

Stereo Review

JUNE 1996 • US \$2.95 • CANADA \$3.95 • UK £1.95

THE BASICS

**3 TOP-BRAND STEREO
RECEIVERS AND
HOW THEY PERFORM**

**AMPLIFIER/SPEAKER
CONNECTIONS
What You Should Know
About Impedance**

**SYSTEMS
A Home Theater
That Rocks**

DSS REVISITED

**TEST REPORTS
Audio Alchemy CD Player
Onkyo A/V Receiver
Acoustic Research Speaker
And more**



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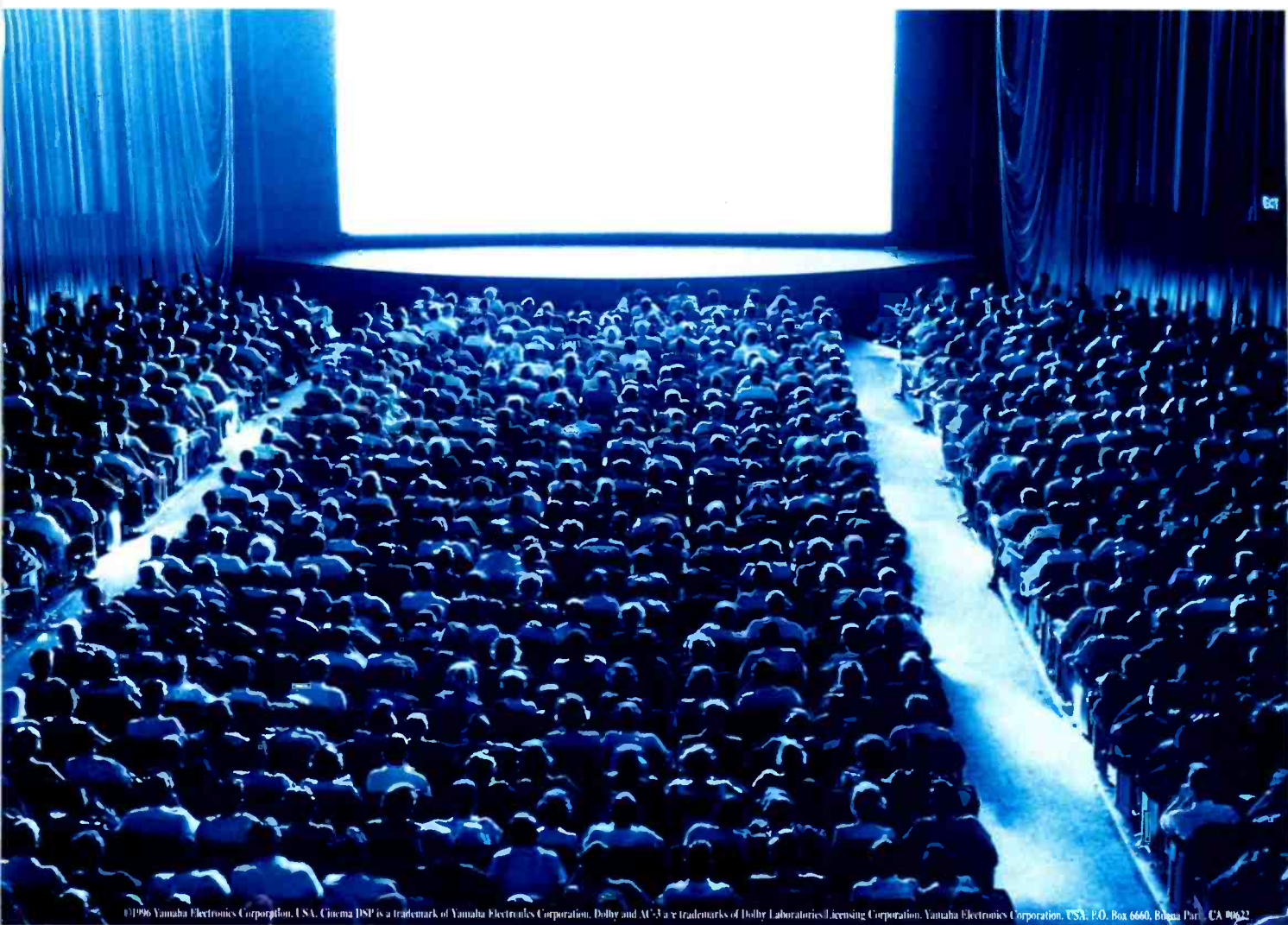
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The Theater

The DSP-A3090 lets you choose from 30 sound field modes. From L.A.'s Roxy and New York's Cellar Club, to churches and concert halls around the world. Seven-channel amplification sends 80 watts to each of the main, center and rear speakers, plus 25 watts to both front effects speakers. Analog, video and S-video, plus RF, coaxial and optical digital inputs link you to today's and tomorrow's Dolby Surround AC-3 components.

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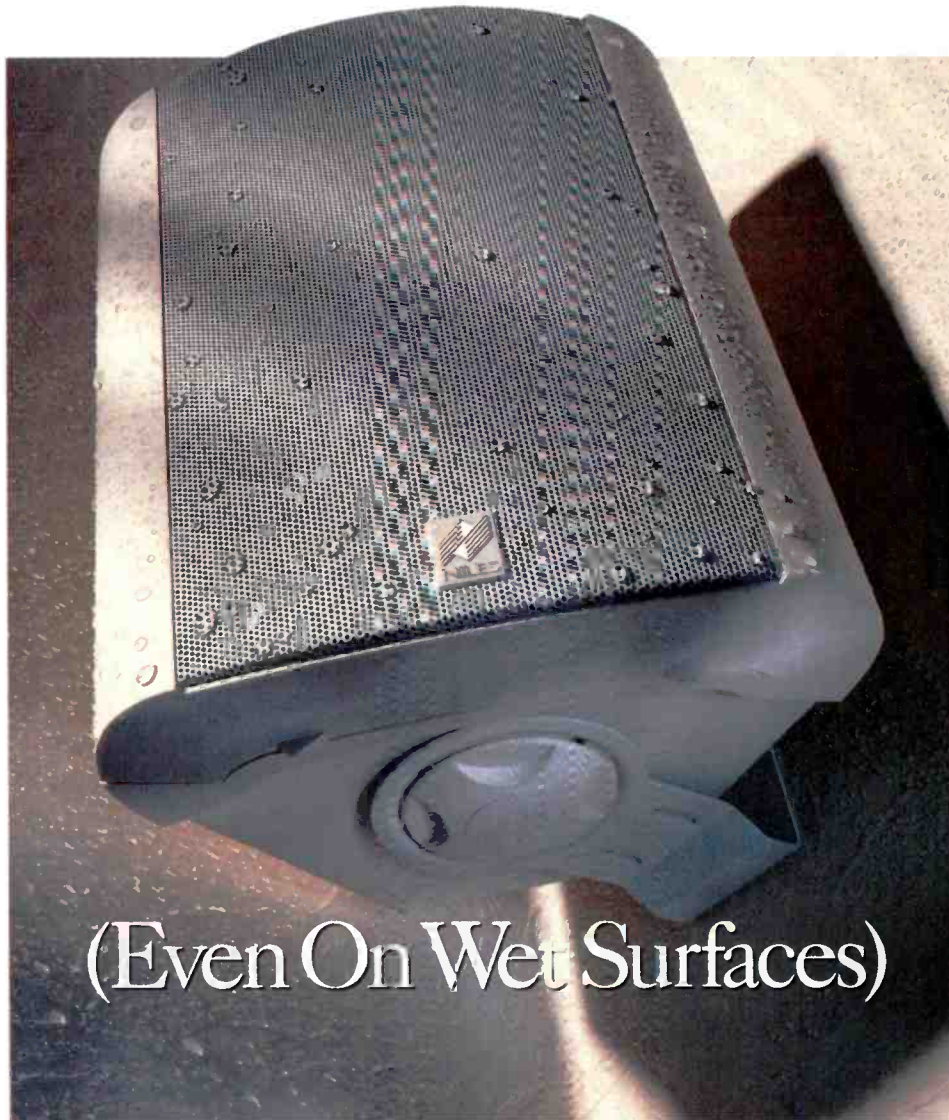
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IF IT'S TOO LOUD,
YOU'RE TOO OLD.

Corners Beautifully.



Tapered to tuck neatly into corners and under eaves, the OS-10 comes with a clever pivoting bracket that provides endless mounting solutions.



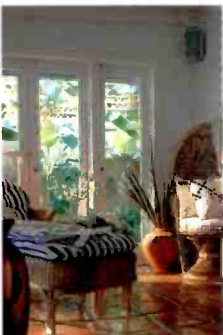
Tough enough for marine applications and beach-front living. Exceeds military anti-corrosion specs (MIL-STD-883D).



ElastoDynamic™ Hybrid Dome Tweeter
Impervious to moisture. Niles' unique tweeter design offers extended frequency response with stunning detail and clarity.

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Sonically. The OS-10 handily outperforms many traditional bookshelf speakers. Much of its superb sonic character comes from its unique tweeter design. Constructed from a composite matrix of elastomers and natural fiber substrates, the *ElastoDynamic™* tweeter yields extended frequency response with stunning detail and clarity. But to be a great speaker, you need great bass. Here the OS-10 shows its true horsepower thanks to its injection-molded, polypropylene woofer cone, supple butyl-rubber surround, and powerful magnet structure.



Visually. The OS-10's aerodynamic shape speaks for itself. But what may not be readily apparent speaks just as loudly. The OS-10's



aluminum; the connectors are gold-plated; all the hardware is brass or stainless steel—this speaker will not rust! And we guarantee it for two years.

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BLENDING HIGH FIDELITY
AND ARCHITECTURE

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tapered enclosure tucks neatly into corners or under eaves, complementing any decor, inside or out. Its clever pivoting bracket (standard equipment on the OS-10) gives you endless mounting solutions. Available in white or black, either finish is paintable for a truly custom look.

Functionally. We don't take the term "weather-proof" lightly. The OS-10 is designed to withstand extreme climates—from Minneapolis to Miami. Its rugged, non-resonant cabinet is totally sealed (insects or moisture can't creep in) and will not fade under the sun's rays. The grills and brackets are



Niles Audio Corporation, Inc.
P.O. Box 160818 Miami, FL 33116
In Canada call Aralex Acoustics, Ltd. (604) 873-4475



Stereo Review

INCORPORATING HIGH FIDELITY

June 1996

Not only can you still buy a good two-channel receiver, but it could be a terrific value! See page 56 for descriptions, test results, and comments on a high-performance trio: from top, the Harman Kardon HK3250, the Denon DRA-565RD, and the Yamaha RX-595.

Photograph by Roberto Brasan

BULLETIN	6
LETTERS	10
NEW PRODUCTS	17
AUDIO Q&A	26
SIGNALS	28
TECHNICAL TALK	38
POPULAR MUSIC	80
BACKBEAT	92
CLASSICAL MUSIC	94
TIME DELAY	108

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32 Peripherals

Surround sound for personal computers
BY JAMES K. WILLCOX

40 Equipment Test Reports

Onkyo TX-SV727 audio/video receiver, page 40
Audio Alchemy ACD II compact disc player, page 44
Acoustic Research Model 312 HO speaker, page 45
Rane SSE 35 home-theater equalizer, page 47

51 User's Report

The Digital Satellite System revisited
BY RICH WARREN

56 Receiver Face-Off

Hands-on comparison tests of three stereo receivers
BY DANIEL KUMIN

63 Loaded for Disaster?

What you need to know about speaker impedance
BY CHRIS STEINWAND

66 Systems

Good as Gold
BY ROB SABIN

69 The Ragged Edge

How to replace speaker surrounds
BY DENNIS EICHENBERG

73 William Christie

An American conductor makes the French Baroque flourish again
BY ERIC SALZMAN

76 Best Recordings of the Month

Paul Westerberg's hard-headed, soft-hearted "Eventually," Schubert's "Trout" Quintet played by Emanuel Ax, Yo-Yo Ma, and friends, "Quartets — Live from the Village Vanguard" featuring tenor saxman Joe Lovano, and rediscovering Albert Roussel's four symphonies with conductor Marek Janowski



▲ Page 45



▲ Page 63



▲ Page 17



▲ Page 80

BULLETIN

BY BOB ANKOSKO & WILLIAM LIVINGSTONE

A/V DIGEST

Mitsubishi will be back in the audio business later this summer with a midprice lineup comprising a five-disc CD changer, two A/V receivers, and six home theater speakers, including two powered subwoofers. On the TV side, Mitsubishi unveiled an 80-inch projection set (\$9,999) and demonstrated a prototype of a 40-inch wall-hanging plasma TV it plans to offer next year for \$8,000 to \$10,000. The company also announced plans to market TV sets next year that are capable of browsing the World Wide Web. . . . *Audio-ophile Audition*, billed as the only national radio program for audio enthusiasts, is celebrating its eleventh anniversary. Produced and hosted by John Sunier, the hour-long show is carried weekly on 125 public and commercial classical stations. For information, write to Audiophile Audition, P.O. Box 1621, Ross, CA 94957. . . . Primestar recently hit the 1-million subscriber mark for the 95-channel satellite TV system it offers primarily through cable TV operators. The company expects to have 2 million subscribers by the end of 1996. The medium-power digital system uses a 36-inch dish.

HOME THEATER HELP

A 30-minute CD-ROM entitled the *Interactive Guide to Home Theater* is available from the Consumer Electronics Manufacturers Association for \$15 plus shipping and handling; phone 1-800-228-5877 to order. . . . Attention, do-it-yourselfers: The Cinema Source of Burlington, Massachusetts, is offering the 100-page *Home Theater Resource Packet* and a one-year subscription to a quarterly newsletter for \$19.95. Call 1-800-483-9778 or visit the company's World Wide Web site at <http://www.tiac.net/users/cinema>. . . . More hints on home theater are provided at Monster Cable's Web site. The address — <http://www.monstercable.com/> — also yields product details and news of Monster Music tapes and CD's.

STICKLERS FOR STICKERS

STICKLERS FOR STICKERS

The "Parental Advisory: Explicit Lyrics" logo has been an "appropriate tool" for parents who want help in monitoring the music their children buy, according to recent research by the Recording Industry Association of America and the National Association of Recording Merchandisers. The black-and-white sticker identifies recordings that "may contain strong language or expressions of violence, sex, or substance abuse" and advises "parental discretion." To make the sticker applicable to video as well as audio recordings, the phrase "Explicit Lyrics" is being changed to "Explicit Content."

MUSIC NOTES

In Munich on June 12, this year's International Music Prize (\$170,000) of the Ernst von Siemens Foundation will be awarded to the Italian pianist Maurizio Pollini. . . . Nancy Sinatra has donated her white go-go boots, made famous in 1966 by her No. 1 hit single *These Boots Are Made for Walkin'*, to the Hard Rock Cafe's memorabilia museum. . . . The American soprano Renée Fleming, 37, has been named the first recipient of the Solti Prize, given by the Académie du Disque Lyrique in Paris to "an outstanding younger singer." Fleming recently signed a record contract with Decca/London. . . . Wilma Cozart Fine, producer of Mercury's Living Presence recordings, has received the 1996 Cannes



ANARCHY IN THE TULIPS

For once in American history, rock fans are listening to the same music their parents did. Witness the success of the Beatles' "Anthology" series across a universe of ages. Still, the surviving Fab Three refuse to tour — but never mind the Beatles, here's the Sex Pistols' *Second Coming*. John "Johnny Rotten" Lydon, Steve Jones, Paul Cook, and Glen Matlock will tour in July, having reportedly wisecracked that they're helping God save the Queen by raising funds for Princess Di's divorce settlement. Actually, a source told *Rolling Stone* that the old punks are motivated by "money and a sense of unfinished business." To which we reply, "business" is right.

Another comeback trail is lined with tulips, and who's that hairy, ovoid creature tiptoeing through them? None other than Tiny Tim, who has just released a CD on Rounder called "Girl" (Boy George probably wishes he'd thought of that) with backing by Texas polka crazies Brave Combo. Tiny (that's "Mr. Tim" to the *New York Times*) usually parks his falsetto in favor of what the band's Carl Finch calls an "enormous" voice, singing such standards of yesteryear as *Bye Bye Blackbird*, *Springtime in the Rockies*, and *Stardust* — as well as *Young Jude and Stairway to Heaven*. Did somebody say "retro"?

Classical Awards' Lifetime Achievement Award.

SINGLES GOING STEADY

Not a computerized dating service nor a guide to pick-up bars, the *MegaGuide to Singles* lists 400,000 45-rpm records. Formerly on sixteen floppy disks, it has been compiled onto one CD-ROM

with commentary on some of the important early record companies. Claimed to be the most complete reference for 45's, the *MegaGuide* is available for \$199.95 plus \$6 for shipping from PSG-Home-Craft Software, P.O. Box 974, Tualatin, OR 97062; phone 503-692-3732.

ILLUSTRATION BY BOB SCOTT

WHAT

a GREAT
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INTER-VISUAL

Don't judge our speakers by just their pretty faces.

Look at the back of Eosone loudspeakers and you'll notice speaker drivers there. They are part of a unique Eosone technology called Radiant Surround Field™ or RSF. RSF creates a broader listening area so that everyone in the room, regardless of listening position, hears superior sound and spatial effects. Until now, you could only find this feature in "high end" speakers, costing as much as \$90,000 a pair!

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Conventional speakers limit optimum listening area.

(■ optimum listening area)

(■ optimum listening area)

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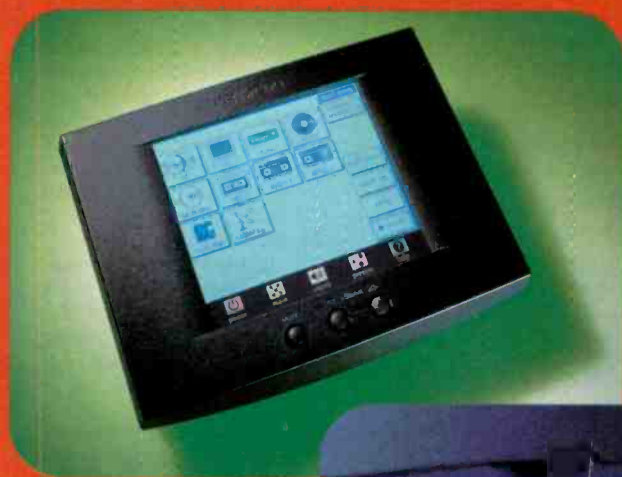
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WITH THIS SYSTEM, YOU COULD CHANGE
THE TREBLE FROM YOUR BATHROOM. WE DON'T
KNOW WHY YOU WOULD. BUT YOU COULD.



Welcome to Stage 3. A new line of Kenwood home products designed to do nothing less than simplify the way people interact with their technology. The first product is the Stage 3 Home Theater Controller (KC-Z1). A Dolby® Digital (AC-3) audio/video controller that integrates and controls up to ten other audio and video components. It also includes THX® Cinema and six channels of output for surround sound. But the heart of Stage 3 is the portable TouchPanel. This intuitive graphic interface lets you oper-



ate your controller from any room in the house. Press an icon on the screen and you can do everything from adjusting the volume to setting digital delay. And only the choices you need appear. Because like all Stage 3 products, the TouchPanel puts the power over technology back where it belongs. In the hands of the people. For the dealer nearest you, please call 1-800-KENWOOD or check out our brand new web site at www.kenwoodusa.com.



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LETTERS

Surround Sanity

I read with great interest Tom Nousaine's "Surround Sanity" in April. I am just beginning to build a home theater; my first purchase was an M&K MX-90 subwoofer. I plan to purchase M&K speakers for the main, center, and surround channels as well, so I was excited to read that Mr. Nousaine's setup included M&K's. How is his center speaker positioned in relation to the TV? Horizontally on top?

Second, my living room is similar to Mr. Nousaine's, with a large entryway on one side wall. Built-in bookshelves on the opposite side wall, however, preclude wall-mounting a dipole surround speaker. Would placing one on a 6-foot-high stand work? I haven't seen any speaker stands that tall. Any suggestions? EDWARD J. SZWEDO
New York Mills, NY

Tom Nousaine replies: I placed the M&K S-5000THX center speaker upright on my rear-projection TV. THX specifications call for wide horizontal but restricted vertical directivity for all three front channels, and this speaker does not have that kind of performance in the horizontal position. Other M&K THX models are not nearly as tall if vertical clearance is a problem.

I don't know of any 6-foot "speaker stands" currently in production, but M&K makes stand kits for professional and display use. You could also suspend the speaker from the ceiling or buy a heavy-duty light stand from a camera store.

One possible placement for surround speakers that Tom Nousaine's article did not address is recessed in the ceiling behind the main listening area. I have seen it done that way as well as high on the side walls, and each person thinks his setup is preferable. What are their relative advantages and disadvantages? JEFFREY SCHMIERER
Brookfield, CT

Tom Nousaine replies: Any high-mounted monopole speaker with reasonably smooth frequency response and wide dispersion will make an excellent surround speaker whether mounted in the wall, on the ceiling, or on a bookshelf or stand. Mounting speakers in the ceiling has obvious cosmetic and wall-space advantages, and if properly positioned 2 to 3 feet behind the listener and near the side walls they should work superbly except for listeners located directly underneath them.

Recordable CD for Whom?

Regarding Ken Pohlmann's "Recordable CD Is Here" (March), my question is, for whom? Am I going to spend \$18 to \$25 for a blank 63-minute disc to make a copy of a CD with a lot more music that I can buy for \$12 or less? Particularly when Mr. Pohlmann tells us that making a mistake while

recording on a CD-R could waste the disc or reduce its usable playing time.

JERRY KAUFMANN
Palm Beach, FL

We agree there's no point in using a CD-R to copy a CD that you can buy in a store, but what if the CD is out of print? You might also want to make compilations of favorite tracks from a number of CD's for a party, car playback, or another purpose.

The Recording Factor

I fully agree with Julian Hirsch's view (April "Technical Talk") that today's electronic audio equipment is an insignificant factor in the reproduced sound of a recording. But I would consider even the speakers to be of reduced significance, if you choose good ones to begin with. Any "golden ear" knows that a stunning recording will sound good even if you move down in playback-equipment quality, but a bad recording will only get only worse if you move up.

I believe 95 percent of the fate of a recording is decided at the recording session. The sound we get depends first on the orchestra itself (no golden sound from poor orchestras), then on the concert hall (some halls are shrill and eat the bass no matter where you sit), and then on position in the hall (for ear or microphone, it is absolutely necessary to be in the sweet spot). Even the orchestra's seating arrangement counts, and so does whether the hall is empty. (How do they move microphones around to find the optimum spot at live recordings with 2,000 people present? Probably they just use the setup that worked best in the empty hall.)

As a concertgoer I have very seldom had the luck to sit where all the factors fell into place. And that is probably one reason for the success of recordings, because we have a better chance for good sound if the producers sort these things out for us.

ERNEST WINTER
Bethesda, MD

DVD Questions

I have heard a lot about the new DVD players coming out later this year. Will the discs be recordable? What are prices for the players expected to be? Does this mean the end of the laserdisc? With the new Dolby Digital (AC-3) surround-sound system, will Dolby Pro Logic become a thing of the past? BRYAN SCHMIDT
Mequon, WI

Recordable DVD's are a couple of years off. The only announced prices so far are \$499 and \$599 for players due in September from RCA and Toshiba. DVD will almost surely replace laserdisc, but it will take a few years. Dolby Digital will also replace Pro Logic eventually, but it will take a while because 1) a huge number of Pro Logic receiv-

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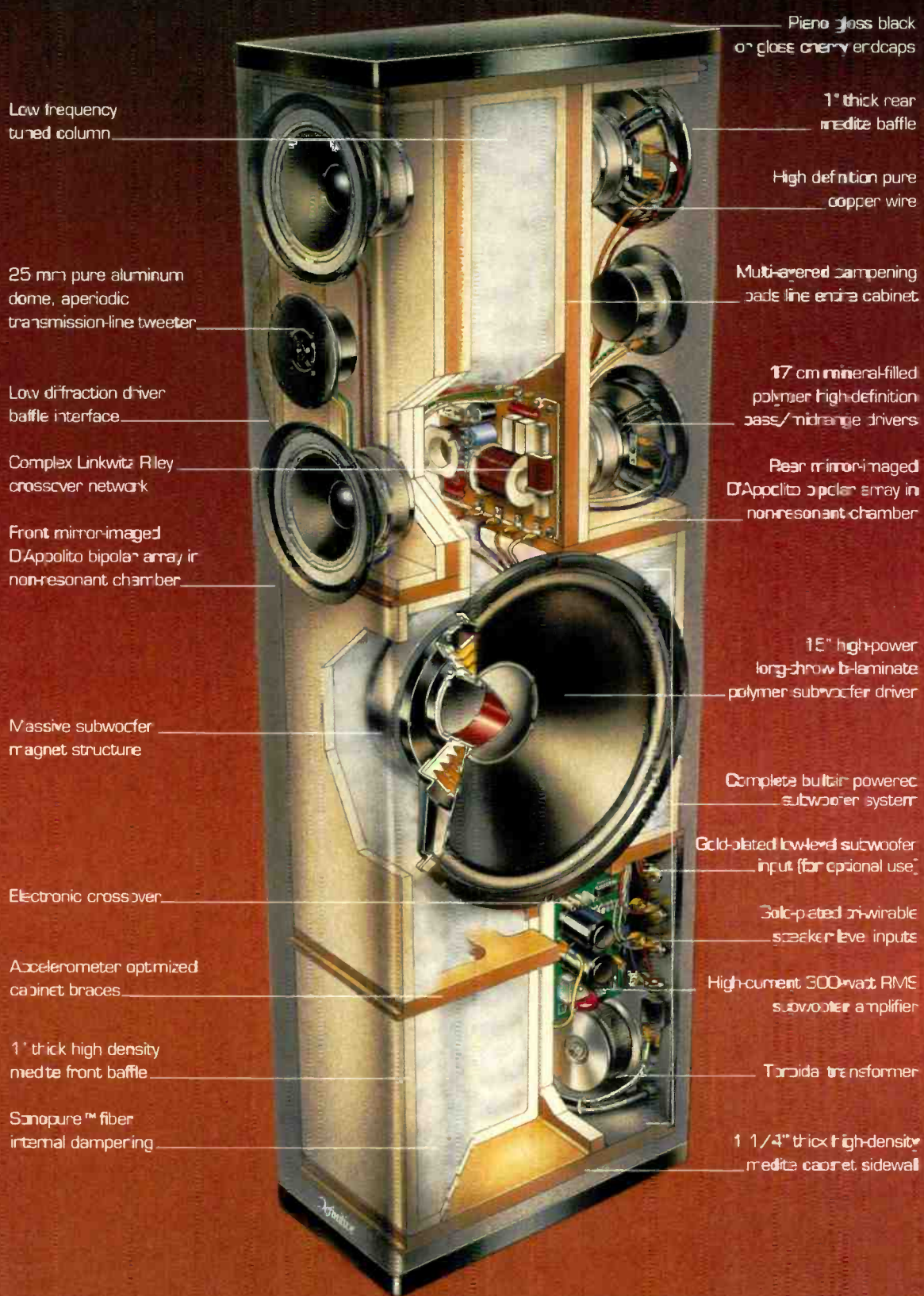
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"The first speaker I have been able to audition in my own familiar surroundings that has given me that special thrill that usually costs ten or more times its price to obtain."

—Julian Hirsch, *Stereo Review*

"Frankly, if circumstances allowed, I would choose these speakers for myself."

—Julian Hirsch, *Stereo Review*

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See our dealer list on page 14

The Ultimate Home Theater

In addition to being an audiophile's dream, the BP2000s are also the main speakers in Definitive's AC-3 ready Ultimate Home Theater System. This astonishing system is absolutely the finest sounding available. It recreates a "you are there" spatial reality that actually puts you into the soundspace of the original cinematic action.

The complete system combines the BP2000s (\$1499 ea.) with a C/L/R 2000 center (\$650 ea.) and BPX bipolar surrounds (from \$399 ea.). Of course, dual 15" powered subwoofers are already built into the sleek BP2000 towers. Truly the ultimate listening experience! Visit your Definitive dealer today.

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ME: Cookin': Portland.
MI: Pecker's: Detroit; Trevo: Classical Jazz Holland; Classic Stereo: Glenwood; Grand Rapids; Stereo Center: FRAY: Flint; Court St. Listening Room: Midland; Saginaw.
MA: Audio Designs: Winona; Audio King: Minneapolis & Suburbs; Rochester, St. Cloud; Audio Perfection: Minneapolis.
MO: Independence A/V; Independence; Reference Audio: Sedalia; Sound Central: St. Louis.
MS: McLelland TV: Hattiesburg; Players A/V: Ridgeland.
MT: Aspen Sound: Missoula; Avital: Bozeman; Car & Home Stereo Ctr.: Billings; Rocky Mt. Hi Fi: Great Falls.
NC: Audio Video Systems: Charlotte; Audio Visions: Wilmington; Now AudioVideo: Durham; Greensboro; Raleigh; Winston Salem; Audio Lab: Wilmington; Tri City Elect.: Conover.
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.
NY: Ultimate Elect.: Las Vegas; Upper Ear: Las Vegas.
NY: Audio Breakthroughs: Manhasset; Audio Den: Lake Grove; Audio Expressions: Newburgh; Audio Junction: Watertown; Clark Music: Albany; Syracuse Stereo Exchange: Manhattan; Hargett; Hartland; Ithaca; Vestal; Innovative Audio: Brodway; Listening Rm: Scarsdale; Rowe Camera: Rochester; Stereo Mill: Mt. Kisco; Speaker Shop: Amherst; Buffalo.
OK: Jammin'Pro Sounds: Ok City; K Labs Premium Audio: Tulsa; Radio World: Bartlesville; Ultimate Electronics: Tulsa.
OH: Audio Craft: Akron; Cleveland, Mayfield Hts., Westlake; Audio Etc.: Dayton; Classic Stereo: Lima; Paragon Sound: Toledo; Threshold Audio: Heath.
OR: Bradford's HiFi: Eugene; Chelsea A/V: Portland; Beavertron & Kelly's Home Ctr.: Salem; Larson's: Medford; Roseburg; Stereo Plant: Bend.
PA: Audio Junction: Pittsburgh; Gary's Elect.: State College; ENT Stereo: Lancaster; Hart Elect.: Blakely; Kingston; Hi Fi House: Abington; Broomall; Camp Hill; Harrisburg; Listening Post: Pittsburgh; Palmer Audio: Allentown; Pro Audio: Bloomsburg; Stereo Shoppe: Selinsgrove; Williamsport; Stereoland: Natrona Heights; The StereoShop: Greensburg; Stereo One: Erie.
RI: Stereo Discount Ctr.: Providence.
SC: A/V Design: Charleston; Custom Theater & Audio: Myrtle Beach; Upstate Audio: Columbia.
SD: Audio King: Sioux Falls; Sound Pro: Rapid City.
TX: 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; Waco; Audio Video: College Station; Brock A/V: Beaumont; Bunkley & Sd. Systems: Abilene; Bjorn's: San Antonio; High Fidelity: Austin; Krystal Clear: Dallas; Marvin Electronics: Ft. Worth; Sound Bar: San Angelo; Sd. Quest: El Paso; Sd. Systems: Amarillo; Sd. Towne: Texarkana.
UT: Alpine Elect. Provo; AudioWorks: Salt Lake City; Crazy Bob's: St. George; Slopes Bros.: Logan; Ultimate Elect.: Layton, Murray, Orem, Salt Lake City.
VA: Audio Buys: Arlington, Fairfax, Manassas; Audio Connection: Virginia Beach; AudioTronics: Roanoke; Home Media Store: Richmond; Stereo Type: Charlottesville.
VT: Audio Video Authority: S. Burlington.
WA: Aspen Sound: Spokane; Definitive Audio: Bellevue, Seattle; Evergreen Audio: Silverdale; Pacific Sight & Sound: Wenatchee; Tin Ear: Kennewick.
WA: Sound Post: Princeton.
WI: Audio Emporium: Milwaukee; Absolute Sound & Vision: Sheboygan; Hi Fi Heaven: Appleton; Green Bay; Sd. Video: Wausau.
WV: Radio King: Precision Audio: Ripon; Piedras.
Canada: A & B Sound: Calgary; Edmonton, Kelowna, Vancouver & Suburbs; Victoria; Advance Electronics: Winnipeg; Bay Bloor Radio: Toronto; Centre Audio Charest: Trois Rivières; CDRA: Quebec City; Digital Dynamics: Clearbrook; Great West Audio: London; Kebecan: Montreal; Lipton's: New Market Ontario; Peak Audio: Halifax; Sound Room: Vancouver; Stereoland: Windsor; Treble Clef: Ottawa.
Mexico: Contact Grupo Volumen: Mexico City.

ers are now in use, 2) the VHS videocassette format used for time-shifting as well as rentals cannot support AC-3, and 3) the vast library of movies on video with matrix-encoded soundtracks designed to be played with Pro Logic will take years to convert — and some may never be.

On TV it was said that DVD's are capable of having more than one version of a movie on one disc, and each version would have different ratings (PG, PG-13, and so on). If so, will all DVD's have multiple versions with different ratings? This will probably be a large factor in determining whether we buy a DVD player. **ERICK ERICKSON**
Quincy, WA

The DVD technology allows for a recorded movie to be encoded so that scenes considered unsuitable for some viewers can be blocked on playback, or possibly have alternative versions substituted, at user discretion. It's not yet clear how many movies will actually be released with this feature, if any, or how objectionable dialogue will be handled in scenes that are not visually objectionable. The technology also allows for alternative versions of entire movies to be recorded on double-sided or double-layer DVD's, such as a director's cut accompanied by the original theatrical version, but that's a different issue.

Test to Destruction

March "Bulletin" referred to a Swedish test of CD players that involved putting them in "continuous repeat mode playing the same CD" for 4½ years. I hope it wasn't ABBA's "Waterloo." **TIM WALSH**
Oak Ridge, TN

Lost up the Amazon

I was extremely disappointed by Eric Salzman's review in March of Alfred Heller's CD of Villa-Lobos's *Forest of the Amazon*. This dazzling masterpiece has been unfortunately unavailable since the composer's own exciting stereo recording went out of the catalog in the mid-1970's. A reviewer as astute as Mr. Salzman usually is should have commended Heller for making it possible for us to hear the complete 74-minute score — and for getting surprisingly excellent results from a Russian orchestra unaccustomed to playing Brazilian music.

JEFF PONIEWAZ
Milwaukee, WI

Screen Saver

In the March "Audio Q&A," Ian Masters's answer regarding magnetic distortion of a TV picture states that "it may take some hours for the picture to return to normal" after being affected by unshielded loudspeakers. Maybe things have changed (I studied electronics a few years ago) but I seem to remember that color TV's have weak degaussing coils built in that are activated at power-on. That would mean the length of time for a picture to return to nor-

mal is a function of how often the set is turned on rather than how long it is on.

RAYMOND J. SCHUERGER
Pittsburgh, PA

Your memory is correct. In fact, some direct-view sets with very large screens come with a user-activated degaussing feature, as the susceptibility of the picture to magnetic disturbances increases with screen size.

No Bonus

I don't have Don Henley's "Actual Miles," nor have I heard it, but *Everybody Knows*, the unlisted bonus track on the CD that Parke Putterbaugh quoted from in his March review, must be Leonard Cohen's song of the same title. **WENDELL CLOUGH**
Bangor, ME

Ooops — you're right. Sorry we missed that.

Video Recording from DSS

Your reply to reader Jim Reed's letter in April about DVD/DSS interface issues missed the mark on an important point regarding recording from a Digital Satellite System receiver. While all DSS receivers have "standard composite-video outputs," as stated, the better ones (such as the top-of-the-line RCA models) also have S-video outputs. With such a unit, not only will an S-video-capable TV set give great performance, but so will an S-video VCR, delivering noticeably better playback than a standard unit.

Recordings made on my S-video VCR are fully equal to the original broadcast. The only drawbacks of an S-video VCR are that it costs more and that S-video tapes can't be played back on standard machines.

STANLEY KRITZIK
Milwaukee, WI

"Systems"

My sole purpose with this letter is to express the enjoyment you have provided me over the years by including the "Systems" feature in various issues. I find it fascinating to see how others have designed and assembled their systems. Here's one vote for the continued inclusion of "Systems."

TERRY W. RUSCH
Muskego, WI

Many readers have expressed similar sentiments about "Systems." We're always on the lookout for systems to profile. If you think yours is interesting or unusual, send us a couple of snapshots (sorry, they cannot be returned), a list of your equipment, and a phone number to contact you if we decide to feature it.

