register. The biggest stretch for subject matter is "Under the Knife,"

only the second rock song I can remember hearing about cosmetic surgery. But where Paul Westerberg's "Mannequin Shop" settled for snide humor, Trynin's song is genuinely creepy, with a long outro that layers distorted vocals over a Stony guitar riff.

The three-piece sound of her debut has also been opened up for *Gun Shy Trigger Happy*, with Trynin and producer/key-boardist Mike Denneen making creative use of tape loops, layered vocals, and late-night ambience. And despite the self-doubt that Trynin airs in some of the songs, what lingers is the sense of a confident songwriter who's just getting started.

Brett Milano

JEN TRYNIN: Gun Shy Trigger Happy.

Go Ahead: February; If I: Writing Notes; Everything; Bore Me; Love Letter; Washington Hotel; I Resign; I Don't Need You; Around It; Under the Knife; Rang You & Ran. SQUINT/WARNER BROS. 46670 (48 min).



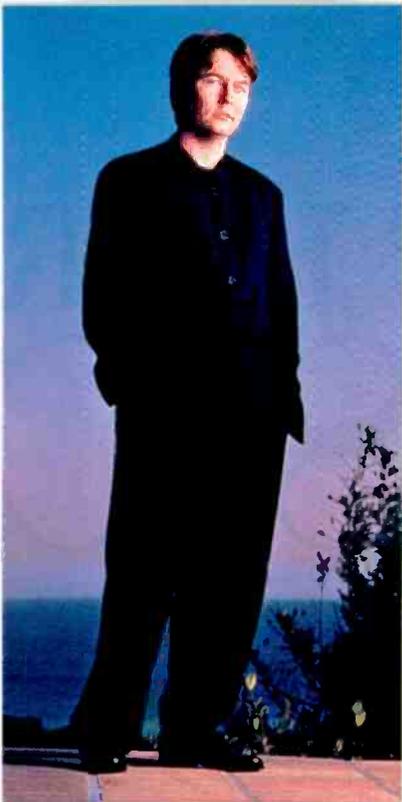
Jen Trynin

WARNER BROS.

A Little Transfigured Night Music

Schoenberg's *Tristan*-esque *Verklärte Nacht* (*Transfigured Night*) blazes with white-hot passion in Sony's new recording with Esa-Pekka Salonen and the Stockholm Chamber Orchestra. Nonetheless, the music's linear textures emerge with the utmost forcefulness and clarity in this performance of the composer's string-orchestra arrangement of the work, originally for string sextet. Put this down as one of the best of the more than two dozen versions currently available on CD.

The companion work on the disc, Schoenberg's 1929 transcription of his Second String Quartet (1905-08), is somewhat more controversial. Not only is it a transitional work signifying the young Schoenberg's drift away from the tonal universe, but it calls for the use of the human voice in the two final movements — settings of texts by the turn-of-the-century German symbolist poet Stefan George. The expressive content of the work as a



Esa-Pekka Salonen

whole is highly subjective, arising as it does from the near collapse of the composer's first marriage.

The sonata-form opening movement is akin in spirit to the more turbulent episodes in *Verklärte Nacht*. Agitation and irony dominate the so-called scherzo, un-

derlined by the quotation from the Viennese pop tune "Ach, Du Liebe Augustin." The two vocal movements are slow and intense. The expressionist language of Schoenberg's *Erwartung*, composed a year later, is anticipated in the setting of George's "Litanei," in which the poet prays for deliverance from the torments of love and desire. I also hear echoes of the wounded Grail-Knight Amfortas in Wagner's *Parsifal*.

"I breathe the breath of other planets" begins the redemptive final movement, which indeed cuts free from the orbit of tonality — Schoenberg's first venture into the then unknown. Whether heard in the original chamber version or in this string-orchestra arrangement, the Quartet No. 2 makes for a potent listening experience. Soprano Faye Robinson deals valiantly and for the most part sensitively with the often taxing vocal line in the concluding movements. The top-drawer recording of both works boasts an unusually wide dynamic range.

David Hall

SCHOENBERG: Verklärte Nacht; String Quartet No. 2 (trans. for string orchestra and soprano).

Faye Robinson (soprano); Stockholm Chamber Orchestra, Esa-Pekka Salonen cond. SONY 62725 (61 min).

NOW ON CD

POPULAR

CRACK THE SKY: Crack Attic (The Best of Crack the Sky).

RENAISSANCE 182 (P.O. Box 681786, Franklin, TN 37068). Everything a fan of the Seventies art-pop/rock band could want: sixteen tracks, 80 minutes, lyrics, liner notes, and a marked improvement in the sound of the notoriously thin original recordings.

GANG STARR: No More Mr. Nice Guy.

WILD PITCH 2001. The 1989 debut record of Brooklyn's Guru and DJ Premier, pioneers of the hip-hop/jazz hybrid.

JETHRO TULL: Aqualung.

DCC COMPACT CLASSICS 1105. Remarkably, the first American remastering of the 1971 classic using the original two-track mixes, on a gold CD with complete lyrics and artwork.

KEITH MOON: Two Sides of the Moon.

MAUSOLEUM CLASSIX 60038. From 1975, the drummer's only solo album, now with eight extra tracks and notes by Who authority Richard Barnes. Guests include David Bowie, Harry Nilsson, Ringo Starr, Joe Walsh, and Ron Wood.



GARY NUMAN/TUBEWAY ARMY: Premier Hits.

BEGGARS BANQUET 2007.

RANDOM.

BEGGARS BANQUET 195 (two CDs).

The first is what it says, remastered. The second is a tribute album to Numan — once a New Wave artist, now a godfather of techno/electro — featuring Bis, Jesus Jones, Kenickie, the Orb, Pop Will Eat Itself, Republica, Matt Sharp, and St. Etienne.

CLASSICAL

ALBENIZ: Iberia; Navarra.

GRANADOS: Goyescas. Alicia de Larrocha (piano). LONDON 448 191 (two CDs). "The recorded sound is excellent

throughout — rich and resonant. . . . There is no better, no more authentic *Iberia* to be had anywhere" (March 1974).

BACH: Brandenburg Concertos Nos. 1-6.

Sigiswald Kuijken (violin); Anner Bylmsa (cello); Frans Brüggem (recorder); Gustav Leonhardt (harpsichord); others: Gustav Leonhardt cond. SEON/SONY 62946 (two CDs). "Superbly performed" (December 1977).

BOCCHERINI: Symphonies, Op. 12.

New Philharmonia Orchestra, Raymond Leppard cond. PHILIPS 456 067 (two CDs). "The orchestral sound is like velvet, and the concertante writing is beautifully executed" (September 1979).

CHOPIN: Piano Concerto No. 1. SCHUMANN: Overture, Scherzo, and Finale, Op. 52.

Rosina Lhevinne (piano); National Orchestral Association, John Barnett cond. VANGUARD SVC-60. Lhevinne, the Russian-born pianist whose pupils at Juilliard included Van Cliburn and James Levine, was recorded in the Chopin concerto in 1961 at the age of eighty.



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

GENE AUTRY: *Sing Cowboy Sing — The Gene Autry Collection.*

RHINO 72630 (three CDs, 185 min).

★★★★★

Anyone who knows Gene Autry primarily as a cowboy singer and film star (or as the owner of a baseball team) will be surprised at much of *Sing Cowboy Sing*, a set that spans his recording career from 1937 to 1955. In eighty-four performances, the smooth-voiced Autry handles the catalog of California cowboy tunes like "Back in the Saddle Again" and "(I've Got Spurs That) Jingle, Jangle, Jingle," but he also sings love ballads ("The One Rose," "Maria Elena"), sentimental heart-tuggers ("That Silver-Haired Daddy of Mine"), folk songs ("El Rancho Grande"), and topical tunes ("At Mail Call Today"). There's also an odd nod to honky-tonk, "Don't Hang Around Me Anymore," which lets him flirt with the subjects of juke joints and roadsters without actually embracing them. Still, Autry made all manner of contributions to country, commonly called "hillbilly music" before his success got it changed to "country and western" in the trades.

Many of the tracks here, including numerous previously unreleased recordings from Autry's *Melody Ranch* radio show, haven't been heard in more than fifty years. Although there's a sameness to some of the cowboy songs in orchestration, arrangements, and themes, Autry was as diverse in his musical tastes as he was in his pursuits in life. And as a frequent million-selling artist, with hits like "Have I Told You Lately That I Love You," "Mexicali Rose," and "South of the Border," he stood toe-to-toe

with mainstream singers (and Columbia labelmates) Rosemary Clooney and Jo Stafford, both of whom appear here in duets.

The Singing Cowboy, now 90, belongs to a simpler age. But once the nostalgia factor of his campier songs wears off, his repertoire projects a certain unassailable nobility. America — and popular music — would do well to welcome him back. *A.N.*

ERIC CARMEN: *The Definitive Collection.*

ARISTA/MASTERS 18963 (73 min).

★★★★★

As Eric Carmen himself points out in the excellent liner notes, there are a lot of people who think that everything he's done since making his name with power-pop gods the Raspberries has been a sellout to MOR hackdom. After making my way through

The Definitive Collection, I'm inclined to agree, with reservations. Certainly, something is wrong when two of the more energetic songs here, "That's Rock n' Roll" and "Hey Deanie," have been covered far more forcefully by a wimp like Shaun Cassidy. That said, the five newly remastered Raspberries tracks that open the set sound better than ever, some of the ballads aren't completely ghastly, and the concluding "Make Me Lose Control" remains a guilty pleasure. *S.S.*

DAVID ALLAN COE: *Live — If That Ain't Country . . .*

LUCKY DOG/COLUMBIA 67996 (53 min).

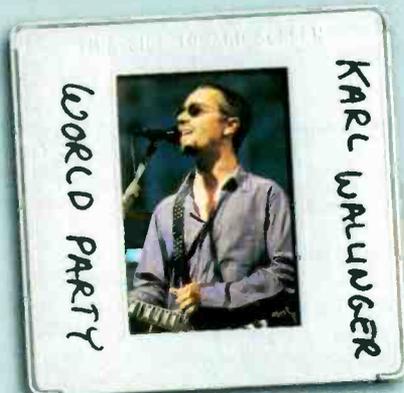
★★★

When David Allan Coe was at his height in the 1970s, he was a truly menacing figure, a tattooed hulk of a man in black leather and chains who raged about how he was the baddest of country rebels. What kept him from being a cartoon was that he was also a formidable performer and songwriter, responsible for classics like "Would You Lay with Me (in a Field of Stone)," sung by the teenage Tanya Tucker, and "Take This Job and Shove It," Johnny Paycheck's greatest hit and an anthem for America's disgruntled work force.

Now, on his first major-label album in eight years, a live set recorded in Fort Worth, the former biker and ex-con looks and sounds, at age 58, like the father to the man who ranted and raved in the past. Although his surprisingly taut Southern rock band, led by guitarist Warren Haynes, bolsters his repertoire of old and new material, Coe himself is so tepid, his voice so ragged and defused of its former fire, that "Take This Job" is reduced to mild water-cooler talk between shifts. And one of the new songs, "When I Was a Young Man," a retrospective of the old braggart himself, sounds merely like a mesh of Charlie Daniels and Johnny Cash circa 1970.

Sessions at West 54th

In case you haven't noticed, there's a TV show that spotlights performances by rock, jazz, and everything-else-under-the-sun musicians, up close and not necessarily unplugged. *Sessions at West 54th*, the first weekly contemporary-music series conceived for public television, is taped in front of a small audience at Sony Music Studios in Manhattan and aired on Saturdays at 11 p.m. (check local listings). Most programs include sets by two artists, as well as interviews filmed by documentarians D. A. Pennebaker and Chris Hegedus. Artists as diverse as Sonic Youth, Paula Cole, Wynton Marsalis, and Emmylou Harris have already appeared; among those coming up are Luscious Jackson, the Squirrel Nut Zippers, and Karl Wallinger (shown at right) with his band, World Party. The series continues until the end



of the year, followed by rebroadcasts. Highlights and interview outtakes are accessible from the show's Web site at www.sessionsatwest54th.com.

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STAR SYSTEM

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



CAPITOL NASHVILLE

Bob and Mike Delevante: literate, lyrical

Coe may be a favorite of contemporary college students, but the truth is that he has traded far too long on far too little. *A.N.*

DEL AMITRI:

Some Other Sucker's Parade.

A&M 540 705 (50 min).

★★★★

Scottish band Del Amitri harks back to the halcyon days of rootsy, semi-obscure pop groups like Help Yourself and the Sutherland Brothers & Quiver — and even Poco circa *From the Inside*. The songwriting of co-leaders Justin Currie and Iain Harvie is up to snuff, for the most part, and Currie's keening vocals are a pleasure. Pop/rock conventions get twisted in the duo's Scottish translation, gaining a certain conviviality in this unsentimental, electronic day and age. The good songs on *Some Other Sucker's Parade* — the briskly paced "Life Is Full," the chiming "Medicine," the crisp "Not Where It's At," the heartbreakingly lovely "Mother Nature's Writing" — are very good indeed. The average ones are, at worst, pleasantly undistinguished. All in all, a fairly entertaining record, the likes of which rarely pass down the pop avenues these days. *P.P.*

THE DELEVANTES:

Postcards from Along the Way.

CAPITOL NASHVILLE 56179 (44 min).

★★★★

Jersey-born Bob and Mike Delevante grew up as kids of the Sixties and Seventies, mesmerized not only by the jangly guitars of the Byrds but also by the captivating story songs of Steve Goodman. The music the Delevantes eventually synthesized is about as intriguing as anybody's can get by album two. *Postcards from Along the Way* coming close on the heels of their much-lauded *Long About That Time*.

