Stereo Review

US \$2.95 · CANADA \$3.95 · UK £1.95 · AUGUST 1994

BALANCING A

3 LOW-PRICE A/V RECEIVERS WEIGH IN FOR COMPARISON

PORTABLE PLEASURES

A/V MOVING: TIPS ON TRUCKIN'

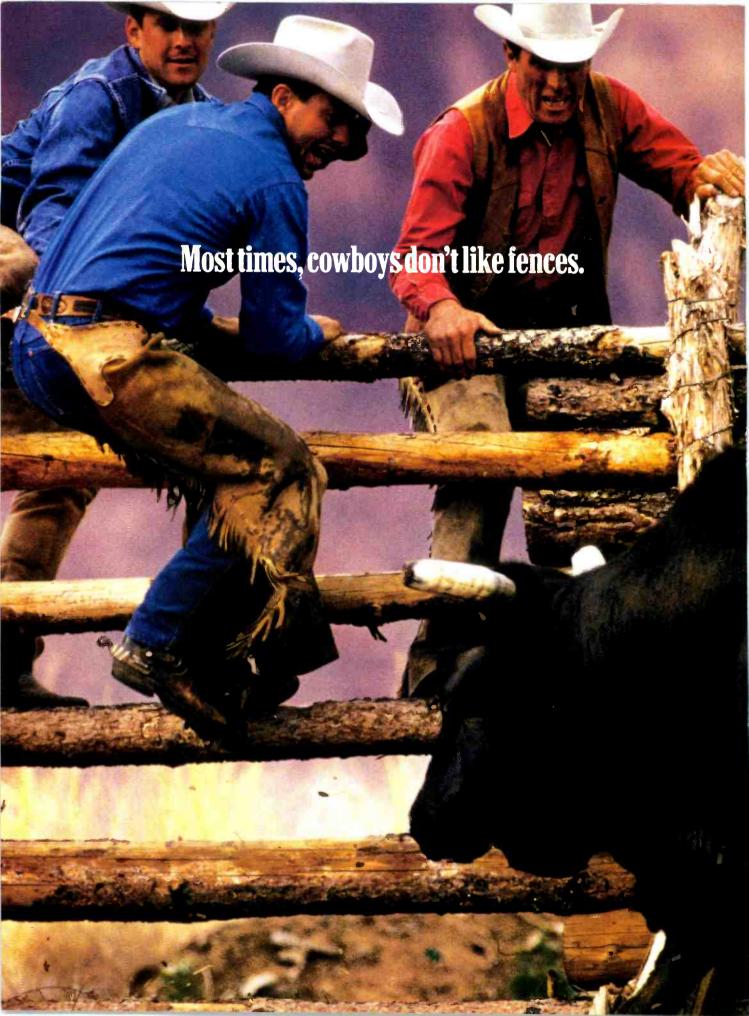
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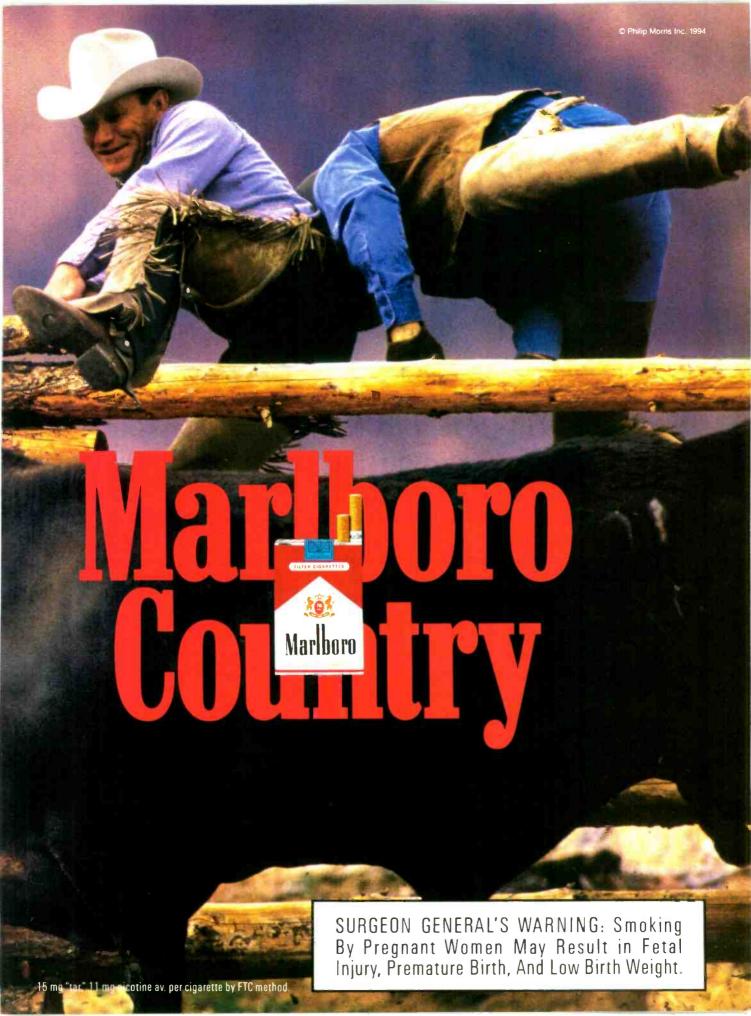
Onkyo THX A/V Receiver, Rotel 6-Channel Power Amp, Nakamichi Cassette Deck, and more...





ONISYILLE WOODS PKY #0408







Cinema DSP blurs the line between watching a movie and actually being in one.

Yamaha Cinema DSP gives dialogue more definition. Music, more dimension. And sound effects, far greater realism, more graphic detail and superior placement. This breakthrough in realism is no small feat.

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Digital Sound Field Processing is Yamaha's unique technology that electronically recreates some of the finest performance spaces in the world.

While Dolby Pro Logic places sound around the

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Together, these two technologies allow Yamaha to offer a complete line of home

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But don't just take our word for it. Hear it for yourself. Stop by your local Yamaha dealer for a demonstration today. It's one demo that's bound to change the way you look at movies forever. Or at least for a very, very long time. For the dealer nearest you, call 1-800-4YAMAHA.



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speakers that fully
replicate the experience you get in
multi-speaker
movie theaters. It
sounds so real,
you'll swear you
hear sounds from
places you don't
even have speakers.





Cover

Three basic A/V receivers,
Technics' SA-GX470. Sony's STR-D615, and
Kenwood's KR-V5560, offer different
options in the low price range. See our comparison
tests beginning on page 46.

Photograph by Dan Wagner

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Stereo Review

INCORPORATING HIGH FINELITY ..

EQUIPMENT

Equipment Test Reports.

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Tips on preparing your A/V treasures for the big trip • by Ian G. Masters

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Eleven of the neatest little gizmos you can get for your personal entertainment • by Rich Warren

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MUSIC

Best Recordings of the Month . U

The Pretenders' tough-as-nails punk/rock, Maggie Estep's "No More Mr. Nice Girl," Stephen Kovacevich's Beethoven sonatas, and Kurt Masur's heartbreaking "Babi Yar" Symphony



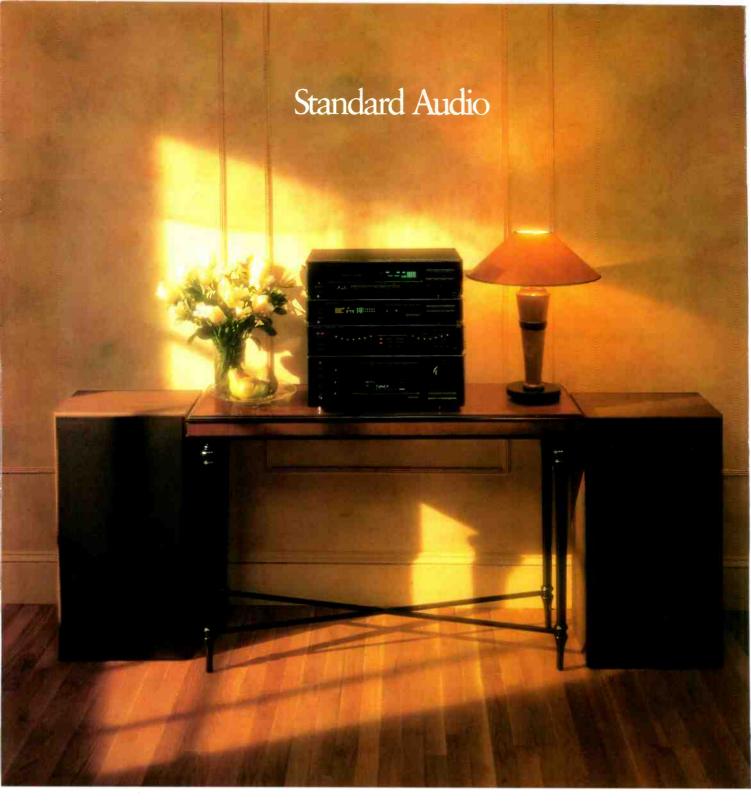
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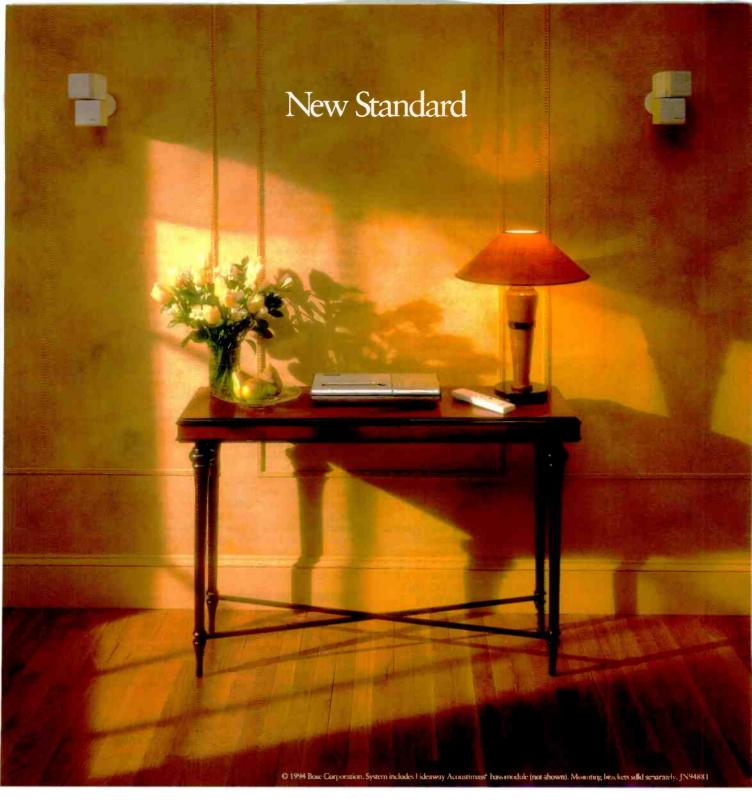
clarity and definition, without the complexities of conventional systems.