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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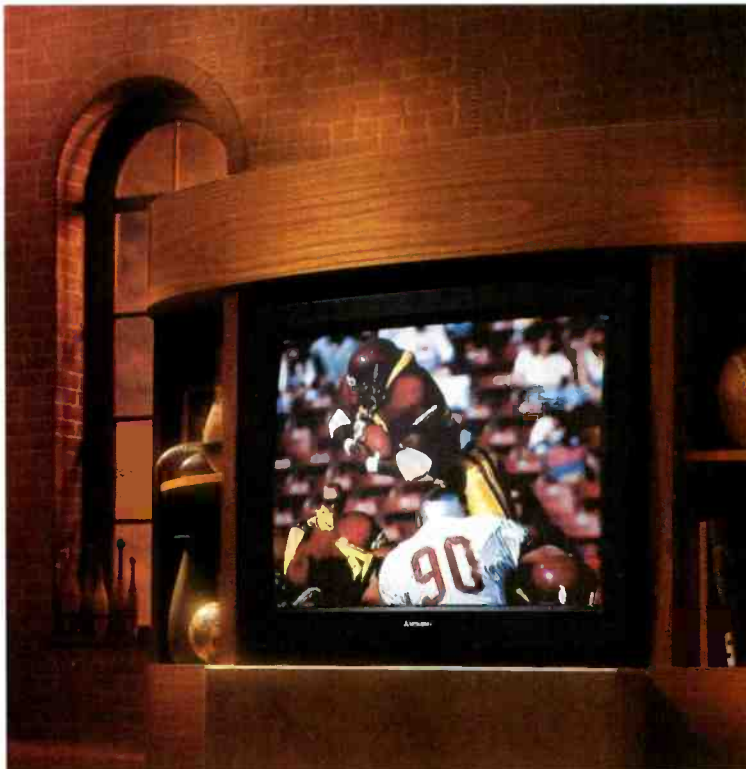
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Our Diamond Vision Stadium Screen, seen exclusively at 26 of the nation's top stadiums, is among the largest television images ever created (over 50 million sports fans a year watch one, so it helps to be big).

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But size is just part of the story. Our 40-inch television also has a brighter picture, higher contrast, and a longer life than just about anything else out there.

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NEW PRODUCTS



▲ DENON

Denon's AVR-600 A/V receiver uses Dynamic Discrete Surround Circuitry-A (DDSC-A) topology to separate Dolby Pro Logic decoding and directional-enhancement circuitry for better surround separation and lower noise. Power output is rated 50 watts per channel across the front with no more than 0.08

percent distortion and 15 watts each for the surrounds. There are three audio inputs, two tape outputs, two sets of video connections, and a line-level subwoofer output for flexibility. Price: \$319. Denon Electronics, Dept. SR, 222 New Rd., Parsippany, NJ 07054.

• Circle 120 on reader service card



▲ KLIPSCH

The heart of the Klipsch KV 4 center speaker is a Tractrix compression-horn tweeter with a 2-inch aluminum diaphragm. Aluminum's light weight and rigidity are said to give the KV 4 clean upper-midrange and high-frequency output. The two 8-inch woofers have Santoprene, polypropylene, and carbon-graphite composite cones and neodymium

magnets. Frequency response is rated as 65 Hz to 20 kHz ± 3 dB, sensitivity as 99 dB, and power handling as 200 watts. The 27 $\frac{1}{4}$ -inch-wide cabinet has four feet that can be adjusted to aim the speaker at the listening area. Price: \$599. Klipsch, Dept. SR, 8900 Keystone Crossing, Suite 1220, Indianapolis, IN 46240.

• Circle 122 on reader service card

▶ ADVENT

The JADE is a 35 x 9 $\frac{1}{2}$ x 9 $\frac{1}{4}$ -inch floor-standing speaker in Advent's new B₂R series, as in "Bach to Rock." The two-way tower, with an 8-inch long-throw woofer and a 1-inch dome tweeter, is shielded for home-theater applications. Frequency response is given as 43 Hz to 21 kHz ± 3 dB, sensitivity as 89 dB, and impedance as 8 ohms. Recommended power is 10 to 125 watts. The cabinet is finished in black vinyl over dense fiberboard with a solid oak accent. Price: \$449 a pair. Advent, Dept. SR, 25 Tri-State Intl. Office Ctr., #400, Lincolnshire, IL 60069.

• Circle 121 on reader service card



▼ SUNFIRE

The Sunfire Cinema Grand is a monster amplifier designed by Bob Carver whose name reflects its power rating: five channels of 200 watts each into 8 ohms. Need more juice? Rated output *doubles* into 4 ohms. Bandwidth is given as 1 Hz to 80 kHz. Extras include balanced inputs, automatic

signal-sensing turn-on, high-frequency protection circuitry, a front-panel meter calibrated in joules to monitor the power supply, five-way binding posts, and a five-year warranty. Price: \$2,375. Sunfire, Dept. SR, P.O. Box 1589, Snohomish, WA 98290.

• Circle 123 on reader service card



NEW PRODUCTS



◀ BANG & OLUFSEN

B&O's BeoSound 9000 system features a six-CD "sled" changer that moves between tracks on any discs in 4.5 seconds or less; infrared sensors stop the sled if fingers interfere. The 35¼ x 117/8-inch system unit includes an AM/FM tuner with sixty presets and can be mounted on a wall, table, or floor stand (shown). Price: \$4,000; stand, \$500. The BeoSound 9000 mates with B&O powered loudspeakers such as the 52-inch-tall BeoLab 8000 shown (\$3,000 a pair). Bang & Olufsen, Dept. SR, 1200 Business Ctr. Dr., Mt. Prospect, IL 60056.

• Circle 124 on reader service card.



▲ CINEPRO

Cinepro took a Lucasfilm-certified stereo amplifier it sells to THX movie theaters and adapted it for home use as the Model 600X. Rated at 200 or 300 watts per channel into 8 or 4 ohms, respectively, the 600X can be bridged with the flip of a back-panel switch to create a monoblock amp rated at 600 or

800 watts into 8 or 4 ohms. RCA and balanced XLR inputs, five-way binding posts, and several protection circuits are provided. Available factory-direct for \$699 (plus \$25 shipping). Cinepro Theater Products, Dept. SR, 1030 Vicente, San Francisco, CA 94116.

• Circle 125 on reader service card



▲ GODAR ELECTRONICS

You can lose those unsightly TV rabbit ears with the Godar Super Antenna. Built from 18-gauge steel elements encased in black plastic, it's only 1 inch high, 17 inches wide, and 9 inches deep, so it can easily hide in a shallow space in your equipment rack or mount in an attic. The

Super Antenna receives VHF, UHF, FM, and AM signals, requires no power, and, unlike rabbit ears, is omnidirectional. Available factory-direct for \$49.95 from Godar Electronics, Dept. SR, 339 N. Gilbert Rd., Gilbert, AZ 85234; phone, 602-892-8207.

• Circle 126 on reader service card



▲ PHASE TECHNOLOGY

Phase Technology's PC-3 speaker plays all positions (except subwoofer) in a Dolby Digital or Pro Logic home theater. Two 6-inch flat-piston woofers flank a vertically arrayed 1½-inch dome midrange and 1-inch dome tweeter. The mid/tweeter assembly rotates for horizontal or vertical placement, and the tweeter can be aimed

independently. Low-frequency limit is given as 40 Hz, nominal impedance as 8 ohms, and sensitivity as 93 dB. The cabinet measures 8 x 23 x 11½ inches, and it's finished in black or dark oak veneer. Price: \$500. Phase Technology, Dept. SR, 6400 Youngerman Circle, Jacksonville, FL 32244.

• Circle 128 on reader service card

MONSTER CABLE ▶

Monster Cable combined shielded stereo interconnects with a video cable in the AVPOD403, with Interlink 400 MK II and Video 3 Mini technology, and the AVPOD203, with Interlink 250. Prices: \$60 and \$30, respectively, in 1-meter lengths. Monster Cable, Dept. SR, 274 Wattis Way, South San Francisco, CA 94080.

• Circle 127 on reader service card



Ever wish you owned a movie theater?



You'd sit in a different seat each time, with your feet up. The theater would only serve your brand of cola, and popcorn would come in one size — silo. If a movie had a great soundtrack, you'd have the projectionist turn it up until the booming bass made the plaster cherubs that ringed the high ceiling tremble.

At NHT, we've always known a big part of the magic of movies was in the sound system. And we've captured it in the VT-2, a no-holds barred home theater system that at the flip of a switch also provides optimal music performance. Designed for the latest digital technology, and with a built-in subwoofer, the VT-2 makes motion pictures come alive. So now you can come home to your own movie theater.

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NEW PRODUCTS



▲ SOUNDTUBE

SoundTube's speakers are unique. In the ST93 shown here, an 8-inch woofer sits at one end of a 3-foot-long, 9-inch-diameter flexible tube and fires into an acoustic-dispersion lens. Perched atop the lens are three 1¾-inch dome tweeters aimed to provide omnidirectional highs. The tube speakers, which can be

placed in stands as shown or hung vertically or horizontally, are said to eliminate standing-wave bass problems. Removable covers are available in twelve colors and patterns. Price: \$890 a pair; stands, \$75 each. SoundTube, Dept. SR, P.O. Box 1120, Park City, UT 84060.

• Circle 129 on reader service card



▲ TICE AUDIO

The Solo A/V line conditioner from Tice is rated to deliver up to 15 amperes (1,875 watts) of spike- and surge-protected power. Its eight AC outlets are served by three separate circuits for digital and analog components and power amps, each with a different degree of noise filtering.

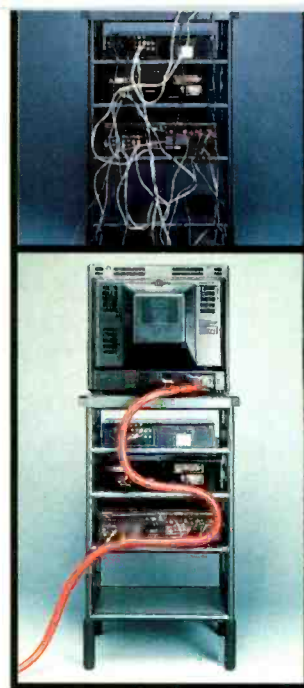
The 8½ x 4½ x 13-inch, half-rack-sized unit features a ¼-inch black anodized aluminum faceplate, an "ellipse" LED power indicator, and an 8-foot cord. Price: \$399. Tice Audio, Dept. SR, 1530 Cypress Dr., Suite C, Jupiter, FL 33469.

• Circle 132 on reader service card

▼ GET ORGANIZED ▶

Cord-control kits from Get Organized include reusable beaded ties, a Superflex slit plastic tube to conceal power and A/V cables, and color-coded labels. Tubes are available in white, black, red, and gray and in 6-, 8-, 10-, and 12-foot lengths. Prices: \$12.95 to \$18.95 depending on length. Get Organized, Dept. SR, 328 Canham Rd., Scotts Valley, CA 95066.

• Circle 130 on reader service card



▼ PETRAS

The Petras QS-1 car preamp/processor/crossover does a lot in a half-DIN-size chassis. The mono subwoofer output (below 80 Hz) offers equalization with adjustable level, frequency, and "Q." The stereo outputs can be full-range or pass only

signals above 80 Hz and feature an image processor. The mono center-channel output, with a separate level control, cuts off below 250 Hz. Price: \$209. Petras, Dept. SR, P.O. Box 150716, Arlington, TX 76015.

• Circle 131 on reader service card



▼ ELECOM

Elecom's CDR-12 CD Flip holds twelve jewel boxes. The plastic rack has four rubber feet and a small 6¼ x 8½-inch footprint that makes it a good choice for storing "active" or new CD's

before transferring them to your main storage rack. Available in ivory or black. Price: \$4. Elecom, Dept. SR, 17316 Edwards Rd., Suite B280, Cerritos, CA 90703.

• Circle 133 on reader service card



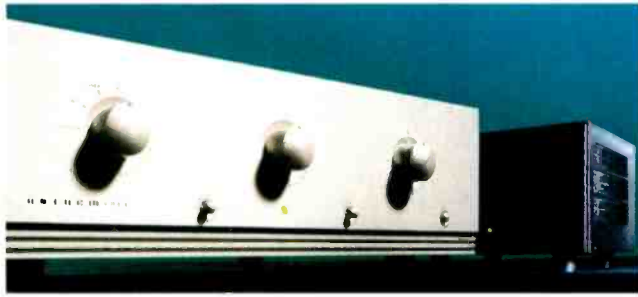
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NEW PRODUCTS



▲ ANTHEM/SONIC FRONTIERS

The Anthem line from high-end manufacturer Sonic Frontiers includes a preamplifier, an integrated amp, a power amp, and a CD player, all priced at \$1,500 or less. The Anthem Pre 1 (shown) features an all-tube design that includes both moving-

coil and moving-magnet phono stages, adjustable high/low line-stage capability, and an outboard power supply (at right in photo). Price: \$1,495. Sonic Frontiers, Dept. SR, 2790 Brighton Rd., Oakville, Ontario L6H 5T4.

• Circle 134 on reader service card



▲ OZ AUDIO

Oz Audio's CX 180 two-way component coaxial car speaker has a 7-inch woofer and a 1-inch treated-silk dome tweeter coupled by a proprietary pole-mounted tweeter housing that swivels for different mounting locations. Outboard crossover modules, grilles, and mounting hardware

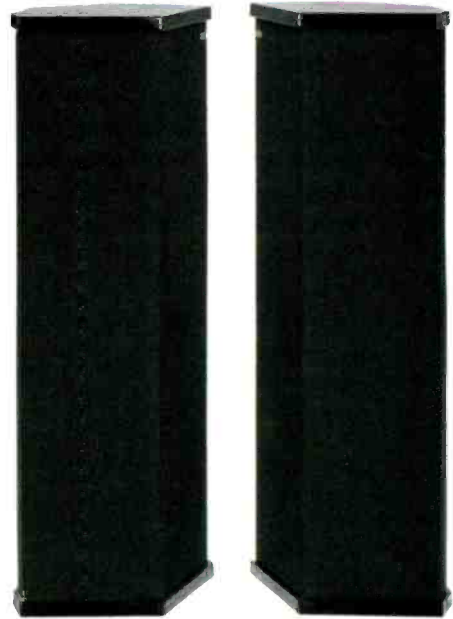
for two speakers are included. Frequency response is given as 35 Hz to 22 kHz ± 2 dB, power handling as 150 watts, impedance as 4 ohms, and sensitivity as 93 dB. Price: \$550 a pair. Oz Audio, Dept. SR, 1300 S.W. 10th St., Suite 2, Delray Beach, FL 33444.

• Circle 136 on reader service card

◀ SONANCE

With its proprietary DuaLevel circuitry, the Sonance DL1200 powered subwoofer can always be optimized for either music or home-theater use. An approximately 21-inch cube, the DL 1200 houses a 200-watt amp driving a 12-inch woofer and a 15-inch passive radiator. Rated response is 25 Hz to 140 Hz ± 3 dB. Price: \$999. Sonance, Dept. SR, 961 Calle Negocio, San Clemente, CA 92673.

• Circle 137 on reader service card



DCM ▲

DCM's TimeWindow SurroundScape II is a 42-inch pentagonal tower that reproduces both the main left or right channel and its corresponding surround channel to deliver surround effects without satellites. Sold in mirrored pairs, each speaker has two 6½-inch polypropylene woofers with coaxially mounted

¾-inch dome tweeters (one direct-firing, the other angled out for ambience), two 6½-inch woofers driven by a built-in 100-watt amplifier, and two rear-firing ¾-inch dome tweeters. Price: \$1,299 a pair. DCM, Dept. SR, 670 Airport Blvd., Ann Arbor, MI 48108.

• Circle 135 on reader service card



▲ RF-LINK

The Wavecom Jr. from RF-Link Technology uses wireless FM transmission on the uncrowded 2.4-gigahertz radio band to send "cable-quality" stereo audio and video, through walls and other obstacles, up to 300 feet away. It can feed movies or music to playback equipment far from the source system or receive

signals from a camcorder used as a security device or baby monitor. The transmitter and receiver modules measure 6½ x 4 x 1¾ inches and are powered by supplied 12-volt AC adaptors. Price: \$200. RF-Link Technology, Dept. SR, 411 Amapola Ave., Torrance, CA 90501.

• Circle 138 on reader service card

"The sweet spot, where sound and spatiality are most enjoyable, was very wide with the Vivid 3D."

John Sunier *Audio Magazine* April 96



The Holy Grail of Audio

The audio holy grail is to make the speakers sound invisible and to eliminate the sweet spot. We feel we've achieved this goal with SRS technology and the Vivid 3D Theater.

Enhance any System

The Vivid 3D Theater easily connects to an existing two speaker stereo system as well as surround sound technologies such as Dolby Pro Logic® and THX®.

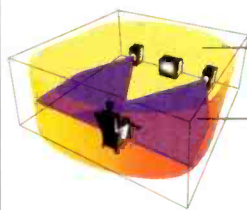
"...the VHT-200's action with surround-encoded soundtracks and music did produce a surprisingly satisfactory sense of envelopment and front-to-side sonic continuity, if not front/surround directionality....The VHT-200 can produce, with less noise and distortion than many Dolby Pro Logic circuits we've tested, much of the excitement of surround-sound home theater with only two speakers." *Stereo Review, May 96 David Ranada*

"Using SRS with the "70mm" setting of a Fosgate/Harman Kardon Dolby Pro Logic processor achieved excellent surround effects from music and movies on laserdiscs and from telecasts." *Audio Magazine, April 96 John Sunier*

Improve Multizone Sound

The Vivid 3D Theater actually eliminates several problems installers run into when connecting a multizone system. By placing the Vivid 3D theater between the audio feed and the distribution amplifier, SRS will provide improved sound coverage in all zones, even if the speaker position in these rooms is less than favorable. The Vivid 3D Theater also gives a new dimension of sound to in-wall and ceiling speakers, bringing them to life with a full, rich sound.

Stereo processing creates flat, two-dimensional sound, where as SRS processing fills an entire room with lifelike, three-dimensional sound.



SRS 3D Sound

Stereo Sound

U.S. Dealer and international distributor inquires welcome

"The health club had very low ceilings and I wanted to avoid having to put in too many speakers, yet even coverage was needed. It turned out that the solution lay in signal processing, not acoustics. A NuReality SRS processor was used, and the effect was that the loudspeakers become essentially impossible to localize." *Sound and Communications, February 96 Rob Baum*

Mono Recordings

Put multi-channel excitement back into any mono recording with the Vivid 3D Theater. Old movies come to life with SRS technology.

"The SRS mono mode is used when stereo is not available...and is very effective in adding ambience. One of the best I have ever heard done correctly." *High Performance Review, Winter 95/96 John Gatski*

How it Works

You only have two ears, yet you hear in three dimensions. Patented SRS technology is based on a natural psychoacoustic phenomenon, known as Head Related Transfer Functions or HRTFs, that have been largely ignored by modern sound reproduction technologies. HRTFs allow your brain to localize sound because the spectral characteristics, or frequency response, of the sound varies. These "spatial cues" supplied primarily by the outer ear, or pinna, are transferred to the brain—enabling you to position sounds very accurately in three-dimensional space. SRS technology essentially mimics these diffractive effects of the pinna by extracting information from a recording that originally came from the sides and rear. This ambience information gives you a sense of acoustic space. SRS then uses HRTF-based corrections to cause the ear to perceive these sounds in their original spatial relationships. The result is that the sense of realism you perceive from reproduced sound is dramatically enhanced.

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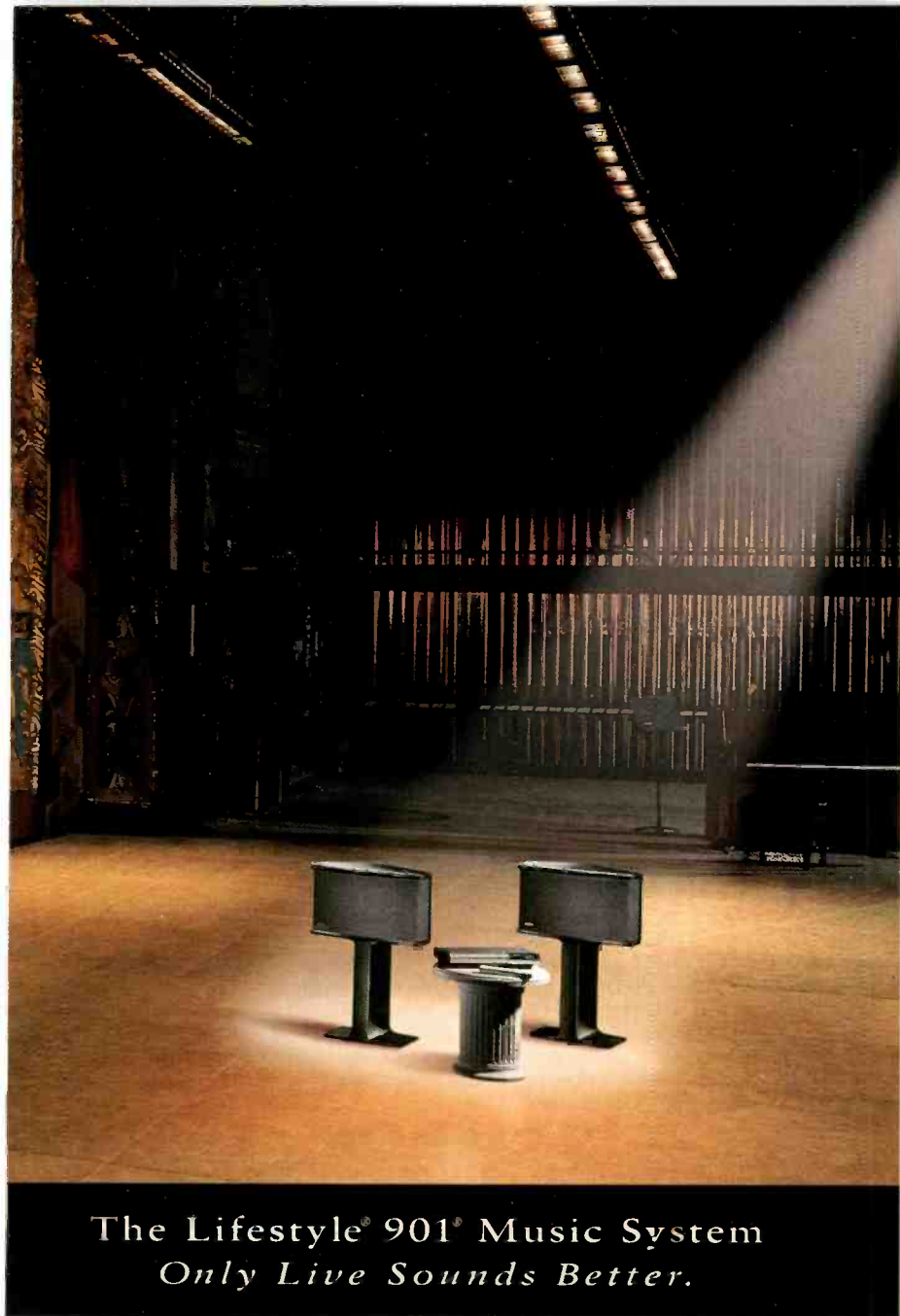
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In developing the advanced technologies behind the Lifestyle® 901 music system, we recognized how important the hall's acoustics were to the quality of sound. So our research began there.

At a live concert you hear unsurpassed clarity. Music comes to life when this clarity is combined with the spaciousness of sound reflecting off the walls, floor and ceiling. Instruments sing. And voices dance.

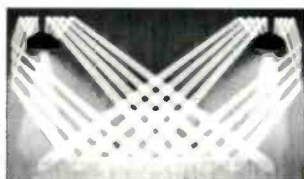
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Our research began in concert halls, to make sure the sound of the Lifestyle® 901 system was second only to live. Compare it to the largest, most expensive audio systems you can find.



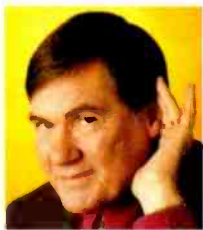
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Fully integrated system electronics ensure optimum performance. Includes a brushed aluminum music center with built-in AM/FM tuner and six-disc CD changer. Remote works through walls.



AUDIO Q & A

IAN G. MASTERS

Sensitivity Training

Q To prepare for surround sound, I have upgraded to a Dolby Pro Logic receiver and am now in the market for center-channel and surround speakers. My main speakers have an impedance of 6 ohms and a sensitivity of 86 dB. Must the surround and center also be 6 ohms and 86 dB?

ROBERT GEARING
Tampa, FL

A No. The most any variances in these numbers will do is produce level differences, and those are independently adjustable with any Pro Logic decoder or receiver. That's why all of them have test-tone generators to make balancing easier.

Live Wire

Q While connecting some speaker cables, I could feel a small electrical charge when I handled the bare wires. The cable was connected to my amplifier, which was turned off but plugged in. The only way to stop this seems to be to unplug the amp. My house does not have three-prong grounded electrical outlets. Could this be a contributing factor? If not, do you have any other suggestions?

E. DEVITO
Ridgefield, CT

A It may be nothing, or it may be dangerous, so I wouldn't mess with it. I suspect it probably does have something to do with the house wiring's lack of ground connections, but you can get around that by running a separate ground wire from a convenient point on your equipment to a nearby water pipe. Often the most accessible connection point is the ground terminal associated with a phono input. If your system doesn't have one, most metal screws on the back of the equipment, or the sleeve of an unused line-level RCA jack (not the ones belonging to a phono input), will usually do as well. Or it may be as simple as reversing the power plug in the wall outlet (try this first). If none of that helps, your amplifier may need a trip to the shop—or your house an electrician.

Phantom for the Opera

Q I have recently acquired several CD's encoded in Dolby Surround, which I play through my home-theater setup. My center-channel speaker is not a particularly good match with the main left and right speakers, but that doesn't seem to be a major problem with movie soundtracks. When it comes to music, however, the mismatch is

distracting, so I tend to listen to these CD's in "phantom" mode, where the center information is distributed to the main speakers. What, if any, spatial information is lost by using this configuration?

GREG BRIGHT
Monrovia, IN

A Nothing. In Dolby Pro Logic, the phantom mode feeds what would normally go to a center speaker equally to the left and right front speakers. As long as you're sitting on the central listening axis, the center material should image properly just as it does for ordinary stereo. And, as you note, you stand a much better chance of sonic consistency across the soundstage.

Surround Movies

Q I have heard that not all movies sent to theaters are encoded in surround sound in spite of all the money spent on special audio effects. Is that true? And do some rental videos have surround sound and others not?

STEVE NETHERSOLE
Hicksville, NY

A Virtually all movies made in the past decade are encoded with surround sound, and so are the stereo videocassettes made from them. Older films might not be. You'll occasionally find an old movie in stereo but not surround, and anything made before the 1950's is definitely mono. Not all theaters are equipped for surround sound, however, or even stereo. A colleague recently reported seeing a blockbuster first-run movie in a big-city multiple-screen movie house and realizing it was being played in mono. The film itself, rest assured, had surround sound.

Driving Car Speakers

Q I have a 70-watt stereo receiver that calls for speaker loads of 8 ohms, and I would like to connect it to a pair of 4-ohm, 100-watt car speakers. Nobody seems to know what would happen if I tried this. Would such a setup work?

PHILLIP CHIANG
Lauderhill, FL

A That the speakers are designed for autotone use doesn't matter very much—a speaker is a speaker, wherever it's meant to be used. And the wattage ratings are only very general approximations, so there wouldn't be much of a mismatch on that score. But connecting 4-ohm speakers to an amplifier that calls for 8-ohm loads could cause problems.

A speaker's nominal impedance is an av-

erage; the actual impedance is often much lower at some frequencies, and amplifiers can almost always handle loads below their rating without problems. If your car speaker had a 4-ohm impedance across the spectrum, you could probably hook it up to your receiver without concern. But if the actual impedance is 2 ohms or less at some points, the receiver might misbehave or fail outright.

The only way to tell for sure is to connect the speakers and check very carefully to see what happens. Keep levels low and switch the system off immediately if you hear a lot of distortion. Also check frequently to make sure the amp isn't heating up too much (low impedances mean high current drain, and that means heat). If things are running cool and the sound is clean, you're probably okay, but bear in mind that such mismatches may do their damage over time rather than immediately. Whether you're willing to take that risk only you can decide.

External Power Switching

Q A friend told me that an integrated amplifier can be damaged if it is plugged into a power cord with a power switch and that switch is used to turn the system on and off, rather than the one on the amplifier. Yet I have seen switch boxes with surge protectors and delayed outlets. Would these be safe?

BILL ROOD
Basking Ridge, NJ

A I have never heard of such a problem. My own system is connected to a power strip with surge protection, and I use that switch to turn everything on. There's never been a problem in all the years I have used this arrangement.

Gold Plugs

Q The consumer-electronics industry recommends gold-plated plugs because of that metal's noncorrosive characteristics, but most audio and video components don't have gold-plated jacks. A computer magazine suggests that using gold plugs in non-gold ports will eventually destroy the sockets. In audio, could a similar combination of dissimilar metals cause corrosion?

BOB ELDRIDGE
Norristown, PA

A The advantage of gold is that it doesn't oxidize the way conventional connector materials do. The oxidation can eventually become severe enough to disturb the contact between jack and plug. That's usually corrected easily enough by removing and reinserting the plug a few times to scrape off the oxide. I can't imagine that putting gold into contact with another material would promote any deterioration, but it won't slow down the oxidation of the other metal either.

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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SIGNALS

KEN C. POHLMANN

Psychic Audio

Iwould like to announce an amazing breakthrough that will change forever our understanding of audio and video entertainment technology, and information theory in general. After years of contemplation, I have unlocked one of the greatest mysteries of our time. Read on — these few short paragraphs will change your life.

Ever since the advent of digital audio technology, some audiophiles have disapproved of digital recordings and insisted that they were not as good as analog recordings. They have objected to the “sterile” sound of digital audio and its apparent inability to convey the “emotion” of music performance. They have maintained that something is missing from the ones and zeros of digital audio, that those millions of bits simply leave them feeling cold.

To address their concerns, digital designers have struggled to improve digital recordings with higher sampling rates, digital oversampling filters, sophisticated dither algorithms, jitter reduction, and other remedies, but to no avail. Many audiophiles are adamant: Digital lacks the passion that analog so successfully conveys. You hear the same story over and over. A seemingly contented CD listener digs out his old turntable, puts on an LP, and is blown away by the improvement. This has been a mystery — until now.

Conventional science says that digital must be better than analog. Any analytical measurement, such as frequency response, harmonic distortion, or wow and flutter, conclusively proves that it is. Clearly, to understand why some people say that analog sounds better, you must look *outside* conventional science.

Many things are not understood by science. Scientists routinely pooh-poo phenomena simply because they are unable to explain them. Literature is filled with examples of phenomena that scientists dismissed simply because they fell outside accepted theories, then readily embraced once scientific theory was corrected to include them. The history of science is full of ignorance and denial, then discovery and re-evaluation. The concepts of planetary motion, a spherical earth, microbes, and many others were once rejected and ridiculed by scientists.

One phenomenon that falls outside of mainstream science is extrasensory perception, or ESP. Although many people believe in it, today’s scientists cannot explain it, and so they condemn it. ESP lies at the heart of my breakthrough. I have discovered why a digital audio system can never be as satisfying as an analog system, no matter how sophisticated the digital design. The reason is this: An analog system can convey psychic messages to the listener, whereas a digital system cannot. As a result, a digital recording will always sound sterile, cold, and emotionless in comparison.

My theory is easily proved. Clearly, psychic messages are analog in nature. Digital communication is a man-made technology. Psychic communication is a

pathos from the performer. These messages were absent in the digital version of the same recording. Moreover, the psychic energy energized the analog recording, vastly improving the perceived sound.

Why, then, are some listeners content with the sound of digital recordings? That is easy to explain. It is because not everyone is psychic. If you are impaired in that respect (and many people are), a digital recording will sound the same as an analog recording. Since digital recording avoids some purely sonic artifacts of analog recording, nonpsychic listeners may think that digital sounds better. But to a psychic listener accustomed to receiving psychic messages from analog recordings, a digital recording is appalling.

Although my work in this field has just begun, I am confident that this phenomenon will extend to video and other entertainment media. For example, a digital videodisc should lack the emotion of an analog videodisc or tape. Similarly, any information conveyed through any digital channel will be psychically deficient. That explains, for example, why we grow tired of computer-based video games so quickly. With that in mind, I am preparing a patent application for the LP-ROM format. I am confident that many computer manufacturers will switch to this format so that their games, computer programs, and other software will be able to convey

Clearly, to understand why some people say that analog audio sounds better than digital, you must look outside conventional science.

natural phenomenon, and, like all natural phenomena, it is analog. After all, psychics existed long before binary arithmetic was even invented. The interesting thing is that while digital technology can apparently encode *some* analog phenomena (such as the pressure changes of an acoustical signal), it cannot encode analog psychic messages. That is not surprising, since digital channels were invented to encode only those signals *known to science*. Therefore, only analog recordings can contain psychic messages.

What kinds of psychic information do you find in analog audio recordings? Well, all kinds of information — all the messages that were present at the time of the recording. Most specifically, the proven psychic intensity of musicmaking causes analog recordings to contain high levels of psychic energy from the emotions of the performers. This psychic energy is clearly evident in a live performance, and it is psychically conveyed both live and through analog recordings. For example, in one analog piano recording I tested, I could vividly sense an inner

the psychic emotions and messages of their authors.

Finally, I would like to say that I am abandoning print publications. Clearly, the only audiophiles worth communicating with are the most perceptive ones, that is, the psychic ones. Logically, we have no need for paper communication when we can converse psychically. Henceforth I will only communicate my thoughts — including this column — via psychic messages.

Of course, since psychic communication is often not understood even by those with psychic powers, it is important to educate the many psychic audiophiles out there. To do this, I am setting up a special help line. If you think that analog sounds better than digital, you are extremely gifted and possess psychic powers. To learn how to develop your psychic audio acuity and to communicate with me, you should call my Psychic Audio Hot Line, 920-BIG-EARS. The cost is \$99.95 per minute. You must be at least 18 years of age. Call now. Call often. For entertainment purposes only. □

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David Ranada, *Stereo Review*, January, 1996

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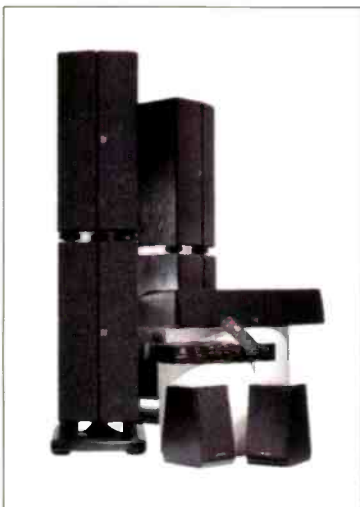
David Ranada, *Stereo Review*, January, 1996

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What Hi-Fi?, Great Britain. February, 1996

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Matthew Polk
Co-founder, Polk Audio

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PERIPHERALS

PRODUCTS AND TRENDS THAT
GO BEYOND MAINSTREAM AUDIO/VIDEO

Surround Sound for Your PC

BY JAMES K. WILLCOX

If you need any convincing that sound is an integral component of the multimedia experience, spend about 20 minutes playing the computer game *Doom* in a darkened room with a decent subwoofer/satellite speaker system. Your eyes will be drawn to the intense on-screen graphics, but it is the heart-pumping soundtrack that really gives the game its visceral impact.

Of course, moviegoers and home-theater fans have long known how much dramatic kick a stirring soundtrack can impart to a blockbuster film. But until recently, sound was the forgotten stepchild of computer-based multimedia. Now that the docile home computer has been commandeered as another weapon in our entertainment arsenal, however, we're asking it to get serious about audio.

That's brought us to the brink of the latest evolution in multimedia audio: surround sound. The first big jump was the transition from frequency-modulation (FM) synthesis to wavetable sound, which swapped tinny synthesized sounds for digital samplings of real musical instruments. The next leap was the rise of CD-based games and programs, which gave entertainment software developers the storage space they needed for high-fidelity sound. Finally, the better sound afforded by wavetable audio and CD-ROM's was enhanced by vast improvements in multimedia speakers, often spurred by companies with home audio pedigrees.

If good two-channel sound is making its way into multimedia, why not surround sound? Well, for one thing, since few home computers are located alongside the family's audio and video gear, it usually isn't feasible to route the sound through an existing Dolby Pro Logic (DPL) home entertainment system. So why not create a full-blown DPL system just for the computer? Some companies have taken that approach, most notably SSI with

its Model 525D Dolby Pro Logic processor for PC's (\$299). But not all consumers are willing to endure the cost and hassle of setting up four or five separate speakers in two different rooms in their houses.

Fortunately, there are several other ways to get compelling, panoramic sound from your computer. Altec Lansing's ACS 500 powered subwoofer/satellite system (\$450), for example, has a DPL processor and two speakers that contain conventional front-firing drivers as well as side-firing drivers that use baffles to project surround information. This approach reduces system cost somewhat and saves space.

Dolby Surround Multimedia

Hoping to encourage computer manufacturers to get on the surround-sound bandwagon, Dolby Labs recently followed a similar theme in reworking its Pro Logic system for multimedia applications. The new technology, christened Dolby Surround Multimedia (DSM), recognizes that a computer

user is just one person who generally sits only inches away from the speakers. As such, DSM system requirements are less stringent than DPL's with regard to the number of speakers needed and the minimum power to drive them.