The brothers are capable of literate, lyrical songwriting, but they score equal points for heartfelt romance, sly moods, cool riffs, and can't-sit-still rhythms. "My Daddy's Cadillac," for instance, nails the rockabilly ravings of early Elvis Presley. Elsewhere, they evoke the ghosts of Buddy Holly and Hank Williams, as well as the pop-country fusion of Radney Foster. Then again, their ability to draw on influences is also a weakness: they're the Everly Brothers here, the Beatles there, and somebody else around

the corner. If they're still sorting out their personal style, they nevertheless craft gorgeous songs, especially "I Know I Promised," about a man who threw away the very love he craved, and "Blame It on the Horizon Line," which looks at the conflict of staying or going and evaluates the price either way.

The Delevantes are being worked out of Nashville, which is surprising, considering their alt-country status. But who cares what it's really called? When you can put together the churning guitars, throbbing bass, and reedy harmonica of "Hi-Lo" and transport your listeners like these guys can, all you can truly be called is great. *A.N.*

THE FLYING BURRITO BROTHERS: California Jukebox.

AMERICAN HARVEST 57708 (51 min).

P.O. Box 68, Las Vegas, NM 87701.

★★★★

Boy, here's a nice surprise. The sometimes together (though usually apart), legendary, and enormously influential Flying Burrito Brothers are back with a make-you-sit-up-and-take-notice album of the kind of sinewy country-rock they practically invented along with the Byrds and, on his own, former Byrd/Burrito Gram Parsons. Of course, only a few veterans are here — foremost, steel guitarist "Sneaky" Pete Kleinow and fiddler/vocalist Gib Guilbeau — but *California Jukebox* is a loose, feel-good collection that sounds like the natural work of cowboy-booted hippies who have played together for decades. What might have been a quickie nostalgia effort is instead a full-bodied album repressing classics like Lowell George's "Willin'," Neil Young's "Dance, Dance, Dance," and the Buck Owens instrumental "Buckaroo," where Owens himself plays acoustic guitar. There are six originals, too, including the spooky, devastated-in-love "World Without You."

Also on hand are Jo-El Sonnier, the great Charlie Louvin, and Waylon Jennings, who lends his sly, knowing baritone to a honking rendition of "I Ain't Livin' Long Like This." But even without the guests, this would have been an album that cooks with the kind of energy you haven't heard much since the Sixties. Mark this one with two T's, for Timeless and Terrific. *A.N.*

MISSION OF BURMA:

Signals, Calls, and Marches.

RYKODISC 10339 (27 min).

★★★★

Vs.

RYKODISC 10340 (53 min).

★★★★

The Horrible Truth About Burma.

RYKODISC 10341 (53 min)

★★★★

Boston's finest early-Eighties band — and one of the best postpunk bands, period — has been ill-served on CD. That has now been remedied by these three extremely well-done reissues of Mission of Burma's entire output. The debut EP, *Signals, Calls, and Marches*, includes the classic "That's When I Reach for My Revolver" and is here fleshed out with the equally wonderful single "Academy Fight Song"

(and its B-side, "Max Ernst"). Both the sole studio album, *Vs.*, and the posthumous live album, *The Horrible Truth About Burma*, sport bonus tracks. More important, all three records have been remastered, removing a considerable amount of sonic murk and making Burma's already monumental instrumental attack seem even more imposing. Describing this music is difficult; it's clearly punk-derived, but it's artier (without being pretentious), passionately rendered, and bone-crushingly loud (the band folded when guitarist Roger Miller developed tinnitus). If I had to pick one of the three, I'd buy the live album — more feedback and great covers of the Stooges ("1970") and Pere Ubu ("Heart of Darkness"). But all three are highly rewarding. *S.S.*

THE MUFFS: Happy Birthday to Me.

REPRISE 46523 (48 min).

★★★★

KENICKIE: At the Club.

WARNER BROS. 46552 (56 min).

★★

If you don't believe that young, cute English bands automatically get a better break, consider these two albums released by the same parent company at about the same time. Kenickie is a mostly female English outfit getting plenty of hype. The U.K. pa-

GO AHEAD, CONFUSE ME

Having trouble keeping band names straight? We don't blame you.

After all, there's Cake, and then there's Cake Like. Not to mention Orb and Orbital, Skeletons and Skeleton Key, Honeydogs and Honeyrods. So it's no wonder that when a CD by Chopper One arrived in our offices the other day, we thought, "Didn't we get that already?" Uh, no... that was just Chopper. Okay, let's sort this out: Chopper, from the East Coast (Connecticut), is led by Steven Deal and Robert Dietrich. Its first full-length record, *Chopper*, has been reissued by Big Deal. Chopper One, from the West Coast (Hollywood), is led by Jason and Amy Cropper (I'm not kidding — and Mr. Cropper was once a Weezer). Its first full-length record, *Now Playing*, has been issued by Restless. Both albums feature hard-guitar power pop, and both are well worth your dollars. Chopper and Chopper One certainly have, um, chops. But a few words of advice to any new groups out there toying with the name Chopper Two (or Chop-Chop or Chop Shop or Don't Bust My Chops): There *are* other words in the English language. *K.R.*



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POPULAR MUSIC

pers think it's a hot new sound, but Kenickie has a familiar mix of punk guitars and pop hooks — the same thing that the Muffs, from L.A. and largely unsung, have been doing for years.

Kenickie plays the young-and-cute angle for all it's worth on its debut record, *At the Club*. On a purely bubblegum level the album isn't bad; the harmonies and teenage hormones have their charms. But the attempts at pointed songwriting fall flat (especially "Punka," an alleged dig at indie-rock snobbery), and the mile-wide production seems designed to hide the fact that Kenickie can't write a proper hook yet.

Hooks have never been a problem for the Muffs, whose Brill Building sensibility sets them apart from other Nineties punk bands: they're inspired as much by Lesley Gore as by the Ramones. Their third album, *Happy Birthday to Me*, tilts more toward pop, but short, quick blasts are still their specialty. "I'm a Dick" pretty much says it all: "You and Your Parrot" is the most original jealousy tale I've heard in a while. And singer/guitarist Kim Shattuck still breaks into screams at all the right moments. Maybe the Muffs would get a break if they lied about their ages and moved to London. *B.M.*

RIC OCASEK: Troublizing.

COLUMBIA 67962 (43 min).

★★★
Ex-Car is produced by a Smashing Pumpkin, and the result is exactly what you'd expect: a record that could have been by the Cars, except that the keyboards and the arena sonics have been replaced by fashionably distorted guitars and a dry, near-minimalist ambience. Ocasek the songwriter hasn't changed a whit, really; he's still penning postmodern bubblegum tricked out with tick-tock rhythms and lyrics that don't mean much of anything. And he still sings them like the old days, although he's beginning to sound a bit like a Yank Ray Davies, particularly in the one ballad here, the waltz-timed "Not Shocked." Mostly, *Troublizing* goes in one ear and out, and Billy Corgan's production is the culprit. After all, most of the fun of the Cars was the bombastic sheen that got applied to ear candy like "My Best Friend's Girl," although, if truth be told, there's nothing here even remotely as tuneful. A disappointment. *S.S.*

PATTI PAGE: A Golden Celebration.

MERCURY 534 720 (four CDs, 221 min).

★★★
Patti Page was once denounced by rock historians as the personification of "establishment" culture. But this retrospective, marking her seventieth birthday and the fiftieth anniversary of her first record, makes it abundantly clear that "The Singing Rage" was a true godmother of contemporary pop. In retrospect, it seems impossible to imagine how Page could have been anything other than the biggest-selling female singer of all time. She had every quality that was prized in the postwar era: the intonation and deep, rich sound of a Jo Stafford, an enthusiasm for novelties à la Spike Jones, enough high-tech contrivances to rival Les Paul and

ED NUTE/LYRIC MOON



Don White: seriocomic storyteller

Mary Ford, and multitracked one-woman vocal groups that stole the thunder of the Andrews Sisters. While not neglecting her dozens of chart hits (and even including a whole volume of country tunes), *A Golden Celebration* makes its sharpest move in directing some attention to Page's classier material, devoting an entire disc to her worthwhile ventures in the realms of jazz and standards. The set climaxes with Page's most sophisticated and poignant recording, "I Stayed Too Long at the Fair," which serves to remind us that she worked with Benny Goodman long before she discovered doggies in windows or threw mothers from trains. *W.F.*

PRIMUS: Brown Album.

INTERSCOPE 90126 (57 min).

★★★★
By now, all the elements of Primus's slanted approach are firmly in place and honed to near-genius. Funky, angular, amelodic grooves slither like punch-drunk reptiles across a blighted landscape. Les Claypool's bass guitar heads up the pack, grumbling with bemused incredulity. His vocals recall the Residents in their comically mechanistic detachment. His songs are full of down-and-outers who slouch around looking for drugs, drink, and detumescence. *Brown Album* is a black-humored set of jittery, urban square-dances in which the characters ultimately all fall down.

The novelty of Primus is that all three members function as a rhythm section, syn-copating instead of soloing, eschewing melodic elaboration for flinty modal riffs, and erecting a tight, weblike architecture of interlocking beats. Just listen to the poly-rhythmic tumbling in "The Chastising of Renegade" or the uber-Zeppelin throttle 'n' stomp of "Camelback Cinema." Beneath it all, Claypool reveals certain aspects of late-twentieth-century life as they truly are — surreal, peculiar, and menacing — rather than as we pretend they are. With a brittle wit worthy of the late William S. Bur-

roughs, Primus dances in the smoldering ruins of a civilization that doesn't even know it's dead yet. Think of *Brown Album* as a kind of *Naked Lunch* for the ears. *P.P.*

JAMES TAYLOR: Hourglass.

COLUMBIA 67912 (55 min; enhanced CD).

★★★★

Hourglass is James Taylor's most entrancing release since the era of *Sweet Baby James* and *Mud Slide Slim and the Blue Horizon* a quarter of a century ago. That's all the more amazing considering the setbacks he's had in recent years: a parting of the ways with manager Peter Asher, the breakup of his second marriage, and the deaths of his father, his brother Alex, and his pianist/producer/best friend Don Grolnick. On top of that, Taylor had begun feeling like a fish out of water — "a folk singer in the electronic age," as he put it.

The title may evoke the slipping away of time, but *Hourglass* is more about walking from darkness into the light, to borrow an image from one of its key songs, "Another Day," a delicate tune that dares to look on the bright side. Ditto "Up from Your Life," which seeks to supplant a barren kind of nihilism with a reason to believe in something. Throughout, Taylor develops the interrelated themes of claiming the day, taking command of one's time, and engaging life with open eyes rather than sleepwalking through it. Musically, he still prefers slick settings with angelic backup voices, soft keyboards, and crystalline guitars. His reserved, fastidious folk-pop is unapologetically adult, but on *Hourglass* his personality isn't subsumed by the polish. In fact, the focus is back on his guitar.

Even James Taylor is sticking hidden tracks on CDs, and the mystery song here is about a hangnail — a non sequitur that lightens the mood of this redemptive album. And there's a whole batch of unusually interesting stuff in the "enhanced" portion of the CD: numerous interview snippets in which the diffident Taylor nonetheless antes up nuggets of insight into his songs and their inspiration, as well as a section called "Scraps" that includes a solo guitar etude, an acoustic performance of "Line 'Em Up," and a rousing live version of "Little More Time with You." You go, James! *P.P.*

DON WHITE: Rascal.

LYRIC MOON 97022 (55 min). P.O. Box 2821, Duxbury, MA 02331.

★★★★

Not long ago at the Bottom Line in New York, Don White put down his acoustic guitar to sing "I Know Exactly What Love Is." Only moments before, the audience was laughing to the wry songs of this singer/songwriter by night, home-alarm installer by day. Now, the Manhattan clubgoers were silenced by the saga of a woman — first a little girl "waiting at the gate for her dad to come home," then a 20-year-old getting married and ultimately raising three kids ("no one told her it got crazy like this"), then a grandmother, and finally an 80-year-old who "hates being in this nursing home" but who, in the end, be-

comes that little girl once more. When White finished the *a cappella* performance, the audience — before breaking into the most spirited applause of the evening — sat in wonder. Pin drop? You could hear a teardrop.