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buttons. And it works right through walls so you control the system from anywhere in your home.

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Best Products of 1993, and the only audio product chosen.

And why Stereo Review said it is an "...attractive, easy to use, and thoroughly listenable [system for] households in which a stack of black-finished components and prominent speaker cabinets would not be appreciated."

We could tell you the Lifestyle[®] system is more than a better sounding stereo. We believe it represents a new era in music enjoyment.

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For more information, and for demonstration locations near you, call 1-800-444-BOSE Ext. 427.

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RIILLEIII



BEACH CHANGERS

CD changers have become so popular that several big names in portable audio are now offering boomboxes that accept five, six, or even seven discs. Sharp's WQ-CH800 (\$249) has a unique toploading five-disc changer with a clear plastic window so that you can see what's playing. Fisher's PH-D650 (\$280) and Sanyo's MCH-900 (\$189) pack internal six-disc elevator-type changer mechanisms that accept discs through a single drawer. And Sony's CDF-600 (\$320) and IVC's PC-XC30 (\$349) let vou play a seventh disc on the fly after six have been loaded into their internal changers. All have a cassette deck as well—or two in the case of the Sharp and JVC boxes. At least there'll be a little more musical variety on the beach now.

ARTS AGAINST AIDS

Twenty-one prominent jazz musicians have donated recorded performances of ballads for a CD that benefits Classical Action: Performing Arts Against AIDS, a not-forprofit organization that raises funds for AIDS services across the U.S. The ballad album, "Last Night When We Were Young, includes cuts by Leny Andrade, Gary Burton, George Shearing, Janis Siegel, Toots Thielemans. Phil Woods, and others, Fred Hersch is both a performer and the producer, and Chesky Records provided technical support. Available only by calling 1-800-321-AIDS, the CD costs \$19.95, including shipping and handling.

VETERANS

Marking the thirtieth anniversary of their first tour of the United States, the Rolling Stones begin a tour of twenty-three North and South American cities on August 1 in Washington, DC. Mick Jagger (now 50), Keith Richards, Ron Wood, and Charlie Watts are joined by Darryl Jones (no relation to Brian), who replaces Bill Wyman on bass.... The legendary country singer Buck Owens has contracted with Sundazed Music, of Coxsackie, New York, to release on CD and cassette ten albums he recorded from 1961 to 1966. Originally released on the Capitol label, these recordings have not been available in the United States for twenty years.

ONE DISC, ONE MOVIE

IVC of Japan has announced the development of a new technology that it says makes it possible to put more than 135 minutes of "high-quality" digital video on one CD-a potential boon for the fledgling Video CD format, which in its present form requires two discs for a full-length movie. Technics plans to

market a Video CD player here this fall as part of a \$1,200 minicomponent system.

MULTIMILLION SELLERS

The Recording Industry Association of America has certified U.S. sales of 13 million units for Pink Floyd's "Dark Side of the Moon" (released on Capitol in 1973), now the fourth top-seller in recording history. Fleetwood Mac's "Rumours" and the Eagles' "Greatest Hits" are tied at 14 million, and Michael Jackson's "Thriller" is still No. l with 22 million.

Newly certified multimillion sales figures include 6 million for Mariah Carev's "Music Box" (Columbia), 5 million for Bob Marley and the Wailers' "Legend" (Island), and 4 million for Billy Joel's "River of Dreams" (Columbia). "Chant" (EMI), an album of Gregorian chant by Benedictine Monks in Spain, which has been on both pop and classical best-seller charts, has been certified Gold and Platinum.

AWARDS AND PRIZES

This year's Pulitzer Prize in Music was awarded to Gunther Schuller.... Toru Takemitsu has received this year's Grawemeyer Award for Music Composition (\$150,000) given under the auspices of

the University of Louisville. The pianist Garrick Ohlsson received the 1994 Avery Fisher Prize endowed by the late Avery Fisher, an audio-equipment manufacturer and philanthropist... The Institute of Electrical and Electronics Engineers (IEEE) is presenting its Founders Medal to Akio Morita, the founder and chairman of Sony, in recognition of "his distinguished corporate leadership and for a lifetime of innovative contributions in bringing advanced technologies to consumer electronics products." The award will be accepted by Morita's wife and son, as he is recovering from a stroke.

RAVE REVIEWS

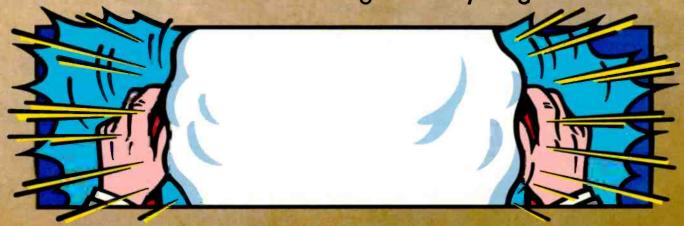
If you're in the market for new or used audio gear and want to know who published what about certain components, you might want to check out The Audio Review Index, a quick-reference guide to 2,000 products that have been reviewed in one or more of ten different magazines (including STEREO REVIEW) between 1988 and 1993. The 74-page booklet is available for \$15.95 (plus \$2.50 for shipping) from Ak Ak Adak Publishing, 398 Elm Ave., San Bruno, CA 94066; telephone, 415-589-2432.

TURBO DCC ON THE WAY

Philips plans to have two new DCC recorders on store shelves this fall: the handheld DCC 170, the format's first portable recorder, and the DCC951 home deck, featuring a new "turbo" tape transport said to increase fast-wind speeds threefold over the currently available DCC900. The DCC951 also boasts an 18-bit D/A converter that Philips says will deliver better-than-CD sound quality from the 18-bit prerecorded DCC's due from PolyGram in the future. A dual-transport DCC deck with both analog and digital recording is also in the works but Philips has no plans to market it this year. . . . Speaking of new formats, Russ Solomon, president of Tower Records, described sales of MD's and DCC's as "pretty pathetic" during a recent chat with Stereo Review but said the chain would continue to support both formats. "We'll support 'em until they die. Our philosophy is to support what the record companies do."



You don't have time to brace yourself, much less think. Meanwhile, it's thought of everything.



It happens so fast. How can an airbag trigger so suddenly? Let's just say it's the moment our little black boxes have been waiting for all their lives. Delco Electronics

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6 Audit

LETTERS

Home Theater Power

n June's "A Guide to A/V Receivers," Daniel Kumin tells us that "The most important power criterion for an A/V receiver is that it deliver *equal* power across the front three channels in Pro Logic operation . . ." Of the receivers illustrating the article, however, five meet this 'most important' criterion, but the other three do not. How important is this 'most important' criterion?

ROBERT K. MCNEILL Yorktown Heights, NY

In a typical Dolly Surround mix, the center channel is the main channel and will therefore tend to contain, on average, at least as much energy as any of the others. So if all three of your front speakers have the same sensitivity and you really need, let's say, 100 watts each for the left and right, you're going to need at least 100 watts for the center. If, on the other hand, your center speaker is more sensitive than the other two front speakers, you will need correspondingly less power for it. And if you actually need substantially less power for the front left and right than your receiver has available for them, then you will also be able to get by with less power for the center speaker (unless it is significantly less sensitive than the other two front speakers). Given that most modern loudspeakers will play pretty loud with even 20 or 30 watts of input, this last situation is probably more common than one might initially suspect.

We recommend equal power across the front because that is, in general, more likely to yield satisfactory results than is a power balance skewed in favor of the left and right. Your mileage may vary.