According to Dolby, the beauty of DSM is that it provides a surround-sound experience from just two closely spaced front speakers rather than the five spread-out speakers required for Pro Logic. Software intended for DSM playback is encoded with the same Dolby Surround technology used for films and videos, but to create a more atmospheric sound from just two front speakers, DSM relies on two techniques. First, a version of DPL's phantom-center mode eliminates the need for a center channel. Then, DPL's mono surround channel is integrated with the front speakers, either through digital signal processing or baffled speakers that redirect the sound.

Dolby only recently began licensing DSM to computer hardware manufacturers. And although software developers can encode games with Dolby Surround free of charge, availability remains limited. In DSM's favor, however, is that, unlike the two-channel enhancement technologies described below, it decodes and attempts to re-create four discrete channels of audio information.

Several other companies have tried to envelop the listener in sound using just a plain stereo or mono signal. By employing psychoacoustic principles to trick the ears into hearing sounds coming from "phantom" side speak-

ILLUSTRATION BY GIACOMO MARCHESI



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—Sound & Image

V-125

S-100B

S-90

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PERIPHERALS

ers, two of these approaches — the Sound Retrieval System (SRS) and Spatializer — create an illusion of three-dimensional sound using just two conventional speakers.

Both technologies involve serious consideration of how the human ear responds to sounds, particularly how it determines their location and direction. When sounds arrive at the ear, some of the frequencies coming from the front are deflected by the shape of the outer ear, or pinna. Sounds entering from the sides are received without as much deflection, so the intensity and arrival time are different from frontal sounds. In 3-D audio, engineers try to restore these spatial cues by creating virtual sound sources apart from the speakers.

SRS

Developed originally for Hughes Aircraft, SRS attempts to restore directional cues often lost during the recording process. The technology is now owned by SRS Labs and has been licensed by TV manufacturers including Sony and Thomson (RCA), audio companies such as Kenwood and Nakamichi, and a growing number of computer hardware companies.

SRS produces its surround-sound effect by combining the left- and right-channel stereo signals into a single signal ($L + R$), as well as subtracting one from the other ($L - R$ and $R - L$) to create ambience signals. The sum and difference signals are then combined and processed, with frequencies tailored to create a three-dimensional sound field. The result is a wider soundstage, with sounds that appear to be coming from the sides as well as the front. SRS Labs says that the system, unlike other processors, does not use time delays or phase shifting to achieve its expanded sound image.

Spatializer

Spatializer, from Spatializer Labs, was developed as a professional recording technology, and like SRS, it enhances either stereo or mono signals. Also like SRS, Spatializer creates sum and difference signals, but it processes the latter differently by sending them through a filter, which boosts mid-range frequencies, and adding short phase delays, which is said to create a sense of space and reduce low-frequency cancellations for better bass re-

sponse. The difference signals are then combined with the original left and right channels. Another difference from SRS is that Spatializer doesn't process the sum signal but uses it only to monitor the signal level for a special circuit that prevents over-processing. The effect is to create phantom rear speakers that cause a listener to perceive a 180-degree arc of sounds.

QSound

Quite a different approach to 3-D sound is being taken by QSound Labs with its QSound Virtual Audio, a technology that also cut its teeth in the professional recording industry.

QSound is usually encoded on the audio soundtrack of a piece of software during the production phase. You don't need to buy a special processor to enjoy its 3-D benefits. Nonetheless, several PC companies have licensed the technology to provide QSound processing at the computer level for unencoded software.

QSound Labs conducted hundreds of thousands of experiments with listeners, developing a complicated set of algorithms to determine where the human ear places certain frequencies. By adding delays, QSound widens the soundstage and positions certain sound effects anywhere within a 180-degree arc around the listener's head. In multimedia applications its effects can be quite dramatic, particularly in a dark room. At one trade show I watched a listener flap his hands at imaginary birds circling his head.

QSound's primary drawback is that its effect is highly dependent on a listener's being positioned in the sweet spot between the two speakers, a limitation that has made it a poor choice for home theater. For a while, however, it was in vogue among recording artists (Pink Floyd and Madonna used it on albums), and now the technology may be getting new life in multimedia, where the listener is generally well positioned for the optimum effect.

3-D Slugfest

No consensus has yet emerged as to which computer surround technology will become dominant. QSound, SRS, and Spatializer have all attracted significant licensing support. Companies such as Acer and IBM are using QSound in PC's, and Sony Interactive, Activision, and Looking Glass Tech-

nologies have licensed it for entertainment software.

Spatializer's biggest proponent is the speaker manufacturer Labtec, which sells both multimedia speakers and a small stand-alone device (LCS-9210, \$40) that connects to external powered speakers; the technology is also set to appear in Advent's Powered Partners multimedia speakers. But SRS has attracted the most widespread support, with licensees including Kenwood, NEC, Packard Bell, Sharp, Revel Computer Products, Pioneer, HTP International, Kurzweil, and NuReality (which markets a line of stand-alone processors beginning with the Vivid 3D, \$60). Software developers Interplay and Spectrum Holobyte are also on board.

Others are getting into the game, too. For example, a company called Binaura has licensed its two-speaker 3-D audio technology to PC add-on manufacturers Creative Technology and Diamond Multimedia. Texas Instruments recently developed a chip that creates Dolby Pro Logic surround sound through two speakers by combining DPL processing with JVC's 3D-Phonic sound-field technology.

Yet another company, Crystal River Engineering, is adapting for PC sound cards a 3-D technology called Audio Reality. Meanwhile, Virtual Listening Systems will market Toltec 3-D processing in its upcoming wireless home-theater headphones.

Finally, Transaural 3-D was recently demonstrated by Harman International, which has licensed the technology from a company called Cooper Bauck for use in multimedia speakers. The two-speaker system combines a DPL processor and a proprietary binaural steering device to create a virtual home theater.

But that's not all. With the imminent arrival of the DVD, the multimedia world is all abuzz with talk of six-channel Dolby Digital sound making its way not only to the home theater but also the home computer. If that comes to pass, the family PC may finally take its rightful place in the audio/video kingdom, providing interactive entertainment with a truly palpable kick. □

James K. Willcox reports on computers and multimedia for This Week in Consumer Electronics.

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TECHNICAL TALK

JULIAN HIRSCH

Heathkit Remembered

Anyone who has been involved in audio (or almost any subject involving electronics) for more than ten or fifteen years probably remembers the Heath Company. Located in Benton Harbor, Michigan, Heath played a significant role in the growth of a consumer-electronics industry in the post-World War II era.

Founded in 1926 by Ed Heath, the company started out in a totally different field — private aircraft that could be assembled from a kit of parts. Over time, Heath began making test instruments, also available in kit form, and eventually it became well-known among enthusiasts for its do-it-yourself audio-component kits, which it stopped making only a few years ago. Today, it primarily supplies electronics educational materials to schools.

I became aware of Heath's test-instrument kits in the early 1950's, when I began testing high-fidelity audio components. Such basic instruments as vacuum-tube voltmeters, oscilloscopes, and signal generators, vital for an audio testing program, represented a sizable investment for an impecunious engineer.

Heathkits made it possible to set up a test laboratory on a modest budget. Each kit supplied a complete set of parts, including all metalwork and cabinets, with detailed assembly drawings and step-by-step instructions. The instruments were designed to be calibrated with the aid of readily available standards, such as a 1.5-volt battery or a few supplied precision resistors.

The end product was usually the functional equivalent of a piece of commercial test equipment (their circuits were often virtually identical), though with somewhat less accuracy and ruggedness, and perhaps less reliability. The cost was a very small fraction of the price of the equivalent commercial product on which it was based.

Of the fifty or so Heathkits I have built, every one worked as represented, and not one ever failed in use! Ultimately, I replaced them with more sophisticated instruments as test requirements became more stringent.

As the fledgling hi-fi industry grew,

Heath began to sell audio-component kits, starting with amplifiers, tuners, and loudspeakers. My collection of *STEREO REVIEW*'s annual equipment directories begins in 1958, the year *STEREO REVIEW* was founded, when Heath was represented by two tuner kits (AM and FM), each priced at \$25.95. The following year the Heathkit line had expanded greatly, comprising some eleven amplifier kits ranging in price from a \$19.75 preamplifier to a \$109.95 70-watt power amp. The previous year's AM and FM tuners remained, joined by an AM/FM stereo tuner at \$89.95.

Heath also marketed a number of speaker systems of various types. Some were quite good for the time, which is rather faint praise considering that there were relatively few speakers of any type on the market that could compare with almost any of today's speakers. I assembled

a few of Heath's and can attest to their value if not their overall fidelity.

The subsequent expansion of the Heath audio product line (and the entire hi-fi industry, for that matter) is chronicled in *STEREO REVIEW*'s buyer's guides. Heathkits followed the expanding technology of the hi-fi world, becoming more sophisticated and complex (and costlier) as the years went by.

In the 1985 edition of the guide, Heath had a deluxe stereo-receiver kit (the AR-1650) whose specifications would stand comparison with some of the best of today's receivers. The receiver had all kinds of refinements, including 125 watts per channel and an optional Dolby FM noise-reduction module. The basic kit price of \$770 (in 1985 dollars), along with what must surely have been many days of painstaking assembly time, eloquently explains the disappearance of Heath (and most other kit manufacturers) from the consumer audio scene.

I have had a parallel experience with some of the most sophisticated Heath products — advanced single-sideband communications equipment for amateur radio service. These were relatively complex pieces of gear, and because the builder was presumed to be familiar with electronics from the inside out, they required almost total assembly from scratch (no pre-assembled circuit boards).

Assembling one of the Heath ham-radio products was a much more laborious process than connecting up a few printed circuit boards. Building a single-sideband receiver and transmitter took a few weeks of bit-by-bit assembly, but the result was a fully up-to-date station that served me well for a number of years.

Eventually, although the Heath station worked flawlessly, the urge for change led me to retire it and invest in more up-to-date, all-solid-state manufactured equipment (hams and audiophiles alike tend to be dissatisfied with the status quo even if it works perfectly well).

Assembling single-sideband and audio equipment is simply impractical for most users in this day of surface-mount semiconductors and integrated circuits, and "home-brew" gear has disappeared except for the efforts of a small number of enthusiastic hobbyists.

Virtually all of today's audio enthusiasts buy their electronic components ready-made and fully tested. That makes budgetary sense, too, for it would be impossible for an individual, no matter how

Assembling your own audio equipment is simply impractical for most users in this day of surface-mount semiconductors and integrated circuits.

knowledgeable, to build a modern tuner or amplifier for anything close to the cost of one that's manufactured and tested on an assembly line.

Possibly the sole exception to this situation is the loudspeaker. Someone with access to power tools can construct a speaker cabinet of any size or internal configuration (there is still a good number of speaker-building audiophiles). Of course, you have to find the appropriate drivers and crossover components (as I did forty-odd years ago, when I wound my own crossover inductors), but it can be done.

There is another catch, however. Unless you have a considerable knowledge of speaker design, and access to suitable drivers, the chances are that you won't come close to realizing optimum results. Nonetheless, the satisfaction of creating your own speakers is likely to add significant smoothness and spaciousness to the final sound — for your ears, anyway! □

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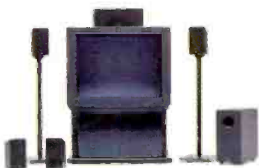
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JACK & LEUNG

Onkyo TX-SV727 Audio/Video Receiver

DAVID RANADA • TECHNICAL EDITOR

Onkyo's TX-SV727 receiver is second from the top of its line, after the acclaimed \$2,000 TX-SV919 Home THX model. While the TX-SV727 doesn't include any of that older receiver's THX facilities, it does carry over quite a few important features, for better or worse.

Retained are a fully digital Dolby Pro Logic decoding system and four ambience/reverb digital signal-processing (DSP) modes: Theater, Hall, Live, and Arena. These modes operate by generating multiple time-delayed simulated reflections that are fed to the front and surround speakers of a home-theater system. As before, modes are selected in round-robin fashion by a single button on the front panel or the supplied programmable infrared remote. That makes quick comparison virtually impossible between stereo-only operation, which is treated as its own processing mode, and DSP enhancement.

Also retained from the TX-SV919 is a handy on-screen display that is useful (but not obligatory) mainly while making adjustments to the DSP modes.

Among the things you can adjust in the non-Dolby Pro Logic modes are the size and shape of the hall, the level of the earliest simulated reflections (ambience), and the level and duration of the densely spaced later reflections (reverberation). Dolby Pro Logic offers the standard adjustments: center-speaker mode (normal, wideband, or phantom), surround-speaker delay, and center- and surround-speaker levels.

Not quite as powerful as Onkyo's THX receiver, the TX-SV727 is rated for 80 watts per front channel in surround operation, which still amounts to only 1 dB less maximum continuous volume level than the 100-watt rating of the TX-SV919. In stereo operation, the TX-SV727 is rated at 100 watts per channel. On the other hand,

its 25-watt surround-channel ratings are 3 dB below the 50-watt surround-channel ratings of the THX receiver. In any case, the TX-SV727 exceeded all of its power ratings in our tests.

Again like the TX-SV919, the TX-SV727 uses multiway binding posts that take both single and dual banana plugs for every speaker. But hooking up a single center speaker, rather than a pair, requires using either stripped wires or single banana plugs. Nonetheless, the provision of dual-banana binding posts for all speaker outputs is as unusual as it is laudable.

Other rear-panel facilities include snap connectors for both AM and FM antennas, three switched AC convenience outlets, jacks for Onkyo Remote Interactive (RI) signals to operate other Onkyo RI components via a single remote control, and connections for multiroom operation via a Xantech control system (optional accessories are required for such operation). Audio-only connections are provided for a moving-magnet phono cartridge, a CD player, and two tape decks, one of which can instead be an equalizer. Four A/V components can also be connected (composite video only): two VCR's and two play-only components, one of which connects to the front panel. Feeding a video signal to the receiver's play-only TV/VDP (videodisc player) input will automatically turn on the receiver and switch it to that input, a feature Onkyo calls Intelligent Power Management.

DIMENSIONS: 18 inches wide, 6 $\frac{3}{4}$ inches high, 15 $\frac{3}{8}$ inches deep

WEIGHT: 28 $\frac{3}{4}$ pounds

PRICE: \$799

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

The front panel contains the primary tuner controls, including those operating the thirty station presets, which can be divided into three groups. Other controls operate facilities available only on the front panel: bass, treble, and balance knobs and a Selective Tone button that engages substantial treble and bass boosts (see "Measurements" below). Another button, this one also available on the remote, dims the large central alphanumeric fluorescent display, which also contains numerous indicator lights for various receiver functions.

Available only on the remote is the receiver's sleep-timer control, which

delays turn-off for as much as 90 minutes in 10-minute increments. While the remote's buttons are monotonously uniform in size, shape, and layout, the handset does have glow-in-the-dark luminescent paint surrounding many of the buttons. This makes their labels show up clearly in the dark, a nice touch.

On the test bench, the TX-SV727 performed well. Measured tuner performance was average for a receiver in its price class, which means very good. Dolby Pro Logic performance was quite a bit better than average, with very high channel separations and unusually low distortion, both character-



MEASUREMENTS

AMPLIFIER SECTION

All data for two-channel stereo operation.

OUTPUT AT CLIPPING (at 1 kHz)

8 ohms	131 watts
4 ohms	199 watts

CLIPPING HEADROOM (re 80-watt rating)

8 ohms	1.17 dB
--------	---------

DYNAMIC POWER

8 ohms	171 watts
4 ohms	245 watts

DYNAMIC HEADROOM (re 80-watt rating)

8 ohms	2.3 dB
--------	--------

DISTORTION AT RATED POWER

	0.0097%
--	---------

SENSITIVITY (for 1 watt output into 8 ohms)

CD	20.23 mV
phono	0.295 mV

NOISE (re 1 watt, A-wtd)

CD	-82 dB
phono	-76 dB

RIAA PHONO EQUALIZATION ERROR

(20 Hz to 20 kHz)	+0.64, -0 dB
-------------------	--------------

FREQUENCY RESPONSE

(tone controls centered)	
20 Hz to 20 kHz	+0.27 dB, -0.25 dB

TONE-CONTROL RANGE

100 Hz	+8.3, -7.9 dB
10 kHz	+8.8, -8.7 dB

SELECTIVE-TONE-CONTROL EFFECT

50 Hz	+8.7 dB
15 kHz	+4.5 dB

TUNER SECTION

All figures for FM only except frequency response.

SENSITIVITY (50-dB quieting)

mono	18 dBf
stereo	22 dBf

NOISE (at 65 dBf)

mono	-79 dB
stereo	-72 dB

DISTORTION (THD+N at 65 dBf)

mono	0.12%
stereo (including pilot leakage)	1.9%

CAPTURE RATIO (at 65 dBf)

	1.3 dB
--	--------

AM REJECTION

	51 dB
--	-------

SELECTIVITY

alternate-channel	53 dB
adjacent-channel	3.5 dB

PILOT-CARRIER LEAKAGE

19-kHz	-35 dB
38-kHz	-70 dB

HUM

	-80 dB
--	--------

CHANNEL SEPARATION

100 Hz	40 dB
1 kHz	45 dB
10 kHz	34 dB

FREQUENCY RESPONSE

FM	30 Hz to 15 kHz +0, -1.7 dB
AM	58 Hz to 2.9 kHz +1, -6 dB

DOLBY PRO LOGIC PERFORMANCE

FREQUENCY RESPONSE

left, right	20 Hz to 20 kHz +0.3, -0.8 dB
center	20 Hz to 20 kHz +0, -1 dB
surround	20 Hz to 6.6 kHz +0.37, -3 dB

OUTPUT AT CLIPPING (8-ohm loads)

left, center, right	115 to 118 watts
surround	33 watts

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

left, right	-70 dB
center	-69 dB
surround	-67 dB

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

left, right	0.05%
center	0.07%
surround	0.07%

SURROUND-DECODER INPUT-OVERLOAD MARGINS (at 1 kHz)

left, right (re 2-volt input)	+1.9 dB
center (re 1.4-volt input)	+4.95 dB
surround (re 1.4-volt input)	+1.9 dB

SURROUND-CHANNEL NOISE-REDUCTION CALIBRATION ERROR

re Dolby spec (247.5 mV)	-1.11 dB
re THX spec (141.4 mV)	+3.75 dB

CHANNEL SEPARATION (100 Hz to 7 kHz)

left output, right driven	>52 dB
left output, center driven	>54 dB
left output, surround driven	>55 dB
center output, left driven	>53 dB
center output, surround driven	>52 dB
surround output, left driven	>50 dB
surround output, center driven	>58 dB

istics probably stemming from the use of digital signal processing throughout. The best performance came out of the amplifier section, which substantially bettered its ratings in both continuous and dynamic output. Measured distortion at rated output was also unusually low.

Except for a tad too much background noise, the TX-SV727's Dolby Pro Logic performance during listening tests was excellent, with solid image placement and a very clean sound — deriving, no doubt, from the unusually low distortion of the processing. The amplifier section's substantial power capabilities were also evident in listening tests. The receiver developed very high sound levels with speakers of average (88 to 90 dB) sensitivity while producing no sense of strain or incipient overload.

The music-oriented surround-sound modes (Hall, Live, and Arena) and the Theater soundtrack-oriented mode all suffered from a couple of important faults, however. First, you cannot separately reduce the amount of simulated reflections fed through the front speakers, much less eliminate them altogether. As a result, both the image and tonal quality of the front soundstage suffer when these modes are used. This problem is not exclusive to Onkyo or the TX-SV727; I have found it with many other A/V receivers' music-processing modes.

Second, and this does seem to be characteristic of Onkyo A/V receivers

TEST REPORTS

with DSP, you cannot fully turn off the very colored artificial reverberation employed in the non-Pro Logic processing modes. I commented on this problem as long as two years ago in our review of the TX-SV919 (August 1994). Unfortunately, the reverb behavior of the TX-SV727 seems virtually identical to the earlier unit's. Artificial reverb isn't even necessary for substantial sonic enhancement from a DSP system — a few well-chosen ambience reflections will do, as Yamaha has shown with its Digital Sound Field processing. I found the Onkyo receiver's non-Pro Logic DSP modes fatiguing for long-term listening and preferred plain stereo or Dolby Pro Logic operation, in which the receiver sounded very, very good. But I don't doubt the other DSP modes' abilities to produce a wildly exaggerated showroom demonstration.

Except for plain Dolby Pro Logic decoding, I would gladly give up all of the TX-SV727's DSP modes (as well as its multiroom capabilities, the on-screen display, and most of the tuner presets) for a set of pre-out/main-in connectors for the main left/right channels. The receiver provides only pre-out connections, and without the corresponding main-in terminals it is impossible to correctly hook up the line-level crossover and high-pass-filter loopback signals of a moderate-cost powered subwoofer (the TX-SV727 has no high-pass filters). You might be able to do it through the Tape 2/Monitor connections (no mention of such a hookup is made in the manual, which barely covers the use of a subwoofer at all), but you'd probably screw up Dolby Pro Logic decoding if you did. This is not the first time we've come across the inability to properly integrate a good powered subwoofer into a home-theater system due to the lack of proper amplifier connections. What is most strange is that Onkyo got it right previously with the TX-SV919, but for the TX-SV727 the designers chose to eliminate virtually all of the earlier receiver's superb array of bass-management features while retaining some of its least impressive aspects, like the artificial reverberation.

So while you might want to look elsewhere for top-quality music-enhancement digital-signal processing, do look to Onkyo's TX-SV727 for solid tuner performance, excellent Dolby Pro Logic decoding, and gobs of amplifier power. □

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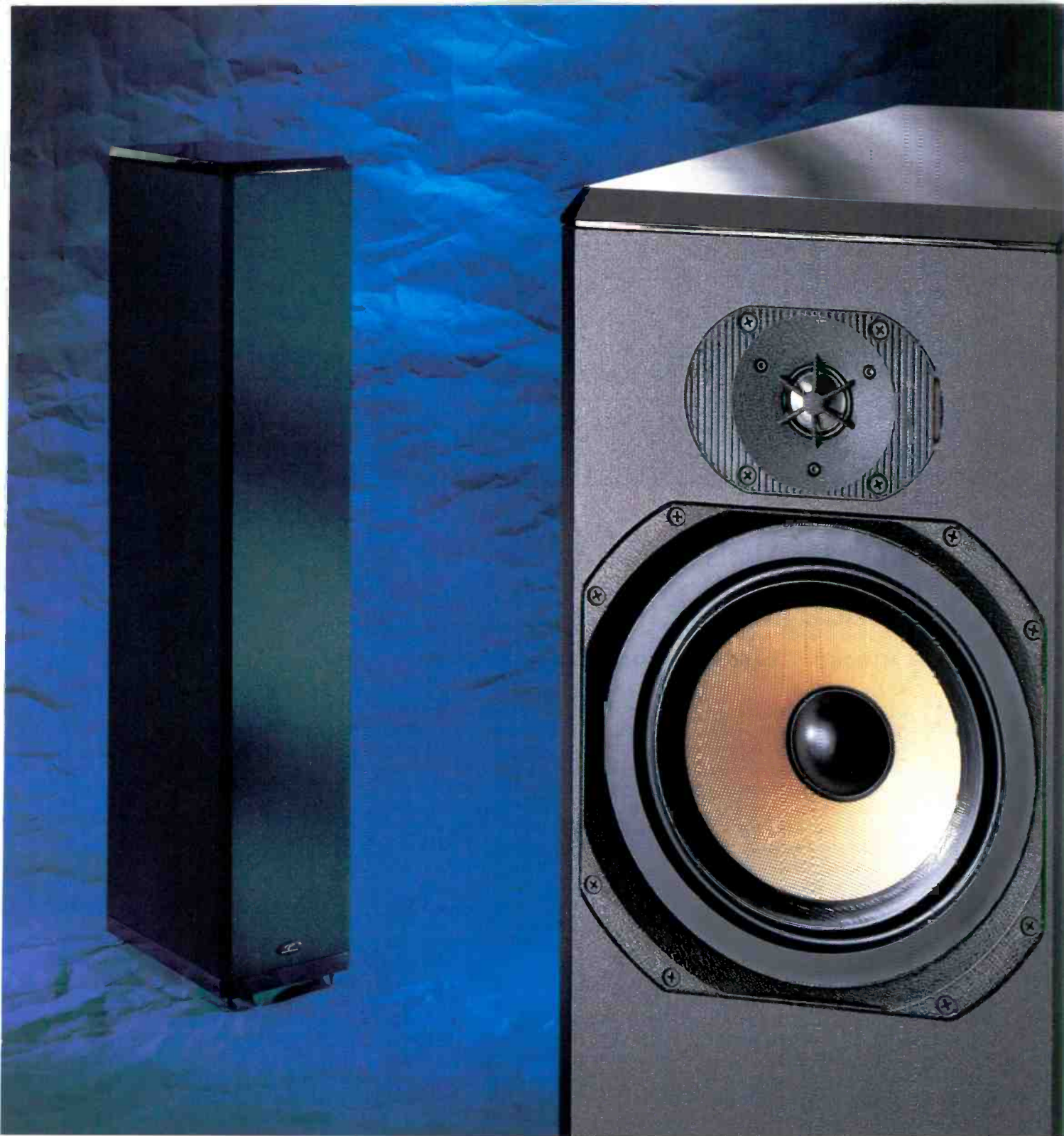
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CIRCLE NO. 35 ON READER SERVICE CARD



JOCK P. LEUNG

Audio Alchemy ACD II Compact Disc Player

JULIAN HIRSCH • HIRSCH-HOUCK LABORATORIES

Audio Alchemy, though not as widely known to the general public as some of the larger consumer electronics companies, manufactures a number of components designed for serious audiophiles, including amplifiers, preamps, CD transports, and separate digital-to-analog (D/A) converters. In general, its products are priced somewhat higher than typical mass-market components but below many "specialty audio" products.

The Audio Alchemy ACD II is a moderately priced, high-quality CD player that differs in several respects from mass-market players. Aside from its basic performance specifications, which are typical of today's better players, the ACD II is described on its front panel as having a Digital Controlled Tracking Servo System, with no further elaboration in the otherwise complete instruction manual.

The ACD II's appearance is distinctive, and its operation has quite a different "feel" to it. A compact, lightweight unit with a stark, disarmingly simple black exterior, it has on its front panel only a small white power button, the disc drawer, a display window, and a small control strip below the display. When a disc is loaded into the drawer, the player displays (in

white on a black background) the total number of tracks, total playing time, and a "music calendar" showing the numbers of the unplayed tracks on the disc (up to twenty). In operation, the display shows the current track number, its elapsed or remaining time, or the elapsed time on the disc (as selected by the time button), and the music calendar.

Unlike most CD players, which typically have a number of discrete buttons to control their functions, the ACD II has only a white plastic strip about 5 inches long and half an inch high. On it are the standard symbols for disc-drawer open/close, play, pause, track skipping (forward or backward), fast forward, and stop. The touch-sensitive switches for these functions are behind the plastic (membrane) strip, and gentle pressure on any of the symbols produces the indicated action. Company literature notes that the



membrane seals the controls from dust and dirt.

The ACD II comes with a small wireless remote control that expands its operating versatility in addition to duplicating the functions of the front-panel controls. Numbered buttons provide direct access to any track, and a pair of Line Out Level buttons vary the output level in 1-dB steps from maximum to -20 dB.

More elaborate programming functions can also be performed through the remote control. These include program play, which allows a sequence of up to twenty-four tracks (in any order) to be created and stored in memory, and shuffle play, in which the tracks are played in random order. The repeat button can be used for nonstop replay of any track or programmed sequence, and the check button shows the programmed track sequence in the music calendar.

DIMENSIONS: 17 inches wide, 4 inches high, 1 1/4 inches deep

WEIGHT: 7 pounds

PRICE: \$499

MANUFACTURER: Audio Alchemy, Dept. SR, 31133 Via Colinas, #111, Westlake Village, CA 91362; telephone, 818-707-8504

Up to twenty-four tracks can be selected for dubbing (in any order) onto a tape, with an extra second of time added between them, and if you're recording both sides of a tape, you can insert a pause at the appropriate point for turning it over. A fader button allows for smooth transitions.

Clearly, the ACD II is simultaneously one of the more versatile CD players as well as one of the simplest and least daunting to the user. Of course, its unconventional operation makes study of the instructions a must. Fortunately, they are adequate and clear, with diagrams of the control settings and display readouts for the various modes of operation.

The theme of simplicity is carried over to the rear apron of the cabinet,

MEASUREMENTS

MAXIMUM OUTPUT LEVEL 2 volts

FREQUENCY RESPONSE
20 Hz to 20 kHz +0, -0.2 dB

CHANNEL SEPARATION
100 Hz 106 dB
1 kHz 105 dB
20 kHz 82.5 dB

QUANTIZATION NOISE -92.5 dB

DYNAMIC RANGE -92.5 dB

DISTORTION (THD+N)
1 kHz, 0 dB 0.0063%
1 kHz, -20 dB 0.0067%
20 Hz to 10 kHz, 0 dB 0.0085%

LINEARITY ERROR (-90 dB) <0.5 dB

MAXIMUM INTERCHANNEL PHASE SHIFT 1 degree

DEFECT TRACKING
(Pierre Verany #2 disc) 2,500 μ m

IMPACT RESISTANCE top, B; sides, A

which contains only three gold-plated output RCA jacks, two for the analog channels and one for a digital output to an external D/A converter, a digital processor, or another component with digital inputs.

All this versatility and imaginative design would be of little value if the ACD II fell short in performance. As our measurements show, however, the Audio Alchemy ACD II is unquestionably representative of today's better CD players. It is solidly built, with above average impact resistance, and it offers an unusual combination of performance and operating versatility together with one of the simplest and most usable control systems we have seen in a full-featured CD player. □



JOCK P. LEUNG

Acoustic Research Model 312 HO Speaker

JULIAN HIRSCH • HIRSCH-HOUCK LABORATORIES

Few currently active companies have had as profound an effect on the consumer audio industry as Acoustic Research (AR), founded in 1954 by Edgar Villchur and Henry Kloss. It has made a number of significant contributions to the loudspeaker art, many of which are now standard features of today's high-fidelity speakers. The AR-1 speaker and its descendants set new standards for low distortion and extended bass response, though at some price in reduced efficiency. These "acoustic-suspension" speakers in turn created a demand for the higher amplifier power needed to generate realistic volume levels.

Over the years AR's management

and ownership have changed several times, and its later products have been designed for a broader market than the AR-1 and its immediate successors. The current AR management team is headed by Cary Christie, a co-founder of Infinity Systems, also known for in-

DIMENSIONS: 43¾ inches high, 10½ inches wide, 19¼ inches deep

WEIGHT: 70 pounds

FINISH: black vinyl (other finishes available)

PRICE: \$1,099 a pair (black)

MANUFACTURER: Acoustic Research, Dept. SR, 9424 Eion Ave., Suite J, Chatsworth, CA 91311; telephone, 818-407-4820

TEST REPORTS

novative speaker designs. At the 1996 Winter Consumer Electronics Show, Christie Design Corporation (a subsidiary of Recoton Corporation) introduced a series of Acoustic Research brand speakers headed by the Model 312 HO.

The AR 312 HO ("High Output") is a fairly large and heavy floor-standing column speaker. Three drivers are vertically aligned at the top of the enclosure. A 1-inch dome tweeter is flanked by two 5¼-inch cone midrange drivers. The tweeter diaphragm, molded from gas-filled, closed-cell foam, is said to provide high efficiency, wide bandwidth, and freedom from dome-breakup effects.

The panel surrounding the drivers is covered with an "Energy Control Contour" baffle sculpted from a varying-density foam. This is designed to control the tweeter's radiation pattern and acoustic loading, matching the output of the midrange drivers in the crossover region (around 2.5 kHz).

The lowest frequencies (below 180 Hz) are propagated by a single long-throw, 12-inch cone located near the bottom of one side of the cabinet. This driver operates in a vented enclosure, with the vent opening on the rear of the cabinet. The 312 HO speakers are constructed in mirror-image pairs and should be installed with the bass drivers facing outward, away from each other.

Possibly the most unusual characteristic of the 312 HO is its high efficiency, as demonstrated by its rated sensitivity of 97 dB sound-pressure level (SPL) at 1 meter with an input of 2.83 volts. High efficiency is advanta-

geous in several respects. Obviously much less amplifier power is needed for a given sound level compared with many other home speaker systems. Also, as a byproduct, the speaker's impedance, rated at 4 ohms and dropping slightly below that value at a couple of frequencies, should not present any problem with any amplifier we know of at reasonable output levels.

The entire front of the speaker is

**The Acoustic Research
312 HO speaker
had a beautifully balanced
sound. It does credit
to its heritage.**

covered by a single attractively shaped grill, which is removable with some difficulty. A circular grille (also not easily removed) covers the woofer. Two pairs of gold-plated binding posts, accepting dual banana plugs, wires, or lugs, are recessed into the rear of the cabinet. These are normally paralleled by gold-plated straps, which can be removed for biwiring or biamplification.

The measured impedance of the 312 HO ranged from a maximum of just under 10 ohms at 20 Hz to 3 ohms at 3 kHz and 2.8 ohms at 110 Hz. It averaged 4 ohms or higher over the full audio range. The room response, averaged for the left and right speakers and corrected for room absorption, was within ± 4 dB from 20 Hz to 20 kHz.

The quasi-anechoic MLS frequency response at 1 meter was ± 2.5 dB from 300 Hz to 20 kHz. At a 2-meter distance it was even better, an impressively flat ± 1 dB from 300 Hz to 13 kHz, with an additional 2-dB rise from 13 to 20 kHz.

The horizontal dispersion over a 45-degree angle off the forward axis was typical of dome tweeters of this size, with an off-axis drop beginning above 3 kHz and amounting to about 12 dB at 20 kHz.

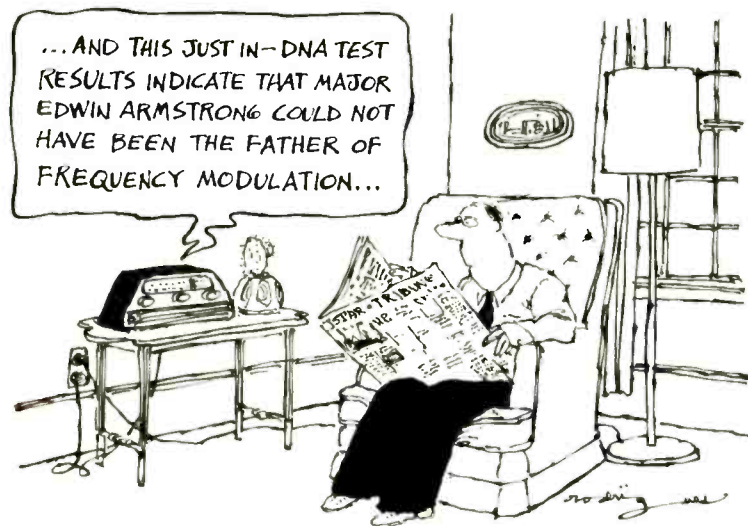
A close-miked measurement of the woofer response showed a maximum output from 50 to 120 Hz, falling to -6 dB at 30 Hz and -3.5 dB at 200 Hz. The woofer distortion at a 90-dB system SPL was 1 percent between 60 and 100 Hz, falling to 0.5 percent at 200 Hz and rising to 4 percent at 30 Hz (the lowest rated frequency). It rose to 12 percent at 20 Hz.

These measurements clearly suggest that the AR 312 HO is a very good speaker. Our ears conveyed the same message — loud and clear! To be sure, that message was received before we made any measurements, but it is always reassuring to find that our B&K 4133 microphone is on the same wavelength, so to speak, as our eardrums.

The speaker had a beautifully balanced sound, without obvious emphasis or de-emphasis of any part of the audio spectrum. Clearly, it has earned its place at the top of the current AR speaker line and does credit to its heritage. It also demonstrates forcefully that there is more than one way to solve most engineering problems, although it is ironic to find that the engineers at Christie Design have achieved the original AR goal of low deep-bass distortion in a totally opposite manner, with a ported cabinet rather than a sealed one.

The current HO series of AR speakers is designed for home theaters as well as music systems, and all are magnetically shielded to avoid video distortion. Our magnetometer confirmed that there was less than 1 gauss of external field (in most places it was less than 0.1 gauss!) at any point on the outside of the 312 HO's cabinet that could reasonably be placed close to a TV set or video monitor.

Finally, the best news of all — the price! The 312 HO is unquestionably a bargain, and chances are you would have to pay substantially more to get anything surpassing the sound quality of this system. □



TEST REPORTS



Rane SSE 35 Home Theater Equalizer

DAVID RANADA • TECHNICAL EDITOR

An equalizer can be a powerful tool for improving the sound of a home-theater system by shaping or correcting the frequency responses of the speakers installed in a listening room. Ideally, the setup of an equalizer should be a one-time affair, accomplished by a skilled professional installer with the aid of test instruments. Once adjusted for specific speakers set up in specific positions, a truly pro-grade equalizer should then disappear from view, never to be adjusted again until there's a change in either the speakers or their layout. Such an equalizer is the Rane SSE 35, a graphic equalizer with controls for the three front-channel speakers and one or two subwoofers of a home-theater system.