The good news is that "I Know Exactly What Love Is" appears on White's new album, *Rascal*, and for my money it's in the running for Song of the Year. The not-so-good news is that producer Paul Caruso has applied a piano/bass/drums backing that

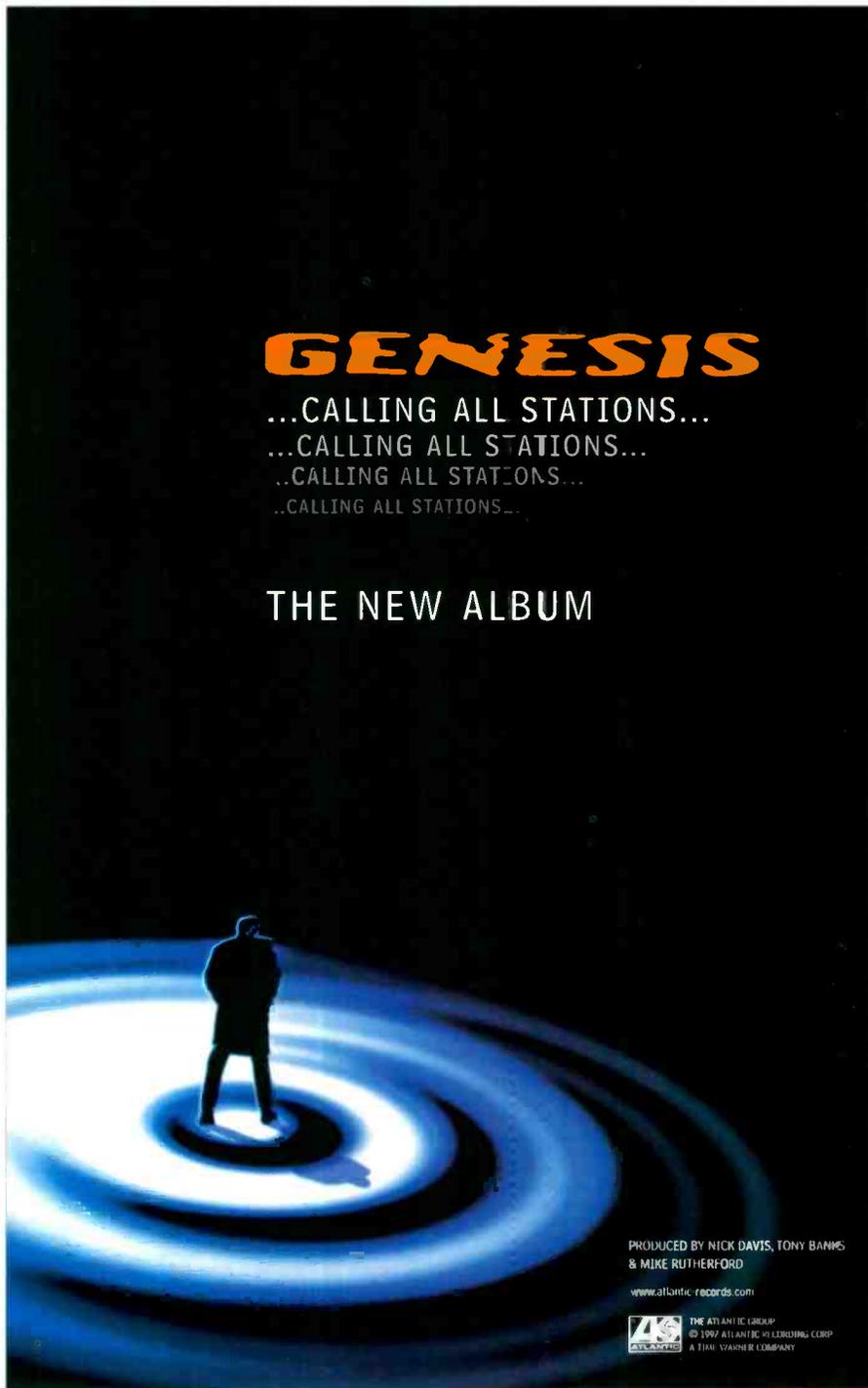
dulls the impact of White's storytelling. Further, two other serious songs, "The Painter" and "Sense of Humor," are rather ordinary, and the melodic structure of the latter borrows from "I Know Exactly" itself.

Still, "it's a great day to not be dead," as White sings elsewhere in his charmingly shy voice, and his comic material is customarily strong throughout. The protagonist of "Po' Po' Baby" gets slapped by Christine Lavin ("Snap out of it!"), the protagonist of the title track is a dog ("Kids go to college

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Technics SB-LX70
•3-way, 12" woofer, 200 watts power handling, black cabinet **\$149.99**

Technics SB-CSS90
•Center Channel/Surround Sound Speaker System, may be wall mounted **\$159.99**

Technics SB-LX90
•3-way, 15" woofer, 200 watts power handling, black cabinet **\$199.99**

Center Channel Speakers

YAMAHA



Yamaha NS-AC2
Center Channel Speaker
•2" tweeter •Two 5" woofers
•10-80 watts •70Hz-20KHz
•8 ohms •Shielded •Acoustic suspension design •Black finish

\$399.99 (YAM NSAC2)

Bose® V-100™
•StarDriver™ full-range driver, shielded, grey cabinet **\$99.99**

JBL SC305
•2-way, dual 5" woofers, dome tweeter, 100 watts power handling, shielded, black **\$129.99**

Yamaha NSA-C141
•Dual 5.25" woofers, 1" dome tweeter, 160 watts maximum, shielded, matte black **\$129.99**

Advent AV571
•Powered Partner Amplified Speaker, 35 watts, 5" woofer, 1" tweeter, shielded, black **\$149.99**

JBL CL505
•2-way, dual 5" woofers, 1" tweeter, shielded, 10-125 watts, black oak woodgrain finish **\$199.99**

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Receivers
SONY
Sony STR-DE915
A/V Receiver
•100w x 2 or 100w x 5 •Built-in Dolby Digital (AC-3) decoder
•Dolby Pro Logic Surround sound •DSP •Digital Cinema Sound System •Remote

CALL (SON STRDE915)

Sony STR-DE310
•100 watts/channel, 30-AM/FM presets, remote control **CALL**

Sony STR-DE415
•100w x 2 or 100w x 4, Dolby Pro Logic, DSP with 3 acoustic environments **CALL**

Yamaha R-V902
•90w x 3 + 35w x 2, low impedance drive, Dolby Pro Logic, discrete 6-ch. inputs **CALL**

Sony STR-DE815
•100w x 2 or 100w x 5, VisionTouch™ joystick point & click remote, DSP w/15 environments **CALL**

Sony STR-DE1015G
•100w x 2 or 100w x 5, VisionTouch™ joystick point & click remote, built-in Dolby Digital (AC-3) **CALL**



Aiwa Mini Systems
Aiwa NSX-A22
Mini Audio System
•20 watts/channel •3-disc CD changer •Dual cassette •32 AM/FM presets •Super T-Bass •2-way speakers •Remote

\$199.99 (AIW NSXA22)

Aiwa LCX-110
•20-track programmable CD player, cassette deck, 32-AM/FM presets, EQ, remote **149.99**

Aiwa NSX-A30
•3-disc CD changer, dual cassette, AM/FM, karaoke, 30 watts/ch, remote **229.99**

Aiwa NSX-A50
•3-disc CD changer, dual A/R cassette, AM/FM, karaoke, 60 watts/ch, remote **274.99**

Aiwa NSX-A72
•100 watts/ch, 3-disc CD changer, dual A/R cassette, AM/FM, 4-way speakers, remote **349.99**

Aiwa NSX-MT90
•A/V, 145w x 2 + 20w rear, 3-disc CD changer, AM/FM, dual A/R cassette, 5 speakers **499.99**



Aiwa TS-W5
Powered Subwoofer
•35 watt built-in amplifier •8" speaker •Magnetically shielded •60/90/120-Hz crossover settings •Bass level control
Mfr. Sug. Retail \$225

\$79.99 (AIW TSW5)

Aiwa TS-W9
•Powered, 100 watt built-in amp, 8" speaker, shielded **119.99**

Advent GRANIT™
•Continuously variable, 100" woofer, powered, 125 watts, 12" woofer, continuously variable crossover, black **299.99**

AudioSource SW Four
•Powered, 150 watts, 12" woofer, variable crossover (40Hz-180Hz), black **299.99**

JBL PSW1200
•Powered, 120 watt amp built-in, 12" woofer, variable crossover, black **CALL**

Velodyne™ VA-806
•Powered, 70 watts, 6" woofer adjustable crossovers, volume & phase, black **399.99**

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TO ORDER BY MAIL: SEND MONEY ORDER, CERTIFIED OR CASHIER'S CHECK, MASTERCARD, VISA, AMERICAN EXPRESS or DISCOVER CARD (include Interbank No., expiration date & signature) To: J&R Music World, Dept. SR710, 59-50 Queens Midtown Expwy, Maspeth, Queens, NY 11378. Personal & business checks must clear our Authorization Center before processing. Shipping, handling & Insurance Charge (Continental US) is 5% of the total order with a \$4.95 minimum for orders up to \$500; 4% for orders over \$500 to \$1000; 3% for orders over \$1000 to \$1500; 2% for orders over \$1500 to \$2000; 1% for orders over \$2000. For heavyweight/oversized items, shipment by air, or to Canada, Hawaii, Alaska, Virgin Islands & Puerto Rico please call for information. **DO NOT SEND CASH.** Sorry, no C.O.D.'s. NY residents please add sales tax. **ORDERS SUBJECT TO VERIFICATION & ACCEPTANCE. NOT RESPONSIBLE FOR TYPOGRAPHICAL OR PICTORIAL ERRORS. ALL MERCHANDISE SHIPPED BRAND NEW, FACTORY FRESH & 100% GUARANTEED.** Some quantities may be limited. Copyright 1997 J&R Music World, City of N.Y. Dept. of Consumer Affairs License Numbers 0900310/0900615/0900616/0900617



Jazz Specials - Call To Order Music Reviewed In This Issue!

Roy Hargrove's Crisol: Habana
VER 537563 CD **\$11.99**

Patrice Rushen: Signature
DVEY 77065 CD **\$11.99**

Herbie Hancock/Wayne Shorter: 1+1
VER 537564 CD **\$11.99**

Lee Ritenour: Live in L.A.
GRP 9882 CD **\$11.99**

Gato Barbieri: Que Pasa!
SON 67855 CD **\$12.99**
CASS **\$7.99**

Various artists: Twist of Jobim
VER 533893 CD **\$11.99**



Pat Martino
All Sides Now
\$17.99 CD

Nancy Wilson: If I Had My Way
SON 67769 CD **\$12.99**
CASS **\$7.99**

Jon Lucien: Endless is Love
SHA 5031 CD **\$11.99**
CASS **\$6.99**

Ray Obiedo: Sweet Summer Days
WH 11189 CD **\$12.99**

Wynton Marsalis: Blood On The Fields
SON 57694 3-CDs **\$26.99**

Sonny Rollins: Complete RCA Victor
RCA 68675 6-CDs **\$71.99**

Mini Audio Systems



JVC FS-2000
Ultra Micro Audio System
•20-track programmable top-loading CD player •15-FM/15-AM presets •Subwoofer output •Cherrywood speakers •Remote control
\$349.99 (JVC FS2000)

Sony MHC-RX30
•3-disc CD changer, dual cassette, AM/FM, 30 watts/ch, remote **CALL**

JVC FS-1000
•CD player, AM/FM, woodgrain speakers, remote **299.99**

Sony MHC-RX70
•3-disc CD changer, dual A/R cassette, AM/FM, karaoke, 100 watts/channel, remote **CALL**

Sony MHC-RX100AV
•100w x 2 + 20w + 10w x 2, 3-CD changer, dual A/R cassette, 5 speakers & remote **CALL**

JVC F3000
•65 watts x 2, CD player, dual A/R cassette, AM/FM, 2-way speakers & remote **CALL**

Mini Audio Systems



Panasonic SC-AK20
Mini Audio System
•30 watts/channel •5-disc CD changer •Dual auto-reverse cassette •24 AM/FM presets •3-D space sound system •Remote control
\$249.99 (PAN SCAK20)

Yamaha GX-50
•45 watts/channel, 3-disc CD, dual auto-reverse cassette deck, remote **399.99**

Panasonic SC-AK91
•50 + 1 CD changer, 8-ramp power, 25w x 2 + 75w x 2 (subwoofer), dual A/R cassette **499.99**

Denon D-C30
•45 watts/channel, 6-CD changer, dual auto-reverse cassette, remote **CALL**

Yamaha CL-1
•45w x 3 + 15w x 2, Dolby Pro Logic, Cinema DSP CD player, AM/FM, A/R dual cassette **CALL**

JBL ESC550 THE SOURCE™
•Premium, CD player, AM/FM, Dolby Pro Logic/Dolby 3 stereo, subwoofer + 5 satellites **CALL**

Mini Audio Systems



Bose Lifestyle 3-II
Music System
•AM/FM tuner & CD player •2 tiny cube speakers & Acoustimass™ bass module •Biamplified •Remote works through walls •Black or white
\$799.99 (BOS LS3II-BK) (BOS LS3II-WH)

JVC MX-D661T
•80 watt/ch. amp, 3-CD triple-tray CD changer, dual A/R cassette, AM/FM, remote **359.99**

Aiwa XR-M30B
•30 watt/ch. amp, CD player, auto-reverse cassette, AM/FM, remote **CALL**

Denon D-C1
•15 watt/ch. amp, 6-CD changer, auto-reverse cassette, Dolby B, AM/FM, EQ, remote **CALL**

Yamaha GX-70
•Home Theater, 65w x 2 + 20w x 3, Dolby Pro Logic, 3-CD changer, AM/FM dual A/R cass. **CALL**

Denon D-850
•Home Theater, 35w x 3 + 15w x 2, 3-CD changer, AM/FM, dual A/R cass., 5 speakers, remote **CALL**

Sony Digital Technology



Sony MDBUNDLE4
Home/Portable MiniDisc Package
•Complete package of MiniDisc products to record at home & take your music with you •Home recorder •Portable player •2 blank MiniDiscs
\$499.99 (SONY MDBUNDLE4)

Sony INT-W100 Web TV
•Internet Terminal, built-in modem, requires WebTV™ service, WAS \$329.99 **249.99**

Sony MDS-JE510
•MiniDisc Recorder, 25-track programming, jog dial, remote **299.99**

Sony MDS-S38
•MiniDisc Recorder, 10-sec. shock-resistant memory, jog dial, 25-track programming, remote **CALL**

Sony DTC-ZE700
•DAT Recorder, Super Bit Mapping™ technology, optical & coaxial digital inputs **CALL**

Sony DHR-1000
•Digital Video Cassette Recorder, over 500 lines horizontal resolution, remote **CALL**

DJ Equipment



Gemini CD-9800
Professional Dual CD Player
•Variable pitch with a plus/minus 4, 8 or 16% assignable range •Jog wheel shuttle search •Pitch blend
\$898.99 (GMI CD9800)

Gemini FG-2001
•Professional Compact Fogger, low-profile design, generates dense fog, 800 watt heater **118.99**