Soundtrack Bust

hank you, Steve Simels, for having a bad word to say about Whitney Houston's rendition of Dolly Parton's I Will Always Love You in the soundtrack album from The Bodyguard ("The Soundtrack Boom," May). Up till now I had never heard anyone criticize that record; the attitude seemed to be that since it sold a jillion copies, it must be great.

WILLIAM B. RHODES Vallejo, CA

Attention, Vinyl Whiners

In response to Paul Gordon's letter in June about "the horror of digital sound": We are tired of the vinyl whiners who live fifteen years in the past. These people need to wake up and smell the digital! Digital technologies are here to stay—there is no way we will ever go back to analog.

We would like to know what Mr. Gordon

means when he refers to the "lack of tonal ambience" in today's digital recordings. Does he mean that he misses all the pops, hisses, and scratches usually associated with the playback of analog recordings on vinyl records? The recording industry is driven by what consumers want, which in the case of music recordings is sound quality, convenience, and value. We dare Mr. Gordon to achieve the same level of sound quality with his old vinyl records as we do with our CD's without spending thousands of dollars on sound-enhancing hardware.

Juan Gonzales, Alex Canizales Salt Lake City, UT

yo, dude! Get out of the Stone Age (or clean out your ears—or both)! The old complaint about "midrange harshness" is as tired as the green-marker myth. Digital rules, plain and simple.

STEVEN DAY CARTER Columbus, OH

Dynamic Range and Music

or some time now I have been planning to buy new speakers and an A/V receiver, but I have held off because of uncertainty about what to look for with the aim of reproducing classical music. Some otherwise excellent receivers disappoint me in that respect because their signal-to-noise ratio (S/N) is only 85 dB. Is that really adequate to reproduce some of the exceptional recordings available today? Most CD players, even modest ones, seem to do much better than 85 dB S/N.

So-called audiophiles have told me that musical accuracy in speakers is only possible with acoustic-suspension designs. Is that fact or fiction? Do vented or ported (bass-reflex) speakers degrade musical accuracy to achieve deep bass response?

FREELAND P. FARRAND De Land, FL

The S/N of CD's and CD equipment is figured relative to maximum output, whereas amplifier S/N is figured relative to a 1-watt output (or should be according to the current EIA measurement standard—some manufacturers still use full output as the reference, which inflates the number). The maximum S/N for a CD is about 96 dB. A receiver with an 85-dB S/N relative to 1 watt will have a 96-dB S/N relative to about 13 watts. So as long as the receiver is putting out at least 13 watts from each channel on peaks from whatever CD you are playing, its noise should not be a factor.

Design of bass-reflex (ported) speakers used to be sort of a black art. With modern methods, however, very good and predictable results are not merely possible but

routine. There is no reason to avoid bassreflex speakers as a category on grounds of reproduction accuracy.

RFI Solutions

The solutions to radio-frequency interference (RFI) problems are not cut and dried. Usually it's necessary to analyze and test several possible causes. The American Radio Relay League (ARRL) encourages amateur radio operators to operate their stations legally and to help their neighbors find solutions to RFI problems regardless of fault. We can offer some help in such cases by referring the problem to local experts, who often mediate or suggest fixes.

STEREO REVIEW readers can get a copy of our free pamphlet on RFI interference by sending a stamped, self-addressed envelope to: ARRL Technical Secretary, RFI Pamphlet, 225 Main St., Newington, CT 06111.

ED HARE, ARRL Newington, CT

Classic Audio

t bothered me to read that Ralph Hodges had passed away. That he was fifty, and I'm fifty, and that he died of cancer, and I'm enrolled in a course with the American Lung Association called "Freedom from Smoking," made it especially bothersome. His wife wrote a very nice letter, I thought, especially the part about his beloved "Maggies." That's how I feel about certain pieces of equipment, and she conveyed that feeling very well.

I am trying to get hold of a pair of the Powered Advent loudspeakers that were around in the late Seventies. I don't quite know how to go about it. I thought of putting an ad in STEREO REVIEW's classified section, but I might not be able to afford the speakers after paying for the ad. Is there any national publication concerning used stereo equipment? There's the Bargain Trader here, but I'm looking more for a "Joe Willie's Never-Say-Die Used Stereo Equipment Publication." Any suggestions would be appreciated.

DONALD R. MCMENIMEN 6050-7 Sherwood Glenn Way West Palm Beach, FL 33415

Digital Recording

f royalty fees are included in the purchase price of both a digital recorder and the blank tapes or discs it uses, what is the purpose of the Serial Copy Management System (SCMS)? If royalties are prepaid, why can't unlimited digital copies be made?

Also, if I'm not mistaken, recordable CD

(CD-R) was released last year, but I have yet to see any advertising or any components for sale. What's the scoop? Who makes the components, and where can they be purchased? How much do they cost? Will the discs be rerecordable like Mini-Discs? If not, why not? Will a CD-R component be able to play conventional CD's? Will a conventional CD player be able to play CD-R's?

MARK WATT Platteville, WI

We don't see any good reason for SCMS, either, but it's the law. You can, by the way, make unlimited digital copies from the original. All SCMS prevents is direct digital copying of a digital copy—hence. Serial Copy Management System.

CD-R decks are available from Marantz and Meridian for about \$7,000; blank discs are about \$50 each. The technique used to record CD-R's is permanent, so the discs are not reusable. They can, however, he played on regular CD players, and a CD-R deck can play conventional CD's as well. Magneto-optical technology, which is used for recordable MiniDiscs, would permit erasure and reuse, but the resulting discs would not be readable by standard CD players. On the other hand, it would be possible to make a magneto-optical CD recorder that could also play back conventional CD's, although we don't know of anybody planning such a product.

Overseas Mail-Order Tip

buy most of my CD's from the U.S. by mail, but the postage can run \$2 per CD for surface mail or up to \$6 per CD for airmail. I had the brilliant idea of asking the dealer to send me the discs without the jewel boxes (just the printed inserts), and the airmail cost went down to less than \$1 apiece. When the CD's arrive, I buy jewel boxes for \$1 each, for a total of \$2 per CD instead of \$5 to \$6.

MOSHE BENARROCH

Jerusalem, Israel

Correction

n our comparison review of six floor-standing loudspeakers ("Stand Up and Be Counted." July 1994), the Klipsch KG-3.5's on-axis frequency response should have been listed as 49 Hz to 20 kHz ±5.0 dB.

We welcome your letters. Please address correspondence to Editor, Stereo Review, 1633 Broodway, 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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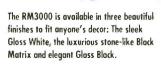
be astonished. Because we've miniaturized everything but that big, room-filling sound. In fact, 1800 audio

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brings the drama of home theater to your fingertips.
Preprogrammed DSP(Digital Signal Processing) modes such as Concert Hall, Nightclub, Stadium and Five-Channel Stereo surround, let you create a variety of custom-tailored, psychoacoustically correct listening environ-

ments.

These features couple ideally with the GTP-600's advanced, programmable remote which lets you command up to eight addi-

tional system components for complete home theater control.

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Preview the new GTP-600 tuner/preamplifier at your authorized Adcom dealer today. But be careful, you might want to leave the lights on.

"Dolby" and "Pro Logic" are registered trude marks of Dolby Laboratories Licensing Corporation



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NEW PRODUCTS

▼ YAMAHA

Yamaha's DSP-E580 processor/ amp converts the electronics side of a two-channel system into a five-channel surround setup. It delivers 25 watts each to the center and two surround speakers and offers eleven A/V modes. including Dolby Pro Logic and

70mm Movie Theater, and four music modes. It has several adjustable parameters, including reverb, and six line-level outputs, Price: \$699, Yamaha. Dept. SR, 6660 Orangethorpe Ave., Buena Park, CA 90620.

• Circle 120 on reader service card

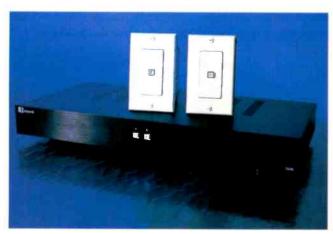


V RUSSOUND

The Russound/FMP SSAB speaker selector (\$350) lets you switch the output of an eight-channel home theater system between two groups of speakers. It has inputs for an auxiliary amplifier so that you can play a pair of speakers for music listening in one room while a full surround setup is playing a

soundtrack in the other room. Switching can be done from the SSAB's front panel, the SSAB-WK wall-mount keypad (\$45 each), or the free-standing SSAB-FS keypad (not shown, \$71). Russound/FMP. Dept. SR, 5 Forbes Rd., Newmarket, NH 03857.

• Circle 122 on reader service card





KLIPSCH

Klipsch's first Home THX-certified speaker lineup includes the 231/4-inch-tall KTLCR front-channel speaker, featuring a 1-inch horn tweeter (\$499 each), the 13-inch-tall KTDS dipole surround speaker (\$699 a pair), and the 35-Hz-capable

KTSW subwoofer (\$1,699). featuring a 200-watt amplifier/crossover and a 15-inch driver. All cabinets are finished in black, Klipsch, Dept. SR, 8900 Keystone Crossing, Suite 1220, Indianapolis, IN 46240.

• Circle 121 on reader service card



LEXICON

Lexicon's Model 500T remote control can learn a hundred "macro" control sequences, each with up to twenty-four commands. It features a touch-screen graphic interface with programmable

button labeling and layout. Price: \$2,000 and up, depending on system complexity. Lexicon, Dept. SR, 100 Beaver St., Waltham, MA 02154-8425.