When I opened our test sample, the SSE 35 proclaimed its professional status immediately. Instead of the rows of slider controls shown in our photo, I saw a virtually featureless front-panel cover or shield, whose purpose is precisely to keep prying fingers off what may be laboriously derived equalizer settings. Even removing the cover for "authorized" access to the controls was problematical until I tracked down a suitable tool (a $\frac{5}{64}$ -inch Allen wrench).

Once the front cover was off, I found five groups of slider controls, each control providing 6 dB of boost or cut in its frequency band. Each control group is dedicated to equalizing a single loudspeaker. Starting at the left, the sliders control the left subwoofer,

left front speaker, center speaker, right subwoofer, and right front speaker. The three front speakers all have the same control-band center frequencies, which are spaced two-thirds of an octave apart (160, 250, 400, and 630 Hz and 1, 1.6, 2.5, 4, 6.3, 10, and 16 kHz). For the subwoofers, the bands are at one-third-octave intervals (25, 31.5, 40, 50, 63, 80, and 100 Hz), a close spacing that is essential if you are going to have any hope of correcting for low-frequency speaker/room interactions such as standing waves.

At the far right is a bypass button with a nearby red LED. Rane's intermittently hilarious (for an electronic component) manual says that the bypass mode, which is automatically activated during the power-up sequence, "hard-wires" all inputs to their respective outputs in order to convert the SSE 35 temporarily "into a relatively expensive, but pretty patch cord." Above the bypass switch, mounted on a short stalk that normally leads to a hole in the front-panel cover, is the equalizer's power-on indicator, a cute blue LED about which the manual says, "to avoid confusion a distinction

is made here between electrical and political power."

The rear panel is very simple, having gold-plated RCA jacks for the front channels (line-level inputs and outputs) and subwoofers (outputs only), switches to select the subwoofer crossover frequency (80 or 125 Hz), subwoofer-output on/off buttons (with red LED indicators), and two subwoofer signal-derivation switches (for stereo or mono subwoofers). Power is supplied by an external modular transformer that connects to the SSE 35 by a multiconductor snap-in telephone-type plug. Next to the power connector is an unusual Ground Lift switch, a professional feature that should be moved from its factory-set position only in order to eliminate or reduce a stubborn hum or buzz originating from installing the equalizer.

In the early days of equalizers, getting topnotch performance was nearly impossible with the circuit techniques and parts then available. With today's low-distortion, low-noise operational-amplifier (op-amp) integrated circuits, a properly designed equalizer can provide superb results. Our measurements showed that Rane's SSE 35 does precisely that. In several important respects, the SSE 35 in its "neutral" state (all slider controls set to flat) provides better performance than any signal you are likely to feed it. Specifically, with an A-weighted noise level of -104.3 dB referred to a 0.5-volt output, it is quieter than any CD player. Referred instead to the typical CD-player maximum output level of 2 volts, the equalizer's noise level was an outstanding -116.3 dB, and its maximum hum component was a completely inaudible -126 dB at 180 Hz. Total harmonic distortion plus noise (THD+N) over the audio band was 0.001 percent at most at a 0.5-volt drive level, which is lower than the

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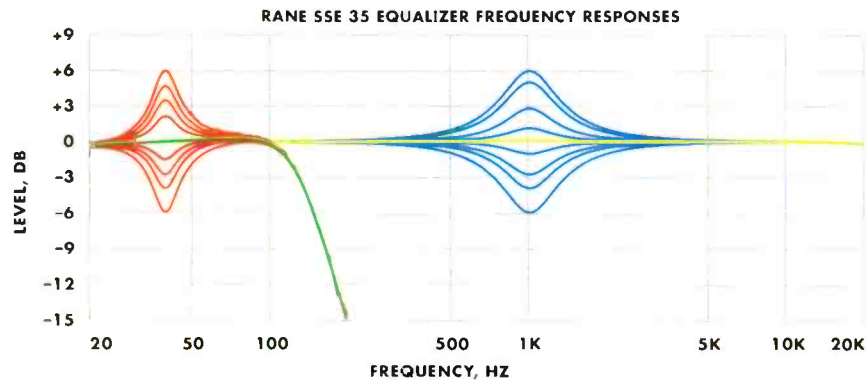
theoretical CD minimum of around 0.0086 percent at the same level. Even the SSE 35's frequency response with the sliders centered, +0, -0.3 dB from 20 Hz to 20 kHz, is better than the response of many CD players (the slight rolloffs occurred at the very ends of the audio range). This is all unusually good even for pro gear.

The graph below shows the range of responses available with the SSE 35's 1-kHz main-channel sliders (blue) and 40-Hz subwoofer sliders (red). The yellow trace shows the response with the main-channel sliders in their neutral positions, and the green is the response of the 125-Hz subwoofer cross-overs with the subwoofer sliders in neutral. The equalizer bands are of the “constant-Q” variety, which simply means that the shape of the boost or cut in each band remains the same as the slider is raised or lowered, as opposed to a design where the bands get more “pointy” at extreme settings. The measured subwoofer response conformed to the manufacturer's specifications and provided 24-dB-per-octave rolloffs above the selected crossover frequency.

In use, the SSE 35 proved to be as easy—or as difficult—to use as any other graphic equalizer we have tested. Without a microphone and a spectrum analyzer, setting up an equalizer is just about impossible, although in this case you might be able to adjust the center-speaker controls to obtain a

With our lab mike and spectrum analyzer, and using pink-noise test signals, we were able to substantially flatten several models of front-channel speakers simply by setting the sliders to the inverse of the speakers' measured frequency responses. Flattening out subwoofer responses to the same degree was more difficult, especially when room resonances occurred at frequencies between those covered by the SSE 35 bands. Neither Rane nor I recommend using the SSE 35 to compensate for deficiencies in program material.

Perhaps the equalizer's biggest drawback is not the obvious lack of equalization for surround speakers but that it contains no high-pass filtering of the outputs to prevent feeding low-bass signals into the main front speakers. That is especially important with Dolby Digital (AC-3) soundtracks, in which the low-frequency special-effects signal can get very loud. You might be able, by a clever hookup arrangement, to get a powered-subwoofer's high-pass filters into the signal path, but there is still no way to also remove the SSE 35's subwoofer crossover low-pass filters without turning off the subwoofer outputs altogether. So unless you can defeat a powered subwoofer's own low-pass crossover filter, you'll get two doses of low-pass filtering, one from the subwoofer and one from the SSE 35. Maybe next time around Rane can provide a cross-

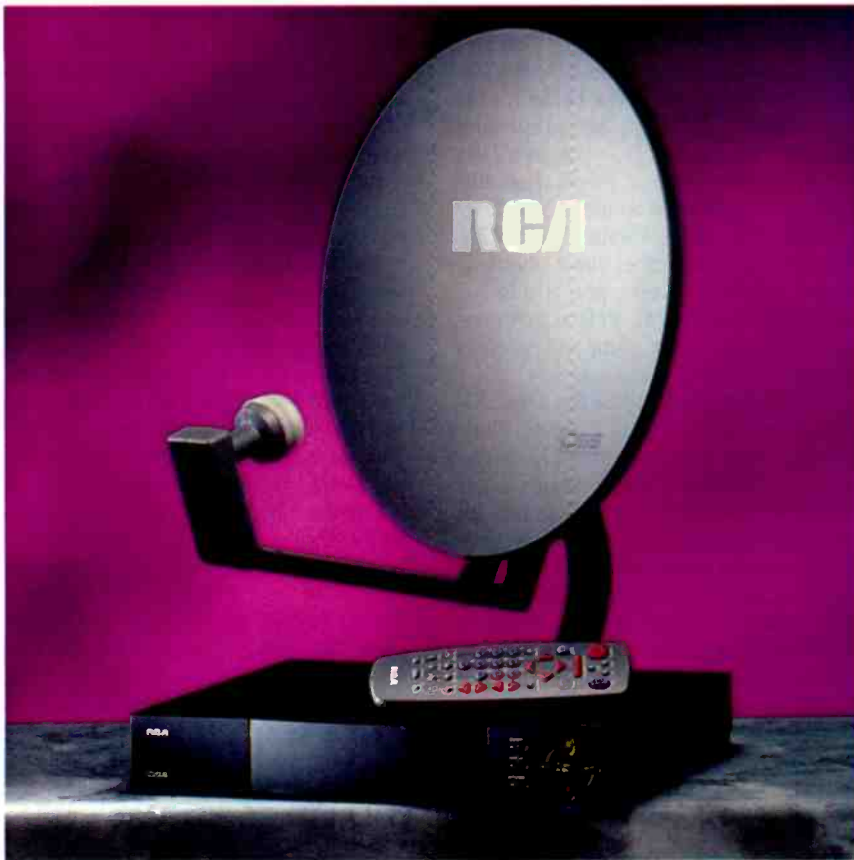


better match with the front left and right speakers. Rane is absolutely upfront about this requirement. The manual seriously states that you should “use a one-third-octave real-time analyzer [or] a sound-pressure meter to ‘flatten’ the system as described in the analyzer or meter manual.” In short, the SSE 35 is explicitly intended for dealer installation and setup, as reinforced by that front-panel shield.

over-defeat switch that doesn't also remove the subwoofer equalizer from the signal path, or else suitable high-pass filtering on the front-channel outputs.

Those caveats aside, and here making no distinction between electrical and political power, the Rane SSE 35 is an outstanding candidate for a home-theater equalizer that well deserves election into the highest home-theater positions. □

USER'S REPORT



DSS Revisited

BY RICH WARREN

A year and a half ago I reported in these pages on the arrival of DirecTV's direct-broadcast satellite TV service with a hands-on look at RCA's DS2430RW Digital Satellite System (DSS), the high-end version of the country's first small-dish satellite receiving system (see "DSS at Home," January 1995). Although several companies are now — or soon will be — offering DSS hardware packages, we wondered how RCA's second-generation DS4430RA system compares with its predecessor. The package, which falls in the middle of a new three-model lineup, lists for \$899 and includes a redesigned "deluxe" receiver, an 18-inch satellite dish with two outputs (for feeding two receivers), and a universal remote control.

RCA's new DSS receivers work with its original dish (as well as any other brand of DSS dish, for that matter), so you can upgrade without having to scale your roof. The procedure

for installing the dish remains the same and is well within the reach of a competent do-it-yourselfer (RCA sells an installation kit for \$50). Otherwise, expect to pay \$150 or so for professional installation. The dish comes with a versatile mounting bracket that can be secured to virtually any surface (angled or otherwise). The goal is to make sure the dish has a clear view of the south-southwestern sky.

For this report, I used the dish that was professionally installed for my original DSS evaluation. The plastic dish is positioned near the roofline of my house. To get the new system up and running, I had to swap DSS receivers, a simple procedure that involves switching a telephone line and five or six cables (depending on whether your antenna or cable-TV feed runs through the receiver).

The DRD403RA receiver included in the DS4430RA package is a little deeper than RCA's original receiver, but its front panel sports the same soft,

curvaceous styling. The slot for your access card, which contains the personal authorization number required to "unlock" the DSS programming, is now concealed by a sliding panel — a major improvement. (Should tiny fingers fold, spindle, or mutilate that card, you can wave goodbye to all those channels.) The receiver has dual composite-video and stereo-audio outputs for simultaneous connection to a TV and VCR, but there's only a single S-video output.

Pressing the power button for the first time displays a screen that guides you through the ins and outs of system setup. From there you can go to a new screen that lets you (and three other family members) set up a personal-preference profile, identified by your name. You can choose a cute and friendly graphical interface or a more businesslike text interface. Kids will go wild for the graphics: Each user creates an image for his or her character icon by choosing among dozens of comical hair, eyes, nose, and mouth options. It's like playing video Mr. Potato Head, but much more hip.

On the functional side, each profile contains a list of favorite channels and an MPAA ratings limit for movies (so parents can control what Junior watches). A password can be assigned to each user profile, and there is a master password that lets Mom and Dad set overall spending limits for movies and pay-per-view events. A child's profile might include favorite channels like Nickelodeon plus G-rated movies.

The graphical user interface RCA developed for its second generation of DSS receivers is as friendly as a warm puppy. The main screen, patterned after a living room, contains a number of labeled icons that take you to different places. To get to the help screen, for example, you highlight Nipper (RCA's famous black-eyed dog) using the remote's cursor keys and then hit the Menu/Select button. RCA engineers outdid themselves on this colorful and intuitive interface, which bears a passing resemblance to Microsoft's Bob operating shell for Windows. Click on the satellite dish seen through the room's window and you get pointers on how to position the dish. Highlight the TV set and an up-to-date program guide fills your TV screen.

All of the menus are pleasing to the eye, featuring rounded edges and soft pastel colors, and most of them fill only a third of the screen. The larger windows accompanied by program de-

USER'S REPORT

scriptions are easier to read but show fewer channels than the main program guide. Some of the information panels are translucent so that you can see the underlying picture while making programming choices. These thoughtful touches endear themselves as you use the receiver. RCA's friendly new user interface is a far cry from the original strictly business interface.

Except for a few minor button changes, the remote control is identical to the one RCA supplied with its original DSS system. The use of different sizes, shapes, and colors for the buttons makes this one of the easiest-to-use remote controls on the market. If you misplace it, a handful of buttons on the receiver's front panel will still operate most system functions.

The remote's tiny Rec(ord) button wields amazing power. In VCR mode it can be used to manually engage recording, but in the DSS mode it performs a very handy one-touch-recording function thanks to technology licensed from StarSight Telecast. To make use of this feature, you run a wire with a tiny infrared transmitter on the end from a jack on the back of the receiver to your VCR (the adhesive-backed transmitter head goes near the VCR's infrared eye), look up the code for your VCR on the supplied list, and enter it on the remote's numeric keypad. Then it's a simple matter of highlighting the show you want to record on the on-screen program guide — which presents a full seven days' worth of fare — and hitting the Rec button. Beyond that, the only thing you have to do is remember to load a tape into your VCR and select a recording speed.

When it's time to record the show, the DSS receiver turns itself and the VCR on, starts the recording about 20 seconds before the start of the movie (to bypass the tape's leader), then shuts itself and the VCR off after the final credits roll. For those who want to line up a number of shows for automatic recording, RCA provides a programming screen that keeps a log of recording sessions.

The Programming

Arianespace successfully launched the third Hughes high-power DSS satellite in June of 1995. Intended primarily as a back-up, it has also been used to add channel capacity. DSS hit the scene two years ago with 150 channels but now offers about 200 channels. Cur-

rently, DSS programming is available only from United States Satellite Broadcasting (USSB) and DirecTV. USSB offers most of the cable movie channels — including Showtime and the Movie Channel — as well as MTV, VH-1, and five other channels. The newest addition to the USSB lineup is the Sundance Channel. DirecTV supplies all of the other cable channels in the known universe and a number of sports packages as well as pay-per-view attractions; the company recently added the History Channel.

A subscription to all of the DirecTV channels, called Total Choice Platinum, costs \$44.95 a month. (The original Total Choice package, with fewer channels, cost about \$10 less.) If all you want is access to pay-per-view programs and no other service, you'll pay \$5.95 a month (plus the charge for each movie or sports event you watch, of course). DirecTV's monthly bill includes a coupon for \$2.50 off the first movie. A subscription to all twenty of USSB's channels costs \$34.95 a month, with the first month free. Both companies offer less expensive packages to suit different tastes and budgets.

On any given day, DirecTV beams down as many as fifty-five pay-per-view offerings, including a sprinkling of letterbox (16:9 aspect ratio) movie transmissions to please cinema purists. The price of admission for both standard and widescreen flicks is \$2.99 a pop. On most days DirecTV transmits three widescreen movies at once, rotating titles through the day.

The price of entry to most PPV sporting events is \$5 to \$10 per game, with packages ranging from \$30 to \$150 depending on the length of the season and number of games. With the \$149 NBA League Pass you can view every NBA game. The NFL Season Pass costs \$139, and the NHL Season Pass skates in at \$119. In March, DirecTV began offering the MLB Extra Innings baseball package for \$139, which covers 1,000 games. In other words, DSS could be the final blow to a shaky marriage.

Picture and Sound Quality

What looked promising in early 1995 has turned out to be truly spectacular in mid-1996. The few rough edges that I reported on in my original DSS evaluation have vanished. During its first year of operation, DSS relied on a digital encoding system known as MPEG-1. While it worked well most of the time, it occasionally produced

visible glitches. For example, fast motion would cause various distortions, or the picture would break up into tiny blocks. The quarterback would lob a pass and the football might change shape or disappear entirely. Rapid panning across the fans in the stadium sometimes resulted in bizarre images of smeared and faceless crowds.

As of late last year, all DSS channels are now encoded using the more efficient and effective MPEG-2 system. Since MPEG-1 is a subset of MPEG-2, any DSS receiver can decode both, so the transition from one encoding system to the other caused no problems. The football season being over, I relied on basketball to test the mettle of MPEG-2. As the Chicago Bulls rocketed the ball around the L.A. Lakers it remained nice and round — and visible. Even Magic Johnson failed to make the ball disappear. The fans also retained their identity without obvious distortion. Like the Bulls, MPEG-2 is an unqualified success. Because MPEG-2 encodes data more efficiently, it requires slightly fewer digital bits. That permits a few additional DSS channels to be transmitted from the same number of satellite transponders.

DSS delivers the best home-video quality short of the forthcoming digital videodisc (DVD). The rendition and stability of solid colors, especially reds, sets it apart from other current video sources such as analog C-band satellite, laserdisc, and Super VHS.

Actually, DSS has two tiers of quality. Pay-per-view movies offer the best picture because they are up-linked to DSS satellites directly from the highest-quality digital master tapes, which means that the signal remains in the digital domain until it's decoded by your DSS receiver. The result: Resolution appears to exceed that of the best laserdiscs, with virtually no video or audio noise. Viewed on a Toshiba rear-projection TV with a 56-inch 16:9 screen, movies transmitted in the widescreen format came as close to delivering a movie-theater experience at home as I've seen — short of a setup with a \$20,000 front-projection TV and Faroudja line quadrupler, that is. Reproducing DSS soundtracks, my THX audio system with McIntosh electronics and B&W speakers *surpasses* most movie theaters.

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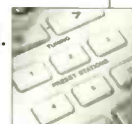
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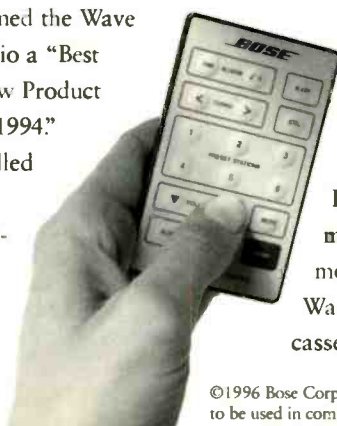
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sound quality, with extremely low noise, minimal distortion, and wide frequency response. The digital system preserves the phase relationships necessary for the proper functioning of Dolby Pro Logic decoding of Dolby Surround recordings. Separation is as wide and steady as Pro Logic playback from the best laserdiscs.

The "normal" DSS quality you get from the dozens of subscription channels, like CNN and Showtime, is comparable to the best C-band satellite picture — very good indeed, but not

quite as sparkling as PPV movies. To pick up those channels, DirecTV and USSB must downlink the *analog* C-band signals of virtually all cable services, digitally encode them, and reuplink them to the DSS satellites. Some C-band satellite programmers are beginning to supply digital satellite feeds to bring the quality closer to that of PPV movies.

Although other companies are now offering direct-to-home digital satellite services, the DSS juggernaut seems unstoppable. It offers more channels

than any of the competing small-dish satellite services, and it has the support of many big-name companies. Besides the packages now available from RCA (and its affiliate brands ProScan and GE), Hughes Network Systems, and Sony (see below), DSS systems are on the way from Toshiba, Uniden, Panasonic, Samsung, Daewoo, and Sanyo. Even AT&T has jumped on the DSS bandwagon. Don't be surprised if a pitch for a DSS system is enclosed with your next AT&T long-distance bill. □

Last fall Sony became the second company to market DSS equipment. It sells three systems priced from \$750 to \$950. I evaluated the top-of-the-line SAS-AD1 system, which includes a dual-output 18-inch dish, the SAT-A1 receiver, and a remote control.

Sony brings its own unique twists to DSS, including a satellite dish that communicates with the installer. Normally, positioning the dish is a two-person job: One is outdoors (often on the roof) aiming the dish, while the other is inside watching the signal-strength meter displayed on the TV screen. Unless they have a set of walkie-talkies, the job requires a lot of running and shouting. Sony has made the procedure a one-person affair by putting a SignalSeeker LED on the dish's LNB module (the small, arm-mounted box that receives the satellite signal as it bounces off the dish). The LED blinks faster as you move the dish closer to its optimum position. When the LED stops blinking but remains illuminated, the dish is locked onto the signal. From an installation point of view, the dish is not quite as flexible as the RCA dish because of the shape and configuration of its support bracket.

The cleanly styled receiver has a fold-down door in the center of its front panel to protect the access card and a handful of pushbuttons to the right. To control the receiver from the couch, Sony supplies an advanced universal remote that emits infrared signals for controlling just about any brand of A/V component as well as RF signals that let you operate the DSS receiver from anywhere in the house. Pressing one of the three function keys near the top of the remote (cable, TV, or DSS) assigns all of the keys to that component. Lifting the hinged panel supporting the function keys reveals controls for a VCR and a laserdisc player.

In the lower third of the remote is a unique "joystick" button that feels something like one of those nubby mouse pointers you find nestled between the keys on some laptop computers. You can



run through all of the DSS on-screen guides and menus by moving the joystick with your thumb. To select a highlighted function or program, you just press down on the joystick. Talk about *simple!* For those who insist, the remote also has a familiar numeric keypad as well as a dozen or so conventional buttons.

Sony provides a mostly text-based on-screen interface that includes channel-logo graphics (as does the RCA system). The menus and guide screens are exceptionally clean. When you power up the system, nine boxes appear on screen. Most provide access to guides and program lists, inviting multiple configurations of favorite channels and program types. There's a Sports Guide, a Custom Guide for your favorite programs, and a Movies List that's subdivided into adventure, children, comedy, drama, musicals, and so on.

The DSS signal provides the subcategory cues, so there's no work for the viewer. Scrolling the Master Guide presents program descriptions on top of the screen. Viewing the Movies List presents movies in alphabetical order with starting times. When you highlight a pay-per-view movie, a preview clip — with audio — appears around the

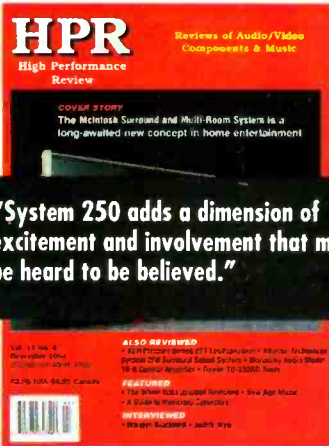
perimeter of the selection window. The SAT-A1 receiver's powerful 32-bit microprocessor handles menu changes and updates rapidly. The only delays you're likely to experience are those that occur while programming information is being downloaded from the satellite.

The software behind Sony's user interface lets you set spending limits (to prevent astronomical PPV bills) and lock out PPV movies/events, all movies carrying a specified MPAA rating, or channels that are inappropriate for children. Changes can be made only after a passcode is entered into the remote.

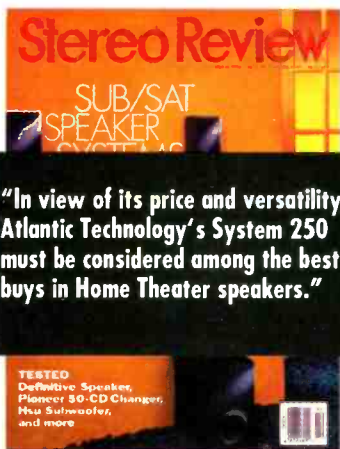
A timer screen lets you set the receiver to tune in programs at prearranged times. The timer automatically turns on the DSS receiver, but, unlike the RCA system, it won't activate a VCR (Sony's forthcoming DSS model will have this feature). The SAT-A1 has two sets of composite-video/stereo-audio outputs but only one S-video output.

I viewed DSS programming on a Sony 32XBR100 32-inch TV, one of the finest direct-view sets on the market. The SAT-A1 challenged the set to its full potential. The green Irish countryside in *Circle of Friends* was as true as the Emerald Isle itself, and the resolution was so good I could see the details of the makeup on the actresses' faces. In comparing the picture and sound quality of the RCA and Sony DSS systems, I wasn't able to discern any significant differences — which isn't surprising.

The coming onslaught of DSS receivers will compete on price and features rather than video and audio quality. All receivers use the same basic MPEG chip set (licensed from Thomson), so differences in picture and sound quality will be minimal, if you notice any at all. Once the system matures and designers begin tweaking the analog audio and video stages, some qualitative differences may appear. Then we can look forward to seeing \$5,000 DSS receivers with gold-plated dishes at a future high-end A/V show. —R.W.



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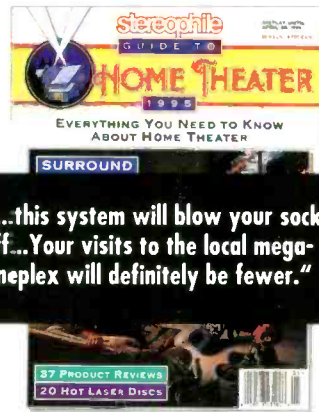
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receiver FACE-OFF

COME WITH ME BACK TO A SIMPLER TIME, when baseball was played outdoors in the sunlight instead of under a flood-lit dome, a cup of coffee was a mug of joe rather than a hazelnut latte, and stereo meant two channels and two speakers, not four, five, or "5.1." To scan the shelves of your local electronics superstore, you'd be hard pressed to imagine such a thing. Audio/video receivers with onboard surround-sound processing and video switching dominate today's offerings, leaving folks interested in a simple two-channel stereo receiver with just a handful of models to choose from in most cases.

Yet, despite all the hype about home theater, most Americans still listen to music over a two-speaker system. And although the trend is clearly toward multichannel A/V gear, every big-name receiver maker continues to offer at least one, and often two or more, plain-vanilla audio-only receivers, typically in the under-\$400 price range.

You might want such a steam-powered device for pure music listening in a secondary room with no home-theater or surround potential, such as an office, a den, or a dormi-

THREE NO-FRILLS STEREO RECEIVERS PUT TO THE TEST

tory. Or you might simply *prefer* two-channel listening despite the conventional wisdom that multichannel audio is the future. Or perhaps you're fiscally challenged and realize that you can always buy an add-on processor/amp and move on to surround sound at a later date.

Whatever your rationale, today's two-channel receivers have more going for them than just low cost. Most are fairly compact, attractively designed, and unencumbered by features of dubious utility. Consequently, today's non-A/V receivers are easy to operate — even by a technophobic buyer.

To find out just what you get in 1996 if "Keep it simple, stupid" is your credo, we rounded up a trio of stereo receivers and put them through their paces. As it turns out, the Denon DRA-565RD (\$400), Harman Kardon HK3250 (\$319), and Yamaha RX-595 (\$399) have

PHOTO BY ROBERTO BROSANI

COMPARISON TESTS | BY DANIEL KUMIN



Denon DRA-565RD



POWER RATING: 65 watts per channel into 8 ohms with 0.005 percent THD

DIMENSIONS: 17 1/8 inches wide, 5 1/8 inches high, 12 1/4 inches deep

WEIGHT: 15 pounds

PRICE: \$400

MANUFACTURER: Denon, Dept. SR, 222 New Rd., Parsippany, NJ 07054; telephone, 201-575-7810

more in common than two channels of amplification and an AM/FM tuner.

All three receivers use good old-fashioned knobs for the basic controls — volume, bass, treble, and balance. The Yamaha and Denon also have knobs to control loudness compensation. The Denon and Harman Kardon rely on pushbuttons for every other function, and so does the Yamaha except for rotary switches for source selection and record-signal routing. Each receiver provides scads of preset memories for both FM and AM radio stations and includes a full-function wireless remote control that can also manage the basic operations of a same-brand CD player and cassette deck. The similarities extend to the receivers' rear panels. Each one has convenient binding posts for two pairs of speakers, RCA input and output jacks for four line-level audio components, and a 75-ohm FM antenna input.

In addition, the Denon and Yamaha receivers add video inputs for a single A/V playback-only component and one video input/output set for a VCR. (Nevertheless, they are *not* "A/V receivers" by current standards because they have only two channels and no surround-sound facilities.) The Denon and Yamaha models also include phono inputs and phono-preamp circuits; the Harman Kardon has no provisions for vinyl playback.

I evaluated the performance of each receiver in three areas: FM reception and sound quality, amplifier oomph and sonics, and ergonomics — all of which require a caveat or two. I judged FM performance using an ordinary folded-dipole antenna stretched out high on the wall, and then with a conventional FM/TV roof antenna located

in my attic. I auditioned AM reception using the loop antenna supplied with each receiver. It's important to bear in mind that my evaluations reflect one user's experience in one geographic location with two antenna installations. A tuner's FM reception is *notoriously* dependent on location and antenna, so it's entirely possible that the results of my tests would be different just a quarter-mile up the road.

The amplifier evaluations were based on listening to CD's, which I played on a high-quality machine through a single pair of B&W Matrix 803 Series 2 speakers (a three-way, floor-standing system rated at 8 ohms) in a 20 x 15-foot room. Again, different speakers or a different listening environment might well have rearranged the results. Finally, on the ergonomic and styling fronts my opinions are just that, opinions. Your own preferences should weigh heavily in this area.

Denon DRA-565RD

The Denon DRA-565RD receiver appears modest on the face of things (it's even the smallest of the three) but it packs more features than you might guess. The Taiwan-built unit is rated to deliver 65 watts per channel. Its tuner section incorporates a basic set of Radio Data System (RDS) features that allow it to automatically display the call letters or nicknames of RDS-equipped stations (about 400 nationwide), search for RDS stations by program type, and automatically receive emergency broadcasts if it's tuned to an RDS signal. The tuner doesn't offer advanced RDS features like scrolling text displays, but it does let you assign easy-to-remember names to your favorite AM or FM stations.

The DRA-565RD also supplies a number of extras, including a loudness control, Bass EQ, two tape loops (one with video switching to double as a VCR connection), and preamp outputs for expansion via an external power amp. There's even an automatic tuning routine that memorizes the station frequencies of the strongest radio signals encountered. With forty presets in five banks of eight, this receiver has enough radio-station memory for a large family or several sets of roommates.

Although I thought its front-panel layout was uninspired, the DRA-565RD was generally easy to operate thanks to the generous spacing between controls and the fairly bright, legible graphics. The knobs felt a little light and twirly, but everything worked quietly and predictably. (The radio-preset routine is somewhat Byzantine, but most users will probably use the auto-tune feature anyway.) Although the variable loudness-compensation control is a potentially useful feature, to my ear it was too energetic, imparting unnecessary boominess unless judiciously applied. The Denon receiver is the only one in this group to offer bass EQ, a pushbutton control I generally preferred to use over the loudness knob for very low-volume listening.

The FM section of the Denon receiver performed well, tuning in the second highest number of stations overall. Its ability to tune in stations with good signals (those I would rate as B+ or better) was about average, however; there was little variation among our three samples in this regard. Strong-signal quality was quite good, with low noise and generally clear and dynamic music reproduction. I detected a hint of "thickening" in the sound with extremely robust signals, which I associate with distortion — a touch of overload in one or more of the FM-demodulating stages is the likely culprit — but in general the tuner's strong-signal performance should please even intent listeners. Weak-signal noise suppression was no better than average, nor was discrimination among closely spaced weak/strong broadcast signals. So if you're interested in pulling in distant FM broadcasts, the Denon might not be your first choice. Its AM reception was average, tuning in just three stations at my semirural location.

As an amplifier, the DRA-565RD proved quite impressive. Its power circuitry seemed punchy, solid, and eager, easily driving my B&W speakers

to more than satisfying levels without strain. Not bad at all. While the speakers are moderately sensitive and a fairly "easy" 8-ohm load, their impedance does dip below 4 ohms and they do require adequate power to sound truly good, which they did. The bottom end was weighty, with plenty of audible extension and "quick" dynamics. Pushed hard to very loud levels, the amp began showing its limits by way of audible hardness and a squished feel on dynamic transients, followed fairly quickly by harsh clipping. Still, the DRA-565RD offers a lot of amplifier for typical speakers and should provide ample oomph for any rational adult. It was also very quiet, free from audible hum, noise, and crosstalk.

There were, however, a few things about the Denon receiver that I didn't particularly love. As in many value-priced hi-fi components, its volume control changes the level much too fast. In other words, even with moderate-sensitivity speakers like the B&W 803's, the receiver was clipping its brains out by the time the volume dial reached about 1 o'clock. Designers typically do this to make a component seem "powerful" — it gets loud fast, so it must have hefty reserves, right? — but it cheats you out of a full knob rotation. God help the listener who has Klipschorns or some other ultra-sensitive loudspeakers that could cause your ears to hit their stops with a mere quarter turn (to 9 o'clock).

The DRA-565RD's remote is crowded with keys of the same size and shape, though contrasting background colors and groupings help ease operation a bit. At least the volume up/down buttons are larger than the others, but there is no mute key. On the plus side, the remote operates over a rather wide angle, so I was able to use it just about anywhere in my room. Finally, the Denon receiver's somewhat rattle-trap top-cover sheetmetal seemed less than ideal — but hey, you're getting a lot of receiver for \$400.

Harman Kardon HK3250

By far the simplest of the three receivers in the group, Harman Kardon's HK3250 is also the classiest looking in my estimation. Though Harman Kardon is a wing of all-American Harman International, the HK3250 is made in Korea. Yet its stark lines and elegantly profiled front panel convey modern American roots, with a distinctly high-end flavor to its appearance. (The little knockout tab in the

lower right corner is a somewhat less classy touch, however.)

With just four knobs and ten buttons, the HK3250's face is by far the sparest of the lot. It also sports the most legible graphics, with bright, bold, gold-tone lettering. And it has the heftiest metal top cover of the three. The Harman Kardon receiver lacks several features found on the other models in this group, including a loudness-compensation control, a phono input, video inputs and outputs, and automatic preset-loading for FM stations. On the other hand, it costs \$80 less than the others. What it does offer is a preset-scan feature on its remote control for previewing stations once you've entered them into memory, two full input/output tape-monitor loops (one is labeled VCR1 despite the ab-

Perhaps surprisingly, the Harman Kardon's amplifier matched the performance of its more powerful (on paper) rivals in almost every regard. On material with a wide dynamic range, it delivered an outstanding sense of acoustic impact and "push," particularly from trap drums, that easily equaled anything from the two higher-wattage contenders. At the same time, it matched them in bottom-end depth and control, and it may even have topped them in treble clarity, ease, and smoothness. The HK3250 didn't quite measure up to the others in ultimate, clipping-free loudness, but it came within a couple of decibels. Harman Kardon is the only company in this group to specify the amplifier's "instantaneous current capability," which for the HK3250 was rated at ± 20 am-

Harman Kardon HK3250



<p>POWER RATING: 40 watts per channel into 8 ohms or 65 watts into 4 ohms with 0.09 percent THD</p> <p>DIMENSIONS: 17¼ inches wide, 4¾ inches high, 15 inches deep</p>	<p>WEIGHT: 18 pounds</p> <p>PRICE: \$319</p> <p>MANUFACTURER: Harman Kardon, Dept. SR, 80 Crossways Park W., Woodbury, NY 11797; telephone, 1-800-422-8027</p>
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sence of video ports), and rear-panel pre-out jacks for system expansion. Power output is rated as 40 watts per channel.

On the FM front, the HK3250's behavior was very good. Strong-signal reception was excellent: crisp, clear, and, within the limits of today's rather uneven broadcast standards, tonally balanced. Strong-signal sound quality was almost as good, with the kind of musicality from the best broadcast sources (NPR and a few college stations) that rivals the performance of a decent stand-alone tuner. Weak-station reception was about on par with the Denon — good but not great. The AM reception, using the supplied loop antenna, was marginally better than the Denon (four stations instead of three) but still nothing to jump about.

Whether that has anything to do with its performance is mostly immaterial: I thought the HK3250's amp made the B&W speakers sound damn good. And when it reached its power-output limit, I felt it clipped a bit more gracefully than the other amps in the group, with a less steep "hardness curve" and a slightly slower onset of audible crunch. But, again, these observations are all highly subjective and subject to the influences of room acoustics and the speakers.

A couple of closing observations on the performance of the HK3250's amplifier. First, I thought its tone controls were relatively useful, with a not-too-boomy smoothness on the bass and a well-placed effect from the treble. Second, the amp section was extremely quiet, perhaps even a tad quieter

Yamaha RX-595



POWER RATING: 80 watts per channel into 8 ohms with 0.019 percent THD

DIMENSIONS: 17½ inches wide, 5¾ inches high, 15½ inches deep

WEIGHT: 21 pounds

PRICE: \$399

MANUFACTURER: Yamaha, Dept. SR, 6660 Orangethorpe Ave., Buena Park, CA 90620; telephone, 714-522-9105

than the Denon. Receivers in general have come a long way in the past decade or so in this regard.