Audio Technica AM200
•DJ Mixer, 2 phono, 2 mic & 4 stereo line level inputs, sound effects generator **149.99**

NESS Orca
•DJ Light, double row of 20 lenses that twist with the beat of the music, multi-colored display **189.99**

Gemini PDM-7024
•Digital DJ Mixer, 24 sec. digital sampling rate, 4 memory banks, 7-band/channel EQ **368.99**

Pioneer DJM-300
•Pro DJ Mixer, auto b.p.m. counter, 2-phono/2-CD/1-mic. inputs **479.99**

Home Theater



Technics SH-AC300
Digital Surround Processor
•Decodes the Dolby Digital (AC-3) input signal from DVD player to send to select receivers •CINEMA Re-Equalizer circuit •Dual digital inputs •Remote
\$299.99 (TEC SHAC300)

AudioSource SS Five
•Surround Sound Processor w/Amps (24w center & 24w/ch. rear, Dolby Pro Logic **179.99**

Sony SDP-E800
•Dolby Digital Decoder, 24-bit processing, decodes Dolby Digital & Dolby Pro Logic Surround **CALL**

Yamaha DDP-2
•Dolby Digital (AC-3) Processor, decodes Dolby Digital sources **CALL**

JBL esc300
•All-in-One Home Cinema System, 5 speakers & subwoofer w/ components & amplification **CALL**

JBL SCS120
•5-Piece Home Cinema Speaker/Subwoofer, 150w subwoofer •Five 2-way speakers **CALL**

Amplifiers



Denon AVC-2800
Audio/Video Integrated Amp
•85 watts x 3 + 25 watts x 2 •Dolby Pro Logic Surround Sound •DSP simulated modes •On-screen display •Remote control
\$399.99 (DNN AVC2800)

Harman Kardon AVI200 MKII
•A/V Integrated Amp, 75w x 2, 65w x 3 + 25w x 2, Dolby Pro Logic, subwoofer out **299.99**

Gemini XG-2000
•Pro Power Amp, 250w/ch @4Ω, 160w/ch @8Ω, 500w@8Ω bridged mono **398.99**

Luxman M-375
•Power Amp, 150 watts/channel, high-current design provides 300 watts/channel @2Ω **699.99**

Pioneer M-V3000
•Pro Power Amp, 480w/ch @4Ω, 300w/ch @8Ω, 1000w mono @8Ω **1199.99**

Dynaco Stereo 160
•Vacuum Tube Power Amp, 75 watts/channel into 2, 4 or 8 ohm loads **1499.99**

Turntables



Thorens TD180
3-Speed Belt Drive Turntable
•33, 45, 78 r.p.m. •Automatic shut-off & auto-retract •Synchronous motor •External power supply •Includes Stanton cartridge
\$299.99 (THN 180)

Aiwa PX-E850
•Fully-automatic, includes built-in phono preamp & cartridge **119.99**

Technics SL-BD22K
•Semi-automatic, belt drive, pitch control with shunt, accepts P-mount cartridges **154.99**

Sony PS-LX300H
•Semi-automatic, belt-drive, includes cartridge **CALL**

Thorens TD280 Mk IV
•Belt-drive, 33/45, auto shut-off, includes Stanton cartridge **369.99**

Technics SL-1200II
•Professional Manual, direct-drive, quartz lock, pitch control **479.99**

Separates



AudioSource AMP Two
Power Amplifier
•80 watts per channel, switchable to 200 watts mono •Auto-on signal sensing •A/B speaker switching
\$299.99 (ASO AMP2TWO)

AudioSource AMP Three
•Power Amp, 150 watts/channel, switchable to 400 watts mono **399.99**

Dynaco Stereo 200
•Power Amp, 100 watts/channel, A/B speaker selector **399.99**

AudioSource PRE One
•Preamp, electronic switching, AM/MC phono, 2-way tape dubbing **229.99**

Pioneer PAS-4
•Vacuum Tube Preamp, MM phono preamp **499.99**

AudioSource PreAmp/Tuner Two
•Preamp & AM/FM tuner with 18 station memory, includes phono & video inputs, remote **399.99**

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J&R MUSIC WORLD®

VCRs



Samsung VR8756
Hi-Fi Stereo VHS VCR
•4 heads •VCR Plus+ •High-speed mechanism •Digital auto tracking •Universal TV/VCR remote control

\$179⁹⁹ (SAM VR8756)

Samsung VR3607
•Quick-start/high-speed mechanism, remote with 2-key shuttle operation **'129⁹⁹**

Panasonic PV-7400
•4 heads, digital auto picture, universal TV/cable box remote **'159⁹⁹**

JVC HR-A53
•VHS Hi-Fi Stereo, Precision 19 micron heads, Ultra-Spec Drive, remote **'189⁹⁹**

Panasonic PV-7451
•VHS Hi-Fi Stereo, 4 heads, VCR Plus+, digital auto tracking, universal remote **'199⁹⁹**

Go Video GV-6060
•Dual Deck VHS Hi-Fi 4 head Recorder, video sequencing, remote **'699⁹⁹**

Horror Movies on VHS - Call To Order from our Huge VHS Selection!

Your Choice: \$11.99 each

Alice, Sweet Alice
LTX, Collectors Edition, VHS

Dawn of the Dead
LTX, Collectors Edition, VHS

Dracula, Prince of Darkness
LTX, VHS

Heathers
LTX, Collectors Edition, VHS

Hellraiser
LTX, Collectors Edition, VHS

Mark of the Devil
LTX, Collectors Edition, subtitled, VHS



Your Choice: \$11.99 each

Halloween LTX, Anniversary Edition
\$11⁹⁹ VHS

Martin
Collectors Edition, VHS

Prom Night
LTX, Collectors Edition, VHS

Rasputin, the Mad Monk
LTX, VHS

Return of the Blind Dead
LTX, Collectors Edition

Stepford Wives
LTX, Collectors Edition, VHS

Tombs of the Blind Dead
LTX, Collectors Edition, VHS

Professional Video



Panasonic AG-1980
Pro S-VHS Hi-Fi Video Recorder
•Digital TBC & Digital noise reduction to eliminate jitter
•Insert/assemble editing •3-D digital Y/C separation

\$1199⁹⁹ (PAN AG1980)

Panasonic AG-1310
•VHS VCR, High-response mechanism, front-panel A/V inputs **'249⁹⁹**

Panasonic AG-2550
•S-VHS, Hi-Fi Stereo, digital TBC & digital noise reduction, insert/assemble editing **'329⁹⁹**

Sony SV-02000
•S-VHS Hi-Fi Stereo Editing VCR, adaptive picture control, VCR Plus+ **'1099⁹⁹**

Panasonic CT-1384Y
•13" Pro Color Video Monitor, 90° deflection screen, selectable line 1, 2, 3/S-Video **'299⁹⁹**

Panasonic AG-456U
•S-VHS Camcorder, 12x zoom with manual control, digital functions, VTC generator **'1499⁹⁹**

Televisions



Panasonic CT-27SF12
27" Superflat™ Stereo Color TV/Monitor
•Data-Grade picture tube with black screen •Up to 700 lines of horizontal resolution •Closed Caption •Universal remote

\$499⁹⁹ (PAN CT27SF12)

Sharp 13JM100
•13" Color TV, trilingual on-screen display, front-panel A/V inputs **'159⁹⁹**

Sony KV-20S10
•20" Trinitron™ Stereo Color TV, Trinitron® picture tube with deep black screen **'299⁹⁹**

Samsung TXG2548
•25" Stereo Color TV, dark tint picture tube, comb filter, Contrast enhancement circuitry **'299⁹⁹**

Samsung TXF2899
•27" x 1" (extra 1/3 8" signal) Ultra-Flat Screen Stereo Color TV, 2-tuner picture-in-picture **'799⁹⁹**

Sony KV-32XBR100
•32" Trinitron™ XBR® Color TV/Monitor, 2-tuner picture-in-picture **CALL**

DVD Players



Sony DVP-S7000
DVD/CD Player
•Over 500 lines of horizontal resolution •Plays DVD, audio CD & video CD formats
•Includes 4 bonus DVD discs & remote control

CALL (SON DVPS7000)

Toshiba SD-2006
•DVD/CD Player, LED display, Dolby Digital (AC-3) capable (with select receivers) **'459⁹⁹**

Toshiba SD-3006
•DVD/CD Player, fluorescent display, Dolby Digital (AC-3) capable (with select receivers) **'579⁹⁹**

RCA RC5500P
•DVD/CD Player, Built-in Dolby Digital (AC-3) decoder, shuttle control, remote **'599⁹⁹**

Panasonic DVD-A300
•DVD/CD Player, built-in Dolby Digital Decoder (AC-3) & karaoke functions **'599⁹⁹**

Yamaha DVD-1000
•DVD/CD Player, Built-in Dolby Digital (AC-3) decoder, optical digital output, remote **CALL**

Remotes/Antennas



One-For-All homeDirector™ 8
Universal IR/RF Remote System
•Operates any combination of 8 devices •Works through walls, from anywhere up to 100' away

\$79⁹⁹ (OFA URCB090)

Sony RM-V8
•Preprogrammed Universal Remote, controls TV, VCR & cable box, sleep timer function **'99**

One-For-All URC-B080
•homeDirector™ 8, Universal Home Theater Remote Control, replaces 8 devices, backlit keypad **'599⁹⁹**

Recoton TV800
•Amplified TV & FM Stereo Antenna, adjustable gain control **'699⁹⁹**

Terk AM-FM0
•Powered Indoor Stereo AM/FM Antenna, with selectable wideband/narrow modes **'799⁹⁹**

Terk TV50
•Indoor/Outdoor Amplified TV Antenna, half-length design, omnidirectional, weather-proof **'1299⁹⁹**

Hi-Fi Stereo VCRs



Panasonic PV-S7670
S-VHS Stereo Hi-Fi VCR
•4 heads •Spatializer™ Audio Processing •Digital auto tracking •VCR Plus+ with cable/DSS box control •Multi-brand TV/cable box remote with shuttle

\$399⁹⁹ (PAN PVS7670)

JVC HR-VP638
•4 heads, VCR Plus+, Ultra-Spec drive, jog/shuttle control, remote **'279⁹⁹**

Panasonic PV-7662
•4 heads, VCR Plus+, color/advanced noise reduction, shuttle remote **'279⁹⁹**

Sony SLV-790HF
•4 heads, VCR Plus+, enhanced menu graphics joystick universal remote **'289⁹⁹**

JVC HR-VP830
•4 heads, VCR Plus+ with cable box controller, random assemble editing, universal remote **'379⁹⁹**

JVC HR-S7300
•S-VHS, VCR Plus+ with cable box control, pro-style edit, multi-brand remote **'599⁹⁹**

Portable CD Players



Aiwa XP-SP1000
Cross Trainer Series Portable CD Player
•40-second Electronic Anti-Shock System •Water resistant design •24-track programming •Includes headphones

\$179⁹⁹ (AIW XPSP1000)

JVC XL-P33
•10-second Triple Shock Protection, 24 track programming, AC adapter & headphones **'179⁹⁹**

Panasonic SL-S320
•10-second anti-shock active use memory, 24-track programming, heat resistant body **'199⁹⁹**

Panasonic SL-S401C
•Car/Portable CD Player, 10 second anti-shock memory, 24-track programming, car kit **'129⁹⁹**

Sony D-368
•20-second Electronic Shock Protection, 22-track programming, silver metallic finish **'149⁹⁹**

Sony D-465
•Microson™ 20 second Electronic Shock Protection, rechargeable, 22-track prog., headphones **'199⁹⁹**

Portable Stereo



Aiwa CSD-E5220
CD/AM/FM/Cassette Portable Stereo
•Top loading CD player with 20 track programming •AM/FM analog tuning •Cassette with auto stop

\$69⁹⁹ (AIW CSDES220)

Sony CFD-V30BLACK
•CD/AM/FM/Cassette, 20-track programmable CD, remote, black **'89⁹⁹**

JVC RC-X540
•AM/FM/CD/Cassette, 20-track programmable CD, 15-AM/15-FM presets, remote **'119⁹⁹**

Sony CFD-ZW160
•CD/AM/FM/Dual Cassette, 20-track programmable CD, 3-piece, remote **'139⁹⁹**

Aiwa CA-DW480
•CD/Dual Cassette AM/FM, 3-piece, digital tuner with 24 presets, 20 track prog. CD **'159⁹⁹**

Aiwa CA-DW680M
•Dual CD Changer/AM/FM/Dual Cassette, 3-piece, Dual CD changer (2 single CD players) **'179⁹⁹**

Personal Stereo



Aiwa HS-JX779
AM/FM/Cassette Personal Stereo Recorder
•Digital tuner with 30 presets •Auto-reverse record & play •Dolby B •Rechargeable battery, remote & headphones

\$199⁹⁹ (AIW HSJX779)

Aiwa HS-RX768
•AM/FM/Cassette, digital tuner with 30 presets, auto-rev., Dolby B, rechargeable, remote **'149⁹⁹**

Panasonic RQ-SX40
•Auto-Reverse Cassette, Dolby B, heavy-duty rubberized body, remote, rechargeable **'149⁹⁹**

Panasonic RQ-XV30
•AM/FM/Cassette, digital tuner with 24 presets, auto-rev., Dolby B, rechargeable, remote **'149⁹⁹**

Sony WM-FX553
•AM/FM/Cassette, digital tuner with 16-FM/8-AM presets, auto-rev., Dolby B, wired remote **'149⁹⁹**

Sony WM-EX5
•50th Anniversary Walkman Cassette, auto-reverse, Dolby B, wired remote **'249⁹⁹**