· Circle 123 on reader service card

NEW PRODUCTS

V FULTRON

The Model 8569 6 x 9-inch car speaker from Fultron sports a coaxially mounted 1-inch titanium-dome tweeter and biamping terminals. The 4-ohm driver is rated to handle 150 watts of peak power, or 75 watts

continuous, and its low-frequency limit is given as 20 Hz. Mounting depth is 3½ inches. Price: \$159 a pair. Arthur Fulmer, Dept. SR, P.O. Box 177, Memphis, TN 38101-9988.

• Circle 124 on reader service card



MAGNEPAN >

Magnepan's MG 2.7/QR dipole speaker combines planar-magnetic bass and midrange elements and a quasi-ribbon tweeter in a sleek 22 x 71 x 11/4-inch frame in natural oak (shown) or black. Frequency response is given as 34 Hz to 26 kHz ±3 dB, sensitivity as 87 dB. Power-handling capability is 50 to 250 watts. Price: \$1,995 a pair. Magnepan, Dept. SR, 1645 Ninth St., White Bear Lake, MN 55110.

• Circle 125 on reader service card



PIONEER >

Pioneer's FH-P95 car receiver packs a CD player, a hidden cassette deck, a tuner, a parametric EQ, an ambience processor, and a 30-watt four-channel amp into a 4-inch-high double-DIN chassis. Highlights include CD-changer controls, a

sing-along mode, and a unique Soundscape mode to create moods by mixing two sources together; a CD with background sounds is included. Price: \$1,400. Pioneer, Dept. SR, P.O. Box 1720, Long Beach, CA 90801-1720.

• Circle 126 on reader service card



1025 - 10

V ASM LABS

ASM's Mongoose fiber-optic cable system is designed to isolate analog line-level audio signals from noise and interference. A small transmitter converts the signal into light pulses and sends them via optical

cable to a receiver that converts them back into an electrical signal. Price: \$649 for two transmitter/receiver pairs. ASM Labs, Dept. SR, 410 E. O'Dell St., Marionville, MO 65705.

• Circle 127 on reader service card

A TECHNICS

The Technics SA-TX1000 A/V receiver, slated to hit stores in September, features a Home THX Cinema mode with special timbre-matching, equalization, and surround-enhancement circuitry that's designed to tailor Dolby Pro Logic-decoded movie

soundtracks to home listening.
Power output is 120 watts each to
the three front speakers and 110
watts to the surround channel.
Price: \$1,200. Technics, Dept.
SR, One Panasonic Way,
Secaucus, NJ 07094.

• Circle 128 on reader service card









This question may confuse those who believe that the measure of a loudspeaker is the number of its drivers. It will also elude those who have never bothered to question conventional driver placement, which always separates the woofer from the tweeter.

In fact, the most acoustically correct location for the tweeter is precisely at the *center* of the woofer. This strategic placement creates a single sound source, allowing high and low frequencies to reach your ears at the proper time, regardless of where the speakers are placed or where you are sitting. (No wonder KEF's patented Uni-Q® is the technology of choice for advanced Home Theater applications.)

Perhaps the greatest benefit of the KEF Q Series speakers is that they sound as good in your home as they do in the showroom.

NEW PRODUCTS

ARISTA A

Arista Technologies' Commercial Brake, a black box that connects to a VCR and TV, automatically eliminates commercials from videotaped programs. While a recording is in progress, it inserts markers on the tape that pinpoint the beginning and end of each

commercial. When the tape is played back, the Brake instructs the VCR to fast forward when it hits a commercial, meanwhile fading the screen to blue and masking the audio. Price: \$199. Arista, Dept. SR, 125 Commerce Dr., Hauppauge, NY 11788.

• Circle 129 on reader service card



RUARK ACOUSTICS

The Crusader II speaker from England's Ruark Acoustics combines a 6½-inch woofer, a 3-inch midrange driver, and a 1-inch silk-dome tweeter in a 36-inchtall cabinet finished in dark walnut, oak, or black ash veneer (shown). Frequency response is given as 45 Hz to 20 kHz ±3 dB. Price: \$3,300 a pair. Distributed by Audio Influx Corp., Dept. SR, P.O. Box 381, Highland Lakes, NJ 07422-0381.

• Circle 130 on reader service card

▼ AUDIO-TECHNICA

Audio-Technica's MMS557 powered multimedia speaker joins a 4-inch wooier, a ¾-inch tweeter, and a power amp in a magnetically shielded cabinet only 9 inches tall. Rated power is 10 watts per channel, bandwidth 100 Hz to 18 kHz. Price: \$150 a pair. Audio-Technica, Dept. SR, 1221 Commerce Dr., Stow, OH 44224-1760.

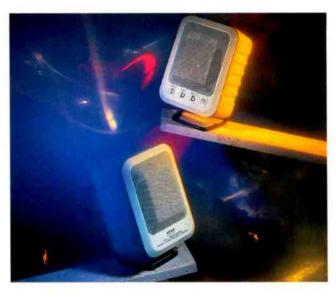
• Circle 132 on reader service card



CAIG LABS

Caig's ProGold K-AV30 kit (far left, \$33) includes G100 metal-contact cleaning/lubricating solution and lint-free cloths, swabs, and brushes. The K-PAV50 kit (\$53) adds a pen-type cleaner for small parts, OpticALL glass/metal/plastic cleaning solution, and pure alcohol. Caig Labs, Dept. SR, 16744 W. Bernardo Dr., San Diego, CA 92127.

• Circle 131 on reader service card



◀ KENWOOD

Kenwood's KR-V7060 A/V receiver is rated to deliver 100 watts each to three front speakers and 25 watts each to two surrounds. It features a Oolby Pro Logic decoder with a Theater Logic "sound enhancement" mode,

level controls for the center and surround speakers, and six linelevel outputs, including one for a subwoofer. Price: \$399. Kenwood, Oept. SR, P.O. Box 22745, Long Beach, CA 90801-5745.

• Circle 133 on reader service card



NEW PRODUCTS

▼ VISTA

Vista's Dynamic Noise Reduction system, which incorporates patented technology developed by National Semiconductor Corp., is said to reduce noise by "at least 10 dB" with any source. including FM radio and TV broadcasts. The device, which connects to the tape loop of a

receiver or amplifier, uses an adaptive low-pass filter to "push the noise floor down." Available factory direct for \$139 (plus \$6.95 shipping and handling) from Vista, P.O. Box 1425, Bolingbrook, IL 60440; telephone, 708-378-5534.

• Circle 134 on reader service card

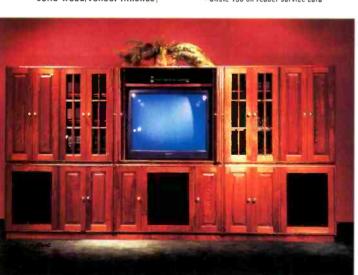


▼ CUSTOM WOODWORK & DESIGN

CWD's Woodmore home theater cabinet has three 221/2 x 271/8 x 18-inch speaker cubbies and can hold a TV ranging from a 35-inch direct-view model to a 45-inch rear-projection set. The modular cabinet is available in a variety of solid-wood/veneer finishes.

including four types of oak. walnut (shown), cherry, pewter, and ebony. Price: \$6,750 to \$9,150 depending on finish. Custom Woodwork & Design, Dept. SR, P.O. Box 8, North Reading, MA 01864-0008.

· Circle 136 on reader service card





Soundstream's SS611 two-way car speaker system comprises pairs of 61/2-inch woofers, 1-inch textile-dome tweeters, and twoway 24-dB-per-octave passivecrossover modules. System frequency response is given as 40 Hz to 20 kHz ±3 dB, sensitivity as

90 dB, and power-handling capability as 80 watts (continuous). A surface/flushmounting kit for the tweeters is included. Price: \$449. Soundstream, Dept. SR, 120 Blue Ravine Rd., Folsom, CA 95630.

• Circle 135 on reader service card



4 A DESIGN

A Design's 25-inch-tall speaker stand has a solid-maple post, a 6 x 8-inch top plate, and a 10-inchdiameter base plate. Both plates are epoxy-coated steel with rubber spacers. Available by mail order for \$300 (plus tax and shipping) from A Design, Dept. SR, 701A Market St., San Francisco, CA 94109; telephone, 1-800-677-6744.

• Circle 137 on reader service card



IMPACT A

Impact's QL-10BPS car subwoofer enclosure is designed to be fitted with the 10-inch woofer of your choice. The box's two ports can be trimmed to optimize performance following a supplied

tuning chart. Dimensions: 171/8 x 131/2 x 71/2 inches. Price: \$140. Ai Research/Impact, Dept. SR, P.O. Box 159. Stillwater, OK 74076-0159.

• Circle 138 on reader service card

How Do You "...The Best Value

Cambridge SoundWorks Introduces New Ensemble, New Ensemble II

Audio Magazine once said that our Ensemble speaker system may be "the best value in the world." Dozens of critics and thousands of customers have applauded our Ensemble and Ensemble II speaker systems. Designed by Audio Hall of Fame member Henry Kloss, (founder of AR, KLH and Advent), these systems have become best sellers by offering very high quality construction and accurate, wide-range music reproduction with precise stereo imaging – all at factory-direct prices, with no expensive middlemen.