Ergonomically speaking, Harman Kardon's little receiver was easy to use. The front-panel layout is logical and user-friendly, and its controls worked smoothly and silently, though the dual-rocker arrangement of input-select keys may be puzzling at first glance. Knob action was solid, better than the Denon's, though not quite as "expensive" feeling as the Yamaha's (I'm a sucker for this quality), and volume ramp-up was fine. The HK3250's remote control was probably the most intuitive of the three; unlike the others, it has a nine-digit numeric keypad for direct access to radio presets.

The Harman Kardon HK3250 is also the only receiver in this group to offer a mute button on its remote — a handy feature. Unfortunately, there is no visual cue to inform you when the receiver's volume is muted, and when you hit the mute button a second time to unmute the output, there's a half-second delay. These quirks could make for a few nasty surprises until you learn your lesson. My only other quibble: I wish the receiver was a couple of inches less tall. Nevertheless, if plain vanilla is what you seek, the HK3250 is a tasty choice.

Yamaha RX-595

The Yamaha RX-595's front panel has the most densely populated layout of the trio, with separate knobs for source and record-output selection and two "extra" buttons for CD-Direct and Source-Direct tone-control bypass modes. Yamaha's smallish, slightly

dim panel graphics bugged me mildly, but I thought the Malaysian-made receiver's overall look and feel were very nice. Its control feel was the best of the bunch, and its top cover was solid.

On the FM side, the RX-595 was the distant-signal champ of the lot, receiving more stations overall than its rivals. More important, from both antennas it tuned in one or two more stations with a listening quality I would rate B or better. Music quality from strong FM stations was very good, with low noise and definition, relative freedom from distortion and multipath, and a slightly warm but pleasantly dynamic tonal balance.

Overall, sound quality with strong signals was about on par with the Denon receiver in terms of noise and distortion. The Yamaha sounded distinctly though subtly different from the Denon, however, not quite as wide or dimensionally deep. On weak signals the Yamaha was the clear winner, so if you want to listen to a distant station where your prime criterion is intelligibility, the RX-595 is the best bet here. Its AM performance was also the best — it plucked eight potential ball-game broadcasts from the ether, well above average for the AM tuners being built into receivers these days.

Watts-wise, the RX-595's 80-watt-per-channel power rating (the group's highest) did not translate into dramatically higher volume. The amp was an impressive performer nonetheless, delivering a clean, dynamic presentation. It hit about the same top volume level as the Denon without compromising sound quality, but it was able to play a tick louder with decent, though not

maximal, sound quality before the onset of ugly distortion. Below clipping, the RX-595 sounded pretty much indistinguishable from the Denon, though I still preferred the Harman Kardon for critical listening.

Like its fellows, the RX-595 was impressively quiet. Its tone controls were better than average in terms of utility, though the treble effect was slightly "spitty" for my taste. Yamaha's continuously variable loudness control, a company trademark, worked pretty well for moderate-volume listening but was too heavy-handed in the midbass region at extreme settings.

Uniquely, the RX-595 includes both CD Direct Amp and Pure Direct buttons on its front panel to bypass tone and loudness circuits, simplifying the signal paths for CD and other sources. Why both are necessary is something of a mystery. I usually find such controls to be somewhat silly, but I must confess that I did detect a slight difference in sound quality when the CD Direct button was engaged. The change was subtle enough to obviate value judgments, but I sensed a difference nonetheless.

In terms of ergonomics, the Yamaha RX-595 was easy to use (though it joined the Denon receiver as an offender for its too-loud-too-fast volume control). Its rotary controls, including a lovely "old-fashioned" source-select knob, rated highly with me, as did its independent record selector. That added level of flexibility, unique in the group, will prove invaluable if you do a lot of recording. On the down side, the RX-595's remote was the least friendly of the lot, with same-size keys and a confusing layout; no mute button, either. Though the receiver's amber display was the toughest to read in bright daylight, it was the most legible at night. On the whole, the RX-595 struck a nice balance between performance and features and, apart from its remote, had no serious vices.

The Final Word

While the digital age has not in my book done much for receiver ergonomics — fusty old coot that I am, I still favor knobs and slide-rule dials over buttons and LCD readouts — it has advanced value. All three of these receivers are fully evolved designs that will do the trick for most folks. In the important areas of performance, they all did well, delivering better-than-decent FM reception and near-parity on the power front (even though their rat-

measurements

	DENON DRA-565RD	HARMAN KARDON HK3250	YAMAHA RX-595
AMPLIFIER SECTION			
OUTPUT AT CLIPPING (at 1 kHz)			
8 ohms	80 watts	55 watts	102 watts
4 ohms	114 watts	81 watts	136 watts
CLIPPING HEADROOM (re rated output, 8 ohms)	0.9 dB	1.38 dB	1.1 dB
DYNAMIC POWER			
8 ohms	115 watts	64 watts	144 watts
4 ohms	171 watts	112 watts	230 watts
DYNAMIC HEADROOM (re rated output, 8 ohms)	2.5 dB	2.04 dB	2.5 dB
DISTORTION AT RATED POWER			
8 ohms	0.0042%	0.016%	0.0053%
4 ohms	NA	0.06%	NA
SENSITIVITY (for 1 watt output, 8 ohms)			
CD	25 mV	30 mV	17 mV
phono	2.4 mV	NA	2.8 mV
NOISE (re 1 watt, A-wtd)			
CD	-83 dB	-83 dB	-72 dB
phono	-81.5 dB	NA	-79.5 dB
RIAA EQUALIZATION (30 Hz to 15 kHz)	+0.25, -1.0 dB	NA	+0.15, -0.7 dB
FREQUENCY RESPONSE 20 Hz to 20 kHz (tone controls flat)	+0, -0.7 dB	+0, -0.4 dB	+0, -0.2 dB
TONE-CONTROL RANGE			
100 Hz	+9, -11 dB	±8 dB	+8.5, -8.2 dB
10 kHz	+8.5, -10.5 dB	±9 dB	±8 dB
TUNER SECTION*			
SENSITIVITY (50-dB quieting)			
mono	14 dBf	31 dBf	15 dBf
stereo	38 dBf	31 dBf	26 dBf
NOISE (at 65 dBf)			
mono	-79 dB	-77 dB	-78 dB
stereo	-73 dB	-69 dB	-72.5 dB
DISTORTION (THD+N at 65 dBf)			
mono	-50 dB	-57 dB	-54 dB
stereo	-53 dB	-60 dB	-50 dB
CAPTURE RATIO	2.5 dB	2.5 dB	2.5 dB
AM REJECTION	70 dB	67 dB	66 dB
SELECTIVITY			
adjacent-channel	6.5 dB	5 dB	8 dB
alternate-channel	63 dB	58 dB	61 dB
PILOT-CARRIER LEAKAGE (19-kHz)	-32 dB	-73 dB	-75 dB
HUM (worst case)	-84 dB	-80 dB	-80 dB
CHANNEL SEPARATION			
100 Hz	36 dB	40 dB	36 dB
1 kHz	40 dB	44 dB	46 dB
10 kHz	40 dB	39 dB	35 dB
FM FREQUENCY RESPONSE (30 Hz to 15 kHz)	+1.7, -0.4 dB	+1.25, -0.4 dB	+1.3, -0.2 dB
AM FREQUENCY RESPONSE	130 Hz to 1.9 kHz +0, -3 dB	60 Hz to 2.6 kHz +0, -6 dB	30 Hz to 2.4 kHz +2, -6 dB

* All data for FM only except frequency response.

ings range from 40 to 80 watts). Yet each model has distinguishing features and operating modes that set it apart from the others, as well as elements of design and ergonomics that give it a distinct personality.

For a budget-limited shopper who wants to do serious listening from CD's and strong FM sources, I'd probably recommend the Harman Kardon HK3250 — especially if styling is a factor. Where a compact combination of high power and features are key, Denon's DRA-565RD would get the nod — especially in dense urban areas that enhance the utility of its RDS tuner. And for those who want the most overall power and FM receivability — and especially for inveterate home recordists — the Yamaha RX-595 is the obvious choice. □

the Numbers

The test-bench results from Hirsch-Hoock Labs on the three receivers held few surprises. Maximum power with 8-ohm loads was above spec in all cases — 55 watts for Harman Kardon's HK3250, 80 watts for the Denon DRA-565RD, and 102 watts for Yamaha's RX-595 — a spread of less than 3 dB. With 4-ohm loads the spread was less than 2 dB, with extremes of 81 and 136 watts. All three amplifiers exhibited impressive low-distortion performance, with at least 2 dB of dynamic headroom all around, which helps explain the excellent listening results. The Yamaha's rather mediocre A-weighted signal-to-noise ratio (72 dB re 1 watt) surprised me; I did not perceive a 10-dB noise difference relative to the other models.

Interestingly, the tuner tests correlated fairly well with the findings of my listening evaluation (I'm not accustomed to art and science dovetailing so well). The Harman Kardon showed the best audio results (stereo distortion at -60 dB, for example), and the Yamaha's excellent weak-signal reception was reflected by a stereo sensitivity measurement of 26 dBf and a relatively high 61 dB alternate-channel selectivity. The Denon's poor pilot-tone suppression (-32 dB) was a surprise, but apparently it was sufficient to tame the effects of 19-kHz leakage, as I did not hear any warts while listening. —D.K.

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THEY SAY IGNORANCE IS BLISS, but when you're hooking up a stereo system, ignorance can spell disaster. Connecting the wrong speakers, or combination of speakers, to a power amplifier (or the amplifier section of a receiver) can damage it or shorten its life. So what do you do when your amplifier is rated at 8 ohms and your speakers are rated at 4 ohms? That darn salesman told you everything would work! Well, to his credit, it probably will. But there does seem to be considerable confusion about impedance ratings for amplifiers and speakers, and what these numbers really mean when you wire them together.

Sorting It Out

The ohm (named for the German scientist Georg Simon Ohm) is the unit of electrical resistance or impedance. Simply put, a device's capacity to resist the flow of an electric current and convert it into heat is called *resistance* in the case of direct current (DC), which flows in only one direction, and *impedance* in the case of alternating current (AC), which runs in both directions. The more resistive the device, the higher its ohm rating.

ILLUSTRATION BY STEPHEN SWENY

BY CHRIS STEINWAND



For practical purposes, only your speakers "have" impedance. Your amplifier's 4-ohm or 8-ohm rating refers to the impedance of the load it's intended to handle, not the unit itself. (Any amp has a certain "output impedance," but this is usually negligible.)

The manner in which a speaker generates impedance is pretty simple. An audio signal is alternating current, which constantly changes directions. As it does, the signal swings back and forth from positive to negative. Each of these excursions is called a cycle. The number of cycles in each second determines the signal's frequency, which is measured in hertz (Hz); 1 Hz is equal to one cycle per second.

Now, a traditional speaker has a wire voice coil that sits in a magnetic field created by the driver's magnet. As an audio signal flows through the coil in one direction, the electrons build up an opposing magnetic field in the voice coil that moves the speaker diaphragm. The reversing flow of electrons must then fight against the energy stored in that magnetic field. The more the current changes direction, the more often this conflict takes place and the more opposition the signal encounters. In other words, *as the input signal's frequency rises, the voice coil's impedance rises proportionally.*

This phenomenon has profound implications for your audio system. It means that in a typical three-way speaker, the bass driver will have the lowest impedance, thereby allowing it to receive most of the power your amplifier generates — usually about 65 percent of it. The midrange usually gets around 20 to 25 percent (even though it *sounds* the loudest), and the little tweeter gets the rest. This makes perfect sense. Remember those physics lessons? Electric current will always follow the path(s) of least resistance. So when the current divides in your speaker, the drivers operating at the lowest frequencies end up with the lowest impedance and draw the most power.

Since a speaker's impedance varies depending on the frequency of the input signal, it is typically rated as having a certain "nominal" impedance. Surprisingly, there isn't much agreement in the audio industry on the exact meaning of nominal impedance. The Electronic Industries Association, which develops test guidelines for audio products, defines it as 10 percent above the lowest measured impedance

of the speaker when playing full-spectrum white noise. Nonetheless, my discussions with engineers at a handful of audio manufacturers have resulted in conflicting definitions, and there is currently no certification program to hold manufacturers accountable for the impedance ratings of their speakers. Be wary, though you can be reasonably confident of those given by well-known manufacturers.

Plugging It In

Most stereo amplifiers have a power rating that specifies a load of 8 ohms. This figure has much to do with how the amplifier is tested by Underwriters Laboratories (UL), which certifies the safety of home appliances.

To test an amplifier, UL starts by connecting a load resistor — a sort of silent substitute for a real speaker — at the output terminals. The resistor, usually rated 8 ohms, is driven with a constant 1-kHz sine wave at one-tenth of the amplifier's maximum *measured* power rating. The amplifier must then operate for 6 to 8 hours without overheating or exceeding its rated distortion levels. This is a very strenuous test, and UL is making it even more stringent now by phasing in testing at one-eighth of maximum power. It lends great credence to the value of that little black-and-silver "UL approved" sticker that's on the back of most electronic products.

In any event, if the UL test used a 4-ohm resistor instead of an 8-ohm one, the amplifier would produce *twice* the current and *twice* the heat for the same output-voltage level, and many of the products that would otherwise pass the test would fail. Well, guess what? According to UL, if your amp bears a UL sticker but does *not* specify an 8-ohm load next to its output terminals, then it was automatically tested with 4 ohms (or possibly even 2 ohms, if it's designed to drive two pairs of speakers at once). This is a good quick reference when you're shopping. If there is no impedance rating posted at the speaker terminals, or if the rating is 4 ohms, then you're probably looking at a higher-current receiver or amplifier that may stand up to more rugged use.

Even so, an amplifier's impedance rating is ultimately of limited value when it comes to establishing the speaker load it can safely handle. Normal listening places much less demand on your amplifier than the UL test, which is equivalent to playing *music at full volume* for 6 to 8 hours.

Therefore, if your receiver handled 8 ohms during the UL test, it should handle lower-impedance loads under less strenuous conditions at home.

So why don't manufacturers place a more realistic impedance number on the back of their products, or else give a range of numbers? In most cases, they're protecting both you and themselves. It's kind of like driving your car at 55 mph. The car can go faster without danger, but the people who make the rules like to keep things nice and safe. Of course, some drivers *can't* drive safely at higher speeds, and, generally speaking, higher speeds do increase the probability of accidents. The same law applies to operating an amplifier with a load that's below its impedance rating. Although in most cases the amp will handle the lower impedance without suffering any damage, the probability of failure increases slightly, especially over the long term.

Unfortunately, it's impossible to predict how long any amplifier will last, even when it is safely operated at its rated speaker load. Eventually all things wear out, and a lot depends on how you use your gear. No \$300 receiver is built to be used in a night club (or your living room) at full volume for 6 hours at a time, night after night, even with 16-ohm speakers.

Hooking It Up

Okay, so now you're ready to wire up your amplifier. Maybe you've got just one set of speakers. Or maybe you've got two pairs you'd like to connect and play simultaneously. Perhaps you've got two pairs in one room and a third pair in another room. How do you figure out what your amp can handle?

There are a few practical guidelines to follow here. First, we can assume that in most cases, if you have only one pair of speakers, your amplifier will probably be able to handle them without problems as long as they're not rated below 4 ohms. Keep in mind that the manufacturer of your amp is almost always going to recommend that you use speakers rated 8 ohms or higher, and if you don't you may run into warranty problems. Nonetheless, the odds are good that a name-brand, component-grade unit will comfortably handle a pair of 4-ohm speakers.

How can you tell? A big hint is the presence of multiple speaker outputs. Many receivers are designed to be able to play two sets of speakers at the same time. When you do this, the A and B speakers are usually connected

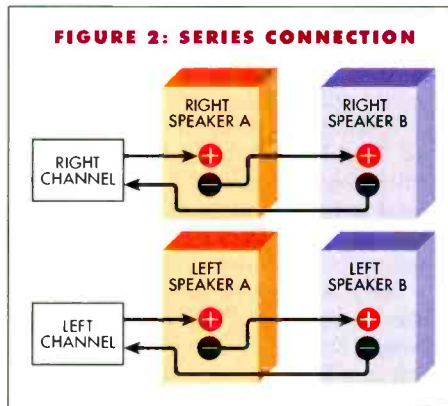
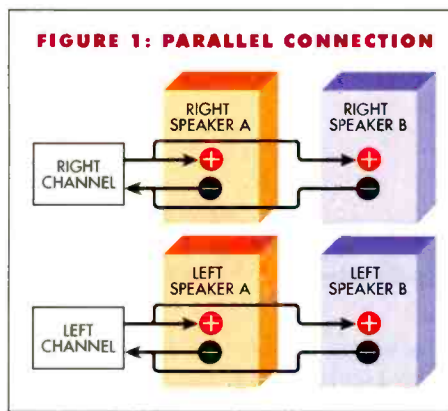
together *in parallel* inside the receiver (Figure 1). Wiring two sets of speakers in parallel effectively lowers the total impedance. Two pairs of 8-ohm speakers in parallel will put a 4-ohm load on your receiver's output channels. So the presence of multiple speaker outputs on an amplifier rated for 8 ohms suggests right off that it can safely handle a 4-ohm load under normal listening conditions, whether that load is in the form of two pairs of 8-ohm speakers playing together or a single pair of 4-ohm speakers playing alone.

It's easy to check whether your A and B speaker outputs are connected in parallel. First, connect speakers to both sets of outputs and select A+B playback on the speaker-selector switch. While playing some music through both pairs at low volume, carefully disconnect the left speaker of the A pair. If the left speaker of the B pair continues to play, your A+B speaker switch connects the pairs in parallel, and therefore your amplifier is probably designed to handle a load that's half of its impedance rating.

If, however, the left speaker of the B pair stops playing when you disconnect its A counterpart, it indicates that your A+B switch is connecting the two pairs *in series* (Figure 2), which means that their impedance is added together rather than halved. Two pairs of 8-ohm speakers in series results in a 16-ohm load, with half the voltage being delivered to each speaker. A series A+B connection may mean the amp's manufacturer was being overly cautious. More likely, the unit is simply not designed to handle a low-impedance load for any length of time.

It should be clear by now that understanding the effects of series and parallel speaker connections is critical to making sure your amplifier operates within its safety zone. Remember, wiring speakers *in series* always *raises* the total impedance "seen" by the amplifier and is generally safe. Wiring speakers *in parallel* always *lowers* the total impedance load and can be dangerous if done carelessly.

For example, two sets of 4-ohm speakers connected in parallel would yield a nominal impedance of only 2 ohms. That is too low for most receivers on the market as well as all but the most rugged home and professional amplifiers. What if you have two pairs of 4-ohm speakers in different rooms that you want to connect to the A and B outputs of an amplifier rated for 8 ohms? Well, if you've established that



the amp's internal A+B switch connects the speaker pairs in parallel, playing either pair alone would present the amp with 4 ohms, which is probably a safe load. But playing both pairs simultaneously would result in a 2-ohm load, something you want to avoid. Similarly, a 4-ohm speaker and an 8-ohm speaker wired in parallel results in a nominal 2.7-ohm load, which would also be risky.

If you just want to have two pairs of speakers playing in your listening room at all times, you can always wire them in series to add their impedance, which means that 4- or 8-ohm speakers will present a very safe 8- or 16-ohm load to your amplifier. Of course, there's a catch: Each speaker gets only half the voltage and therefore half the power, so you're spreading the sound among four speakers without getting any additional volume. (This, by the way, is the primary argument for using 4-ohm instead of 8-ohm speakers: They draw twice the current from an amplifier under similar conditions, resulting in a 3-dB increase in output.) Also, when you connect speakers that are not identical in series, the impedance variations in one pair can affect the frequency response of the other.

If you have multiple speaker pairs you wish to play simultaneously in

one or more rooms, the simplest solution may be to buy an inexpensive speaker-divider box from a source such as Radio Shack. Some speaker dividers allow up to four speaker pairs to be played simultaneously from a single two-channel amplifier without overloading. These boxes are designed to keep the load to your amplifier more or less constant (and safe) through a combination of parallel and series connections. They're limited in how much power they can handle, though, and discriminating listeners may object to the small amount of distortion, noise, and response variations they introduce.

Shutting It Down

At this point you may be wondering what happens if you do manage to present your amplifier with an unsafe load. Relax. Most components today are built with protection circuits that are triggered by just such a scenario. They may not kick in when you first turn your system on, but as you turn up the volume and the amplifier tries to deliver more current into a low-impedance load, the amp will go into overload and most likely tell you so by shutting off. In other cases, the additional current drawn by a low-impedance load will cause the amp to run hot, and its thermal-protection circuits will eventually shut it down.

Be careful. Remember, you could be *playing with fire* — figuratively or perhaps even literally — when you continue to run excessively low impedance loads. At the very least, you can hurt sonic performance and cause your amplifier or receiver to age much more quickly. At worst, the extra heat coming off the amplifier's heat sinks and chassis can cause an injury, and in the unlikely case that the protection circuitry fails, there's no telling what might happen.

But that doesn't mean you should run scared every time your receiver and speaker impedance ratings don't quite match. Just be aware of how your audio components interact. It's not brain surgery, but there are some basic rules to follow. Keep them in mind, and when it comes time to connect your speakers, do the same as when you get behind the wheel: Drive safely. □

Chris Steinwand, a freelance technical writer, has spent the last seventeen years exploring all aspects of sound reproduction.

Good as Gold

Two wall hangings in Terry Upp's 1,700-square-foot home entertainment room speak louder about the man than his A/V system does — and that's pretty loud. One is the first record he ever purchased, a 45-rpm single of Elvis Presley's *Jailhouse Rock*, bought when the King was still swingin' his hips to the top of the charts and now mounted in an acrylic case. The other is a plaque that declares the basement fun room "Club Doc, Home of the Doctors Gold." That's gold as in gold records and gold lamé jackets, which are, respectively, Terry's stock in trade and the uniforms he and his old friend Rick Morel climb into whenever they spin tunes at family parties or the occasional paid gig.

Fact is, Terry Upp, who owns a janitorial company with his wife Kathie in

on buying records," he says, "and one day I looked up and had a wall full totaling 4,000 45's and 1,200 albums." His tastes run from big-band jazz to country to contemporary pop, but "my favorite music is still the early rock before the Beatles: the late-Fifties/early-Sixties stuff from Phil Spector, the Teen Idols, Neil Sedaka, the Shirelles, the Drifters . . ." Most of that vinyl has since been replaced by CD's (he has 1,500) or archived on digital audio tape or MiniDisc.

Terry built his \$17,000 A/V system like his record collection, slowly. He bought his first components — a Bogen amplifier, Garrard turntable, and Janszen speakers — in 1968. "I just progressed from there, and spent thousands along the way," he says, prodded in part by STEREO REVIEW, to which he has subscribed since 1977. But it wasn't until he and Kathie built a new home three years ago that he created his dream space.

Terry first called on Jamieson's Stereo in Toledo, where he's bought most of his gear. During construction of the house, Jamieson's wired it with Monster Cable and provided in-wall/in-ceiling speakers (or wall terminals for free-standing speakers) in the living room, family room, billiard room, master bedroom, deck, and garage. A Niles in-wall SPW6 switchbox located upstairs controls all six remote-speaker pairs.

The heart of the matter, of course, is downstairs in the basement. One wall sports a pair of custom-built wood equipment racks featuring track lighting and rear access via a utility closet. Alongside is storage for Terry's massive music collection, including wall racks for CD's, MD's, DAT's, and analog cassettes. His vinyl is concealed in a cabinet down below.

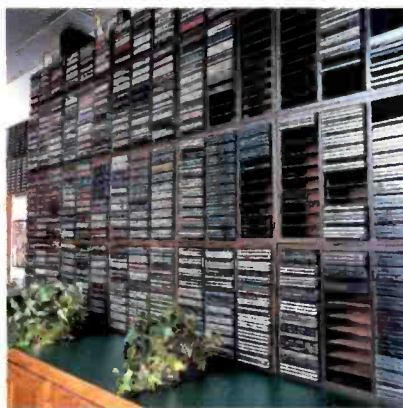
A Sony TA-E2000ESD digital pre-amplifier serves as the brains of the system and provides Dolby Pro Logic decoding for home-theater use. Terry especially likes its direct digital audio and S-video inputs. The preamp in turn feeds an Adcom GFA-555II power amp, which delivers 200 watts to each of two Klipsch Epic CF4 speakers, and a multichannel Adcom GFA-2535 amp, which juices the video system's Infinity center-channel speaker with 200 watts and a pair of in-ceiling rear surrounds with 60 watts each. The Klipsch speakers are recent replacements for an "extremely accurate" pair of Infinity RS-1B's that proved a bit too refined for the Upps, who like to entertain frequently and prefer speakers that can play louder. The incredibly efficient Klipsch CF4's are the only speakers Terry has heard that maintain their excellent sound quality no matter how hard he cranks them. A Klipsch SW12II 12-inch powered sub-woofer fills in the bottom.

The reference audio source is a two-piece Philips LHH-1000 CD player and digital-to-analog converter. It shares CD duties with a Pioneer PDF-904 100-disc megachanger that has brought much joy to this music lover's life. Terry's got it loaded with his twenty-five favorite albums and seventy-five best greatest-hits compilations. "I used to come down here and look at my 1,500 CD's and not know what to play," he explains. "Now I just put the Pioneer in random mode, and it'll always hit something I like."

Meanwhile, he's used a Sony DTC-77ES DAT recorder and MDS-501 MiniDisc recorder to slowly archive



Toledo, Ohio, is a frustrated DJ with a serious bent for oldies and a music collection that would be the envy of any pop radio station. It all started in the early 1950's when Terry, now 48, was a toddler listening to his mom's records. By the time his age hit double digits, rock-and-roll was in its infancy, and Terry caught the bug. "I just kept





PHOTOS BY AMEEN HOSSEINI

anything on vinyl that he can't buy on CD. Most of his 45's, as well as hit songs borrowed from LP's, are on MD to take advantage of the format's fast access time. DAT is used for infrequently played LP tracks. Incidentally, to keep tabs on his music library, Terry built a home computer database, with 11,500 songs searchable by artist, title, year, *Billboard* chart position, and audio format.

Other audio sources include a Sony CDP-K1A karaoke CD player, ST-S550ES tuner, and TC-WR99ES dual cassette deck and a dusty Phase Linear 8000II turntable. A Pioneer Elite SX-31 stereo receiver, rated at 100 watts per channel, drives the remote speakers through the Niles switchbox.

While Terry puts his music first, his

home theater is nothing to sneeze at. There are a pair of JVC HR-S5000 Super VHS VCR's for recording movies off-air (he's amassed some 200 films that way). A Sony EV-O510 8mm VCR allows playback of camcorder tapes without hooking up the camera. And he's just added a Sony SAT-A1 Digital Satellite System to gain access to 100 pay-per-view movie channels and 30 music-only channels. Images appear on a 61-inch Sony XBR rear-projection TV, for which Terry has high praise. "Nobody can believe it's not a picture tube," he says. "I've got another five or six TV's in the house, and this puts them all to shame."

Finally — and we've saved the biggest for last — Terry's home entertainment room boasts two extremely un-

usual features. As noted, the Upps like to party, so Terry and his pal Rick — the Doctors Gold — decided to include an elevated stage and dance floor. The stage raises the rear projector for easier viewing, but its primary purpose is to facilitate live entertainment. And that it does, often with the help of the Sony karaoke machine and a nearby wet bar. "Actually, it's worked out rather well," Terry laughs. "A lot of people, after they've had a couple of adult beverages, like to go up there and see what kind of performance they can put on."

Okay, so it's not quite *American Bandstand*. But, as systems go, Terry, we'll give it a 98: It definitely rocks, and you sure can dance to it.

—Rob Sabin

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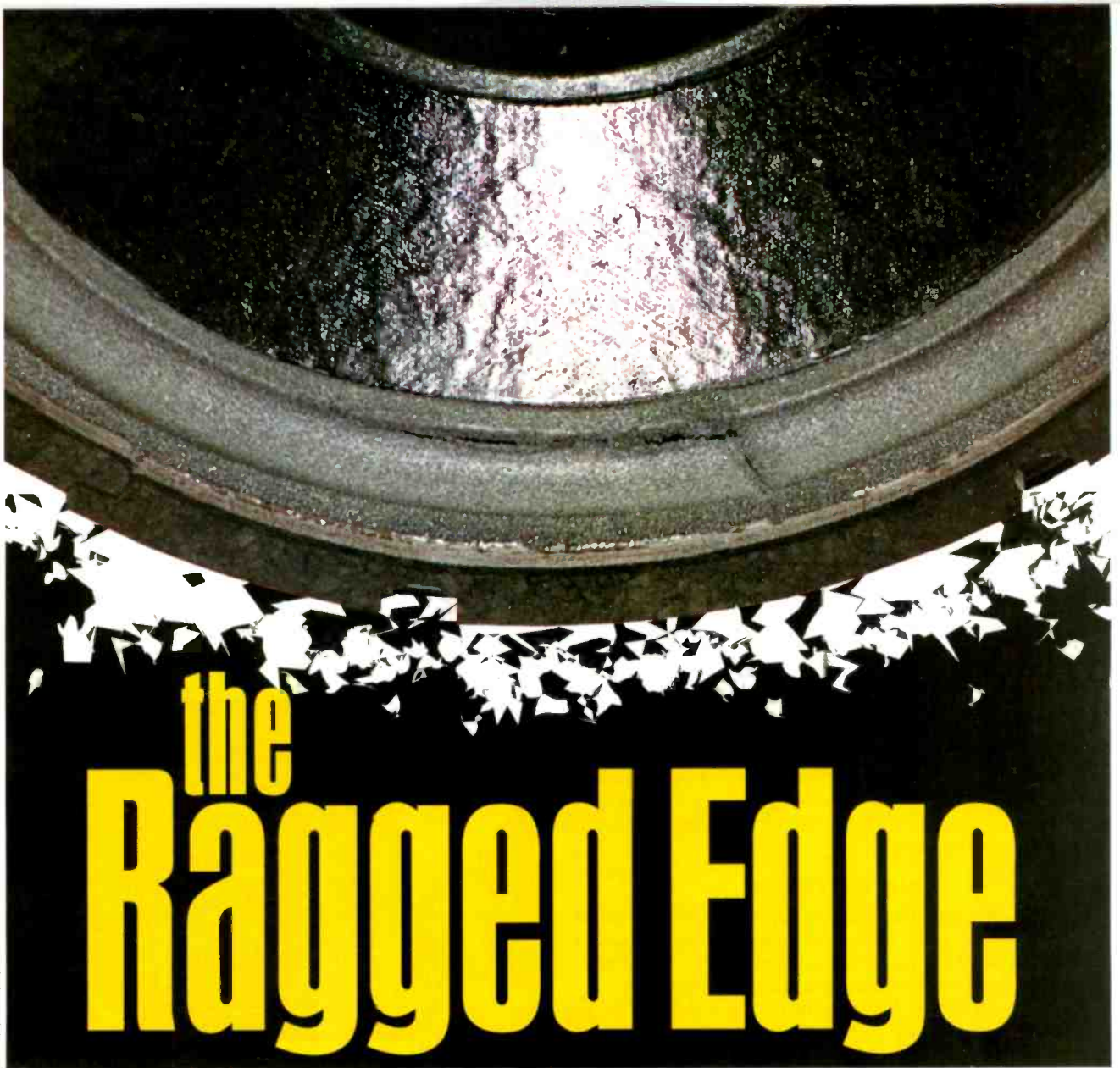


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the Ragged Edge

HOW TO REPLACE SPEAKER SURROUNDS

BY DENNIS EICHENBERG

Are your speakers starting to sound tired? Maybe they don't play as loud as they used to. Or maybe music that used to sound crisp and clean now sounds raspy — even at low volumes. If your speakers are more than a few years old, there's a pretty good chance that the woofers (or other drivers) are

beginning to fall apart. While there are a lot of things that can degrade the sound quality of a speaker, the most common culprit is a deteriorating surround, the thin strip of material that runs between the perimeter of a speaker cone and its frame. And if that's what's ailing your speakers, you may be able to breathe new life into them — without spending a lot of time and money.

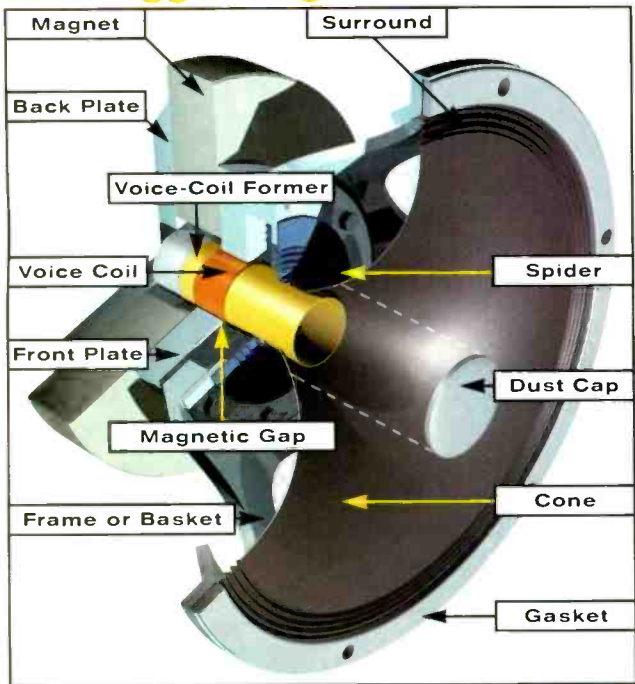
As you can see in the cutaway diagram on the next page,

besides joining the outer edge of the speaker cone to the frame, the surround also provides suspension for the cone, which produces sound by moving in and out. Surrounds are made of foam, butyl rubber, or cloth, but foam is by far the most common material because it performs well and is relatively inexpensive. Unfortunately, its life expectancy is rather limited. Over time, it dries out and eventually starts to crumble. In a

typical home setting, a foam surround should last ten to fifteen years on average, but prolonged exposure to direct sunlight or other heat sources will accelerate aging.

The first step toward saving your beloved speakers is to confirm that their poor sound quality is indeed the result of damaged foam surrounds. Carefully remove the grille of each speaker cabinet and inspect the drivers, paying particular attention to the woofers and midranges (these tend to go

The Ragged Edge



first). If the surrounds are in an advanced state of decay, you'll see holes in the foam. If damage is not readily apparent, look closely for small perforations in the foam — like the one shown in the photo on the previous page. If you spot a problem in one driver, it's a safe bet that other drivers in the system are also doomed.

THE OPTIONS

Once you determine that damaged surrounds are the cause of your speakers' sonic misfortunes, you have three options: replace the entire speaker system; replace the damaged drivers with new drivers; or replace the damaged surrounds.

Replacing the entire loudspeaker system is the way to go if you were never totally satisfied with the sound of your system to begin with — now you have an excuse to shop around for a brand-new pair.

Replacing the damaged drivers is a viable option if you really love the sound of your speakers — *and* if you can find appropriate replacement drivers. And it's the *only* way to save them if the damage extends beyond the surrounds, such as a punctured cone or a fried voice coil. There's no guarantee that an exact replacement driver will be available, however, and even if one is, it might be costly. While you may be tempted to use any old driver that fits the space, the chances of its sounding good in the system are slim.

Replacing the damaged speaker surround is the least expensive option — and often the most attractive — provided the speaker is otherwise in good condition. If it's properly installed, a new surround can restore the driver's original sound quality.

REPLACEMENT SURROUNDS

Surround-replacement kits for most name-brand speakers are available from a number of companies, including the New Foam division of Speaker Place in Rochester, New York (telephone, 800-639-3626), and Simply Speakers in Clearwater, Florida (800-767-4041). The kits typically include two surrounds, adhesive, and installation instructions. Speaker Place charges \$24.95 for its standard kit and \$27.95

for a deluxe kit that includes voice-coil alignment shims and replacement dust caps (plus shipping cost, which is not included in either price). Simply Speakers' kits cost \$23.95 to \$29.95, without voice-coil alignment devices. Both companies also provide a re-foaming service for those who prefer to leave the detail work to the professionals.

HOW TO DO IT

Replacing a speaker surround is a straightforward procedure. You'll need a utility knife (or any small knife), a few rags or paper towels to remove excess adhesive, and possibly a screwdriver or wrench to remove the driver. The key to success is patience. Work slowly and cautiously to prevent other damage while performing the repair. I've outlined the general replacement procedures below, but I urge you to pay careful attention to the instructions provided in the replacement kit.

Before you begin, determine whether the driver is mounted on the front or rear of the speaker enclosure's front panel, or baffle. If it's mounted on the rear, you'll have to remove it to gain full access to the surround. If it's mounted on the front of the panel (the speaker rim will be in full view), you can leave it in place.



1. Remove the damaged surround. Proceed carefully, using only your fingers if possible, to dislodge the surround from the speaker cone and frame. Gently does it!



2. Remove the remaining foam and adhesive from the speaker cone. Use a gentle scraping action with the side of your knife to avoid cone damage.