Headphones



Koss ESP/950
Electrostatic Headphones
•Audiophile reference quality •Includes amplifier, carrying case & external battery pack •Straight-line response from 8Hz to 35,000Hz

\$499⁹⁹ (KOS ESP950)

Sennheiser HD 445
•Supra-aural lightweight design, includes dual plugs for use with portables or home stereo **'499⁹⁹**

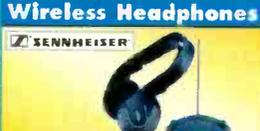
Sony MDR-V6
•Monitor-quality, enclosed-ear design, Uni-Watch™ plug for home or portables **'699⁹⁹**

Beyer DT-990 PRO
•Professional design with ultra-wide bandwidth & heavy-duty construction **'999⁹⁹**

Koss a/250
•Studio Pro Headphones, dynamic design, closed leatherette ear cushions **'1799⁹⁹**

Sennheiser HDC 451
•NoiseGuard™ Open-air design, allows listening to speech, yet it reduces ambient noise **'1799⁹⁹**

Wireless Headphones



Sennheiser RS6
900MHz Wireless Stereo Headphone System
•RF technology •325⁹⁹ range •3-switchable frequencies •Volume control on headphone •Ni-Cad rechargeable battery

\$199⁹⁹ (SEN RS6)

Aiwa HP-WR601
•900 MHz Wireless Headphones, up to 150' range, closed-ear, rechargeable battery **'799⁹⁹**

Sennheiser IS380
•Infrared Wireless, 30' range, rechargeable portable transmitter **'799⁹⁹**

Sony MDR-RF940RK
•900MHz Wireless, circumaural earcup, includes headset & base **'999⁹⁹**

Recoton WP525
•900MHz Wireless, 150' range, omnidirectional transmission, rechargeable **'1299⁹⁹**

Sony MDR-IF520RK
•Infrared Wireless, lightweight, transmission up to 33' & 90° angle, rechargeable **'1499⁹⁹**

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A/V Furniture



Plateau 24

Audio Rack

- Ergonomic high-tech design
- All-metal construction
- 4 shelves •19" w x 14.5" d
- Black •Adjustable spike feet

\$149⁹⁹

(PLA 24A)

- Target BT1**
•Tilt & Swivel Speaker Wall Bracket, holds 50 lbs.pr. **'29⁹⁹**
- Elite EL-143**
•TV Cabinet, adjustable VCR shelf, charcoal finish, heavy-duty casters **'69⁹⁹**
- Elite EL-318**
•Audio/Video/TV (27"-32") Stand, birch style, glass doors, 2-shelves, casters **'99⁹⁹**
- BELL'OGGETTI AR-703**
•Audio Rack, all-metal construction, 5 adjustable shelves, adjustable spikes **CALL**
- Standsign Design 5 Series**
•Audio Rack, 34" h w/ 6.5" adjustable distance between shelves, 20" w & 16" d for each shelf **'299⁹⁹**



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and kids move away / Dogs and husbands, that's who stays"), and the job front is seen from the point of view of both "just an ordinary working Joe" ("Megabucks") and his boss, "the middle-aged deflector-shield blame-throwing Teflon man" ("The Quarterly Meeting"). Back in sober territory, the true story of White's son getting mugged inspires both the moving "Heartbeat of Heaven" and a fan's reaction to that song, chronicled and grappled with by White in the album's hidden monologue.

Overall, *Rascal*, coming on the heels of the fine *Live at the Somerville Theatre*, is a solid record. With more sympathetic (and, sometimes, simply *less*) production, and with a little more fine-tuning of material, White could become, well, Loudon Wainwright IV. Meanwhile, Don White does know exactly what love is, and that song alone is worth the price of admission. *K.R.*

Collections

KNIGHTS OF THE BLUES TABLE.

VICEEROY/LIGHTYEAR 54189 (73 min).

★★★

BLUES DOWN DEEP — SONGS OF JANIS JOPLIN.

HOUSE OF BLUES 161 251 (63 min).

★★★

Here are two rock/blues crossovers, one from each direction. The first features a bunch of British figures from the Sixties getting their blues rocks off, while the second has modern blues artists taking on Janis Joplin's greatest hits. A nostalgic tone hangs over both, and you'd definitely have more fun digging out your old Yardbirds and Joplin albums, but each collection includes some gems worth digging for.

Knights of the Blues Table is half-inspired and half blues-by-the-numbers. The brightest moments come from Jack Bruce, Georgie Fame, ex-Savoy Brown singer Miller Anderson, and the mid-Seventies lineup of Pretty Things, still sounding punkish. The big disappointment is Peter Green, the once-great Fleetwood Mac guitarist who's performing again after a two-decade fight with mental illness. Sadly, his acoustic version of Robert Johnson's "Travelling Riverside Blues" (otherwise known as Cream's "Crossroads") could have been anybody's.

Joplin personalized her songs so much that covering them isn't easy, but many of the singers on *Blues Down Deep* — mainly the female ones — are up to the task. Tracy Nelson digs up an early obscurity, "What Good Can Drinkin' Do," treating it as her own statement rather than a tribute. Koko Taylor provides an older and wiser take on "Get It While You Can," Lou Ann Barton is suitably sultry in "One Good Man," and Etta James turns "Ball and Chain" into the kind of soul-baring slow blues that has always been her specialty. Problems come up on the rocking side of the repertoire: Tad Robinson's "Move Over," Otis Clay's "Piece of My Heart," and Paul Black's "Down on Me" are the kind of workmanlike covers that your local bar band plays every weekend. *B.M.*



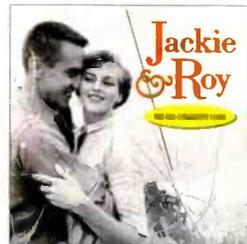
FRED ANDERSON/DKV TRIO.

OKKADISK 12014 (48 min). Distributed by Portaudio, 809 Ridge Ave., #2, Evanston, IL 60202.

★★★★

Fred Anderson is a big-toned Chicago tenor saxophonist in the tradition of Gene Ammons but with wider horizons than most of the breed. Both his asymmetrical phrasing and his fondness for upper-register squalls make him right at home in the sort of exploratory setting he and the DKV Trio — drummer Hamid Drake, bassist Kent Kessler, and multi-reed man Ken Vandermark — have chosen for themselves here. Vandermark, sticking mostly to tenor, provides an ideal foil to Anderson, especially in the dark, boiling "Ladies in Love." Without being remotely imitative, the music here recalls Ornette Coleman's work of the early 1970s with fellow saxophonist Dewey Redman; it conveys a similar sense of purpose as well as a similar sense of fun.

What used to be called free jazz has hardened into a genre, just like pop. But here's an album that illustrates how much untapped potential "free" still holds. Also recommended is the DKV Trio's own recording *Baraka* (OkkaDisk 12012). *F.D.*



JACKIE & ROY:

The ABC-Paramount Years.

KOCH 7927 (53 min).

★★★★

After leaving Charlie Ventura's "Bop for the People" band in 1949, singers Jackie Cain and Roy Kral turned to a more intimate style and revamped their repertoire to include clever, rarely heard songs. Jackie & Roy became a classy club act, and between 1956 and 1958 the duo made a series of recordings for ABC-Paramount. Sixteen of these tracks make up *The ABC-Paramount Years*, lovingly compiled and annotated by James Gavin, a writer with impressive insight and a knowledge of cabaret music. Cabaret? Yes, the line between cabaret and jazz is often thin, just as very little separated Fifties and Sixties pop vocals from performances that were classified as jazz by virtue of their instrumental accompaniments. But so what? No one will wonder where in the time line Jackie & Roy belong; they continue to be a delight to hear, even after all these years, and they were still performing in 1995. *C.A.*

J. J. JOHNSON: The Brass Orchestra.

VERVE 537 321 (71 min).

★★★★

A sort of musical extravaganza that showcases the writing talent of trombonist J. J. Johnson, now in his seventies. *The Brass Orchestra* features a rather large band with a gathering of first-rate musicians, including more brass than you can shake a Stan Kenton record at. It is an ambitious project with complex, opulent arrangements that sometimes reflect Johnson's tenure as a Hollywood composer, but I have to confess that I prefer him in a more intimate setting (as on his 1993 album, *Let's Hang Out*). Small-group passages do appear, flowing with blessed looseness in and out of the big brass. And although the charts occasionally border on heraldic pomp, there are impressive textures in the weave. Jon Faddis, Renee Rosnes, Robin Eubanks, and Rufus Reid are among the players, and when some of them stretch out a bit, the brass politely moves to the side. J. J. Johnson continues to be an interesting artist, and this is an intriguing blend of his ideas, young and old. Verve is to be commended for approving a project of this scope (translation: cost) by a jazz musician who never climbed the pop fence. C.A.

**WYNTON MARSALIS
& THE LINCOLN CENTER JAZZ
ORCHESTRA: Blood on the Fields.**
COLUMBIA 57694 (three CDs. 163 min).

★★★★

When I first heard that Wynton Marsalis was writing a nearly three-hour oratorio about slavery, I feared the worst. It struck me as his misguided attempt to (a) once again make an honest woman out of jazz, (b) beat the European-leaning jazz avant-gardists at their own game, and (c) create a work that by virtue of its sheer size and ambition would deflect controversy away from his hiring and programming practices at Lincoln Center and onto his music.

Blood on the Fields is finally available on CD, somehow having won a 1996 Pulitzer Prize despite having had its premiere in 1994. To call it uneven is an understatement; it's a work that turns an individual reviewer into a hung jury. What needs to be acknowledged first is that *Fields* represents a tremendous leap forward for Marsalis as a composer who has never made any bones about his derivation from Duke Ellington. Any number of individual selections — including "The Market Place" and "Back to Basics," to name the most glorious — come closer than works by any other present-day composers to capturing not just Ellington's tonal palette (which would be achievement enough) but also his band's ineffable sense of forward propulsion. Marsalis has done this while alluding to a wide range of musics, including blues, popular song, modal jazz, and New Orleans second line. He is also to be commended for realizing the great potential still available in standard big-band instrumentation, and for devising such a lovely showcase for Cassandra Wilson, in the role of Leona. A singer who brings an aura of drama and husky sensuali-

ty to her delivery of lyrics, Wilson has never had better material to work with than what Marsalis provides for her in "Lady's Lament" and the infectious "God Don't Like Ugly."

Wilson's excellence notwithstanding, the many problems of *Blood on the Fields* begin with the casting of the singers and Marsalis's inexperience in mounting vocal music. It seems unfair to lay too much of the blame on Jon Hendricks, but what on earth is the quintessential black hipster do-

ing playing a white slave buyer? In his other role of Juba, Hendricks frequently bursts into scat, which is all right because he's playing a black medicine man of sorts. But these scat passages, and those of Wilson's leading man, Miles Griffith (a nonentity in the role of Jesse), come across as anachronistic, underlining the graver problem of Marsalis's lack of finesse in juxtaposing period and contemporary musical styles. It also doesn't help that Wilson and Griffith sing in approximately the same register (the

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libretto mostly takes the form of their running dialogue on how to live with enslavement, and it's often difficult to tell who's singing what), nor that the rhythmic devices with which Marsalis attempts to link his separate themes are very slight.

As for the Pulitzer, I can only say that middlebrow prize committees have always been suckers for tame social commentary, and have always been inclined to measure art by the pound. Judged by any meaningful standard, *Blood on the Fields* is no prize-winner. But lengthy parts of it soar. *F.D.*

Collection

THE INSTRUMENTAL HISTORY OF JAZZ.

N2K ENCODED JAZZ 10004 (two CD's, 120 min; enhanced CD).

★ ★ ★

If you're wondering how the people behind *The Instrumental History of Jazz* managed to squeeze about a century of jazz evolution onto two CDs, the answer is they didn't. That makes the title an exaggerated claim, which isn't rare, but in this case the

program is also slightly disingenuous. An example appears on the opening screen of Disc 2, an enhanced CD. We see a time line with ten buttons that form a gallery of leading figures, each meant to represent a noteworthy development in jazz. Nice shots of Armstrong, Ellington, Parker, Hancock, Grusin — Grusin? Well, Dave Grusin and Larry Rosen (the project's executive producer) are the G and R in GRP, the parent company of N2K Encoded Jazz. Further marring the program is the segment that seeks to justify Grusin's presence: Pop/Contemporary. It features the music that Grusin, Kenny G, and Najee personify — modern-day elevator music that stops just one floor short of John Tesh. Skipping this kind of fluff would have left room for more instrumental jazz of substance.

That said, let me hasten to add that this is otherwise a well-designed package, and here I refer to the illustrated fifty-page booklet as well as the interactive structure and look of the enhanced CD. The text is another matter. "All great jazz swings," it claims, without explaining why the set includes several performances that don't. It names "West End Blues" and "Weather-

bird" as recordings that made Armstrong's original Hot Five popular, when, in fact, the former was recorded by a later group and the latter was an Armstrong/Earl Hines duet. The text also states that trumpeter Don Cherry "eventually broke away from wild jazz." Wild jazz?

As for the music, there are twenty-two selections, ranging from a Scott Joplin piano-roll performance of "Maple Leaf Rag" to, well, Grusin's "Mountain Dance." In between, there is such vital stuff as King Oliver's "Dippermouth Blues," Basie's "One O'Clock Jump," Ellington's "East St. Louis Toodle-o," Coltrane's "Impressions," and excellent performances by Dizzy Gillespie, Charlie Parker, Miles Davis, and so on. George Benson, who made many fine jazz recordings, is poorly represented by "Breezin'," one of his blandest pop efforts, and though audio-only listeners will not hear Thelonious Monk, there is a film excerpt of him playing "Blue Monk" at a 1965 Oslo concert. If you're not equipped for the multimedia content, both discs are playable as audio CDs, and — notwithstanding the flaws I pointed out — this ill-named project does contain excellent recordings. *C.A.*

QUICK FIXES

CANDYE KANE: Diva La Grande.