We are now pleased to introduce new versions of our Ensemble and Ensemble II systems, as well as our new, ultra-compact Ensemble III system.



The New Ensemble

New Ensemble is an improved version of our original, dual-subwoofer/satellite speaker system. New Ensemble maintains the dual subwoofer design of Ensemble, which allows for maximum room placement flexibility. Placement of bass and highfrequency speakers in a room-and how those speakers interact with the acoustics of the room-has more influence on the overall sound quality of a stereo system than just about anything. New Ensemble's two ultraslim subwoofers give you more placement flexibility than any speaker system we know of, and is most likely to provide the performance you want in the real world...in your room. Having two, compact subwoofers lets you move them around, experiment, and find that placement that gives you exactly



the sound you want. This is one of the reasons *Esquire* described Ensemble by saying "you get 30 days to return the speakers or keep them, but you'll keep them."

So What's New?

New Ensemble maintains the tonal balance, frequency range and quality of construction of the original. There are two basic differences.

1. New "long throw" subwoofer speakers with built-in heat sinks.

New Ensemble uses the 8" long throw woofer designed for our Powered Subwoofer II. The woofer's extremely long "throw" (almost 1") provides for more linear cone excursion for more accurate bass. A unique integral heat sink provides improved power handling.

2. New frequency balance controls.

New Ensemble's satellite speakers use the same high quality 1 3/4" tweeter, 4" midrange driver and crossover as the original Ensemble, but with newly designed midrange and high-frequency balance control switches.

A two-position midrange switch on each satellite lets you choose the same output in the key 800-1600 Hz octave as in the original – or you can flip the switch to emphasize that octave by 2 dB. The original Ensemble's response was tailored to avoid the "boxy" characteristic typical of many speakers. This results in an "open" sound on large-scale musical works. For some music, switching to the higher output position provides a "warmer" sound that some listeners may prefer.

A second, high-frequency switch has three positions:

A) The same balance as original Ensemble.

B) A 2 dB high-frequency increase.
C) A 2 dB high-frequency decrease.
Rather than affecting tonal balance as does the midrange control, the high-frequency switch can subtly increase the system's "airiness" (Increase) or it can reduce any tendency towards "edginess" (Decrease).

Real Life Performance, Real Value.

In terms of "real life" performance (your music, your listening room), we believe our New Ensemble system competes head-on with speakers selling for hundreds of dollars more. Available factory-direct with black vinyl-clad subwoofers for \$549, or with black-laminate subwoofers for \$629.

The New Ensemble II.

New Ensemble II is an improved version of our best-selling speaker system, Ensemble II. It's more affordable than New Ensemble because it uses one cabinet to house both subwoofer speakers. Its satellite speakers are identical in every way to those used in the New Ensemble, including the new high-frequency and midrange balance controls.



So What's New?

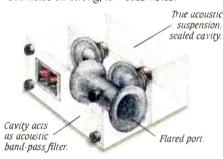
New Ensemble II maintains the overall tonal balance, frequency range, power handling and quality of construction that have made the original Ensemble II one of the country's most popular speaker systems. There are two basic differences. The first is

Improve On In The World"?

- and a new member of the family, Ensemble III.

that its satellite speakers use the same high-frequency and midrange balance controls as our New Ensemble system (see previous description). The satellites also use the same gold-plated 5-way connecting posts as New Ensemble. The second difference involves a redesigned subwoofer cabinet.

New flared subwoofer port. New Ensemble II's subwoofer cabinet encloses twin 6 1/2" long throw woofers mounted in a sealed "acoustic suspension" chamber. They project into a second chamber fitted with a single, flared port. The new port provides smoother air flow, virtually eliminating the generation of any extraneous noise on strong, low bass notes.



"...Beyond Its Price And Size Class

Stereo Review said that the original Ensemble II "performs so far beyond its price and size class that it can be compared only with much larger speakers at substantially higher prices." We believe New Ensemble II carries on this

tradition, clearly outperforming other speakers in its category, including well-known models that sell for about twice the price.

Available factory-direct for \$439.

The Ensemble III

Now you can bring the clear, balanced wide-range sound of Ensemble speakers to a small room.
Our new Ensemble III speaker system is ultracompact: a pair of two-way satellite speakers measuring 4 1/2" x 6 1/2" x 3" and one subwoofer

\$40-\$50 Discount Certificate With New Ensemble.

Purchase New Ensemble with vinyl-clad subwoofers before August 31,1994 and get a \$40 Discount Certificate towards a purchase of any item in our catalog. Purchase New Ensemble with black-laminate subwoofers and get a \$50 Certificate.*

\$30 Discount Certificate With New Ensemble II.

Purchase New Ensemble II before August 31,1994 and get a \$30 Discount Certificate towards a purchase of any item in our catalog.*

\$20 Discount Certificate With Ensemble III.

Purchase Ensemble III before August 31,1994 and get a \$20 Discount Pertificate towards a purchase of any item in our catalog.*

You may not apply the discount to the Ensemble speakers you are buying.

cabinet measuring just 8" x 8" x 15".

Surprising Accuracy and Musical Range at a Low Price.

Compared to our New Ensemble II system, Ensemble III gives up a little in the way of power handling, low bass range, and efficiency. Unlike the "cube" satellite

speakers you'd expect to find in similarly priced systems, Ensemble III's satellites are true two-way speakers with a 3 1/2" midrange driver, a 3/4" tweeter and a crossover. Ensemble III's 6 1/2" woofer uses two separate voice coils (one for each channel) in a cabinet using a special flared port for

smooth air flow.

With most recordings Ensemble III will sound virtually identical to New Ensemble II. It simply won't play quite as loudly. Its construction quality matches that of our other

Ensemble speakers. With a factory-direct price of only \$329, Ensemble III is perhaps the best speaker value of all time.

Risk Free, Satisfaction Guaranteed.

All Cambridge SoundWorks speakers are backed by a 30-Day Total Satisfaction Guarantee. So you can audition your speaker

the right way – in your home, with no salesman hovering nearby. If within 30 days you're not happy, return your system for a full refund. We even reimburse original UPS ground shipping charges in continental U.S.

The satellite speakers used in the New Ensemble and New Ensemble Il include midrange and high-frequency tonal balance controls, and gold plated 5-way binding posts.



All three Ensemble speaker systems come with 100 feet of speaker wire, a wire cutter/stripper, accessories, and our Guide To Surround Sound.

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In The Mid '70s We Now We've Created

The people who work at Cambridge SoundWorks - including our cofounder Henry Kloss (who also founded AR, KLH and Advent) - have been involved with the concept of home theater from the beginning. In 1969 (years before VCRs and cable TV), Henry Kloss founded Advent, the company that introduced the first home theater audio/ video systems - complete with bigscreen TVs and digital surround sound. We have had an ongoing relationship with the people at Dolby Laboratories, creators of Dolby Surround Sound, since Henry Kloss introduced the first consumer products with Dolby noise reduction over 20 years ago. And now

systems factory-direct, with no expensive middlemen. you can save hundreds of dollars. We believe the products on these pages represent the country's best values in high performance home theater components. Audio critics, and thousands of satisfied customers, agree. Stereo Review said "Cambridge SoundWorks manufactures loudspeakers that provide exceptional sound quality at affordable prices." Audio suggested that we "may have the best





Our Surround Speakers

Cambridge SoundWorks Ensemble satellite (but with magnetic shielding). \$149. Center Channel Plus uses an ultra-low, ultra-wide design that is ideal for placement above (or, with optional support stand, below) a TV monitor. \$219.

Surround Speakers

Cambridge SoundWorks makes two "dipole radiator" surround sound speakers. Dolby Laboratories recommends dipole radiator speakers for use as surround speakers. The Surround has a very high power handling capacity and is often selected for "high end" surround sound systems. Audio, describing a system that included *The* Surround said "In many ways the surround sensation was every bit as good as far more expensive installations." \$399 pr. The smaller The Surround II is arguably the country's best value in a dipole radiator speaker. \$249 pr.

Our EXO-1 Electronic Crossover



we have set a new price-to-performance standard for home theater components.

Because we sell carefully matched and tested home theater speaker

Center Channel Speakers

Cambridge SoundWorks manufactures three speakers for use as center channel speakers in Dolby Pro Logic home theater systems. All three are magnetically shielded so they can be placed near a TV or computer monitor. Model Ten-A is a small, affordable two-

way speaker. **\$75**. Center Channel is identical to a



Created Home Theater. A New Way To Buy It.

Powered Subwoofers

The original Powered Subwoofer by Cambridge SoundWorks consists of a heavy-duty 12" woofer housed in an acoustic suspension cabinet with a 140-watt amplifier and a built-in electronic crossover. *Stereo Review* said it provides "deep powerful bass...31.5 Hz bass output was obtainable at a roomshaking level... they open the way to having a 'killer' system for an affordable price." \$599. Our Slave Subwoofer





Home Theater Speaker Systems

We have assembled a number of home theater speaker systems that consist of center channel, surround and main

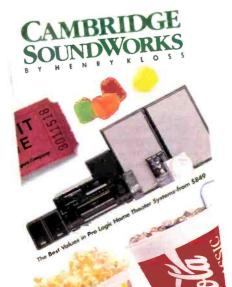
stereo speakers. The combination we show here is our best seller. It includes our New Ensemble subwoofer satellite speaker system (with dual subwoofers), our *Center Channel Plus* and a pair of our best surround speakers, *The Surround*. You could spend hundreds more than its \$1,167 price without improving performance.