3. If the driver is rear-mounted, remove the gasket from the speaker frame. Slip the blade of your knife between the gasket and the frame, and carefully work it all the way around. The goal is to dislodge the gasket without destroying it so that it can be reused. (If it rips apart, replacement gaskets are available from the companies that sell re-foaming kits and supplies.)



4. Remove any remaining residue from the speaker frame. This will provide a clean surface for attaching the replacement foam surround.



5. Attach the new surround to the speaker cone. Using the adhesive included in the kit, apply a liberal bead of glue all around the edge of the speaker cone. Then carefully

place the inner edge of the surround on the cone. Make sure it's centered! Use a paper towel or rag to remove any excess glue before it dries. Let it dry thoroughly, and then check the action of the speaker cone. With your finger, move the cone in and out slightly to be sure that the voice coil is centered. The cone should move freely. Remove and reattach the surround if you sense any friction.



6. Attach the new surround to the speaker frame. Follow the same procedure as in Step 5, and make sure the surround is centered on the frame. Let the glue dry thoroughly.



7. For a rear-mounted driver, reattach the gasket to the speaker frame. Use the same adhesive you used to attach the replacement surround. Let it dry thoroughly. Then reinstall the re-foamed driver (if you removed it earlier) in the speaker cabinet.

PUT IT TO THE TEST

Now it's time to put the "new" driver through its paces. Play a known musical selection at very low volume to make sure sound is coming from each driver in the system. Then visually inspect the speaker cone of the re-foamed driver to be sure that it's moving freely. Slowly raise the volume to your normal listening level. With a little luck you'll be marveling at how good your speakers sound. Keep 'em away from heating ducts and direct sunlight, and they'll provide musical enjoyment well into the next millennium. □

Dennis Eichenberg is an electrical engineer who writes for several magazines, including *Popular Electronics*.



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on the challenge.
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Spirit
SOARING.
ESQ.
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William Christie

INTERVIEW BY ERIC SALZMAN

William Christie is sometimes described as a transplanted New Yorker, but the New York he is from is East Aurora, New York. This is, by dead reckoning, about 400 miles northwest of the elegant and comfortable lobby of the Carlyle Hotel on Manhattan's East Side where we talked in February. It is also some 3,500 miles from his adopted home in France, and light years in cultural distance. It was from this unlikely launching pad that Christie revolutionized the performance of early music, explained French Baroque music to the French, and reinvented the lost art of Baroque opera.

Christie's explanation is from the "aw shucks, just lucky I guess" school. "I just happened to be in the right place at the right time," he said with a smile. He has a plain, amiable, quizzical face framed by large, round, scholarly glasses, a shock of silver hair, and penetrating eyes. His 51 years of understated sophistication and plain-speaking manner might suggest your average Midwestern college professor. That is, after all, what he might very easily have become.

Except he was never average. He was, from the start, a brilliant student and a gifted musician. His talent took him to Harvard, to the Yale School of Music, where he studied harpsichord with Ralph Kirkpatrick, and to Dartmouth, where his brief American teaching career began and ended. In 1971 — footloose, fancy free, and, perhaps more to the point, draft-bait — he moved to France and plunged into the fast-developing early-music scene as a harpsichordist. There is a European side to Christie, but his get-up-and-go is very American and served him well. By 1979 he had formed his own ensemble, taking the name *Les Arts Florissants* from a piece by one of his favorite composers, Marc-Antoine Charpentier.

"Originally, I wasn't even sure I was going to stay in France, and I spent a lot of time hanging out in London and Amsterdam. As it turned out I loved living in France. No matter what you hear, the French are great at recognizing foreign artists in France if they understand that you are part of their definition of culture."

In a way, his work represents a coming of age of the historical-performance movement. In its early days, the stress was on olde instruments and authentic texts, and the appeal was mainly to connoisseurs. Christie has taken the next logical steps by extending the repertoire range to vocal and stage works and the expressive range to cover all the elements not written down in the score. In the process, he has enormously enlarged the audience for historical performance.

"It was logical, inevitable from the start that we would move into the theater," he said. "We were a young ensemble with a flair for the dramatic. I like being in front of singers and coordinating all the forces. I love the chemistry. I feel almost more comfortable in the pit than anywhere else."

Christie's vocal and operatic style is based, above all, on his choice of young, fresh-voiced singers with limited vibrato support and lots of breath control. Thanks to the transparent sound of gut strings and the other aperturances of an old-instrument ensemble, these voices can be heard even in large houses.

"I always choose light, flexible bel canto voices over coloratura voices." Bel canto for Christie means "singing on the breath," a technique that es-



An American conductor makes the French Baroque flourish again.

chews forcing the tone and allows for that long-phrased bel canto legato decorated with lots of fioratura. It's called ornamentation, but it is far from merely ornamental in Baroque music. All the singers did it then, even the basses. The technique has to be learned, and the singers are expected to come up with fresh variations at every performance.

"The idea is to make this music young again, to bring it back into a living context. Improvisation gives spontaneity and life. It has to come to the performers naturally. You have to be as cool and collected as someone in Duke Ellington's orchestra in 1938."

The jazz analogy is not so far-fetched. Both Baroque and jazz ensembles use continuo instruments (keyboard and bass) with performers playing from chord charts; both use improvisation with deep roots in vocal music. "Cool and collected," a very good description of Christie on the

William Christie

podium, definitely does not mean cold performances. On the contrary, the essence of the style can be described as extreme passions contained in very restricted frames.

The story of Handel's *Orlando*, a tale of a hero gone off the deep edge, might be the perfect allegory of this approach, so Christie's interest in the piece is not surprising. When we spoke, he was in town with his ensemble to perform the work at the Brooklyn Academy of Music. The production, by the Canadian stage director Robert Carsen, originated at the Aix-en-Provence Festival, where it was commissioned as a "budget" realization. There are, it is true, only five singers in the cast, and the modern staging is stark, with little gimcrackery. But only in a country like France, with lavish state subsidy of the arts, could this staging — with its remarkable effects of moving geometric forms, fire, and water — be considered "budget." And only William Christie could manage to tour a major opera with his own orchestra, an almost unheard-of practice in opera-land. If there is a secret to Christie's success, in particular his success at reviving Baroque opera where others have failed, it is his insistence on working in true ensemble fashion.

The manner of preparation is certainly the most outstandingly authentic aspect of Les Arts Florissants, almost a textbook example of the virtues of ensemble. The singers and musicians work together over long periods and give numerous performances and revivals of their major productions, constantly refining them and sharpening their focus. The orchestra sits high and directly in front of the stage so that stage and pit can communicate easily. The conductor often stops conducting to let the musicians and singers work out their own destiny for a while. This is the way eighteenth-century opera houses (and orchestras) normally prepared their repertoire, rehearsing and performing together over a period of years, so that even subtle nuances could be instantly communicated and executed. Except for string quartets and rock groups, it is a way of working that has disappeared.

Someone once called Christie the Karajan of the Baroque, and there is no doubt that, in spite of the prominence of some of his singers (Lorraine Hunt, Felicity Palmer), he is the real

CHOICE CHRISTIE

CHARPENTIER:

Les Arts Florissants.

HARMONIA MUNDI 901083.

Le Malade Imaginaire.

HARMONIA MUNDI 901336.

Medée. ERATO 96558.

Te Deum; Assumpta; Litanies.

HARMONIA MUNDI 901298.

LULLY: Arys. HARMONIA MUNDI

901257/59 (selections, 901249).

MOZART:

The Magic Flute. ERATO 12705.

Requiem. ERATO 10697.

PURCELL:

Dido and Aeneas. ERATO 98477.

King Arthur. ERATO 98535.

RAMEAU: Motets. ERATO 96967.

star of his performances. Except for his famous biting tongue (evident only when he is aroused on artistic matters), there is very little of the classic maestro about his manner. His conducting technique is relatively modest. He gives the impression of being a benign paterfamilias rather than a demanding martinet.

Most important, the method of work binds them all together. The orchestra is an essential part of the performances, not just an accompaniment. Singers and instrumentalists alike look at each other, they smile, they take cues from their colleagues as well as from Christie. It is a fine example of the traditional art of music as a social activity.

One thing Christie does *not* try to do is resurrect seventeenth- and eighteenth-century stage style. "I have never done a recreation of an old production," he pointed out, and, indeed, the *Orlando* is perfectly contemporary in style. Some critics see a contradiction here, but the conductor is of a different mind. "I'm a musicologist by training but not an archeologist. I don't just play the notes, and I don't do historical imitations of eighteenth-century staging. What does that mean anyway? Wearing wigs and costumes doesn't make a staging authentic."

Working in the theater and with stage directors has had a big impact on Christie's approach. After he switched record labels (from Harmonia Mundi to Erato), he rerecorded Charpentier's *Medée* — a signature work — in part to do a more complete digital version but also because putting the opera on stage had changed his notion of it. "The difference," he said, "was mind-

boggling. Now, I try to wait until we have done these big pieces a lot before attempting to record them. As you work on them and perform them on stage, they change, they grow."

Christie's theatrical reputation was built on French music, and it can be said that he gave France back the gift of its own great classic operas: *Arys* by Lully, *Medée* and *Le Malade Imaginaire* by Charpentier, several major works by Rameau. Recently he has looked across the English Channel, performing operas by Purcell and Handel. *Orlando* is the first of a series of Handel's Italian operas on his schedule, which also includes *Theodora* and *Rodelinda* at Glyndebourne and *Semele* at Aix. In Paris he is reopening the old Paris Opéra with Rameau's *Hippolyte et Aricie* with Lorraine Hunt and Pergolesi's *Olimpiade* at the Chatelet Theater.

He is also extending his repertoire to the Classical period with several works of Mozart, including a recently released *Magic Flute* (which includes an authentic showstopping cadenza for the Three Ladies) and new productions of *The Abduction from the Seraglio* and *The Marriage of Figaro*. Upcoming recordings include *Orlando*, finished just before the production came to New York, and *Semele*, planned for next year. Christie loves conducting Mozart and "had a ball" directing *Abduction*, which is also scheduled to be recorded next year. One project he would really love to do is the Beethoven *Missa Solemnis*!

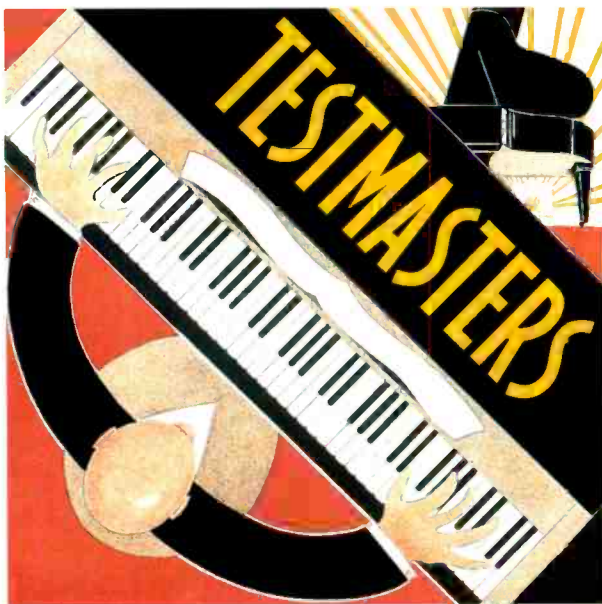
The demands of this schedule are finally catching up with him. He was the first American to teach at the legendary French Conservatoire, but he is now in such demand as a conductor that, reluctantly, he has made the "wrenching decision" to leave. He will come back to the U.S., however, both touring with his company and performing opera at the Brooklyn Academy, where he has been a regular for a number of years. He will also give a lecture at his alma mater, Harvard, on Baroque music as a cultural phenomenon in late twentieth-century France.

As we got up to leave the Carlyle lobby, a woman who'd been sitting nearby approached. "Mr. Christie," she said, "may I introduce myself? I'm a great fan of yours. I live in Paris and go to your performances whenever I can. Oh, and by the way, I'm also from East Aurora."

Must be quite a place, that East Aurora. □

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BEST OF THE MONTH

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



DENNIS KEENE/REPRISE

Westerberg: Hard Head, Soft Heart

Part of the Replacements' charm was the pain they took to keep vulnerability at bay in their pop-punk boys' club. Former leader Paul Westerberg hasn't lost that impish spark on his second solo album. "Eventually," but he no longer masks his sincerity with tomfoolery. On his own, he projects a personality with broader dimensions, one that doesn't flinch at the idea of maturation. All that — and a fair share of instant Westerberg classics — makes "Eventually" an album not just to own but embrace.

It may seem heretical to invoke the

name of Rod Stewart in conjunction with an indie-rock hero, but this record connects like an alternative "Every Picture Tells a Story," with a shot of Ray Davies's happy-sad rocker-dreamer tossed in for good measure. It's rootsy, ramshackle, heart-on-sleeve, funny, disheveled, reckless, brash, and human all at once. Mostly, Westerberg takes the music at a brisk pace, letting fly with his sandpaper rasp over a rock-steady bed of guitars and drums. He seems unashamedly attached to the old-fashioned idea of a good song. For example, instead of copping the chic, cynical pose of so many dour alternative

types. Westerberg opts for a life-affirmingly maudlin line like "A good day is any day that you're alive" (from *Good Day*), a much riskier sentiment to express. And in the shameless love ballad *Time Flies Tomorrow*, he actually croons.

On the rockier side of the ledger, he turns in a number of irreverent rave-ups worthy of his old band and anyone else's new one. *You've Had It with You* is so wrong — distorted voices, dissonant harmonies, wavering sound levels, guitars clashing in the ragged mix — that it's absolutely right, a winning marriage of Tommy James and the Sex Pistols. *Trumpet Clip* is woollier and faster still, a breakneck rocker that cracks Westerberg up even as he's singing its non sequiturs ("pin the tail on Demi Moore"). What's fascinating is his ability to insert warm tonalities into a punk song or to bare his soul without turning saccharine. Sometimes, as with his bittersweet, philosophical look at parenthood and kidhood from both perspectives in *MamaDaddyDid*, you don't know whether to laugh or cry. It's this beguiling mixture of sentimentality and toughness that makes songs like *Century*, *Ain't Got Me*, and *Angels Walk* so vivid, because they reflect the hard-headed, soft-hearted soul of an artist who refuses to deny either his emotions or his contradictions.

You just have to take Paul Westerberg for who he is — and that applies both to those who never understood punk and to those who never outgrew it.

Parke Puterbaugh

PAUL WESTERBERG: Eventually.

These Are the Days; Century; Love Untold; Ain't Got Me; You've Had It with You; MamaDaddyDid; Hide N Seekin'; Once Around the Weekend; Trumpet Clip; Angels Walk; Good Day; Time Flies Tomorrow.
REPRISE 46176 (45 min).

Ax, Ma, & Co. Catch Schubert's "Trout" Quintet

Schubert never intended his music to be divvied up by genre — he would have been deeply mystified by the modern notion of an evening devoted to his piano sonatas, or to the string quartets, or even a program composed entirely of songs. A brightly recorded new Sony CD by pianist Emanuel Ax, cellist Yo-Yo Ma, and friends instead offers a delightful recreation of a "Schubertiade" — a mix of chamber music and song like those the composer and his friends performed of an evening in his parlor in Vienna.

The main work is the "Trout" Quintet



From left, Edgar Meyer, Pamela Frank, Emanuel Ax, Yo-Yo Ma, and Rebecca Young

in A Major, for piano and strings, in as sprightly a performance as any on disc, with a powerful sense of ensemble. Violinist Pamela Frank plays the heavily embellished top lines with exquisite, balletic grace. Ma and Ax's years of collaboration have honed their ability to communicate

musically to a nearly telepathic level, which simultaneously anchors the performance and lets them soar in the joyous passages.

Nowhere is the intimacy of their musical conversation more apparent than in this inspired performance of the much-

neglected Sonata in A Minor for piano and arpeggione. The arpeggione is one of the white elephants of music history. Invented in 1823 by an instrument maker in Vienna, it was a six-stringed hybrid of a guitar and cello played with a bow and with a fretted fingerboard. If Schubert hadn't written his witty, madly romantic arpeggione sonata, the instrument would no doubt be completely forgotten. In Ma's capable hands, the singing cadences of the allegretto slink and shimmy with pure Viennese gaiety. Of course, Ma performs the work on the cello, though it would be interesting to hear it played on an arpeggione, and I'll bet he'd be just the one to do it.

To top the evening off, like a dollop of whipped cream on your *café mélange*, Barbara Bonney sings *Die Forelle* (*The Trout*), the charming early song whose tune reappears in the quintet, thus giving it its nickname, with all the limpid purity of the brook described in the lyric. The recorded sound has a close-miked intimacy appropriate to a *soirée musicale* with old friends. *Jamie James*

SCHUBERT: Quintet in A major for Piano and Strings ("Trout"); Sonata for Arpeggione and Piano; Die Forelle.

Barbara Bonney (soprano); Emanuel Ax (piano); Pamela Frank (violin); Rebecca Young (viola); Yo-Yo Ma (cello); Edgar Meyer (double-bass). SONY 61964 (65 min).

Joe Lovano: Experimental Traditionalist

The tenor saxophonist Joe Lovano's calling card could be his adaptability. Eclectic in his influences — combining the airy lyricism of Stan Getz with the muscularity of Sonny Stitt, the passion of John Coltrane with the brusque humor of Sonny Rollins — Lovano is equally at ease in mainstream or exploratory settings. Such a description risks making him sound like a chameleon, a journeyman who fits in at the cost of his own individuality. This is hardly the case. Now in his early forties, Lovano has emerged as one of the most readily identifiable soloists in jazz — a hard-bop traditionalist of sorts, yes, but one for whom the concept of "tradition" extends past 1965.

Last year's "Rush Hour" presented Lovano in an orchestral setting, playing the arrangements of Gunther Schuller. His new album, "Quartets — Live at the Village Vanguard," is just as ambitious in its own way. A two-disc set recorded at the most fabled of New York's jazz spots, it finds him fronting two very different groups. One disc features pianist Mulgrew Miller, with Lovano's tenor as the

only horn. The quartet on the other disc is pianoless, with trumpeter Tom Harrell joining the front line (and Lovano switching to soprano for two titles). My own preference is for the disc with Harrell, where both horn players solo nimbly over

Joe Lovano: hard-bop horn man



GUY AROCH/BLUE NOTE

Anthony Cox's galloping bass and Billy Hart's lashing cymbals. This unfettered music is inevitably reminiscent of early Ornette Coleman, and Lovano knows how to take advantage of such harmonic and metrical freedom.

His performances with Miller, bassist Christian McBride, and drummer Lewis Nash are more conventional but hardly less rewarding. Miller's own solos gleam, and his skill as an accompanist enables Lovano to turn in what may be his most impressive recorded ballad interpretation so far, on Gordon Jenkins's *This Is All I Ask*. But he is in such inspired form throughout that he even keeps his head above water on two spiraling numbers by Coltrane, *Lonnie's Lament* and 26-2, emulating Trane's drive but delivering his own ideas and making it clear he has his own voice. All in all, "Quartets" is a package that enhances Lovano's already sterling reputation. *Francis Davis*

JOE LOVANO: Quartets — Live at the Village Vanguard.

Fort Worth: *Birds of Springtimes Gone By; I Can't Get Started; Uprising; Sail Away; Blues Not to Lose; Song and Dance; Lonnie's Lament; Reflections; Little Willie Leaps; This Is All I Ask; 26-2; Duke Ellington Sound of Love; Sounds of Joy.* BLUE NOTE 29125 (two CD's, 128 min).

BEST OF THE MONTH

Albert Roussel's Symphonies Rediscovered

The Third Symphony of Albert Roussel (1869-1937), commissioned by Serge Koussevitzky for the fiftieth anniversary of the Boston Symphony Orchestra some sixty-five years ago, has made its way into the outer edges of the general repertory, but his Fourth hardly ever turns up in our concert halls and the First and Second not at all. Even by way of recordings, the first two are likely to be encountered only in the context of an integral set of all four, such as the attractive new one from RCA Victor with Marek Janowski conducting the Orchestre Philharmonique de Radio France.

This is the only such set available in the U.S. now, and it provides our only opportunity to hear the first two symphonies. They are worthwhile discoveries. Roussel called No. 1 "*Le Poème de la Forêt*," and he noted that No. 2, which has no subtitle, represents the ages of man. Neither symphony is insistently "descriptive" or "programmatic," but

both have an agreeably evocative character for which the much-abused term "impressionistic" seems apt enough. Both are strikingly different from the concise, propulsive Third and Fourth Symphonies — closer to the expansive proportions, the general format, and even some of the hovering mysticism of the earlier French symphonies of Franck and his disciples. Occasionally, however, they burst out in the spiky rhythms so characteristic of Roussel, and in the especially broad-scaled Second there are even what might

be regarded as pre-echoes of his 1931 ballet masterwork *Bacchus et Ariane*.

Less than ten years ago Radio France's senior orchestra, the Orchestre National de France, recorded Roussel's four symphonies for Erato under Charles Dutoit, but those discs are no longer available here. Dutoit had a bit of an edge over Janowski in respect to subtlety and expressive warmth, and the still current older recordings of No. 3 under Pierre Boulez (Sony), Charles Munch (Montaigne/Harmonia Mundi, coupled with No. 4), and Leonard Bernstein (Deutsche Grammophon), display an interpretive magic that no subsequent version has yet matched. But Janowski definitely has the measure of these symphonies; he seems to believe in the music unreservedly, and he fired up his players with something like missionary zeal to make an urgently persuasive case for all of it. Listeners who give this handsomely recorded set a try are bound to respond in kind. RCA has enhanced its appeal by packaging it in a convenient space-saving container.

Richard Freed



RCA VICTOR

Conductor Marek Janowski

ROUSSEL: Symphonies Nos. 1-4.

Orchestre Philharmonique de Radio France, Marek Janowski cond. RCA VICTOR 62511 (two CD's, 119 min).

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JOHN TRAVOLTA: Sings.

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MCA 11417. Totally remixed and remastered version of the classic rock opera.

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CANTELOUBE:

Songs of the Auvergne (complete). Netania Davrath (soprano); orchestra conducted by Pierre de la Roche. VANGUARD OVC 8001/2. "Davrath sings with her

customary tonal purity and outdoorsy temperament, and the orchestral sound is rich and colorful" (August 1966).

MESSIAEN: Et Exspecto Resurrectionem Mortuorum; Couleurs de la Cité Céleste.

Yvonne Loriod (piano); Groupe Instrumentale à Percussion de Strasbourg; Orchestre du Domaine Musical, Pierre Boulez cond.

STRAVINSKY: Symphonies of Wind Instruments.

New York Philharmonic, Pierre Boulez cond. SONY 68332. The performances are superb, but when it comes to Messiaen's *Couleurs*, "either you dig it or you don't," though "the sound is ideal" (March 1968).

RIMSKY-KORSAKOV: Scheherazade.

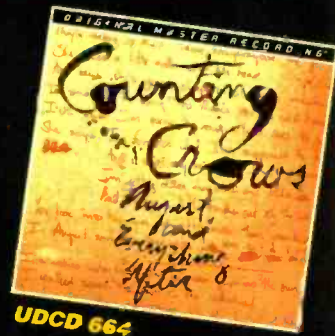
STRAVINSKY: Song of the Nightingale. Chicago Symphony, Fritz Reiner cond. RCA VICTOR 68168. "... the orchestral virtuosity here is enormously exciting" (August 1972 review of cassette tape version).

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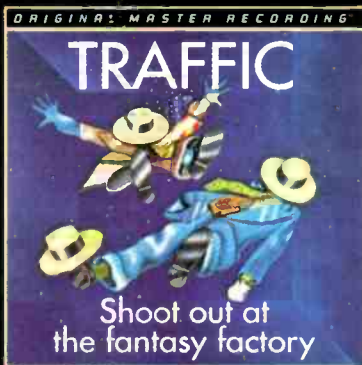
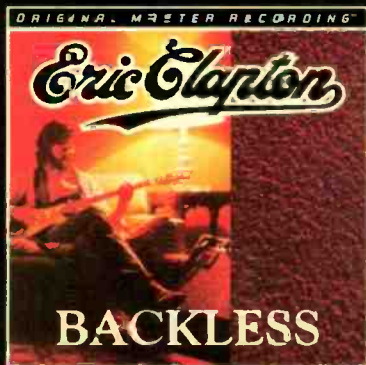


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PHYL GARLAND, RON GIVENS, BRETT MILANO,
ALANNA NASH, PARKE PUTERBAUGH, KEN RICHARDSON, & STEVE SIMELS

ASS PONYS: The Known Universe.

A&M 540 478 (39 min).

Performance: Scary

Recording: Good

On last year's "Electric Rock Music," the Ass Ponys served up a nasty but witty slice of their small-town life. Now the Ohio quartet gives us the horror of that life without the humor, the depressive without the manic. As lyricist/singer Chuck Cleaver puts it in *Shoe Money*. "This hole has no bottom / Of that I have no doubt / If I could only smarten up / And figure my way out / But what would I do then?"

I may take "The Known Universe" a little too personally, but I can remember when my own universe ended well this side of the county line. The people celebrated by the Ass Ponys don't seem to know better than I used to; they're going nowhere slow. So is the band. The tunes here seem to mosey even more than those on "Electric Rock Music," and if the new songs don't have the same emotional range, at least the guitars still have some spunk and the rhythm section some suppleness. And when the tunes kick it up a notch, the Ponys do take off.

In *And She Drowned*, song and band actually seek — and achieve — transcendence. A young woman, about to enter a house filled with painful memories of her dreadful past, stops on the threshold and then turns away. Fueled by a high-octane guitar solo and some serious bashing on the drum kit, Cleaver sings about how her "best was yet to come." For one brief moment, the sun shines on the Ass Ponys. And maybe, just maybe, that's enough. R.G.

THE BEATLES: Anthology 2.

CAPITOL/APPLE 34448 (two CD's, 128 min).

Performance: Revelation 2

Recording: Burn the boots

If you haven't bought "Anthology 2" just yet — in fact, if you haven't bought into the whole Beatlemania revival — get out your bank card. Are you suspicious of product that includes alternate takes and false

starts? Well, some companies have made a cottage industry of filling ten-CD sets with Every Lick Ever Recorded by artists great and small, so Capitol's archival program for the Beatles is by comparison a model of restraint, especially in light of the grave robbers who have been strip-mining Jimi Hendrix. Were you dismayed that "Anthology 1" had more than twenty covers of Fifties oldies and numerous TV/radio/concert performances? "Anthology 2" has but two covers and only seven live tracks. This is the Beatles as studio writers, inventors, alchemists — *rockers*.

The recordings here span February 1965 to February 1968, from the album "Help!" to the double EP "Magical Mystery Tour" (who else has achieved so much in a mere three years?), and the musical discoveries are simply exhilarating. There's a version of *I'm Looking Through You* with a radically different rhythm track and bridge, as well as an early take of *Tomorrow Never Knows*

that is much more dreamy than the ominous master. We learn that the Beatles were wise editors, deleting overly busy sitar lines from *Norwegian Wood* and awkward percussion from *Your Mother Should Know*. There's a fascinating sequence of takes for *Strawberry Fields Forever*, tracing the song from John Lennon's demo to a languid band version and then to a complete recording of what would later be truncated for the first half of the master — all capped by Ringo Starr's intense drum part from the second half, here isolated and loud. Time and time again, Ringo proves triumphant, especially in the thrilling tracks stripped of overdubs, including *I'm Down*, *Good Morning Good Morning*, and *I Am the Walrus*.

Want more? How about a lean take of *Got to Get You into My Life* that beats the released version, a rehabilitation of *Only a Northern Song* that lifts the song from its psychedelic fog, an acoustic *I'm Only Sleeping*, and an extended *You Know My Name (Look Up the Number)*, plus *And Your Bird Can Sing* as if sung by the Byrds and *A Day in the Life* in the making, not to mention three previously unreleased songs, the fun *Real Love* reunion, definitive liner notes, great photos . . .

I'm sorry, but I think I have to go lie down now. K.R.

FRANK BLACK: The Cult of Ray.

AMERICAN 43070 (41 min).

Performance: Pixilated

Recording: Guitar-heavy

Everybody seems to be ripping off the Pixies nowadays, so it's about time that former frontman Frank Black got into the act. While this makes "The Cult of Ray" a creative cop-out, it also makes it Black's best solo album by far.

The problem with his two previous efforts, especially 1994's "Teenager of the Year," was a glut of information: too many words, too many keyboards, too many songs with too many chord changes (former Captain Beefheart/Pere Ubu collaborator Eric Drew Feldman, who likely pushed



The outtake Beatles: the act you think you've known for all these years

Black in that direction, doesn't appear on the new album). The songs here take some tricky hops, but they stand still long enough to be witty and catchy and to rock in three-chord, garage-band style. A handful of Pixies trademarks are back — twisted humor, loud bass lines, surf instrumentals — and *I Don't Want to Hurt You* ranks as Black's most straightforward, appealing song since *Gigantic*. If the Pixies had recorded this album, it could have been one of their best.

Unfortunately, Black's studio band still ain't his former band. Guitarist Lyle Workman needs to tone down the arena flash, and Black needs to find a harmony singer who'll brighten the sound the way Kim Deal did. While he's at it, he might want to tone down the sci-fi themes. The Pixies' songs were usually about sex, dismemberment, or outer space, but Black sticks with the least exciting of those topics. *B.M.*

ERIC CLAPTON:

Crossroads 2 (Live in the Seventies).

POLY DOR (X)167 (four CD's, 268 min).

Performance: Hit and miss

Recording: All over the place

As if "E.C. Was Here" and "Timepieces Vol. II: Live in the Seventies" didn't do the job, here comes another Eric Clapton concert compilation from that decade. On four CD's, the guitarist runs through his most famous work (*Layla, I Shot the Sheriff*) as well as his favorite oldies (*Stormy Monday*). The first disc is surprisingly repetitive: Two songs, *Have You Ever Loved a Woman* and *Rambling on My Mind*, appear three times each (with *Rambling* showing up yet again on Disc 3, grafted onto *Goin' Down Slow*). As usual for Clapton in this time period, he relies on backing vocalists Yvonne Elliman and Marcy Levy to bolster him. However, in *Can't Find My Way Home*, where Elliman takes the lead to Clapton's harmony, he loses the spooky vocal quality of the studio recording; also gone is the at-the-end-of-my-rope feeling heard in the original *Presence of the Lord*.

That leaves Clapton's stinging guitar to carry the bulk of these performances, and he indulges himself in long solos (*Eyesight to the Blind / Why Does Love Got to Be So Sad?* goes on for more than 24 minutes) that veer from brilliant (*Little Wing*) to vibrant (*I Shot the Sheriff*) to ho-hum (*Willie and the Hand Jive / Get Ready*). All told, "Crossroads 2" is a sometimes invigorating, often just passable, and altogether nostalgic ramble down the byways of mid-career Eric Clapton, post-Yardbirds and pre-*Tears in Heaven*. *A.N.*

NEIL DIAMOND: Tennessee Moon.

COLUMBIA 67382 (68 min).

Performance: Better than expected

Recording: Very good

It's hard not to feel a twinge of affection for Neil Diamond, who recalls that hopelessly corny uncle who nonetheless manages to bring a tear to everyone's eye when he breaks into *Danny Boy* at family gatherings. That's not to say Diamond hasn't purveyed some of the most godawful schlock this side of Barbra Streisand, nor that he

ENHANCED CD'S WE'D LIKE TO SEE

THE BUSH LEAGUE. Hot on

the heels of the band Bush comes a reunion of the Bush Tetras. Coincidence? Not according to the cosmic links shown in this compilation's bios, videos, and family shrubbery. It's clear now that Brian Eno and David Byrne's "My Life in the Bush of Ghosts" was inspired by a secret ménage with, yep, Kate Bush. Special screens reveal linguistic ties to the songs *Tush* and *Hush* and the band Lush. Which brings us to . . .

RUSH: Permanent Waves Plus —

The Alliteration Edition. You can choose not only "from phantom fears and kindness that can kill" but also from "shifting shafts of shining" and "a host of holy horrors" with a menu that scans certain phrases and rates them on a scale from "Freshman, High School" to "Freshman, College." Warning: Some CD-ROM drives may be unable to handle "the magic music makes your morning mood" and "all this machinery making modern music." Which brings us to . . .



BEFORE



AFTER

LOU REED: Escape from Metal

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Ken Richardson

has completely curbed his excesses by taking the cure among the blue-blooded pickers of Nashville. But to a rock-weaned fan, "Tennessee Moon" may be the most listenable Neil Diamond album since his days on the Bang and Uni labels (and that's going back some).

Every third song or so is springy, unaffected, and fun. Some of the more mawkish offerings actually have a certain nobility; the guy is truly one of the last great romantics, and you've got to give him his heartfelt due. Highlights include the acoustic popcraft of *Gold Don't Rust* and *Can Anybody Hear Me* (the latter subbing country fiddles for the customary strings to good effect), the understated, gospel-fired rock-and-roll of *No Limit*, and the credible update of *Kentucky Woman*, which piles on more punch and twang than the original. Then

there's *A Matter of Love*, a feel-good tune with "hit" written all over it. If Neil Diamond keeps making albums like "Tennessee Moon," enjoying him will no longer be a guilty pleasure but an honest one. *P.P.*

GIN BLOSSOMS:

Congratulations I'm Sorry.

A&M 540 469 (46 min).

Performance: Bracing

Recording: Fine

The earnest power pop of Arizona's Gin Blossoms has become a grunge-free alternative to alternative. For that, they'll no doubt get dissed by keepers of the indie-rock bylaws, who tend to regard melody as tantamount to perfidy and for whom nothing fails like success. All of which has nothing to do with the Gin Blossoms' music, which is smartly styled and confidently executed.

The band locks into its niche in "Congratulations I'm Sorry," maintaining a brisk tempo, a steady stream of hooks, and an undiminished knack for mining beauty from melancholy. Keening, tremulous lead vocals, guitars that jangle and chime, and a tasteful rhythm section conspire to intoxicate. Some of the songs, such as the whipcrack opener *Day Job* and the torqued-up *My Car*, are as jolting as a shot of caffeine. Others, like *As Long as It Matters*, insinuate themselves in a more deliberate manner, seducing with rich harmonies and interlocking guitar parts. Then there are certain songs that sound instantly familiar upon first hearing. *Follow You Down* is just the most obvious of several irresistible numbers that hit with the gale force of a pure-pop déjà vu. *P.P.*

GUIDED BY VOICES:

Under the Bushes Under the Stars.

MATADOR 161 (55 min).

Performance: Wondrous

Recording: Not low-fi

I hate to jump a critical bandwagon here, but Guided by Voices may indeed be the most wonderful thing to happen to pop music in eons. I fell in love with GBV after last year's "Alien Lanes," but the band's catalog is loaded with small gems — witty, eccentric, and catchy nuggets delivered with unmistakable rock-and-roll heart.

GBV's tenth album, "Under the Bushes Under the Stars," marks a breakthrough of sorts: For the first time, the overused term "low-fi" doesn't apply. True, the band reportedly cut two versions of the album with hotshot producers Kim Deal and Steve Albini, then scrapped them both and recorded most of what's here on frontman Robert Pollard's beloved four-track. But this is the first GBV album that has the full-blooded guitar sound of its live shows, and this time all twenty-four cuts are real songs, not half-developed segues. It's not that Guided by Voices has gotten more conventional, just that it has kept the quirks that work — lyrical left curves, two-minute song cutoffs, cheerfully fake British accents — and toned down the ones that don't.

Between the power-chord rockers that open the album, the melancholy ballads

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POPULAR MUSIC

that turn up in the middle, and the Sixties homages scattered all around, it's hard to recall the last time I heard so many irresistible numbers on the same record. GBV has swallowed large chunks of pop history — there are frequent echoes of the Move, the Who, Cheap Trick, and the Pixies, not to mention that band that did *Free as a Bird* — but Pollard and company have a skewed sensibility that goes well beyond mere revivalism. In short, go right ahead and believe the hype. *B.M.*

HOOTIE AND THE BLOWFISH:

Fairweather Johnson.

ATLANTIC 82886 (50 min).

Performance: Unfazed by fame**Recording: Clean**

So how do you follow up a phenomenon as huge as "Cracked Rear View"? If you're Hootie and the Blowfish, who are as unpretentious as they come, you simply go out and make another record. Of course, "Fairweather Johnson" can't possibly out-sell its predecessor, whose mounting figures are akin to those of McDonald's hamburgers (12 million copies sold!). Still, the new album is certain to move millions — meaning that the band is as guaranteed to succeed in one sense as it is to fail in another. To understand that seemingly contradictory statement, consider Michael Jackson following "Thriller," Fleetwood Mac in the wake of "Rumours," and Boston after "Boston." Multimillion-selling failures all. Only in America.

So much for the inevitable backlash and on to what really matters: the music. With "Fairweather Johnson," Hootie and the Blowfish have made a more reflective and even-toned record. It's not bursting with obvious singles: there are no sure-fire smashes with big choruses that will have the whole country singing in the shower. The closest it comes to that kind of instantly engaging songcraft is *Old Man and Me* — tellingly, a remake of a number from "Kootchypop."

the band's 1992 EP. What the new album offers instead is a suite of songs that are more of a piece, hooked around singer Darius Rucker's brooding vocals and the band's unhurried, midtempo stride.