DISCOVERY 74710 (53 min). ★ ★ ★ ★

Former stripper informs her blues with both a lighthearted acceptance and a raucous sensibility. Kane mostly weds her California origins and Texas connections, whomping up a hillbilly/Cajun stew in, of all songs, "These Boots Are Made for Walkin'." She rails against sexism ("The Lord Was a Woman") and sizism ("You Need a Great Big Woman"), always with a wink and a nod. Great stuff. *A.N.*

LONESTAR: Crazy Nights.

BNA 67422 (39 min). ★ ★ ★

Lonestar, named Best New Vocal Group by the Academy of Country Music, reprises the catchy hooks that made "No News" and "Tequila Talkin'" such instant hits. The Texas mainstream band imbues the sentimental "Everything's Changed" with true heart and serves up an irresistible toe-tapper in "Cheater's Road." Lonestar was probably signed as BNA's answer to Diamond Rio, but these clones are clearly no clowns. *A.N.*

WILLIE NILE: Archive Alive!

ARCHIVE 80009 (56 min). ★ ★ ★ ★

Recorded live in Central Park in 1980 with a rhythm section stolen from Television and Patti Smith, this CD offers impassioned versions of some of Nile's best songs, as well as a brilliant cover of Ricky Nelson's "Stood Up" and a take on the hilarious "Les Champs Élysées" that just shreds the more genteel version on Nile's second LP.

A terrific document of a gifted singer/writer and a natural rock-and-roller. *S.S.*

PINETOP PERKINS: Born in the Delta.

TELARC BLUES 83418 (47 min; enhanced CD).

★ ★ ★ ★

Perkins was 83 when he made these recordings last year, and as singer and pianist he remains in splendid form. The playing time may seem a bit skimpy, but the multimedia offerings compensate nicely, including a performance clip, an interview, a bio, photos, and articles. *C.A.*

JOE SATRIANI/ERIC JOHNSON/

STEVE VAI: G3 Live in Concert.

EPIC 67920 (77 min). ★

There are laws against speeding on our nation's highways. There should be laws against speeding on our nation's fretboards. *G3 Live in Concert* is a titanic clash of egos, overplayed to the point where the principals could also be charged with auditory manslaughter in this demolition derby of fuel-guzzling funny guitars. *P.P.*

KRIS TYLER: What a Woman Knows.

RISING TIDE 1016 (41 min). ★ ★

Omaha native Tyler is blessed with producers Tony Brown and Emory Gordy, Jr., as well as collaborators Gary Burr and Sharon Rice, yet her writing and performing skills haven't evolved to current standards. She has her moments in the soulful "Keeping Your Kisses" and the ballad "Old Boy-friend," but, in the end, Tyler is a young woman in need of seasoning. *A.N.*

JAMES BLOOD ULMER:

Music Speaks Louder Than Words.

KOCH JAZZ 7833 (55 min). ★ ★ ★ ★

Six of the selections here are by Ornette

Coleman, and guitarist Ulmer, in his saw-blade attack and loose-as-a-goose rhythm, remains one of his ex-employer's foremost interpreters. The other three numbers, replete with bruised blues vocals, are great examples of Ulmer's own distinctive blend of harmolodics and Delta hoodoo. *F.D.*



MUDDY WATERS: Paris, 1972.

PABLO 5302 (53 min). ★ ★ ★ ★

Paris, 1972 was recorded live when Muddy Waters' band included harmonica veteran George Buford, guitarist Louis Myers, and pianist Pinetop Perkins, all of whom shone brightly and raucously in the postwar Chicago firmament. Here is a well-balanced album of solid blues by men who were drenched in the stuff from childhood. One wonders why it collected dust for twenty-five years. *C.A.*

RANDY WESTON: Earth Birth.

VERVE 537 088 (54 min). ★ ★ ★

Here's a "with strings" date of subtle charm, thanks to Melba Liston's playful arrangements, the contrast between soaring violins and Weston's percussive ring, and a nifty selection of the pianist's best-known compositions. A nice change of pace, though a few wailing horns end and there might have made it even better. *F.D.*

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PO'S ACCEPTED

Dar Williams

BY ALANNA NASH



97 SKID/RAZOR & TIE

Buried deep in the title song of Dar Williams's *End of the Summer* are autobiographical lines both innocent and disturbing: "I had a dream . . . / It felt like the first day of school / But I was going to the moon instead . . . / And I knew that I would crash / But I didn't want to tell them . . . / It's the end of the summer / When you send your children to the moon."

"Yeah," says the 30-year-old singer/songwriter, crackling on the phone wires from her parents' house in Westchester County, New York, a couple of states away from her own home in Massachusetts. "I literally had a dream that I was going to the moon. I just had it recently, but in the dream I was only six or seven years old. And it was very beautiful, very sad, because I really knew that the rocket was going to crash. But it was still so exciting."

It doesn't take an armchair psychiatrist to reason that Williams allowed her subconscious to float off into the land of *The Little Prince* because she's nervous about the acceptance of her new album. Her previous, sparsely produced records — *The Honesty Room* (1995) and *Mortal City* (1996), both acclaimed by critics — huddled around the catchall moniker of folk music. But on *End of the Summer* she puts a brave foot forward to step into the higher-profile pop arena. Her record company, Razor & Tie, has pressed 100,000 copies, only 20,000 short of the

"I've dreamed of having an ensemble like this. The right band can make every song have its own theatrical space."

combined sales of her other albums. And there's a major tour under way, where Williams, known for performing solo with her own guitar, is supported by her first band: cello, percussion, and second guitar. You might say that she's shooting for . . . well, you know.

Williams knows what some people are likely to say. But she's a woman who follows her muse, and, as she explains, "This is where She went. I've dreamed for years of having an ensemble like this. It just seemed like the right band can make every song have its own theatrical space."

A couple of the new tunes may sound a tad overproduced, but Williams has sacrificed none of her poetic intimacy or emotional intensity. Two of the songs, "What Do You Hear in These Sounds" and "It's a War in There," deal with clinical depression and therapy (the singer's earlier aspirations were to be a therapist or an actress). The first song is lighthearted: "We

fathom all the mysteries, explicit and inherent / When I hit a rut, she says to try the other parent." The second, with its menacing swirl of violin and voice, evokes a horrifying snake pit. And if "Party Generation" is friendly in a beer-commercial kind of way, there's also a stark tribute to the late Townes Van Zandt in "If I Wrote You," and "Bought and Sold" gets into social politics, taking on Wal-Mart for driving the Mom and Pop stores out of small-town America.

Although Williams, who is a feminist, wrote the entire program except for a surprise cover of the Kinks track "Better Things," she doesn't feel she so much "birthed" the project as filled another role in its arrival.

"Actually," she begins, "I decided the best analogy for this record was that I was like a father who had been present at the event." She catches herself. "Well, I shouldn't be heterosexist here. I guess I should say I was the other partner for someone's pregnancy, or the production process. I feel like I went to the Lamaze classes, ate the same diet, and was really present for the recording. So I offered my songs, but then other people took them and turned them into what they are on the album. And I'm very happy with the result."

She is also glad to have reexplored her teenage years, both in the rock rhythms and melodies and in the acknowledgment that kids have plenty to teach adults, as she sings in the spirited "Teenagers. Kick Our Butts."

If the myriad teens who attend her shows readily identify with the Wesleyan University graduate, it could be that they relate to her humorous yet unflinching songs about the confusion of life, the head-spinning complexity of love, and the perils and pleasures of gender morphing. And in signature tunes like *The Honesty Room*'s "The Babysitter's Here" and "When I Was a Boy," she eloquently takes her listeners back to their beginnings.

Williams describes her own childhood self as "a very nervous kid," terrified of losing things and overly sensitive to the "older-sister terrorist organization" of her two "very smart, very quick" siblings. But she's grateful to them for adapting her given name, Dorothy, to Dar.

"Dar" is very much the way I am," she explains. "It's very androgynous. The song 'When I Was a Boy' was so true. Because I really was a boy in a lot of ways growing up. You know, I feel intensely female, and sometimes intensely male. So it's great that I have such a mixed-up, nonthreatening name."

She may have a mixed-up name, but her art is anything but. As a full-time musician for only four years now, Dar Williams is already at the forefront of singer/songwriters who have given neo-folk music renewed credibility and vitality. □

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CLASSICAL MUSIC

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

BRAHMS: Four Serious Songs, Op. 121; Sixteen Other Songs.

Natalie Stutzmann (contralto); Inger Södergren (piano). RCA VICTOR 68660 (64 min).

★★★

Natalie Stutzmann is a true contralto in the Kathleen Ferrier—Maureen Forrester tradition, a voice type that's rarely heard nowadays. She is, therefore, a born interpreter of many of Brahms's amber-colored songs, and, in particular of his valedictory *Vier Ernste Gesänge*, or Four Serious Songs, which are more often favored by baritone or bass performers. In this recording she captures their solemnity and underlying despair in a large-scale, dramatic fashion, but with a sustained legato when needed. She also brings a tone of yearning to such other songs as "O Wüssi' Ich Doch den Weg Zurück" and "Immer Leiser Wird Mein Schlummer," both notably enriched by her cello-like sound.

At times, though, that ultrarich sound is less than ideal: "Botschaft" and "Ständchen" could do well with a lighter tone, and while her handling of the dialogue in "Ver-

gebliches Ständchen" is well conceived, the song does not flow smoothly. One of the problems is the artist's excessive vibrato, which intrudes on the climax of the otherwise thoughtfully structured "Von Ewiger Liebe" and interferes with the full enjoyment of a few other songs as well. Listeners less troubled by this element will find much to enjoy in this generous program, aptly and at times powerfully aided by Inger Södergren's pianism.

G.J.

BRITTEN: Spring Symphony; Hymn to St. Cecilia; Five Flower Songs.

Soloists: Boy and Girl Choristers of Salisbury Cathedral; Monteverdi Choir; Philharmonia Orchestra, John Eliot Gardiner cond.

DEUTSCHE GRAMMOPHON 453 433 (62 min).

★★★★★

The fourteen poems that make up the text of Britten's *Spring Symphony* (1949) run the gamut from an anonymous sixteenth-century lyric through verses by Spenser, Milton, Blake, Auden, and others. The treatments display the composer's incomparable resourcefulness in the deployment of

soprano, alto, and tenor soloists, orchestra, and the richly varied choral forces. The children in the choir are called on to whistle as the soprano sings the jaunty words of John Clare's "The Driving Boy," and the joyous finale is capped by a tour de force setting of the famous "Sumer Is Icomen In" in which the boys emerge from a choral-orchestral texture that's complete with cow-horn. Among the excellent soloists I especially liked tenor John Mark Ainsley, who in timbre and phrasing is a dead ringer for Peter Pears in his prime, when he sang in the work's première.

But as spectacular and elegantly poetic as the symphony is, I don't think it travels beyond England nearly as well as the *Hymn to St. Cecilia*, a superb *cappella* setting of W. H. Auden's wonderfully evocative text composed toward the end of Britten's sojourn in the U.S. during the early years of World War II. The Five Flower Songs, to poetry of Robert Herrick, George Crabbe (the inspiration for *Peter Grimes*), John Clare, and Anonymous, also a *cappella*, were written a year after the *Spring Symphony*. The delicate appeal of the first four gives way to robust humor in the concluding "Ballad of Green Broom."

The performances here are all top of the line in every respect. John Eliot Gardiner imparts his particular brand of rhythmic energy and sharply focused phrasing to each work. The recording is exceptionally clean and wide-ranging (some may find the sonics a bit on the bright side). Although Britten's own 1960 recording of the symphony (hard to come by in the U.S.) remains in a class by itself, Gardiner's state-of-the-art realization need make no apologies.

D.H.

CHOPIN: Etudes, Op. 10; Rondos.

Frederic Chiu (piano). HARMONIA MUNDI 907201 (77 min).

★★★★★

Frederic Chiu's program here is appealing in respect to repertory, commanding in respect to execution, and altogether refreshing. The four rondos, which continue to be among Chopin's least familiar works, are frankly extroverted pieces that make a fine frame for the etudes. It's actually a five-part frame, for Chiu plays the solo version of the C Major Rondo (Op. 73) before the twelve etudes and, by way of what used to be called "overdubbing," gives us the version for two pianos at the end of the program. The Rondo in F Major, Op. 5, is headed "mazurka-style," and all the rondos have a pronounced dance character. So, for that matter, do the etudes, as Chiu demonstrates with the most infectious enthusiasm, combining subtlety with frothy effervescence as we might imagine Chopin did in dreaming up these pieces in the first place

HIGH HOPES

"MISS HAHN represents our hope for the future of classical records," proclaimed Sony Classical on signing the 17-year-old American violinist to an exclusive contract with the label. That's a tall order for a young musician, even one who was admitted to the prestigious Curtis Institute of Music in Philadelphia at the age of 10. With performance debuts with the Cleveland, Philadelphia, St. Louis, Detroit, and Houston orchestras already under her belt, Hilary Hahn makes her recording debut this month playing three of J. S. Bach's works for unaccompanied violin — the Partitas Nos. 2 and 3 and the Sonata No. 3.



Hilary Hahn

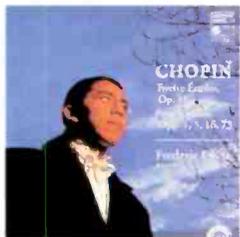
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formances brilliantly, conveying a heady mix of elegance and exhilaration. What it all comes down to is one of the choice piano recordings of the year — a reliable remedy for low spirits, with no known side effects but almost certainly addictive. *R.F.*

COUPERIN: Leçons de Ténèbres; Quatres Versets.