For information on other home theater speaker systems – or on any of the products we make and sell – call 1-800-FOR-HIFI for your free color

catalog. Thanks.

uses the same woofer driver and cabinet, but does not include the amplifier or crossover. It can only be used in conjunction with the Powered Subwoofer. \$299. The new Powered Subwoofer II uses a 120-watt amplifier with an 8" woofer. \$399.

Our EXO-1 electronic crossover can be used with either of our powered subwoofer systems, or with powered subwoofers made by other companies. Its high pass filters keep strong, low bass signals out of the main stereo speakers, and directs them to the powered subwoofer. \$299.



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Our 64-page catalog is loaded with components and music systems from Cambridge SoundWorks, Pioneer, Philips, Denon, Sony and others. Because you buy factory-direct, with no expensive middle-men, you can save hundreds of dollars. For example, a Dolby Surround system with Ensemble II speakers, rear speakers, Philips Dolby Surround receiver, CD player and system remote is less than \$1,000. Call today and find out why *Audio* magazine said we "may have the best value in the world."

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- Save hundreds on components and systems from Cambridge SoundWorks, Pioneer, Philips, Denon, Sony and more.
- Audio experts will answer your questions before and after you buy. 8AM-midnight, 365 days a year-even holidays.
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AUDIO Q.A

Low-Impedance Logic

My main speakers have an impedance of 4 ohms, and my Dolby Pro Logic receiver has a switch on the rear that I thought would let me use 8- or 4-ohm speakers. After rereading the owner's manual, however, I find that this switch is for use only in two-channel operation and that all the speakers have to be 8 ohms in the Pro Logic mode. But if the switch affects only the front channels, why is it inadvisable to use 4-ohm speakers in surround mode?

WILLIAM D. HAUPT III Pasadena, CA

The lower the impedance of your speakers, the more current they will draw from an amplifier for a given output voltage. That can mean trouble for an amplifier's output transistors if they are not designed to handle the extra load, and it could overtax the power supply as well, particularly when four or five channels are operating at once, rather than just two. Receiver instructions regarding speaker impedances are often very conservative, however, and it is not normally possible to reduce a speaker's impedance to a single number anyway, ratings notwithstanding. So you might want to go ahead and try your speakers with the receiver, checking periodically to see if its top cover is getting excessively hot. You will most likely find that everything works okay. If not, the receiver will probably shut itself down before any permanent damage occurs.

Real Bass

Years ago I had a pair of speakers that had a frequency response of 20 Hz to 22 kHz. From my recent reading, however, it looks as if today's speakers rarely go below 30 or 40 Hz. Can humans in fact hear down to 20 Hz? Are there harmonics down there that will affect a note even if it is of higher frequency?

JIM HARDY

Guadalajara, Mexico

Humans can definitely hear as low as 20 Hz: the practical lower limit seems to be about 16 Hz, below which you tend to feel the sound rather than hear it. There's precious little musical content down there, however, apart from the lowest pipe-organ notes. And harmonics go upward: the only way a signal can generate a frequency lower than itself is when it beats with another tone to create spurious artifacts, a condition known as intermodulation distortion.

The differences in response you note are the result of more conservative specification today than in the past. Most speakers of any size produce *some* output in the bottom octave, just as they did twenty years ago, but today's manufacturers use tighter tolerances than before; if the output is 20 dB down at 20 Hz, that frequency is unlikely to be included in the response spec.

CD Interference

Why do marginal FM stations become unlistenable when I turn on my CD player, even if it's disconnected from the preamplifier? The CD player sits right on top of the tuner. It's not really a problem, but I am curious. Is it normal?

MIKE SANDERS Ponca City, OK

It's very common, and nothing to be concerned about as long as you don't mind turning off your CD player when you listen to FM. Moving the components farther apart sometimes helps. The interference occurs because the digital circuitry in a CD player radiates a certain amount of high-frequency energy, and some of it falls in the radio-frequency band, where it can disrupt reception of weak signals.

Dual Centers

In home theater, the ideal location for the center speaker, behind the screen, is rarely practical, so placement is usually a compromise at best. That normally means using a horizontal speaker above or below the screen, which can cause a roller-coaster effect when sound is panned across the front. My solution is to use two center-channel speakers placed vertically on each side of the screen. They are fed by a stereo amplifier that is in turn fed from the centerchannel output of my Dolby Pro Logic receiver via a Y-adaptor. Because the speakers carry identical signals, the sound always appears to come from the center of the screen. Do you see any problems with my arrangement? UNDREY J. CLAY Maryland Heights, MO

The idea of keeping the center speakers upright is often a good one, as timbral character can vary significantly with a speaker's orientation. I've encountered systems in which the three front speakers are identical, but in which the center sounds quite different from the left and right because it's been laid on its side. That's why the Home THX standard, for instance, requires that the three front speakers not only be the same but that they be oriented the same way, and why some manufacturers make special center-channel speakers designed for horizontal orientation.

On the other hand, it seems to me that

your using two "center" speakers on either side of the TV monitor defeats the purpose to some degree. The original Dolby Surround decoders relied on conventional stereo imaging to place things like dialogue in the center of the soundstage, but that tends to work well only for listeners sitting the same distance from the two front speakers. Anyone off-axis tends to localize the center material at the nearer speaker. The Pro Logic solution is to delete that material from the main channels and feed it to its own dedicated speaker in the middle. By splitting this signal into two, you are relying again on a phantom center image and restricting the proper localization of some sounds to one listening position. The placement of a center speaker above or below the screen works because we are normally much more sensitive to directionality in the horizontal plane than in the vertical.

Also, when two speakers carrying the same signal are located very close to each other, their outputs will interfere with each other, coloring the sound somewhat and possibly reducing dialogue intelligibility—the exact opposite of what you want from a center speaker.

Mono Music on CD

My wife and I love big bands and the singers of the Forties and Fifties. Over the years we have taped a number of our records to play in the car, and all of them are in stereo. Now, when we buy CD reissues of this material, it's all in mono. Why FRED THOMPSON the change? Waterloo, IA

If you are buying recordings that were actually cut during the big-band era, they were mono to begin with. Over the years, lots of that material was reissued on vinyl and cassette in simulated stereo, which was sometimes quite convincing, and that may be what you bought in the past. The current trend, however, is to be as true as possible to the original recordings when transferring them to CD, so many old recordings are once again available in mono.

The other possibility is that your older recordings were reconstructions, faithful to the old arrangements but recorded later with more advanced techniques. There are some superb examples of this genre, in both analog and digital recordings, and these are indeed true stereo.

One Subwoofer or Two?

I am considering adding a powered subwoofer to my system, but I'm not sure whether it would be better to have two of them or one bigger unit. Would there be any difference in the low-frequency sound? Is it possible to run the two in stereo?

BRIAN MCMILLAN Duluth, MN

A single powered subwoofer will probably put out as much energy as you will ever need, but sheer quantity may not be enough. The lowest frequencies are the hardest to deal with in most listening rooms, as they can excite standing waves that will render some notes inaudible and others unbearably loud, depending on where the speakers and the listeners are. Using two subwoofers in acoustically dissimilar locations tends to randomize those effects and often results in smoother bass. You can run them in stereo or from your decoder's mono subwoofer output if it has one; bass is often recorded essentially in mono anyway, so it will usually make little or no difference.

Console Overhaul

I have a console stereo system from the Sixties that needs work—the speaker and the FM tuner have given up the ghost. It's a nice piece of furniture, however, and I would like to rehabilitate it if possible. Any suggestions? JOSEPH STANLEY Montoursville, PA

From a technical point of view, there's usually not much worth salvaging from those old console stereos (or "coffins" as they were sometimes called). But if the cabinetry is still in good shape and the unit is the focus of your listening room, there's no reason not to use it to house more modern gear. Fortunately, virtually all of today's components are physically smaller than their Sixties equivalents, so accommodating them in the cabinet shouldn't be a problem; you might even have room for something extra, such as a CD player.

Don't try to replace the speakers with similar-size drivers mounted in the existing holes, however-that almost never works. If you can't accommodate speakers outside the console because of the size or shape of your room, consider buying bookshelf-style speakers that will fit inside the cabinet. Remove the old drivers and place the new speakers behind the existing grille cloth. Just make sure you remove the old baffle (the board with openings for the old drivers) so the sound won't be impeded.

Optical or Coax?

Some people claim that an optical digital connection is less accurate than a coaxial, all-electric one. If there is a loss in quality, what causes it? Isn't a digital signal impervious to degradation? JOE SCHWARTZ Troy, NY

In terms of sound quality, there's little (normally nothing) to choose between the two types of connection. As long as the data stream is not hopelessly corrupted-and that would take a lot of doing-the signal will get through perfectly. In some cases there may be a slight advantage to an optical connection because of its imperviousness to electromagnetic interference.

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.



DAVE **DELCO ELECTRONICS** PRIVATE INVESTIGATORS

When the suspect stepped on the gas, I recalled my days racing at Indy. The Delco Electronics black box was the engine controller in that car. In the car I was driving now, the black boxes were the electronic intelligence behind the anti-lock brakes and one other safety feature I hoped I would never need.