"Fairweather Johnson" is a sustained meditation on loneliness, desire, and parting, with Rucker entering that trancelike zone where singing becomes a form of sacrament. Soon enough, these subtly nuanced songs — sparingly accented with mandolin, keyboards, and strings — start to take on character and shape. Numbers like *The Earth Stopped Cold at Dawn* and *Let It Breathe* reflect the growth of a determinedly human-scaled band that, having tasted the fruits of an unfathomable success, is plumbing for something deeper. "Fairweather Johnson" augurs well for a future that will outlive the backlash. *P.P.*

KISS: Unplugged.

MERCURY 528 950 (56 min).

Performance: Sure, why not?**Recording: Fine**

A lot of us hated Kiss in the Seventies because they were really dumb and all their songs sounded the same. Now that the last few years have seen a revival of every self-important Seventies band from Led Zeppelin to Black Sabbath, we're starting to realize why we should have liked Kiss all along: because they're really dumb and all their songs sound the same.

"Unplugged" is the first act of what promises to be a full-scale Kiss renaissance, and the rock world could do worse: At least the band can show the young whippersnappers the importance of tunes and a sense of humor. Largely avoiding the ballad-heavy trap of most unplugged albums, Kiss rocks here with (no kidding) taste and subtlety. The acoustic setting points out the Beatlesque hooks and harmonies that were always in the songs. And just when you're starting to take these guys really seriously, along comes a lyric like "Plaster Caster,



FRANK MICELOTTA/MERCURY

Unplugged and with six former/current members, a Kiss is not just a Kiss.

POPULAR MUSIC

she calls me by the name of Master," a reminder that they carried the trashy-fun banner long before the likes of the Ramones picked it up.

Then again, Kiss recorded a lot of song-doctorized schlock in the Eighties, and a half-dozen of those tunes wind up here, along with a track from the failed concept album "Music from the Elder." And while "Unplugged" is being widely hyped for the return of original members Ace Frehley and Peter Criss, they appear on only four songs (including a half-baked cover of the Rolling Stones' *2000 Man*). Of course, all this is only the preview of a reunion-with-make-up tour now slated for the summer. It should be totally ridiculous, and I'm looking forward to it. *B.M.*

EMMETT MILLER:

The Minstrel Man from Georgia.

COLUMBIA/LEGACY 66999 (62 min).

Performance: Missing link

Recording: Acceptable

This year's most illuminating reissue — it may prove to be the year's best as well — features the work of a late-1920's white blackface minstrel who recorded *Lovesick Blues* well before Hank Williams and who preceded not only Williams but Jimmy Rodgers as a yodeling, blues-influenced vocal hula dancer. Although Emmett Miller emerges from these still-vital recordings as the father of modern country music, a case could also be made for him as one of the most supple and rhythmically assured male jazz vocalists of the Twenties (his accompanists include the Dorseys and Eddie Lang). The cover depicts him in lamplight and lip paint, and some of his spoken "coon" routines will inevitably make you cringe (as much for the hokiness of his humor as for the demeaning black stereotypes). But once Miller begins to sing, he's a revelation — the missing link between hillbilly and the blues, vaudeville and jazz, his day's popular music and ours. You can't really say you know American music until you've heard him. *F.D.*

BOB MOULD.

RYKODISC 10342 (42 min).

Performance: Intense

Recording: Resourceful

It's ironic that Bob Mould should write a song called *I Hate Alternative Rock*, since he's one of the most dependable artists in that nebulous genre. With his last band, the recently scuttled Sugar, he kicked some life into the big-guitar power-trio format. With this album, a true solo effort that nonetheless sounds and feels like the work of an inspired garage band, he does the same for the confessional, love-starved, bummed-out singer/songwriter format.

If this implies that "Bob Mould" is heavy going . . . well, it is, but only lyrically. Mould has written some downcast lines in his time, but he has seldom gone quite as far as these songs, which deal with deep career disillusionment (*Egoverride*), existential crises (*Deep Karma Canyon*), bad relationships (*Thumbtack*), even worse relationships (*Next Time That You Leave*), and all of

the above (the cheerful finale *Roll Over and Die*). In the past he would likely have set these lyrics to the most brutal music he could muster, as he did on Sugar's dark, metallic "Beaster." But the music here, with the single exception of the grating tape



squeak that runs through *Hair Stew*, is some of his brightest yet. The rockers are loose and upbeat, while the ballads show a newfound subtlety in his singing, such as the near-whispered delivery of *Anymore Time Between*.

Even with his occasional habit of stealing his own tunes — compare *Fort Knox*, *King Solomon* to Sugar's *Hoover Dam* — Bob Mould remains a good reason to love alternative rock. *B.M.*

LOU REED: Set the Twilight Reeling.

WARNER BROS. 46159 (51 min).

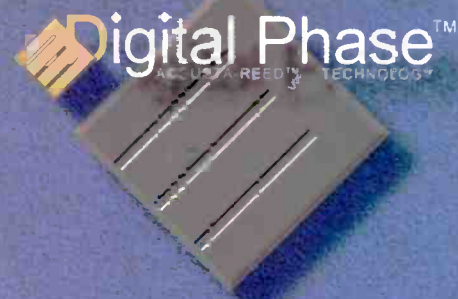
Performance: Vintage

Recording: Alive

"Set the Twilight Reeling" is all about dynamic range: the range of emotions that can be expressed in song, the range of sounds that can be captured on disc. The latter works as an analogue of the former in Lou Reed's touching/tasteless, poetic/profane, polished/roughed-up, elated/pissed-off, soft/loud, high-tech/low-fi slice of New York City life. The album is not overtly conceptual, unlike his last three projects ("Magic and Loss," "Songs for Drella," and "New York"), yet there is a discernible theme — namely, the artist's ongoing redemption through the healing power of love. (In case you don't scan *Rolling Stone's* "Random Notes," his real-life innamorata is Laurie Anderson.)

Although the subject has endless potential for sap, Reed never lapses into cloying confessions. Rather, he celebrates a vigorous, satisfying relationship by showing the raw-boned enthusiasm of a street-smart New York kid downing an *Egg Cream*: "Chocolate bubbles up your nose / That made it easier to deal with knife fights and kids pissing in the street." In *Hooky Wooky*, Reed is back in the present tense, a fully grown man still surrounded by the noise and stink of the city. No less childlike in his enthusiasm, he marvels at his paramour's maturity ("You're so civilized it hurts") while teasing her with the libidinally silly line "I want to hooky-wooky with you." And he hasn't lost his dyspeptic side; for a dose of Reedian venom, check out *Sex with Your Parents*, which finds him hurling unprintable acid darts at Republicans.

Reed is the ablest architect of language in rock-and-roll, but the musical medium is no less a part of his message, and he adroit-



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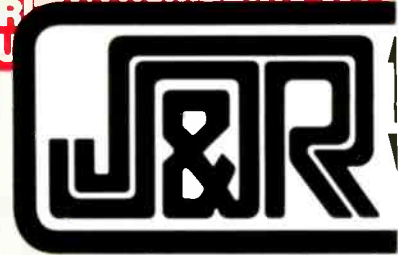
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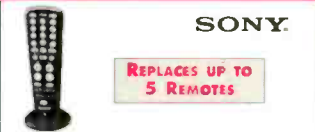
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ly places his words here in sympathetic settings. Working in a trio format, he handles all the guitar parts himself. Without pause he segues from *Egg Cream's* grunge guitar-fest to the pretty, restrained backdrop of *NYC Man*, flavored with subtle horns. In *Adventurer*, a breathlessly wordy tribute to (one supposes) Anderson, his voice and guitar chug along as if trying to keep pace with the object of his affection. It's evident that Reed has found not only comfort but challenge in this relationship, which has helped usher him to a new plateau, both as an artist and a human being. *P.P.*

RIDERS IN THE SKY:

Always Drink Upstream from the Herd.

ROUNDER 0360 (35 min).

Performance: Still riding tall

Recording: Very good

Nearly 20 years after their formation, the western trio Riders in the Sky still make fine music together, reviving timeless cowboy classics and writing contemporary pieces that could be the cowboy standards of tomorrow. On "Always Drink Upstream from the Herd" they stick to basic western themes (loving nature and animals, respecting boots and saddle, giving the other fella an even break), slipping into comic relief only in Too Slim's showcase, *The Trail Tip Song*, which reminds young cowpokes of the album title's wisdom as well as one other rule: "Don't squat with your spurs on."

If you like the Sons of the Pioneers, you'll be happy to know that the Riders demonstrate their mastery of intricate western harmony in such Pioneer-ish songs as *Riding the Winds of the West* and *The Whispering Wind*. They also add sparkle to their set in a duet with songstress Chris O'Connell (*The First Cowboy Song*). The pairing works so well that the Riders might think again about featuring a woman's voice.

If the group makes one tactical error, it's in attempting Frankie Laine's *Rawhide* and Marty Robbins's *The Running Gun*, two songs so closely associated with the original artists that virtually anyone's recording would pale next to those of such seminal voices. But Ranger Doug's yodeling rendition of *Cattle Call*, made famous by Eddy Arnold, is an exception. Watch out, Eddy, the Riders are close on your trail. *A.N.*

STING: Mercury Falling.

A&M 540 483 (48 min).

Performance: One long snore

Recording: Polished

The most bourgeois, highbrow figure ever to successfully affect a New Wave mantle, Sting at last seems completely irrelevant with "Mercury Falling." Once again he has surrounded himself with the usual complement of bloodless, housebroken session musicians, who play impeccably and without an ounce of zeal. His songs are pompous and labored, tending toward bouts of self-pity like the drowsy *I Hung My Head* or windy preachments like *Let Your Soul Be Your Pilot*, a self-help slogan set to music. When this tediously cerebral album threatens to put to sleep all within earshot, Sting makes a vampire-like raid on rhythm-

and-blues, coughing up the anemic workout *All Four Seasons* with a horn chart so full of ennui that only a laying on of hands by Al Green could bring it to life. This, however, sounds like James Brown at the Apollo compared to the travesty that follows, *La Belle Dame Sans Regrets*, where the lounge lizard that Sting has always threatened to become finally takes over. A hook or a gong seems the only appropriate response for such an inert, unctuous display. *P.P.*

BRYAN WHITE:

Between Now and Forever.

ASYLUM 61880 (33 min).

Performance: Maturing voice

Recording: Good

Bryan White hit gold last year with his self-titled debut, an impressive showcase for the 21-year-old's elastic tenor and evocative songwriting, even if his blend of pop and country appeals largely to an audience that likes its hillbilly watered-down. Now his record company is giving the follow-up album the big push, but "Between Now and Forever" doesn't have the joie de vivre of its predecessor, nor as strong a repertoire.

White, who delivers age-old sentiments in a convincing and congenial way, is more compelling in ballads, since his uptempo songs (*So Much for Pretending*, *Sitting on Go*) tend to be pleasantly mindless. He hits his stride in *I'm Not Supposed to Love You Anymore*, where a just-separated man realizes he never really wanted out of his marriage. Otherwise, White's producers keep their eyes squarely on the radio dial, employing as much formula as Vicks NyQuil. A disappointing return. *A.N.*

Collections

FRONT ROW CENTER:

THE BROADWAY GOLD BOX, 1935-1988.

MCA 11353 (four CD's, 300 min).

Performance: The top

Recording: Surprisingly good

This retrospective wisely opens up with *Oklahoma!*, the 1943 production that marked both the first modern musical comedy and the first full original-cast album.

Sting: poor poor pitiful me



ANDREW CAHILL/ASA

From there, the sequence dips back into the Thirties with a few of Decca's early show-oriented singles (although not as far back as it could, considering that MCA owns original Brunswick recordings from *Blackbirds of 1928*) before continuing on to the Eighties. Rather than sticking with the big hits and milestones the way most anthologies do, "Front Row Center" captures more of the spirit of the Great White Way by also addressing the minor successes and outright flops, drawing from virtually every Broadway-related album in MCA's vaults.

Here's the place to sample the Johnny Burke show *Donnybrook!* and selections from *The Amazing Adele* sung by Johnny Desmond before you pay big bucks to used-record dealers for the un-CD'd originals, or to hear neglected giants like Paula Lawrence and Dolores Gray. The chronological sequence is, I suppose, the most sensible



approach, although the selections should have been placed in show order rather than recording order (it's irrelevant that Ethel Merman rerecorded many of her Thirties hits for Decca only after the 1946 *Annie Get Your Gun*). And unfortunately, the box ultimately documents the decline of musical comedy, from Bea Lillie to Bernadette Peters, from Rodgers and Hammerstein to Andrew Lloyd Webber. As any Broadway "book" writer knows, you can only tell a story when it's finished. *Will Friedwald*

NOT FADE AWAY:

REMEMBERING BUDDY HOLLY.

DECCA 11260 (37 min).

Performance: Better than most tributes

Recording: Very good

Buddy Holly left a short but classic roster of songs that has influenced budding rockers and progressive country musicians from the Beatles to Monte Warden. Fittingly, the producers of this arresting Holly tribute have come up with some intriguing pairings of interpreters, among them Waylon Jennings with Mark Knopfler, Marty Stuart with Steve Earle, Mary Chapin Carpenter with Kevin Montgomery, Suzy Bogguss with Dave Edmunds, and a tape of Holly himself with new backup by the Hollies (get it?), reunited with original member Graham Nash.

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Of that list, it's Holly's spooky voice in *Peggy Sue Got Married* that sticks in the mind the longest, although Jennings, who gave up his seat on the ill-fated plane that awful February day, turns in a profoundly sad version of *Learning the Game*, while Knopfler's guitar seems to weep. The Band, performing with Holly's Crickets, also shines in a loose and chugging rendition of *Not Fade Away*, as do the Tractors in *Think It Over*, where Steve Ripley's lead vocal eerily recalls that of the West Texas lad of

20 who went out to chart a course in pop music history.

If several performances end up less than expected (the Stuart-Earle duet, the Mavericks' take on *True Love Ways*, and Los Lobos' somber version of *Midnight Shift*), "Not Fade Away" is proof that country music would do well to remember its roots before 1970. Nashville has been pumping out mediocre tribute records lately, so it's refreshing to find one that even its subject might like. *A.N.*



JAZZ

TERENCE BLANCHARD:

The Heart Speaks.
COLUMBIA 67415 (64 min).
Performance: Rich and buttery
Recording: Excellent

Terence Blanchard seems driven to enter new arenas, whether it's writing film scores, recording the limpid melodies of Stephen Sondheim for a Sony Classical release, or, as in the case of "The Heart Speaks," collaborating with an artist who embraces jazz but is essentially of a different musical persuasion. Of course, good music knows no boundaries, and American jazz players have had wonderful affairs with Brazilian music for decades, so it is not surprising to find an artistic rapport between Blanchard and composer/singer Ivan Lins. What is remarkable is the degree to which that rapport has developed. I was never impressed by Lins's vocals, but they work well in this context, and Blanchard makes one eloquent statement after another, his mellifluous horn fitting Lins's music like a virgin Isotoner glove. *C.A.*

SONNY ROLLINS: Sonny Rollins + 3.

MILESTONE 9250 (56 min).
Performance: Well-turned phrases
Recording: Very good

Sonny Rollins is one of the most significant and influential jazz players of the past four decades, but he does not always fare as well in a studio as he does before a live audience. "Sonny Rollins + 3" is among a handful of grand exceptions. The "3" are bassist Bob Cranshaw, with whom Rollins has enjoyed a long-standing association, joined by either Tommy Flanagan or Stephen Scott at the piano and Jack DeJohnette or Al Foster on drums. Throughout, Rollins's surging, robust tone is as commanding as ever; he has a prodigious ability to dissect a tune, assemble its components into a stunning improvisational structure, and boldly weave strands into new melodies, retaining just enough of the original to indicate the source. Notable tracks include *Mona Lisa* — with an odd chime blended into the intro, followed by a splendid, bumpy interpretation that demonstrates the saxophonist's humor — and a supremely smooth *Cabin in the Sky*, where Rollins reaffirms his way with a ballad. *C.A.*

WALLACE RONEY:

The Wallace Roney Quintet.
WARNER BROS. 45914 (71 min).

Performance: Exquisite
Recording: Excellent

Wallace Roney's latest is a thoughtful album featuring the quintet with which he has worked for the past year. The spirit of Miles Davis hovers over this generous lesson in creative interaction, and you may catch traces of Lee Morgan as well —

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STEVE ALLEN:

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VARÈSE SARABANDE 5693 (39 min).
A bossa-nova *This Could Be the Start of Something?* Sorry, but this lounge music revival is really getting out of hand. S.S.

ERIC DOLPHY: Vintage Dolphy.

GM RECORDINGS 3005 (68 min).
This collection of in-concert odds and ends from the early Sixties makes for an interesting comparison with the recent box set of Dolphy's complete Prestige recordings. "Vintage" actually gives a better idea of his great range, and the previously unreleased performance of Gunther Schuller's variations on Thelonious Monk's *Crisis Cross* is indispensable. F.D.

SLIM HARPO: The Scratch.

EXCELLO/AVI 3015 (71 min).
Most of the tracks here are alternate takes of the swamp bluesman's best-known numbers (*King Bee*, *Raining in My Heart*, all interesting), but the real treat is the finale — a live show, recorded on home equipment, with Harpo in front of a Southern frat crowd sometime in 1961. Pounce, blues fans. S.S.

MONKS OF THE DIP TSE CHOK LING MONASTERY: Sacred Ceremonies 2.

FORTUNA 17079 (59 min).
Those who are drawn to the horns and chants of Tibetan Buddhists will find this recording made in Dharamsala, India, more powerful and compelling than many other somewhat monotonous discs of the genre. Here the trumpets sound more urgent, and the voices are deeper with greater range. William Livingstone

NEW AND USED: Consensus.

KNITTING FACTORY WORKS 163 (71 min).
"Consensus" is a long and lavishly inventive program by a New York-based quintet whose members — trumpeter Dave Douglas, saxophonist Andy Laster, violinist Mark Feldman, bassist Kermit Driscoll, and drummer Tom Rainey — patrol the territory between free jazz and the classical avant-garde. Douglas's limber choruses on his own *Petals* confirm again that

he has no peers among younger trumpeters, and his three-part *Countercultures* is the most ambitious of these eight performances. A fine release by a band that recognizes no contradiction between experimentation and accessibility. F.D.

JOHN PRIMER: The Real Deal.

ATLANTIC 82863 (69 min).
Bluesman John Primer, whose U.S. debut was a 1991 set issued by Earwig three years ago, remains relatively unknown. That may change with "The Real Deal," where his assertive voice and buoyant guitar are propelled in just the right groove by bassist Johnny B. Gayden, rhythm guitarist Jake Dawson, and drummer Earl Howell. This music tugs at the emotions and gives even the most rigid body a rhythmic twist. C.A.

THE REMAINS:

A Session with the Remains.

SUNDAZED 6069 (46 min).
New England legends who toured with the Beatles and played *The Ed Sullivan Show* but never scored a hit record, the Remains have long been touted by those who were there as *the* great American hard-rock band of the mid-Sixties. And guess what? This previously unavailable (although widely bootlegged) live-in-the-studio set justifies the hype. In fact, on the evidence here, these guys were an absolutely lethal combination of R&B moxie and Brit Rock panache. Essential. S.S.



JOSH WHITE:

Blues Singer 1932-1936.

COLUMBIA/LEGACY 67001 (62 min).
Most people who remember Josh White think of him as a suave singer with an eclectic repertoire that easily segued from a vintage blues to an Irish ditty. This reissue of his early work demonstrates his musical transition from a rural blues style to one that clearly portends the smooth, commercial approach to come. A wonderful collection. C.A.

EL CHA CHA CHÀ DE CUBA.

MILAN LATINO 35740 (60 min).
The cha cha cha developed in Cuba in the 1950's, when public life on that beautiful island was more lighthearted than it is now. This compilation of twenty melodic cha cha cha's by different bands captures the sunny gaiety of the old days, and the catchy rhythm truly makes you want to dance. A treasurable CD. W.L.

but more than anything, you will hear a superb band led by a trumpet player who outshines most of his young contemporaries in technique, invention, and taste. I was particularly impressed with the reading of Cole Porter's *Night and Day*. Roney's skills as a composer/arranger have never been better demonstrated than in *Ger*i (dedicated to his friend, pianist Geri Allen), and if you are not dazzled by *Northern Lights*, there's little hope for you. There is not a pit on this CD that isn't saying something. C.A.

HORACE TAPSCOTT:

Aiee! The Phantom.

ARABESQUE JAZZ 119 (59 min).

Performance: Edgy funk
Recording: Good

Horace Tapscott is a shamefully overlooked West Coast pianist and composer whose horn unisons and rumbling, hypnotically repetitive bass lines suggest affinities with Horace Silver — though Tapscott's brand of funk is edgier and more obsessive. Recorded during a visit to New York last summer and teaming him with a powerful rhythm section in bassist Reggie Workman and drummer Andrew Cyrille, "Aiee! The Phantom" finds him pushing the veteran trumpeter Marcus Belgrave and the young alto saxophonist Andrew Burton to some of their finest, most darkly lyrical recorded work. Those familiar with Tapscott's earlier small-group albums will grab this one right away; for everyone else, it's a fine place to start. F.D.

JOHN ZORN'S MASADA: Vav.

DIW 900 (61 min).

Performance: Lusty and thoughtful
Recording: Perfection

"Vav" is the sixth in an ongoing series of albums by John Zorn's pianoless quartet, with Dave Douglas on trumpet, Greg Cohen on bass, Joey Baron on drums, and the leader on alto. The song titles are drawn from the Talmud, and there's a pronounced Middle Eastern feel to many of the themes, with *Mikreh* amounting to a hora and either Zorn or Douglas (can't tell which) emulating shofar on *Miktav*. The instrumentation, though, recalls early Omette Coleman, as do Zorn and Douglas's zesty, untamed improvisations — to such an extent that one is tempted to hear this album and its five predecessors as Zorn's atonement for "Spy vs. Spy," a 1989 monstrosity that attempted to transform Coleman into heavy metal.

Although he has always seemed more important as a composer and conceptualist than as a soloist, Zorn improvises with surprising finesse in this context. He has obviously been woodshedding, but his improved technique isn't the only sign of his growth. This music is personal and direct, humorous but not ironic or self-conscious; it doesn't seem to unfold within quotation marks, the way almost all of Zorn's music has up to this point. Instead of thumbing his nose, he's playing his heart out, and the result is jazz as generous in spirit as it is rich in invention. (Available from Sphere Marketing, 718-656-6220.) F.D.

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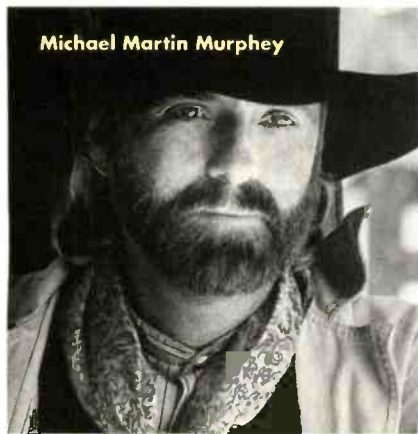
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Twenty years ago, the Nashville powers-that-be effectively removed the "western" from "country-and-western music." Today, at least one record company is trying hard to bring it back.

Warner Western, launched in 1991 by Warner/Reprise Nashville, is the only major-affiliated label with a commitment to music hailing from west of the Mississippi and east of the Sierras. More than twenty albums of western music and poetry are now available, featuring such performers as singer Don Edwards, poet Waddie Mitchell, 85-year-old black cowboy actor Herb Jeffries (who is known as "The Bronze Buckaroo"), and mainstream country singers Emmylou Harris and Randy Travis. Recent releases include Michael Martin Murphey's "Sagebrush Symphony" (recorded with the San Antonio Symphony Orchestra), Red Steagall's "Faith and Values," Native American Robert Mirabal's "Land," the Sons of the San Joaquin's "From Whence Came the Cowboy," and the junior and senior Rex Allens' "The Singing Cowboys."

"We always knew there was an audience out there," said Jim Ed Norman, president of Warner/Reprise Nashville. "We could see it in the success of other western culture activities, such as the Cowboy Poetry Gathering in Elko, Nevada, and movies like *Dances with Wolves* and *City Slickers*. It was just going to take some special marketing attention."

That means selling the albums in western apparel outlets, tack and feed stores, saddleries, and museum gift shops in addition to the usual record outlets. "The core audience for this music," said Reno Kling, vice president of the label's marketing and distribution division, "doesn't go to the mall music store."

Warner Western is the brainchild of singer Murphey, who had a huge pop hit in 1975 with the vaguely western *Wildfire* — and whose 1990 Warner Bros. album of "Cowboy Songs" is nearing gold. Murphey is the kind of guy who actually sits around thinking about the differences between "country" and "western."

As he sees it, western music has more ethnic accents, primarily Mexican and

Spanish, as well as influences from the black cowboys who also populated the Old West. That means western music accepts a much wider range of sounds, including jazz and blues. Murphey explained, "whereas country music always drifts back to church harmony and the Appalachian mountain sound. There's a big difference between a song like *Tumbling Tumbleweeds* and a Hank Williams song. There's no real sense of honky-tonk in western music."

In Murphey's view, "country" threw "western" away in the Seventies for the sake of the dollar. "Nashville wanted to build up its tourist industry. The people who run Music City saw this coming, and they knew that if they were promoting everything 'western,' it wasn't going to work. That's why TNN is The Nashville Network, and CMT is Country Music Television, not Country-and-Western Music Television. It's a regional rivalry."

So far, sales of most Warner Western albums have been modest, under 50,000 copies each. But Murphey, whose West-Fest events draw some 35,000 every year to Copper Mountain, Colorado, insists there's a larger market out there. "People identify with the western way of life as a statement against high technology and city living," he said. "It's a statement about individualism, about carving out your own destiny. The cowboy has always been a symbol of that. People in all parts of the country and the world feel a connection to it."

Apparently, pardner, that's no bull. Red Steagall writes and produces a syndicated radio program, "Red Steagall's Cowboy Corner," which combines theater of the mind, reports on western heritage and lifestyle, and guest appearances by such performers as Reba McEntire and cowboy writer Baxter Black. The show airs in 175 markets — not just "out west."

Of course, most of the performers on the Warner Western label are too country for country radio, which normally resists playing music that even hints of staring at the southern end of a northbound cow. Murphey, however, is hopeful.

"When I put the 'Cowboy Songs' album out, fourteen stations in major Eastern cities told me, 'We will not play a record with the word "cowboy" in it. We're appealing to a city audience.' But literally a year later, Garth Brooks put out a song called *Rodeo*, and they had to play it because of how big he was. If it hadn't been for Garth, we'd still be a long way from breaking radio down."

But if western music ever actually becomes the Next Big Thing, will there be enough supply for the demand? In other words, how many good western acts are out there riding the entertainment range?

Murphey is resolute. "As many as there are good country acts," he said.

—Alanna Nash

CLOCKWISE FROM TOP LEFT: MARY MAURNEY, NEIL WHITLOCK, SENIOR McGUIRE/WARNER BROS.

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CLASSICAL MUSIC

NEW RECORDINGS REVIEWED BY ROBERT ACKART,
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BARTOK: *String Quartets Nos. 1-6.*
JANACEK: *String Quartets*
Nos. 1 and 2.

Tokyo String Quartet. RCA VICTOR 68286
(three CD's, 199 min).

Performance: High-gloss
Recording: Pleasingly intimate

Bartok's 1908 First Quartet is almost *Tristanesque* in its passion, with only the two final movements displaying overtly nationalist (Hungarian) elements. The three movements of the Second, from the World War I period, tend toward the bleak and acerbic, but they are as nothing compared with the fierce Third, which within its taut

structure reminds me of some of the hotter exchanges between exponents of opposing political views on the TV show *Crossfire*.

With the Fourth and Fifth Quartets — both in five movements, one with two scherzos, the other with two slow movements — we find Bartok at his creative peak, achieving a virtually flawless amalgam of his national idiom with mainstream classicism. The Sixth, with its sorrowing *messt*o motive preceding each movement, bespeaks his frame of mind on the eve of World War II, which sent him into voluntary exile in the U.S.

The Tokyo Quartet seems to respond

most wholeheartedly to the essentially Romantic musical language of the first two quartets. Whether you'll like their performances of the later quartets depends on whether you prefer your Bartok hard-edged or with a little give (I prefer more grit). They need yield to none in terms of technical polish and proficiency, yet I felt the need for more tensile strength in the first half of No. 3 and in the opening movement of No. 5.



But the two scherzo movements of No. 4, the miraculous coloration of the slow movement of No. 5, and the fierce finale of No. 5 all come off superbly. I also like all of the Sixth Quartet here, and especially the final movement, wherein despair reaches palpable culmination.

Janacek's First Quartet, which he called "The Kreutzer Sonata," is a miniature music drama based on Tolstoy's tale of that title, involving longing, jealousy, and murderous rage. The Second, titled "Intimate Letters," amounts to a *True Confessions* narrative of his late love for a young woman who was already married and the mother of two sons. The composer has given the performers plenty of emotional material to chew on, and I'm happy with both of these readings.

The sonics — from Princeton University's Richardson Auditorium and St. Peter's Episcopal Church in New York City — are warm and intimate, perhaps a bit too well cushioned for some tastes, but consistent in quality. *D.H.*

African Portraits

Earlier this year Teldec Records released the world-premiere recording of *African Portraits*, a 50-minute stage work by the composer and performer Hannibal that depicts 350 years of the African-American experience. Recorded live in May 1995 at Orchestra Hall in Chicago, it combines African drumming and chant with symphonic music, gospel, blues, and jazz. Featured performers include Hannibal (on trumpet) and his jazz quartet, the gospel singer Jevetta Steele, the blues guitarist David "Honey-Boy" Edwards, the Eye Plus One Drummers, the griot "Papa" Bunka Susso, several choirs, and Daniel Barenboim and the Chicago Symphony.

Hannibal, 47, was born and raised in Texas. Trained as both a trumpet player and drummer, he sees African music as connected not only to jazz but to symphonic music as well. "The piano is

nothing but a harp in a big box. The xylophone is nothing but gourds. In Africa, they had wooden trumpets. . . . any instrument in the orchestra has its roots in Africa."



Hannibal with Daniel Barenboim

BEETHOVEN: *Violin Sonatas Nos. 6-8.*

Gidon Kremer (violin); Martha Argerich (piano). DEUTSCHE GRAMMOPHON 445 652 (64 min).

Performance: Taut
Recording: Bright and clear

Beethoven's three Op. 30 violin sonatas make up an ideal CD program. Flanking a major masterpiece — the Sonata No. 7, in C Minor, for me the best of his ten violin sonatas — are the relatively easy-going Sonatas No. 6, in A Major, and No. 8, in G Major.

These works were titled "for piano and violin," and there is no doubt that pianist Martha Argerich dominates the performances, not through any fault of balancing by the engineers but through sheer force of personality. She also tends, for all her flawless execution and rhythmic exactitude, to make the music sound a bit heartless, even brittle, compared with other performances on the same technical level. The rippling niceties of the G Major bring out the best in her collaboration with violinist Gidon Kremer, and they do manage to relax a little in

the slow movements. The recorded sound from the Stravinsky Auditorium in Montreux, Switzerland, fits the performance style perfectly. *D.H.*

GOULD: Formations, Suite for Marching Band; excerpts from film and TV scores; Concerto Grosso for Four Violins and Orchestra.

Jeffrey Silberschlag (trumpet); Seattle Symphony. Gerard Schwarz cond. DELOS 3166 (61 min).

Performance: Seriously amusing
Recording: Good

When the late Morton Gould brought his Concerto Grosso to George Balanchine to use as the finale for the ballet *Audubon*, the great choreographer decided to make it the opener instead. The producers of this recording should have followed his sage example.

Gould, who died earlier this year, was a serious composer who dared to be popular, and there was an indubitably serious renaissance of his happy music just at the end of his life. This album was obviously not planned as a memorial, but it could well serve as one; it's just tilted the wrong way, with the encores on top. The various excerpts — "Pavanne" from the Symphonette No. 2, "Interlude" from *Festive Music*, and short takes from a CBS-TV documentary on World War I, an NBC-TV mini-series on the Holocaust, and the movie *Cinerama Holiday* — were arranged by the composer himself for trumpeter Jeffrey Silberschlag. He certainly plays it all well, but the music is Gould Lite, a collection of scraps that do not add up. Only the astonishing *Formations* suite for marching band and the sizable Concerto Grosso remind us that he was more than a composer of witty tidbits. *E.S.*

MASSENET: Hérodiade.

Cheryl Studer (Salomé), Nadine Denize (Hérodiade). Ben Heppner (Jean). Thomas Hampson (Hérode), José Van Dam (Phanuel); Capitoile de Toulouse Chorus and Orchestra. Michel Plasson cond. EMI 55378 (three CD's, 166 min).

Performance: Buoyant
Recording: Excellent

MASSENET: Hérodiade.

Renée Fleming (Salomé). Dolora Zajick (Hérodiade). Plácido Domingo (Jean). Juan Pons (Hérode). Kenneth Cox (Phanuel); San Francisco Opera Chorus and Orchestra. Valery Gergiev cond. SONY 66847 (two CD's, 155 min).

Performance: Uneven
Recording: Flawed by stage noise

In his lifetime, Massenet's most popular works were grand operas with exotic settings. The grandest and most exotic of them all was *Hérodiade*, an epic treatment of the Salomé legend composed in 1880. Any comparison of *Hérodiade* with Strauss's *Salome* is bound to make the Massenet opera appear silly. It does contain some of his loveliest lyric music, however, and, as improbable as the story is, the music brims over with dramatic invention.

Until recently there were no recordings

Quintessential Schumann

Martha Argerich was the organizing force behind EMI's new two-disc set of Schumann chamber music, recorded live at a marathon concert she gave with seven of her close associates in the Dutch city of Nijmegen in September 1994. According to the notes with the set, all seven of the works performed were rehearsed in a single day, the object being to achieve "the enthusiasm and intimate inspiration of a family house party."

That atmosphere comes through warmly throughout the set, and most of all in the beloved Piano Quintet, which Argerich enlivens with a proprietary zest and affection that are clearly and winningly reflected by her colleagues — the violinists Dora Schwarzberg and Lucy Hall, the violist Nobuko Imai, and the cellist Mischa Maisky.

The quite different quintet labeled *Andante and Variations, Op. 46*, in which Argerich and Maisky are joined by the pianist Alexandre Rabinovitch, the cellist Natalia Gutman, and the horn player Marie-Luise Neunecker, is especially welcome because it is so rarely heard, and it gets a first-rate presentation here. Rabinovitch, however, does not provide the same sort of impulse in the Piano Quartet that Argerich does in the Piano Quintet — both the plodding pace of his slow movement and the excessive speed of his finale are rather off-putting — but he is again a fine partner to Neunecker in the *Adagio and Allegro, Op. 70*. Argerich tends to overpower Dora Schwarzberg in the Violin Sonata No. 2, but she, too, makes amends, and then some, in the *Märchenbilder* (with Imai) and the *Op. 73 Fantasiestücke* (with Gutman).

If the set is not entirely consistent in its appeal, that appeal is quite remarkable in five of the seven works, adding up to another fine case for recording live. The sound is very realistic throughout (if less kind to the violins than to the other instruments). The recorded applause is intrusive, however.

Applause is not a problem, nor is there any other of any consequence, in

pianist Menahem Pressler's warmhearted new recording of both the Piano Quintet and the Piano Quartet with the Emerson Quartet on Deutsche Grammophon. Pressler, in a class by himself as an ensemble pianist, recorded these two works more than twenty years ago with his colleagues in the Beaux Arts Trio and associates brought in for the occasion. The remake supersedes that disc in every respect. Tempos now are simply ideal, without exception. The strings are more fully integrated, and the new recording, if a little tubby, lets all their individual contributions be heard to best advantage. And Pressler himself is even more eloquent and authoritative than in his earlier recording.

Argerich and company may have a bit of an edge in the quintet, with more of an undercurrent of electricity (particularly in the second movement), but the reassuring authority, eloquence, and overall communicativeness that shine in the Pressler/Emerson version may well make it the more durable in the long run. Their exalted realization of the quartet, in any event, simply has no peer among current recordings, and no similar coupling on one disc is in this league.

Richard Freed

SCHUMANN: Piano Quintet; Piano Quartet; Violin Sonata No. 2; Andante and Variations for Two Cellos, Two Pianos, and Horn; Fantasiestücke for Cello and Piano; Adagio and Allegro for Horn and Piano; Märchenbilder for Viola and Piano.

Martha Argerich, Alexandre Rabinovitch (piano); Dora Schwarzberg, Lucy Hall (violin); Nobuko Imai (viola); Natalia Gutman, Mischa Maisky (cello); Marie-Luise Neunecker (horn). EMI 55484 (two CD's, 146 min).

SCHUMANN: Piano Quartet; Piano Quintet.

Menahem Pressler (piano); Emerson String Quartet. DEUTSCHE GRAMMOPHON 445 848 (58 min).