Patricia Petibon, Sophie Daneman (soprano); Les Arts Florissants, William Christie cond. ERATO 17067 (47 min).

★★★★

In 1714, François Couperin published three of his nine *Leçons de Ténèbres*, settings of the Biblical "Lamentations of Jeremiah" composed for the Good Friday services of the nuns at Longchamp. These three *Leçons*, apparently the only ones that survive, are scored for two high female voices and basso continuo. With their florid melismas on the initial Hebrew letters of the text sections and the somber, poignant expression elsewhere, they are quite different from what we think of as Couperin's typical style. The small motets of 1703, also written for one or two female voices, are only slightly more conventional in form. It is extraordinary that a composer of small-scale religious music of such purity and intensity should have, late in life, turned into an opera composer on the grandest scale.

William Christie, well known for his large-scale Baroque opera performances and recordings of works by Couperin and his contemporaries, also appears here in a very different guise: as a harpsichordist (playing the continuo part) and chamber musician of the first rank. Patricia Petibon and Sophie Daneman, two of his outstanding *bel canto* singers, have sweet, flexible voices and a delicacy of expression that is, nevertheless, quite powerful. These captivating performances and recordings are, despite the short length of the CD, well worth the price of admission. *E.S.*

GERSHWIN: Dayful of Song; Cuban Overture; Promenade; Rhapsody in Blue; Lullaby; An American in Paris.

Andrew Litton (piano); Dallas Symphony. Andrew Litton cond. DELOS 3216 (70 min).

★★★★

It's hard to do a fresh Gershwin recording, but Andrew Litton has succeeded. *Dayful of Song*, which lends its title to the CD, is a "Gershwin" work for piano and orchestra

that was put together (presumably by Litton himself) from Sid Ramin's orchestrations of seven attractive "trunk" songs discovered among Ira Gershwin's effects after his death in 1983. The delightful *Promenade* is André Kostelanez's orchestration of a high-stepping sequence from the Fred Astaire-Ginger Rogers film *Shall We Dance*. *Lullaby* is a string orchestration of an early (1919) tango-like composition for string quartet.

That's a lot of novelty for a new Gershwin recording even if none of it is going to

disturb the standard canon, represented here by three major works and performances: *Rhapsody in Blue* in a kind of symphonic version of the now-popular original Ferde Grofé-Paul Whiteman big-band arrangement (and apparently including some keyboard variants), the *Cuban Overture* with a variant ending, and *An American in Paris* in, well, the usual version but played with unusual vitality and a strong ear for sonority and rhythmic proportion. Litton is a high-energy pianist with a free, lively, and almost casual jump style, and he also gets

"DE PROFUNDIS"

In 1974, Paul Hillier co-founded the Hilliard Ensemble, a small group of vocalists who specialize in early music. He presided over the expansion of the group's repertory from the very old to the brand new, and — thanks to the ECM label's New Series — he helped Arvo Pärt gain international renown.

Several years ago Hillier left the Hilliards and formed a rival group, the Theatre of Voices. So perhaps it was inevitable that the Theatre of Voices, which has a contract with Harmonia Mundi, would eventually compete with the Hilliards by recording the music of Pärt. In fact, three of his pieces on a new disc — the *De Profundis*, *Summa*, and *Magnificat* — were introduced by the Hilliard Ensemble on ECM.

Hillier's new readings are more spacious, expansive, and relaxed. The passage of time has allowed him to absorb and personalize these works, to make room for a greater number of interpretive inflections. Now he approaches Pärt not with the emotional detachment of early music but with a more daring expressive range.

That is not to proclaim the new versions superior to the old ones. The pristine clarity, restraint, even neutrality of

the Hilliard performances lends Pärt's music a cool elegance. And the music itself is built from materials of elemental simplicity — scales, triads, repeated bass lines — that are deployed with exquisite subtlety and logic. The new disc is particularly valuable, however, because it covers a thirty-year span, from the serialist *Solfeggio* (1964), which barely hints at the mature Pärt, to the "tinnabular" pieces, as he calls them, of the last two decades.

Whether you find Pärt's music to be of unearthly beauty or annoying simplicity, you cannot deny that he has found his voice honestly, via slow and painful self-examination. His music not only suspends the passage of time but stands apart from history — a fragile, wide-eyed, devout art created in a cynical and secular century. —*K. Robert Schwarz*

PÄRT: De Profundis; Solfeggio; "And one of the Pharisees"; Cantate Domino; Summa; Seven Magnificat Antiphons; The Beatitudes; Magnificat.

Christopher Bowers-Broadbent (organ); Theatre of Voices, Paul Hillier dir. HARMONIA MUNDI 907182 (76 min).

★★★★★



Paul Hillier

WILLIAM KELEO/HARMONIA MUNDI

CLASSICAL MUSIC

a lot of bounce out of his Dallas Symphony musicians. *E.S.*

GOLDSCHMIDT: Passacaglia; The Comedy of Errors, Overture; Ciaconna Sinfonica; Chronica; Other Works.

Chantal Juillet (violin); François Le Roux (baritone); City of Birmingham Symphony, Simon Rattle cond.; Berlin Comic Opera Orchestra, Yakov Kreizberg cond; Montreal Symphony, Charles Dutoit cond.; Berlin Radio Symphony, Berthold Goldschmidt cond. LONDON 452 599 (66 min).

★★★★

Something of an overview of Berthold Goldschmidt's work is offered by this CD in London's Entartete Musik series, featuring composers who were victimized by the Nazi regime. Ranging from the early (1925) and neo-Baroque *Passacaglia* to the 1994 *Rondeau*, it deploys a handsome array of talent, including the composer himself, at age 92, conducting two of the performances. *Passacaglia* displays his command of a rich, post-Romantic orchestral palette somewhat akin to Webern's in his youthful essay in similar vein. The overture to Shakespeare's *The Comedy of Errors* is somewhat faceless in a mid-1920s Central European manner, but the three-movement *Ciaconna Sinfonica* carries the neo-Baroque approach further. The eight-movement *Chronica* — written for the Jooss Ballet, famous for *The Green Table*, a satirical jab at between-the-wars diplomacy — is more interesting with its anti-Fascist content and telling dramatic substance.

The late works include a four-part song cycle on French texts, *Les Petites Adieux*, that indicates Goldschmidt's genuine gift for solo voice settings. *Rondeau*, for violin and orchestra, is a subtle symbolic manipulation of musical letters evocative of the street in Paris where Goldschmidt first conferred with the author of the play that inspired his perverse but fascinating 1932 opera, *Der Gewaltige Hanrei (The Magnificent Cuckold)*, also available on London.

Considering the variety of locales and talents represented, the recording is not only remarkably consistent in performing quality but also in sonics, which are on the squeaky clean and bright side. *D.H.*



HAYDN: String Quartets, Op. 77, Nos. 1 and 2, and Op. 103; Der Greis.

L'Archibudelli. SONY 62731 (60 min).

★★★★

Based in the Netherlands, L'Archibudelli has devoted itself over the years to "original instruments" realizations of a wide range of repertoire from Mozart to Bruckner. This CD appears to be its first

shot at Haydn, in this instance the master's last string quartets, his final instrumental works, after which he dedicated himself to the realm of choral music and oratorio. Played here on period instruments with gut strings, the quartets sound quite different from what we are used to hearing from modern-instrument ensembles, both more transparent in texture and more penetrating in their overtone components.

The two Op. 77 quartets, in G Major and F Major, were written in 1799. Their eight movements show Haydn at the peak of his powers — for instance, the grave yet serene slow movement of the G Major and that work's pert yet urgent finale, the contrasting dialogue elements in the opening movement of the F Major, the singularly haunting major/minor "walking tune" that pervades its wonderful slow movement, and the almost Beethovenian rhythmic boldness of its minuet and finale.

The Op. 103 quartet, in D Minor, from 1803 remained a two-movement torso. It finds Haydn in more somber vein — by turns wistful and restless. As encore, we get a string version of the poignant 3-minute piece Haydn composed for vocal quartet in 1796, *Der Greis (The Old Man)*: "All my strength is at an end, / I am old and weak; / there's little that brings me cheer, / but wit and the juice of the vine. . . ." L'Archibudelli does full justice to all these works, and Sony has provided lovely sonics. *D.H.*

MAHLER: Symphony No. 8.

Alessandra Marc, Sharon Sweet, Elizabeth Norberg-Schultz (soprano); Vesselina Kasarova, Ning Liang (alto); Ben Heppner (tenor); Sergei Leiferkus (baritone); René Pape (bass); choruses: Bavarian Radio Symphony, Colin Davis cond. RCA VICTOR 68348 (two CDs, 83 min).

★★★★

What is most immediately impressive about Colin Davis's recording of Mahler's colossal Eighth Symphony, the so-called "Symphony of a Thousand," is the way the choral forces come smashing in at the very opening of the first movement, the *Veni creator spiritus*. But what is even more remarkable is the tension and power sustained unrelentingly throughout the movement's 23-minute time span. From the "*Accende lumen sensibus*" to its close, the singing and orchestral performance are nothing short of spectacular, especially in terms of textural clarity and vitality of phrasing. I would go so far as to say that this performance is both the most thrilling and the most intelligible of this immensely complex music that I have heard.

After the dense polyphony of the first movement we have the wide open musical and metaphysical space of the second (and last), a setting of the final scene of Goethe's *Faust*. Massed choral sounds give way here to splendid differentiation, and the soloists have their chance to shine. A starry cast is assembled, including most notably Ben Heppner, whose Doctor Marianus has a ring that recalls the great Jussi Bjoerling. Memorable too is Vesselina Kasarova as the Mulier Samaritana. The other singers are

never less than excellent, though I consider the best team of soloists those on Claudio Abbado's Berlin Deutsche Grammophon recording. I also like DG's sound best in terms of space and balance.

That said, Davis wields a powerful baton throughout the whole 80-plus minutes of the symphony, and he gets superlative orchestral playing, though at times in the *Veni creator* movement I wished that the orchestra had not been overshadowed by the high-voltage choral sonorities. The recording as a whole has ample body and presence but may be a shade bright for some tastes. *D.H.*

RESPIGHI: Roman Festivals; The Fountains of Rome; The Pines of Rome.

Orchestra of the National Academy of Santa Cecilia, Daniele Gatti cond. CONIFER 51292 (66 min).

★★★

There was a time when no classical record collection was complete without a set of Respighi's classic tone poems, which brilliantly evoke Rome's sparkling fountains, exuberant festivals, and the breeze whispering in the pines on the hillsides above the city. That time may have passed, but this is still intensely enjoyable music,



and this is a fine recording of it by the orchestra that introduced two of the works (*Fountains* in 1916 and *Pines* in 1924). Daniele Gatti has shaped exciting, colorful performances, and they are captured in vivid sound. *J.J.*

SCHUBERT: Mass No. 5, in A-flat Major.

Luba Orgonasova (soprano); Birgit Remmert (contralto); Deon van der Walt (tenor); Anton Scharinger (bass); Arnold Schoenberg Choir; Chamber Orchestra of Europe, Nikolaus Harnoncourt cond. TELDEC 98422 (50 min).

★★★★★

SCHUBERT: Mass No. 6, in E-flat Major.

Luba Orgonasova (soprano); Birgit Remmert (contralto); Deon van der Walt (tenor); Wolfgang Holzmair (baritone); Anton Scharinger (bass); Arnold Schoenberg Choir; Chamber Orchestra of Europe, Nikolaus Harnoncourt cond. TELDEC 13163 (52 min).

★★★★★

Schubert's two great settings of the Mass were among the first attempts to use liturgical music for intense personal expression. The earlier of the two, No. 5, in A-flat Major, is a soaring cathedral in sound, with orchestral writing as skillful and elaborate as in any of the composer's symphonies; the chorus's soaring "Hosannas" in the *Sanctus* and *Benedictus*, a lilting antiphonal conversation between the men and the women, have an almost operatic jubilation. The

Mass No. 6, in E-flat Major, is more inward-looking, almost somber at moments, yet shot through with flashes of incandescent joy, perhaps reflecting Schubert's recognition that his own death was near at hand. At the composer's wish, this Mass was first performed in the same church in Vienna where Beethoven's funeral had been held just eleven months earlier.

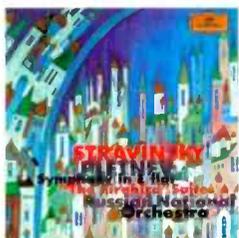
Recorded live at Nikolaus-Hamonicourt's summer music festival in Graz, Austria, these CDs offer fine sound and performances that are aglow with intelligence, careful musicianship, and a rich sense of occasion. The soloists are excellent: baritone Wolfgang Holzmair takes the second tenor's part in the Mass No. 6 to superb effect. The Arnold Schoenberg Choir performs on both discs with an ideal blend of exuberance and taste. *J.J.*

STRAVINSKY: Symphony in E-flat Major; The Firebird, Suite (1945); Scherzo à la Russe; Canon on a Russian Popular Tune.

Russian National Orchestra, Mikhail Pletnev cond. DEUTSCHE GRAMMOPHON 453 434 (71 min).

★★★★★

Stravinsky's frankly derivative but attractive Symphony in E-flat Major, Op. 1, from his early twenties, is done to a turn by Mikhail Pletnev and his fine orchestra. With tempos close to Stravinsky's own, the performance moves along with an enlivening spontaneity, neither stressing nor suppressing the music's near-echoes of Tchaikovsky and Glazunov. An unexpected level of expressiveness seems to emerge without coaxing, as it does even more strikingly in *The Firebird*, the work that took Stravinsky from obscurity to international celebrity barely two years after the little noted premiere of the symphony. It is represented here neither by the original complete score nor by



the familiar 1919 concert suite, but by the more inclusive suite of 1945 (for a somewhat reduced orchestra), a version seldom heard in the concert hall but very familiar indeed as the music for Balanchine's 1949 version of the ballet.