"Look out," Ellen screamed as the suspect slammed on his brakes right in front of us.

WHAT OTHER SAFETY FEATURE DID DELCO **ELECTRONICS BLACK BOXES CONTROL?**

See page 7 for answer.

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SIGNALS

The Tape Runneth Out

here is no question that magnetic tape now rules over the audio and video world. The images on television come from tape players in the broadcast center. Tape recorders line the walls of professional audio recording studios. Your camcorder, VCR, cassette recorder, and telephone answering machine all run on tape. Tape is everywhere in our society. Take a careful look at the side of any highway—you'll probably see miles and miles of tangled tape, unspooled in the wind as the cars drive by.

Yet industry experts now foresee the end of the tape era. They see magnetic tape as a mature technology, increasingly unable to meet the demands of a changing world. The sound, pictures, text, and data of the future, coded as digital information, will be increasingly stored and conveyed by newer, more efficient means. Consider this: The two powerhouse tape formats, the music cassette and VHS videotape, are expected to dwindle to shadows of themselves within ten years. By some forecasts, their sales will decline by 50 percent by the year 2000, and by 2004 they will be history.

In many applications, tape will be replaced by optical disc. Without question, the CD is strangling the music cassette for audio playback applications; cassettes have already virtually disappeared in Japan, and it seems clear that audio storage worldwide will be mainly on optical disc. In addition, the new Video CD format—which is expected to reach store shelves this fall in the form of a Technics Video CD player that's bundled into a minicomponent system—may soon begin to take its toll on VHS tape, and a Video MD format may well appear.

The first Video CD's will provide 74 minutes of full-motion digital video and digital audio playback. As data-compression coding algorithms and laser technology improve, playing time will be increased to 150 minutes—an entire feature film on one 434-inch disc. A Video CD will possess the same qualities that have made the CD format such a huge success—random access and resistance to

damage—and it will be cheaper to replicate than videotape. A Video CD holding a movie may cost 50 cents to manufacture, whereas a VHS tape costs twice that amount.

For a time, home video recorders will continue to use tape. But analog tape formats such as VHS (which has an installed hardware base of perhaps 400 million) will be replaced by digital tape formats able to record broadcast-quality NTSC/PAL signals and perhaps even HDTV. Their high picture quality and ability to interface with the digital world (for example, digital tapes could be edited quickly and efficiently using PC's) should give these tape formats a fighting chance, but for how long?

The explosion in CD-ROM software and hardware will continue, fueling the switch to disc. Also on the computer front, floppies could well be threatened by recordable optical discs by the year 2000; the continuing hunger for larger-capacity storage will dictate it. In particular, small optical discs suitable for use in lap-

kilobytes of information-enough for a Hallmark greeting-card message. Yet consider their credit-card size and flexibility, their lack of external contacts. Now jump ahead a year or two to a card with a more powerful microprocessor and 20 megabytes of memory; with data flow reduced to 128 kilobits a second, such a card could hold 20 minutes of high-quality stereo music. The chip holding the recording is a static memory that does not need any kind of battery back-up; the recording is retrieved when the card is inserted into a powered player. Now fastforward a few more years, and the idea of 100-gigabyte cards and wallet-size audio/video/text/software player/recorders doesn't seem especially far-fetched.

On the other hand, there are those crystal-ball gazers who see any kind of physical prerecorded formats as interim. They argue that computer-based, delivery-ondemand systems will obviate the need or desire for people to purchase and store private audio and video libraries. Audio and video programs could be rented on

Experts now foresee the end of the tape era. They see magnetic tape as a mature technology, increasingly unable to meet the demands of a changing world.

tops will proliferate, pushing aside recordable magnetic media, both floppy and hard.

In the view of some experts, however, the optical disc itself is merely an interim technology. They point to rapid progress in solid-state integration and silicon-chip manufacturers' ability to keep shrinking the size of transistor junctions. Engineers are doubling the number of junctions on a chip every 18 months, and if miniaturization continues at this rate (until it is projected to level out in the year 2010) we should see chips with 100 million junctions by the year 2000 and I billion junctions by 2004. Yet these chips will cost the same as today's chips. Powerful processors, combined with large-capacity solid-state memories and data-compression algorithms, will set the stage for the introduction of solid-state audio and video media.

Today's Smart Cards hold a mere 100

demand, or purchased and stored in a central server where they would be available for listening or viewing at any time. Companies such as AT&T, which has converted 90 percent of its hard-wire telephone network to optical fiber, are busy paving the way for this so-called information superhighway.

Certainly, tape is an endangered species. Yet there is still an important role for tape to play. Since 1986, all new professional video formats have employed digital tape. Saving huge volumes of data necessitates tape. D-5 format professional video recorders, for example, record at the rate of 300 megabits per second to deliver the ultimate in video and audio quality.

Even in these last high-end tape redoubts, however, perhaps it is only a matter of time before newer high-bandwidth recorders begin to assert control, gradually displacing tape until, one day, the last tape comes to an end.



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Onkyo Integra TX-SV919THX Audio/Video Receiver

JULIAN HIRSCH . HIRSCH-HOUCK LABORATORIES

member of Onkyo's premium Integra series and the company's finest audio/video receiver, the TX-SV919THX is also the first receiver certified as meeting Lucasfilm's strict THX standards for home theater sound. It is an imposing product, one of the largest, heaviest, and most expensive receivers on the market. It has fully digital Dolby Pro Logic circuits as well as digital signal processing (DSP) surround modes that simulate five different environments: Open Air, Arena, Night Club, Concert Hall, and Stadium. Three other processing modes are intended for playback of Dolby Surround-encoded soundtracks: standard Dolby Pro Logic, Home THX Cinema, and Theater (which adds a movietheater ambience to a Pro Logic-decoded soundtrack).

In its surround modes, the TX-SV919THX's amplifiers are rated to deliver 100 watts per channel (8 ohms) to the left, right, and center front

DIMENSIONS

18 INCHES WIDE, 7½ INCHES HIGH, 16¾ INCHES DEEP

WEIGHT

49 POUNDS

PRICE \$1,999

MANUFACTURER

ONKYO U.S.A. CORP., DEPT. SR, 200 WILLIAMS DR., RAMSEY, NJ 07446 speakers and 50 watts to each of the two surround speakers with less than 0.08 percent total harmonic distortion (THD). In its two-channel stereo mode (called Bypass), it is rated at 110 watts per channel into 8 ohms with less than 0.03 percent distortion.

Like many other recent A/V receivers, the TX-SV919THX has a disarmingly open and uncluttered front panel. In normal operation all you see is the display window that presents its current operating status (showing, as needed, literally dozens of words and numerals, plus bar-graph displays of tone-control settings for the three front channels), a large volume knob, the power button, and a row of large rectangular buttons that select from among six video sources, two audio tape decks, FM, AM, phono, and CD. Seemingly, nothing could be simpler to operate.

But pressing a small button at the far right of the front panel causes a full-width door to hinge down, revealing more (though by no means all) of the receiver's myriad function controls: some thirty-five pushbuttons of

MEASUREMENTS

1.2 dB

-78 dB

AMPLIFIER SECTION

All figures for left and right front channels only except as noted

Output at clipping (1 kHz)

0 0111110	waits
4 ohms	watts
center channel (8 ohms) 145	watts
surround channels (8 ohms)	watts
Clipping headroom (re-rated output)	

8 ohms.

D	ynamic power	
8	ohms	watts
4	ohms241	watts

by name nead output)
8 ohms 1.1 dB
Distortion at rated power
Sensitivity (for a 1-watt output into 8 ohms)
CD

phono A-weighted noise (re a 1-watt output) CD. -78 dB

phono.

Phono-input overload

(1-kmz-equivalent levels)	
20 Hz	.100 mV
l kHz	.114 mV
20 kHz	.100 mV

Phono-input impedance 50,000 ohms in parallel with 115 pF

RIAA phono-equalization error (20 Hz to 20 kHz). +0.1, -0.6 dB

Frequency	response	(with the tone controls
centered)	20 Hz to	20 kHz +0.1, -0.5 dB

Tone-control range

100 Hz	.±10 dB
10 kHz	.±10 dB

TUNER SECTION

All figures	for FM	only except	frequency
response			

Sensitivity (50-dB quieting) IS ARE

	33 dBf
ignal-to-	noise ratio (at 65 dBf)
nono	80 dB

mono	ou ub
stereo	73.5 dB
Distortion (THD+N at 65 dBf)	
mono	0.23%
stereo	0.21%

mono	
stereo	0.21%
Capture ratio (at 65 dBf)	1.8 dB
AM rejection	66 dB
Calant to	

Selectivity		
alternate-channel	70	dE
adjacent-channel	3	dB

adjacent-channel	3 dB
Pilot-carrier leakage	
19-kHz	64 dB
39_kHz	70 dB

...70 dB

Hum		79 dB
Channel	separation	
100 Hz		48.5 dB

1 kHz .57 dB 10 kHz 29 dB Frequency response

FM .20 Hz to 15 kHz +1.4, -0 dB AM .100 Hz to 2.5 kHz +1, -6 dB

various sizes and shapes. There's also a headphone jack and one set of audio and video input connectors (including an S-video jack).

Centered in this array of doormounted controls are the tuner buttons, which can be used to scan the FM or AM band, to store the frequencies of as many as forty stations in as many as six groups of presets (according to their programming format or any other criterion you choose), or to tune directly to any station frequency by pressing the appropriate numbered buttons. Other buttons control stereo/ mono selection and FM interstation muting.