Pianist Menahem Pressler (center) and the Emerson Quartet



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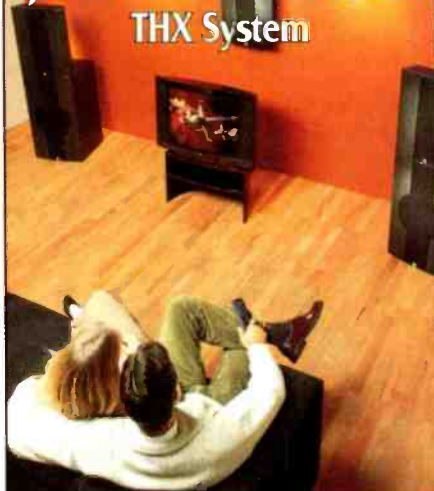
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of *Hérodiade* in the catalog, and now there are two. Sony's is a live recording of a production in San Francisco conducted by Valery Gergiev, and EMI's is a carefully prepared studio recording from Toulouse led by Michel Plasson. Inevitably, both recordings have their merits, and one would like to be able to pick and choose from the two sets. But the EMI set finally wins out, mostly because of Plasson's fluid conducting, which propels the score with Gallic buoyancy and verve. Gergiev, who may be the most exciting opera conductor in the world today, seems strangely subdued in the Sony version.

The EMI set also has the edge, barely, in its cast of singers. The real standout is Ben Heppner as Jean (le Baptiste, that is). His tenor voice rings out with pure gold in his romantic duets with soprano Cheryl Studer, who partners him with great warmth and musicality as Salomé. The main liability of the Plasson recording is a rather shrill and quavery *Hérodiade* in mezzo-soprano Nadine Denize, but don't be put off: Although



it's the title role, the opera by no means revolves around her. The Sony set has its moments, too. Plácido Domingo is very fine as Jean, though his dramatic interpretation lacks real individuality, and Renée Fleming is an exquisitely lyrical Salomé.

Another decisive advantage of the EMI set is its clear, well-balanced recorded sound. Sony's live recording (which omits the lovely Sacred Dance in Act III) is seriously marred by stage noise at some moments — during the Babylonian Dance in the second act, the rattling of the dancers' heads sounds like hamburgers sizzling on the grill in old Jerusalem. *J.J.*

MELARTIN: Symphonies Nos. 1 and 3.

Tampere Philharmonic, Leonid Grin cond.

ONDINE ODE 841 (61 min).

Performance: Good

Recording: Could be clearer

Erkki Melartin (1875-1937) was ten years younger than his celebrated Finnish compatriot, Jean Sibelius. Though he composed six symphonies between 1903 and 1924, even in Scandinavia he is better known for his neatly crafted salon pieces and songs. Finland's Ondine label has recorded not only a generous sampling of the piano pieces but all six of the symphonies, with the Tampere Philharmonic under the Moscow-trained conductor Leonid Grin.

The two symphonies here, the last to be released on CD, are well crafted in a late-Romantic idiom colored here and there with Gallic impressionism. The opening of No. 1 displays a measure of Schumannian

energy and splendor, but the scherzo, which quotes the lovely folk song *Summer Evening*, is the high point. The finale is redolent of Sibelius's *Karelia* Suite. The Third Symphony, dating from 1907, is of a more somber though predominantly lyrical cast. There are echoes of Sibelius's *En Saga* in the early pages, and the movement as a whole is an interplay of light and dark orchestral and harmonic coloration. The slow movement, a somber quasi-processional affair, is followed by a scherzo that's lively at first but darkened by an impressive chorale episode. The finale is mainly an intensely elegiac slow movement, but with a redemptive major-key conclusion.

The Tampere orchestra is well trained and does full justice to the music. The sonics are fine in solo and small-ensemble passages, but the reverberation characteristic of the Tampere Hall tends to muddy the texture of full-orchestra passages. *D.H.*

MOZART: The Marriage of Figaro.

Cheryl Studer (Countess), Sylvia McNair (Susanna), Lucio Gallo (Figaro), Boje Skovhus (Count), Cecilia Bartoli (Cherubino), others; Vienna State Opera Choir; Vienna Philharmonic, Claudio Abbado cond. DEUTSCHE GRAMMOPHON 445 903 (three CD's, 170 min).

Performance: Delightful

Recording: Very good

Several distinguished recorded performances of Mozart's *The Marriage of Figaro* are already available, and yet we are still fortunate to have this captivating, intimate new one under Claudio Abbado. Much of the opera is sung *mezza voce*, making the interplay of characters, in through-composed passages as well as in recitatives, truly conversational. The clarity and articulateness of the singing here give the comedy a compelling immediacy. If volume is low, spirits are high — you can sense the pleasure the artists take in the performance. Lines are subtly inflected for dramatic effect, and a few arias are embellished with the kind of ornamentation Mozart would have expected.

The chorus and orchestra, both so thoroughly at home with this opera, provide a similar clarity and lightness of touch: the orchestra, especially, captures the filigree quality of the score. When robustness is called for, however, Abbado's forces supply it, both tonally and stylistically. If the conductor's interpretation is somewhat idiosyncratic, the result is elegant and nuanced.

All the principal singers seem typecast, musically and temperamentally, for optimum effect. Boje Skovhus commands a rich baritone, and the smoothness of his singing affords the Count an elegance that almost makes him likable. Soprano Cheryl Studer does some of her best singing on records — clear, effortless, and affecting — as his long-suffering wife. Her "*Porgi amor*" is distinguished by a fine-spun legato, and the bravura concluding "*Dove sono*" is tossed off to stunning effect. Sylvia McNair must have one of the most silvery soprano voices heard today, a lovely quality that, coupled with her seamless range and infectious dramatic communication, makes

CLASSICAL MUSIC

her Susanna especially effective. The bouncing Figaro of baritone Lucio Gallo — a youthful bridegroom, sure of his wits — is also delightful. Mezzo-soprano Cecilia Bartoli, singing with unaffected sincerity and notable beauty, makes her Cherubino playful and winningly lovelorn.

The hallmark of this performance is its unity: of musical style, of disciplined and expressive singing, of ebullient spirits, and of stylish elegance. Other recordings of *Figaro* do not lack these attributes, but they do not offer them in such profusion, making this an exceptional realization of Mozart's masterwork. *R.A.*

RACHMANINOFF: Symphonic Dances. JANACEK: Taras Bulba.

North German Radio Symphony Orchestra, John Eliot Gardiner cond.
DEUTSCHE GRAMMOPHON 445 838 (56 min).

Performance: Bright and crisp
Recording: Very good

John Eliot Gardiner seems to be going ever farther afield from the Baroque and Classical repertoire that has been the foundation of his well-deserved celebrity. He is a no-nonsense interpreter yet has plenty of fire when that's called for. His approach works particularly well with the Rachmaninoff *Symphonic Dances*, a piece that can send conductors over the edge into hysteria. I like the rhythmic crispness of the opening pages and the steady yet fluid tempo of the wonderful central waltz movement.

Janacek's dramatic-rhapsodic homage to the mighty Cossack chieftain Taras Bulba comes off brilliantly, though I would have liked more of the rich expansiveness that was achieved by Charles Mackerras with the Vienna Philharmonic on London. Deutsche Grammophon's sound is bright and precise, but a little lean for my taste, particularly in the lushly lyrical episodes of the Rachmaninoff. *D.H.*

SHOSTAKOVICH: Symphony No. 7 ("Leningrad").

St. Petersburg Philharmonic, Yuri Temirkanov cond. RCA VICTOR 62548 (77 min).

Performance: Good, but . . .
Recording: A shade blowsy

As a member of the NBC production staff, I was present at all rehearsals and the first American performance of the Shostakovich Seventh Symphony under Arturo Toscanini on July 19, 1942. Thrilling as the occasion was, with the horrific siege of Leningrad still in progress, I felt the music was uneven in quality, and I have found no reason to change my mind since.

The half-hour first movement with its notorious "invasion" variations comes across, as intended, as a morale booster. Next is something of an intermezzo, with an acerbic central episode. It is with the magnificent and wholly original slow movement that we begin to get really great music. Its Stravinskian opening chorale for winds, fiery massed-violin recitative, and savagely

driven middle section are all haunting. The last movement, whose slow introduction comes on without pause, leads to the main body with its stepwise six-note figure, which then builds to a peak of fury. A voiceless lament follows, and at the end an apotheosis of the stepwise figure combines with the symphony's opening theme.

This is a very tough work to make sound all of a piece, chiefly because of the extreme contrasts between the ferociously



dramatic episodes and the idyllic interludes interwoven throughout the first three movements. The tendency is to push too hard in the former and to let down in the latter. There's a fair amount of such miscalculation in this performance by Yuri Temirkanov and the St. Petersburg Philharmonic. The contrasting elements in the slow movement are set forth very sharply; while they sound fine in themselves, the flow of the movement as a whole gets lost. The main part of the finale goes at a rip-roaring pace

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up to the lamentation episode, but the build-up to the apotheosis goes slack.

The Large Shostakovich Philharmonic Hall is a big, resonant space of the kind needed for this music, with its augmented wind and brass, but the focus at the lower end of the spectrum could be firmer, and the string basses at the very opening should

speak out in more stentorian tones. The all-important snare drum that persists so mad-deningly throughout the "invasion" sequence needs more presence. And in the last pages, the hall resonance is too prominent. This is not a bad recording, just not good enough in terms of what the music calls for. *D.H.*

SIBELIUS: Violin Concerto; Serenades Nos. 1 and 2; Humoresque No. 1.

Anne-Sophie Mutter (violin); Staatskapelle Dresden, André Previn cond. DEUTSCHE GRAMMOPHON 447 895 (48 min).

Performance: Commanding
Recording: Very wide dynamics

Since Anne-Sophie Mutter was discovered by Herbert von Karajan twenty years ago as a dazzling prodigy, she has been methodically working her way through the concert repertoire for violin. Here she takes on the grandest Romantic violin concerto of them all — and turns in a breath-

EARLY RICHTER RESTORED

“Wait till you hear Richter,” the pianist Emil Gilels is said to have remarked when a 1950’s American audience gave him a rapturous ovation. Back then Sviatoslav Richter, born in 1915, had not yet been allowed out into the West by his political masters. His first appearances outside the Soviet bloc came in 1960, and soon we were able to learn at first hand, rather than through technically mediocre Russian LP’s, that Gilels did not exaggerate.

BMG has now put us in its debt by taking more than 11 hours of Richter’s Russian recordings — mostly available in the past, if at all, only in obscure or obsolete formats — and issuing them with greatly improved mono sound as a set of ten midprice CD’s. The first four discs are devoted, respectively, to Bach, Beethoven, Schubert, and Schumann. The next two are mixed collections, and the

For example, the Schubert D Major Sonata included here is played awesomely straight, without much in the way of what we think of as Schubertian nuance. But then, all but one of these performances — the exception being a stunning 1972 reading of Bartok’s Fifteen Hungarian Peasant Songs — predate Richter’s emancipation from his Russian background.

As a result, there are aspects of Richter’s genius that are not to be encountered here. But the point, surely, is that every performance by a musician of his caliber repays attention. The BMG and Philips sets are not competitive with each other but complementary. The Schubert G Major Sonata on Philips reveals precisely the kind of artistic enrichment that the pianist’s later Western experience brought him; in BMG’s D Major we hear a great interpreter in chrysalis — and that in itself is a profoundly moving experience, with rewards that are not duplicated in his later, more supple performances.

Some of these recordings remind me of Thomas Beecham in their way of making supposedly unimportant music seem better than I thought it was — witness the First Piano Concertos of both Rachmaninoff and Prokofiev, and especially the Saint-Saëns Fifth Concerto, whose cheerfully kitschy middle movement sounds positively enchanting in this reading. Glazunov’s First Piano Concerto, too, which is unaccountably unrepresented in the current catalog, emerges as a much stronger piece than his popular but trumpy Violin Concerto. And among the great music, there are performances here of Beethoven bagatelles, Schumann *Fantasiestücke*, and Schubert *Moments Musicaux* that would rank as outstanding from any pianist at any stage of his career. *Bernard Jacobson*

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Sviatoslav Richter (piano); various Russian orchestras conducted by Kurt Sanderling, Rudolf Barshai, Yevgeny Svetlanov, and Kiril Kondrashin. BMG 29460 (ten CD’s; 11 hours, 18 min).



taking performance. Thumbing her nose at its horrific technical demands, she gives free rein to a vivid, soulful interpretation of Sibelius’s soaring vision. André Previn and the Dresden Staatskapelle give her shapely and sympathetic (if somewhat generic) accompaniment.

In addition to its documentation of Mutter’s excellent performance of the concerto, this disc will recommend itself to rarities collectors for its filler pieces. Rather than the usual coupling with another Romantic warhorse, Mutter and Previn give us pleasant readings of the two serenades for violin and orchestra and the first humoresque. The conventional wisdom holds that these are slight, insubstantial bon-bons, and, delightful as these performances are, their juxtaposition here with the craggy magnificence of the concerto only proves the conventional wisdom right. *J.J.*

WAGNER: Das Rheingold.

Robert Hale (Wotan), Hanna Schwarz (Fricka), Kim Begley (Loge), Peter Schreier (Mime), Franz-Josef Kapellmann (Alberich), others; Cleveland Orchestra, Christoph von Dohnanyi cond. LONDON 443 690 (two CD’s, 147 min).

Performance: Good, well-integrated
Recording: Excellent

Georg Solti’s epoch-making 1959 *Rheingold* recording must have cast a heavy shadow over London’s current team as they tackled this opera at Cleveland’s Severance Hall in December 1993. However hallowed the memory of that legendary set may be, it was created before digital technology, and the new production stands up to its predecessor triumphantly. Christoph von Dohnanyi’s leadership here augurs well for his *Ring*-in-the-making. He may not match Solti’s slashing vitality, but the fluid drama he creates, the clarity of textures he secures, and the sensible tempos he sustains are unfailingly impressive, and the Cleveland Orchestra is in superlative form.

For all the illustrious names involved in the early London set (George London, Kir-

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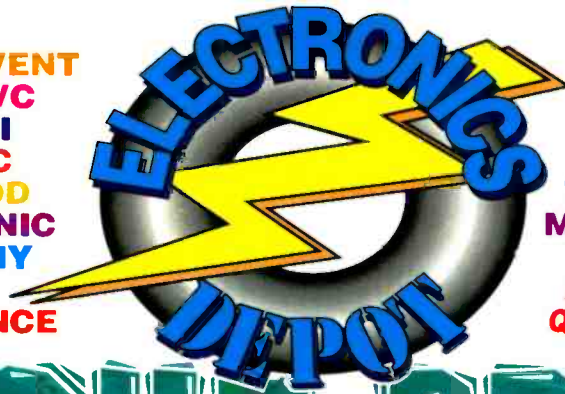


last four cover a wide range of Russian music from Mussorgsky to Prokofiev.

This is “a,” not “the,” Richter Edition. The performances are all relatively early ones, many of them dating back to the pianist’s thirties. There is, moreover, plenty of Richter to be had in other forms, including an even bigger box of twenty-one CD’s assembled by Philips as “the authorized recordings.”

The recording dates matter not just for reasons of technical quality. Before he came out of Soviet quasi-seclusion, Richter was “just” a phenomenally gifted pianist with the somewhat blinkered vision that was all he *could* have had in the Russia of the day. His emergence here was not only a blessing for us; it also brought him into intimate contact with some of the finest Western musical minds. After becoming a close collaborator of Benjamin Britten and Dietrich Fischer-Dieskau, a man could hardly play Mozart or Schubert in the same way as he had before.

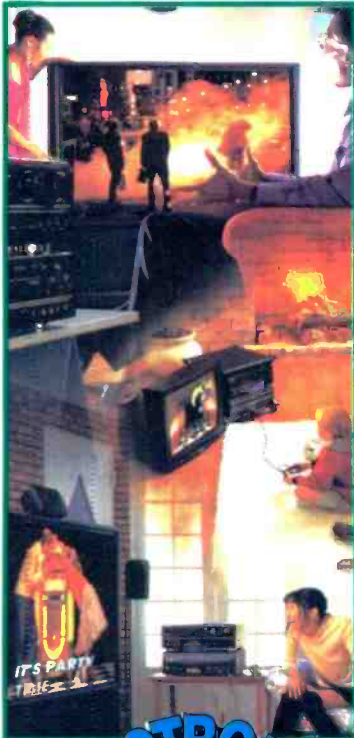
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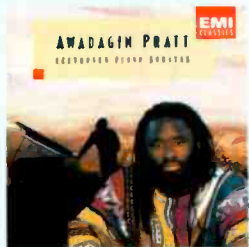
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QUICK FIXES



BEETHOVEN: Piano Sonatas Nos. 7, 9, 30, and 31.

Awadagin Pratt (piano). EMI 55290 (74 min). Put this disc on at almost any point, and you will hear some lovely pianism; leave it on for an entire movement of any of the four sonatas, though, and you are likely to feel the pianism alone. Even with Awadagin Pratt's unwavering regard for firm rhythms and linear clarity, the performances don't add up to cohesive statements of the music. He is not helped, either, by a recording that is marred by a wobble here and there. *R.F.*

BRAHMS: Liebeslieder-Walzer, Op. 52; Neue Liebeslieder Walzer, Op. 65. SCHUMANN: Spanische Liebeslieder.

Barbara Bonney (soprano); Anne Sofie von Otter (mezzo-soprano); Kurt Streit (tenor); Olaf Bär (baritone); Helmut Deutsch, Bengt Forsberg (piano). EMI 55430 (64 min). Of the two Brahms collections, Op. 52 is more melodically engaging, but Op. 65 offers more variety in vocal deployment and allows for more solo opportunities. In the Schumann *Liebeslieder*, the waltz element is unimportant; the emphasis is on the Spanish influence and virtuosic piano writing. The four vocalists excel individually and blend beautifully, and the pianists outdo themselves. The live recording from the 1994 Edinburgh Festival is clear, brilliant, and virtually unblemished by applause and intrusive noise. *G.J.*

DRATELL: Sorrow Is Not Melancholy; Lilith; Syzgy; other works.

David Shifrin (clarinet); Scott Goff (flute); Seattle Symphony, Gerard Schwarz cond. DELOS 3159 (61 min). The title piece, *Sorrow Is Not Melancholy*, an effective 11-minute wail for strings that takes its name from Edgar Allan Poe, is more a cry of pain than of sorrow. The other pieces here by Deborah Drattell might also have been inspired by Poe. There is a clarinet concerto called *Fire Dances* and a flute concerto called *The Fire Within*, and they both crackle. *Lilith* has movements labeled "hypnotic state" and "dance macabre," and *Syzgy* is described (accurately) by the composer as "dark and explosive" and expressing the "organized sounds of chaos in nature." *E.S.*

DVORAK: Cello Concerto; Silent Woods; Slavonic Dances, Op. 46, Nos. 3 and 8; other works.

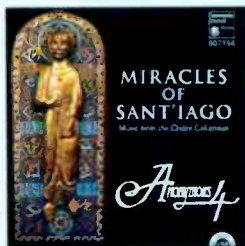
Ofra Harnoy (cello); Michael Dussek (piano); Prague Symphony, Charles Mackerras cond. RCA VICTOR 68186 (69 min). Ofra Harnoy plays everything here with a pleasant cello tone but a fairly shallow interpretive view. There are signs of technical strain in the concerto, and even with the authoritative Charles Mackerras conducting, the usually reliable Prague Symphony is decidedly off its form. The sound quality is quite good, and so is Michael Dussek's piano accompaniment in the three encores, but this release simply doesn't measure up to the overwhelming competition. *R.F.*

RAVEL: Rapsodie Espagnole; Valses Nobles et Sentimentales; Menuet Antique; La Valse.

London Symphony. Kent Nagano. ERATO 98479 (56 min). Kent Nagano's splendid earlier recording of *Daphnis and Chloë* with the London Symphony set up expectations that are only partially met in this second disc of Ravel. Clarity and definition are again exemplary, but the tempos are so broad in the *Rapsodie Espagnole* and the *Valses Nobles et Sentimentales* that the momentum tends to go slack, and even the more conventionally paced shorter works have a frustratingly wooden quality. *R.F.*

ROTA: Works for Solo Piano.

Danielle Laval (piano). AUDIVIS K 1021 (55 min). Best known for his film scores, Nino Rota (1911-1979) also wrote ballets, operas, symphonies, and chamber music. His charming works for solo piano have the transparency, humor, lilt, and irony of similar pieces by Rossini and Satie. Danielle Laval plays them with straight-faced precision and brilliance. *William Livingstone*



ANONYMOUS 4: Miracles of Sant'Iago (Music from the Codex Calixtinus).

HARMONIA MUNDI 907156 (71 min). Anonymous 4, a four-woman choir, proves once again that it is the King Midas of medieval music. In this exquisite collection, recorded with spine-tingling resonance, the singers take on liturgical music associated with the cult of Saint James at Compostela, Spain, from a celebrated twelfth-century codex that contains some of the earliest known polyphonic scores. *J.J.*

sten Flagstad, Wolfgang Windgassen), it did not boast singing of uniform excellence. I cannot praise Dohnanyi's cast either without some reservations, but the totality is quite admirable. Despite moments of tonal unsteadiness, Robert Hale's Wotan is an appealing characterization, more human than godlike in his scheming opportunism. Hanna Schwarz's Fricka also projects a strong personality, though she could have a more solid low range. Kim Begley, an English tenor, captures Loge's craftiness with seasoned skill.

A good Alberich can dominate this opera, and Solti's Gustav Neidlinger was the best. Dohnanyi's Alberich, Franz-Josef Kappellmann, may not equal Neidlinger's magnetism, but he displays ample venom and a strong and well-focused top end, and he mercilessly brutalizes his brother Mime (Peter Schreier, very good in this limited role). Jan Hendrik Rootering is a sonorous Fasolt. Walter Fink a properly sinister, gruff Fafner. As Froh, Thomas Sunnegardh displays a light but attractive tone. Eike Wilm Schulte is excellent as Donner when he's not blanketed by the orchestra, and so is Nancy Gustafson as Freia. Elena Zaremba's Erda and the three Rhinemaidens are all adequate.

Blending the singers against Wagner's orchestral torrents can be a problem in all the *Ring* operas. The solutions are not always perfect here, but, despite minor reservations, this recording is an outstanding accomplishment. *G.J.*

WALTON: Symphony No. 2; Violin Concerto; Scapino Overture.

Tasmin Little (violin); Boumenouth Symphony, Andrew Litton cond. LONDON 444 114 (68 min).

Performance: Very good
Recording: Bright and clear

For all the "jazzy" excursions that crop up in his bigger works, from first to last William Walton was a lyrical composer par excellence. Thus, in this Walton program conducted by the young American Andrew Litton, the opening pages of the Violin Concerto and the affectingly bittersweet slow movement of the Second Symphony are what stay with me. When Walton wanted to be fierce and brilliant, he could turn up the heat, as in the outer movements of the symphony — particularly the last, with its sharply contrasted episodes — or in the dazzlingly virtuosic middle movement of the concerto, which was written for Jascha Heifetz. The jollification and irony of *Scapino*, the "comedy overture" that opens the CD, makes for pleasant enough listening, but it's second-drawer stuff.

The performances are all excellent, recorded in very bright sound from Southampton's Guildhall. Violinist Tasmin Little, whose 1992 recording of the Delius concerto I particularly cherish, gives her all in the Walton. She has plenty of competition, including the redoubtable Heifetz on RCA, with the composer conducting, and Nigel Kennedy, whose Angel disc also offers the Walton Viola Concerto, but this is a nicely varied and mostly substantial CD. *D.H.*

CLASSICAL MUSIC

Collections

CARAMELOS LATINOS

(Latin American Lollipops).

Simón Bolívar Symphony Orchestra of Venezuela, Maximiano Valdes cond. DORIAN 90227 (59 min).

Performance: Lively

Recording: Good sound

A collection of orchestral music by six Latin American composers — the Brazilian Carmargo Guarnieri, the Argentine Alberto Ginastera, the Mexicans Silvestre Revueltas and José Pablo Moncayo, and the Venezuelans Innocente Carreño and Juan Bautista Plaza — this CD carries the unfortunate and demeaning English title of "Latin American Lollipops." The Spanish title, which literally means "Latin Sweets," is slightly less offensive. These are respectable and lively performances of fairly substantial works by sophisticated composers, not kiddie music. Revueltas's children's ballet, *The Wandering Tadpole*, is a little masterpiece of musical wit. Ginastera's *Overture for a Creole "Faust"* interprets a classic of Argentine cowboy literature in a lively manner, and Guarnieri's charming dances all strike the perfect serious/popular note. The two Venezuelan pieces are more romantic but not sugary. In fact, Carreño's picturesque evocation of his native Isla Margarita is rather grand but also has bite. No lollipops here.

Moncayo's *Huapango* is, I grant, a lollipop, one of those encore pieces that are instantly recognizable but otherwise unidentifiable. No fear: One lollipop will not rot your teeth. *E.S.*

JERRY HADLEY:

The Age of Bel Canto.

English Chamber Orchestra, Richard Bonyng cond. RCA VICTOR 68030 (77 min).

Performance: Enjoyable

Recording: Excellent

Despite a pretentious and rather misleading title, this is a well-planned and enjoyable collection, and tenor Jerry Hadley, in good form, benefits from fine orchestral support. Richard Bonyng's knowledge of operatic rarities is probably responsible for the inclusion of such selections as the ornate, if not very interesting, aria from Rossini's *Sigismondo* and the virtuosic "Viens, gentille dame" from Boieldieu's *La Dame Blanche*. The aria from Donizetti's *Dom Sébastien* is better known in its Italian form.

Hadley's singing is sensitive and responsive to the various styles and idioms. He is

at his best in the tender aria from Thomas's *Mignon*, in the charming song from Planquette's *Les Cloches de Corneville*, and in the aria from Delibes's *Lakmé*, in which he skillfully combines a blended voice and pure falsetto. Bonyng rushes the tempo a bit for



the familiar "Ach, so fromm" from Flotow's *Martha*, and the tenor would have been more comfortable with "M'appari," its Italian alternate, in any case. But all in all, there is a great deal of variety here, and most of it is pleasing. *G.J.*

PETER SERKIN:

... in real time.

Peter Serkin (piano).

RCA VICTOR 68189 (65 min).

Performance: Powerful

Recording: Superb

All of the works on this CD were written for Peter Serkin, who at one point toured with a program consisting entirely of commissioned pieces. American, British, German, Italian, and Japanese composers from two or three generations have put some noteworthy music in the hands of a very persuasive interpreter. The pieces by Hans-Werner Henze and Luciano Berio are merely encores, but most of the rest are serious and multidimensional. The general tone is (fittingly for Rudolf Serkin's son) post-Romantic and modern/expressionist.

Alexander Goehr's effective series of post-Bergian short preludes of substantial character are perhaps the high point of the CD. Leon Kirchner's *Interlude* hovers between romantic virtuosity and bebop. At another extreme, Toru Takemitsu's *Les Yeux Clos II* combines the Western post-expressionist blues with Eastern contemplativeness. Peter Lieberson's *Bagatelles*, *Fantasy Pieces*, and *Garland*, which occupy a major portion of the disc, encompass a wide expressive range, from early and difficult to recent and genial. Serkin's confidence and ease with this material give all of it an air of importance as musical matter well worth our attention. *E.S.*


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Reader Service No.	Advertiser	Page Number
—	Absolute Soundings	96
1	Adcom	30-31
—	All Brands Electronics	93
2	Alpine	C3
5	API/Energy	68
7	Atlantic Technology	55
—	Bacardi	C4
—	Bose	24-25
—	Bose-Wave Radio	53
—	Boston Acoustics	39
6	Cambridge SoundWorks	48-49, 50
11	Crutchfield	82
54	DCM	55
15	Definitive Technology	12-13, 14, 15
18	Digital Phase	83
—	Electronic Depot	99
—	Electronic Wholesalers	97
33	Eosone	7
—	Esquire	72
20	J&R Music World	84-85
21	Jensen	2-3
24	Kenwood	8-9
—	M&K	33
—	Marlboro	21
41	Mitsubishi	16
27	Mobile Fidelity	79
28	Music Interface Technologies	35
30	New West	102
22	NIIT	19
16	Niles	4
29	NuReality	23
32	One Call	91
—	Panasonic	11
35	Paradigm	42, 43
—	Parasound	27
—	Pioneer	36-37
34	Polk Audio	29
—	6th Avenue Electronics	87
—	Smimoff	62
45	Sound City	89
—	Uncle's Stereo	88
—	Veritas	75
—	Yamaha	C2-1


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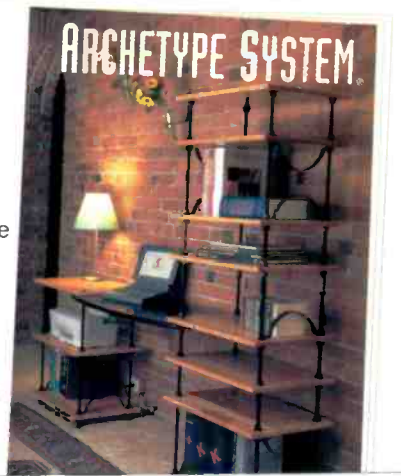
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30 YEARS AGO

Editor William Anderson turned over his June 1966 column to STEREO REVIEW critic George Jellinek, who, inspired by the April farewell performance at the original Metropolitan Opera house, declared his mission at the magazine: "There should be no musical underprivileged in a truly Great Society. I am proud to be one of the active combatants in the War on Musical Poverty."

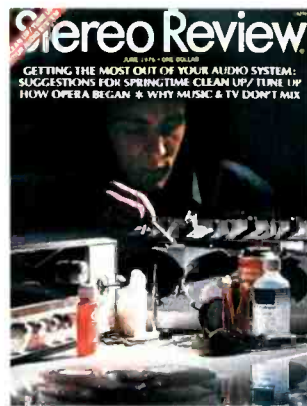
Among new products this month were Shure's Spher-O-Dyne omnidirectional microphone and Craig's C-516

Shure microphone, 1966



tape recorder, a home machine designed to record and play the four-track cartridges then popular in car stereo. Hirsch-Houck Laboratories tested one of the first autoreverse open-reel tape recorders, Concord's Model 994. Technical editor Larry Klein featured "Eight Ingenious Hi-Fi Installations" of readers from around the country, and contributing editor William Flanagan offered an appreciation of the great American composer Aaron Copland.

Thanks for sharing: Reviewing a reissue of duets by Jeanette MacDonald and Nelson Eddy, Ray Ellsworth noted that Hollywood insiders referred to the duo as the Iron Butterfly and the Singing Capon.



20 YEARS AGO

In Best of the Month for June 1976, David Hall endorsed London's set of the first integral recordings of Prokofiev's five piano concertos, featuring Vladimir Ashkenazy and André Previn, while Joel Vance went batty over "Chester & Lester," the



Tony Orlando and Dawn, 1976

first collaboration between guitarists Chet Atkins and Les Paul. In other reviews, Chris Albertson compared "Agharta" by Miles Davis to "a two-pound steak containing a one-and-a-half-pound bone," Stoddard Lincoln declared that most of Haydn's piano concertos were "downright silly and not worth bothering with," and Noel Coppage dismissed Grand Funk Railroad's "Born to Die" as "Ree-goddamn-diculous."

New products included the ADC Accutrac 4000 turntable, which could be programmed to play the bands on a record in any sequence by means of an infrared light and a sensor that responded to reflections off the LP's surface. In test reports, Hirsch-Houck Labs characterized the ESS AMT-1a speaker as "outstandingly fine."

Nobody expects the Spanish Inquisition! Peter Reilly wrote that listening to Tony Orlando and Dawn's "To Be with You" was "torture of a kind so exquisite I'm sure even Torquemada would smile."

10 YEARS AGO

American audio ruled the June 1986 roost. Steve Birchall weighed in with a special report on "The State of the Nation's Audio," including such homegrown products as Allison Acoustics speakers and Threshold power amplifiers. Michael Smolen surveyed "An American Dream" system, representing fifteen U.S.

companies, and Chris Albertson talked one-on-one with singer Maxine Sullivan. "An American Classic." Julian Hirsch tested Harman Kardon's TD392 cassette deck (\$550), which he said "represents solid value in its price class." Meanwhile, in Best of the Month, Mark Peel gave top marks to "Songs from Liquid Days," Philip Glass's collaboration with rock songwriters including Paul Simon and David Byrne, and Richard Freed applauded Murray Perahia's CBS recordings of Beethoven's Third and Fourth Piano Concertos with Bernard Haitink and the Concertgebouw Orchestra.



Bob Prestiano of San Angelo, Texas, wrote a letter to the editor complaining about classical CD's revealing "audible moans and groans that seem to originate from the conductor or soloist. It would be of value to your readers if reviewers would indicate the presence of such noises." — Steve Simels



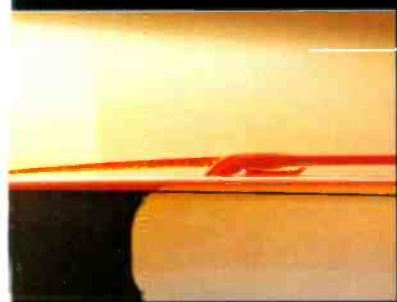
Allison Acoustics
loudspeakers, 1986

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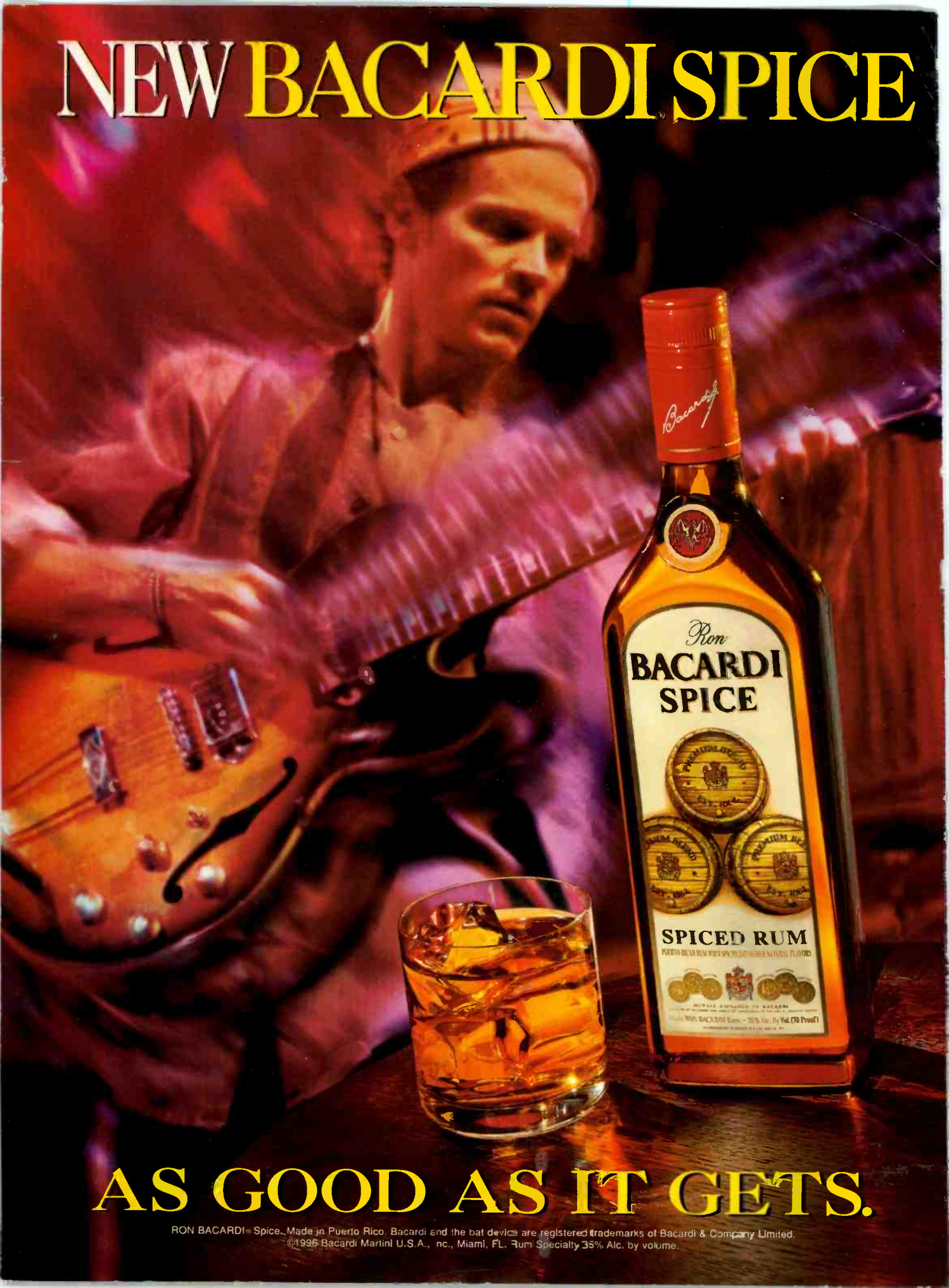
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