The two shorter pieces, from the early and late years of Stravinsky's American residency, are agreeable encores. The sonic focus is rich and warm, and Richard Taruskin's authoritative, clarifying annotation is, as always, another considerable asset. *R.F.*

WAGNER: The Flying Dutchman.

James Morris (Dutchman). Deborah Voigt (Senta). Jan-Hendrik Rootering (Daland). Ben Heppner (Erik), others: Metropolitan Opera

QUICK FIXES

DEBUSSY: Prelude to the Afternoon of a Faun; Saxophone Rhapsody; La Mer. RAVEL: La Valse; Boléro.

Kenneth Radnofsky (alto saxophone); New York Philharmonic, Kurt Masur cond.

TELDEC 13133 (76 min). ★★★

The only slightly unusual piece here is the 10-minute-long Saxophone Rhapsody, a jazzy, Spanish-flavored gem that was written for America's first classical saxophonist, a Bostonian named Elise Hall who took up the instrument in her late forties. Better, swingier versions of the Ravel standbys are available from many orchestras, including earlier recordings by the New York Philharmonic, but this disc is nonetheless a well-played, excitingly recorded library-builder. *J.J.*

GOLDMARK: Suites Nos. 1 and 2 for Violin and Piano.

Ulf Wallin (violin); Bruno Canino (piano).

CPO/NAXOS 999 381 (62 min). ★★★

Karl Goldmark (1830-1915) lived well into his ninth decade, was loved and respected by his colleagues, and is remembered today on the strength of only one or two of his numerous works. His expansive suites for violin and piano, exhibiting the same natural elegance, warmhearted lyricism, and sense of color that illumine his Violin Concerto and the adorable *Rustic Wedding Symphony* (whose five-movement format is more or less anticipated in the early Suite No. 1), could hardly have more effective advocacy than they receive here. *R.F.*

PREVIN: Sonata for Cello and Piano; Four Songs; Two Remembrances; Vocalise.

Sylvia McNair (soprano); Yo-Yo Ma (cello); Sandra Church (alto flute); André Previn (piano). SONY 62004 (61 min). ★★★

It is truly odd that this album is called *From Ordinary Things*, a line from a Toni Morrison poem, because there is nothing ordinary about this attractive, traditional music written for superlative performers. The Cello Sonata is notable for its jazzy finale and the exquisite playing of Yo-Yo Ma. Most of the rest is dominated by the clear, beautiful, utterly real voice of Sylvia McNair, who sings four Morrison settings, a charming Villa-Lobos-style vocalise for voice, cello, and piano, and two love lyrics translated from the German and set for voice, alto flute, and piano. *E.S.*

SCHUMANN: Humoreske; Fantasie in C Major, Op. 17.

Alicia de Larrocha (piano). RCA VICTOR 68657 (59 min). ★★★

Characteristically, Alicia de Larrocha approaches each of these contrasting works on its own terms, directly and without fuss,

securely balancing affection with animation, and sobriety with wit, thanks to her richly developed wisdom, technique, and musical instinct. The sound of her piano is



exceptionally lifelike and well focused, too. If a more fully satisfying recording of any of Schumann's piano music has been issued in the last dozen years, it has not come my way. *R.F.*

SHOSTAKOVICH: Ballet Suites Nos. 1 and 3; Suites for Jazz Orchestra Nos. 1 and 2.

Frankfurt Radio Symphony, Dmitri Kitaenko cond. RCA VICTOR 68304 (64 min). ★

The ballet suites were arranged by Shostakovich's friend Lev Atovmyan from the frothiest of the composer's dance and theater music. From these ballet waltzes and polkas to the waltzes and polkas of the jazzless "jazz orchestra" suites is no distance at all. The spirits of Offenbach and Delibes, not Ellington or Dixieland, hover over this desperate-to-please music. One Kurt Weillian foxtrot has an intriguingly sinister back-door quality; the rest is an aging *apparatchik's* idea of jazz and pop. The Russian conductor and German musicians play with as much brashness as they can muster, but except for that foxtrot, the results are at best coy and cutesy. *E.S.*

CHANTICLEER: Wondrous Love.

Chanticleer (vocals). TELDEC 16676

(74 min). ★★★

Chanticleer, a twelve-man ensemble that's been a pioneer in the current vogue for unaccompanied part singing, demonstrates versatility as well as virtuosity in this collection of folk songs from five continents. Sophisticated arrangements make all of them fall gratefully on American ears.

William Livingstone

PIAZZOLLA FOR TWO.

Patrick Gallois (flute); Göran Söllscher (guitar). DEUTSCHE GRAMMOPHON 449 185 (63 min). ★★★

The great tango composer Astor Piazzolla (1921-1992) scored his 20-minute *History of the Tango*, tracing the genre's trajectory from turn-of-the-century bordellos to the modern concert hall, for a flute-guitar duo. His Six Tango Etudes are a vivacious (if finally somewhat monotonous) exercise in musical dexterity for solo flute. The other selections here are transcriptions of orchestral works that faithfully capture the flavor of the originals. *J.J.*

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★★★★

James Levine presents Wagner's tempestuous opera in all its richness and well-observed detail, although at times his broad and leisurely pacing seems to undercut the music's sustained intensity. James Morris delivers the Dutchman's Monologue commandingly, with tonal richness and variety, but also with a widening vibrato that becomes particularly noticeable in the extended duet with Senta in Act II. The slow tempo doesn't help, yet Deborah Voigt seems little troubled by it. Senta's driven obsessiveness is not yet part of Voigt's portrayal. What she offers here is cleanly focused, bold, and accurate singing that sounds appropriately youthful and simply radiant in the top register. Her duet with Ben Heppner, as Erik, is one of the set's highlights. Heppner is firm and strong throughout, displaying exemplary legato in his third-act cavatina.

Paul Groves contributes a *bel canto* Steersman with his attractive light tone. The engineering gives Jan-Hendrik Rootering's solid and jovial Daland too little presence, and Birgitta Svendén's Mary hardly emerges from the chorus, though the overall sound is rich enough. Ideally, I would like more contrast between the lusty Norwegians and the Dutchman's spectral crew in Act III, but the scene comes off excitingly nonetheless, and the Met's chorus and orchestra perform at their top level, which is saying a lot. *G.J.*

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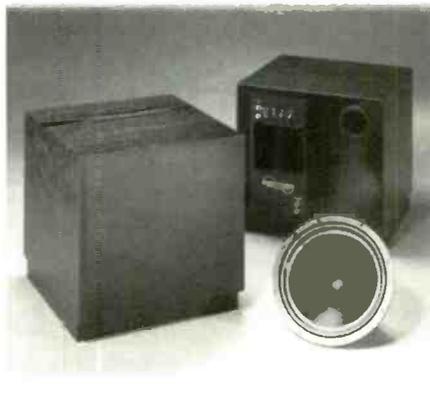
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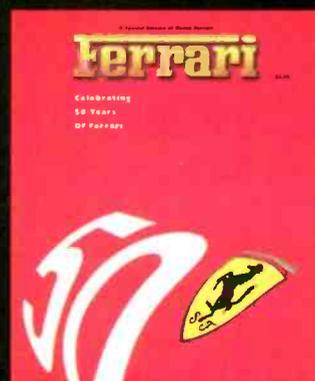
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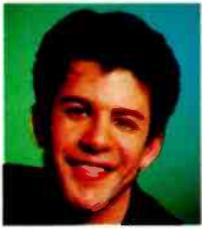
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THE HIGH END

COREY GREENBERG

All the Music That's Fit to Print

Recently, a buddy in the industry got on me for not writing about music anymore. "You used to mention all the latest CDs you were listening to in your reviews — man, it was the only reason I ever read your stuff!" He's right. I haven't written up my favorite CDs in a while, mainly because I got sick of getting letters from readers who just don't see that music is supposed to be good first and *sound* good second. "How can you review speakers with James 'Blood' Ulmer's *Black Rock*? It's not an audiophile recording!" the letters would go, and I'd just hit the snooze button till it was time to wake up. Saving your system for audiophile-grade recordings is a dead end, as anyone who's gone down that path will testify.

As a reviewer, I've found that the best recordings for system evaluation are those with which you're most familiar, not necessarily the ones with the best recorded sound. Of course, you hope that the two coincide, but if your tastes are like mine and tend toward rock, blues, and jazz, you're not going to see a lot of 20-bit, purist-miked action. The good news is that many older recordings in these popular genres are being remixed and reissued with the latest in digital mastering, the result being CDs that not only sound better than the original CD versions but even sound better than the original LPs.

I do miss writing about cool CDs I've come across, though. So here are a few of those I've been using to review equipment with lately, all of which are good, and some of which even *sound* good, too.

Charlie Hunter Quartet: *Natty Dread* (Blue Note). I've been really into this guy ever since his debut, *Bing Bing Bing*. Hunter's a young Berkeley punk jazzier who plays guitar and bass lines simultaneously on his custom eight-string electric guitar, and lately he's been on this serious organ-trio kick, running his guitar through a rotating Leslie organ speaker to sound like Jimmy McGriff. On his latest CD, Hunter, his drummer, and a pair of saxes remake the classic Bob Marley *Natty Dread* album into a soul-jazz groove

workout. Very funky, and the sound quality is excellent.

Jimmy McGriff: *Greatest Hits* (Blue Note). As long as we're talking about Charlie Hunter mining Jimmy McGriff's classic organ grooves from the 1960s and 1970s, you might as well own the originals to see why Hunter's so obsessed with this sound. You can buy a ton of really shoddy McGriff CDs, but this new disc is the best collection of his funkier workouts for the Sue, Veep, and Solid State labels. There is no greater sound than a Hammond B-3 organ overdriving a Leslie speaker, and for my money, McGriff was the coolest of the B-3 heroes. This CD proves it.

Iggy & the Stooges: *Raw Power* (Columbia/Legacy). One of my all-time favorite albums, this reissue is mandatory on several fronts. First, it's the greatest rock-and-roll record ever to come out of the state of Michigan, and maybe any other state for that matter. Second, the CD has been totally remixed from the original master tapes by Iggy Pop himself, and the new mix is miles tougher and gutsier than the original LP or, especially, the old CD, which was really tinny. On the new CD, the shrill top end has been brought down to a cutting snarl. Iggy's new mixes bring out his vocals nicely, and the guitars rage magnificently even as previously buried details emerge, such as the wacky celeste in "Penetration." But the real kicker is Iggy's explanation in the notes of how and why he came to remix *Raw Power*, in which he effortlessly tosses off better rock-and-roll critical writing than any of the clueless doofuses at *Rolling Stone* or *Spin*. This is the best record Iggy Pop ever made, made even better. A masterpiece.

Anxious Hippy: *Incoherent* (by mail for \$15 from Anxious Hippy Music, P.O. Box 2133, Orinda, CA 94563). When he's not designing high-end speakers for NHT, Ken Kantor records original avant-garde rock music for his own record label, Anxious Hippy. *Incoherent*, his first release, combines elements of the Velvet Under-

ground and Lou Reed's solo work with some really wild spatial recording techniques. If your speakers are capable of good imaging and are properly set up, you'll hear sounds swirling all around your living room, moving well beyond the outside of the stereo speaker positions. There's also some deep bass on this disc that will push even the best subwoofers to their limit. You've heard the man's speakers, now hear this music.

Thelonious Monk Quartet: *Live at Monterey Jazz Festival, '63, Vol. 1* (Mobile Fidelity). Boy, does this MoFi remastered 1963 live recording sound good. I mean, *scary* good. The liner notes list one Karl Emil Knudsen as the producer, and all I've got to say is, Karl baby, you the man! Monk and the band swing like crazy, and every last upright bass fingering and black-key tinkle comes through in stark clarity. A must for Monk lovers.

Robin Trower: *Bridge of Sighs* (Mobile Fidelity). Look, I'm the first one to admit that this smacked-out limey Hendrix imitator from the 1970s made about fifty records that all sounded exactly alike, but *Bridge of Sighs* was the best of the lot by a hair, that hair being the one-two punch of Trower's only hit single, "Day of the Eagle," and the perennial bong-hit favorite "Too Rolling Stoned." I dug this stuff like crazy when I was seventeen, and with Mobile Fidelity's fine remastering job, I can't help but dig it all over again.

John Coltrane: *Lush Life* (DCC Compact Classics). Fans of romantic "Mood Indigo" jazz put off by Coltrane's edgier, freerform Impulse recordings like *A Love Supreme* will find a kinder, gentler Trane on DCC Compact Classics' remastered *Lush Life*. Recorded in 1957, this is Coltrane at his straight-ahead best, leading jazz stalwarts like Donald Byrd and Red Garland through such standards as Cole Porter's "I Love You So" and the title track by the great Billy Strayhorn. As usual, Steve Hoffman's remastering job is impeccable.

The Last Poets: *This Is Madness* (Metro-tone/Restless). Long out of circulation, this 1971 collection of black-power bongorants is my favorite of the Last Poets records. Songs like "White Man's Got a God Complex" and "O.D." gain a fresh digital sheen. Food for thought: the engineer on these sessions was none other than Tony Bongiovi, who happens to be the uncle of Jon Bon Jovi (guess which one kept the original spelling of the family name). Could young Jon have been visiting Uncle Tony when all this kull-whitey stuff was going down? Could such an experience at an early age have resulted in "I'm a cowboy, on a steel horse I ride"? The mind reels. □

Ken Kantor.
Co-founder, Head of R & D.
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