So far we have considered only the standard operating functions of any good stereo receiver. But effective use

of a full-featured A/V receiver such as the TX-SV919THX can involve the creation of an enormous number of unique spatial simulations, which can include (but is not limited to) setting the levels, frequency responses, and signal delays of several speaker outputs and adjusting the size, shape, and acoustical characteristics of each simulated space.

Fortunately, if you get lost, these and other processing parameters can be reset to their default values for each mode by simultaneously pressing two buttons (there's even a reset-everything-at-once procedure described in the manual), and the acoustic results with the default settings may well be all you need. In that case, setting up the TX-SV919THX can be nearly as simple and straightforward as setting up a conventional stereo receiver.

If you want to create your own customized sonic environment, most of the sound-processing parameters can be set using three pairs of up/down buttons identified as Surround Mode. Parameter Selector, and Parameter Controller. The changing settings show up in large characters in the display window. Although this can be a laborious procedure, it need not be repeated if it produces the desired result.

When the TX-SV919THX is used with a video system, the setup process is somewhat more direct, since for each operation the receiver creates a menu on the video display, and the receiver's remote control (which has a group of cursor keys) can be used to change the settings. That procedure is clearly desirable for setting up a surround-sound system, since it is somewhat more intuitive than using separate buttons and the display window of the receiver itself.

The TX-SV919THX's rear apron is well populated with no fewer than fifty-one phono jacks (plus nine S-video connectors) and ten pairs of speaker outputs (multiway insulated binding posts). There are so many speaker connections because the receiver can drive either of two sets of front and surround speakers (not simultaneously) in a multiroom installation. Provision is made for separately setting the balances of the speakers in the two rooms. Also on the rear apron are separate preamplifier outputs and poweramplifier inputs, normally joined by jumpers. Interestingly, there is a twenty-five-pin connector for use with an external Dolby Surround Digital decoder when one becomes available. There are also three switched AC outlets, an F-type coaxial jack for a 75ohm FM antenna, and spring connectors for the supplied AM loop antenna. Audio signals for the Video 4 input can be switched to come from either standard audio jacks or an optical digital jack. The latter is the perfect place to connect a combination CD/laserdisc player.

Most of our tests of the TX-SV919THX were of its audio and tuner performance and of its operation in a conventional music system, plus

limited listening with its various surround modes. The amplifier-output measurements can be summarized by saying that the TX-SV919THX provides very generous amounts of power for a receiver. The bass tone-control curves had a sliding turnover frequency between 200 and 500 Hz; the treble curves were hinged at about 3 kHz. The amplifier frequency response was quite flat (within ±0.1 dB) from 20 Hz to 8 kHz, falling off very slightly to -1 dB at 20 kHz. The TX-SV919THX also has a line-level subwoofer output for use with externally powered subwoofers. Its response, flat below 50 Hz, rolled off above 60 Hz at about 18 dB per octave. A built-in high-pass crossover to remove the bass from the front and surround speakers can be switched in when a subwoofer is used.

The receiver's FM tuner section had

The receiver can drive either of two sets of front and surround speakers in a multiroom installation. Facilities are provided for setting their balances separately.

generally good characteristics, especially in regard to AM and image rejection and selectivity. The AM frequency response was typical for a receiver (poor).

Although we were able to use only a limited number of its features, it was clear that everything about the TX-SV919THX has been designed and built to the highest standards. It is one of the most powerful receivers we have ever tested, yet its top cover never became more than slightly warm during our full-power testing, a tribute to good thermal design.

Despite its great complexity and versatility, TX-SV919THX presents a disarmingly simple appearance. This is not entirely an illusion; it can be used effectively (with some sacrifice in total versatility) after only a partial study of its very comprehensive fiftynine-page manual. But we suggest that anyone investing \$2,000 in a receiver take the time to learn how to use it properly. It will yield long-term dividends.

SECOND OPINION Onkyo TX-SV919THX A/V Receiver

n comparison with what other companies have done in their top-of-the-line receivers. Onkyo has done so much right in the TX-SV919THX that is difficult to decide where to start. I'll tackle the numbers first.

As the data show, the receiver's Dolby Pro Logic performance was superb. Probably because of the alldigital Pro Logic decoding, channel separation was around 10 to 20 dB better than what we typically see. The frequency responses of the front channels were extremely flat (the small rolloffs occurred below 25 Hz). And even the surround output had slightly more extended highs than usual, though usually there's not much in the surround channel above 7 kHz, and definitely flatter bass than is typical. Home THX re-equalization and timbrematching surround-equalization errors were also small.

Digital processing is also probably responsible for the excellent signal-tonoise ratios and exceptionally low distortion, particularly for the surround outputs. Only the input-overload levels leave little room to spare. The Home THX reference level (200 millivolts) against which we measure

this characteristic is supposed to be 20 dB below the maximum output of a laserdisc or CD player, which has sort of standardized at 2 volts. To the extent that a player's maximum outputalways reported in our test reportsexceeds 2 volts, you run the chance of overloading the inputs to the TX-SV919THX's surround-sound decoder on signal peaks. We have encountered a few players with maximum outputs several tenths of a volt above

Most impressive to me was the extremely accurate surround-channel noise-reduction calibration, with less than 1 dB of error, which was the closest to perfect I have ever measured in any A/V product. The receiver even changes from the Dolby reference standard (247.5 millivolts) to the THX standard (141.4 millivolts) when you switch from straight Pro Logic to Home THX mode. Subtracting the surround channel's small bass rise and 8-kHz rolloff, the frequency-response errors of the noise-reduction system were well within half a decibel for nearly all measured data points between 100 Hz and 10 kHz from +7 to -40 dB in level. Incredible. Although Dolby Labs

claims that extreme accuracy in surround-channel calibration level and frequency/amplitude tracking is not terribly important, it's nice to find at least one product that does it by the book.

I suspect that "doing it right" is at least partially responsible for the TX-SV919THX's superb soundtrack reproduction, especially with THXcertified laserdiscs decoded through the Home THX setting. For once the surround speakers sounded precisely right (neither absent nor overprominent). Even the "swimmy" quality of the surrounds that I've noticed with some other Home THX processors seemed lessened in this case. Sound steering was very accurate, and on the whole the surround processing was very "clean" (no noise-pumping from the surround channel, low distortion, and so on).

The only major features that disappointed me were the musicoriented processing modes. Although each has a useful array of adjustments, you cannot entirely turn off their reverberation. With many types of music artificial reverb is not even necessary for spatial enhancement (synthesized

early reflections are enough to do the trick). Moreover, in every music mode the TX-SV919THX's reverb was marked by a distinct coloration, which I think is caused by insufficient density of the synthesized reflections and too regular spacing of the ones that are supplied compared with the outputs of ambience-enhancement systems that model real performing spaces. On the other hand, that coloration will be unnoticeable with many types of music unless you stop the playback in midstream to listen to the reverb alone.

But just about everything else is done well. A horizontal arrangement of rear-panel connectors (my preference) was probably not possible because the very generous number of inputs would have made the receiver too wide. Other things are more convenient than usual, however: Setting speaker balances for optimum Pro Logic/THX playback also sets them for the musicenhancement modes, for example. And those modes are well balanced when used with those settings.

I liked the optical digital input jack so much I wish there were a couple more of them. I also liked the inclusion of the subwoofer output in the speaker-balancing test-tone sequence, the nicely laid out programmable remote control, the additional strippeddown major-feature-only remote control, the logical and complete onscreen menu system, and the well-illustrated manual. The manual is also logically organized, though the poor use of typefaces and other aspects of the graphic design tend to work against that. Finally, the multipin externaldecoder jack makes the TX-SV919THX unusually future-proof. This is where you would connect the multichannel audio outputs decoded from upcoming media-HDTV and the even more rapidly approaching Dolby Surround Digital laserdiscs.

Powerful, accurate, and clean with music, and especially when decoding soundtracks, Onkyo's standard-setting TX-SV919THX is the best A/V receiver I have ever tested. It's a receiver for the audio/video connoisseur, and it's worth every one of the two-hundred-thousand pennies it will cost you to buy one.

-David Ranada

0.074%

center

Unless otherwise noted, all measurements are referred to output levels of 1 watt into 8 ohms with Video 6 input reference levels of 200 millivolts (mV) for the left and right front channels and 141.4 mV for the center and surround channels. All measurements were made with the normal center-channel setting except frequency response and channel separation, which were made with the wideband setting using MLS techniques. Unless specified as for Home THX, all measurements are for unenhanced Dolby Pro Logic operation.

Frequency response

center	20 Hz to 20 kHz +0, -0.6 dB
surround	.20 Hz to 8.15 kHz, +0.5, -3 dB
A-weighted	noise
left, right	-78.5 dB
center	-78.0 dB
surround	-78.2 dB
Distortion (l kHz, THD+N)
left, right	0.075%

left, right 20 Hz to 20 kHz +0. -0.6 dB

surround 0.09%
Surround decoder input-overload
levels (at 1 kHz)
left, right +20.5 dB
center +23.5 dB
surround +23.5 dB
Surround-channel noise-reduction
calibration errors (see text)
Pro Logic mode (re 247.5 mV)+0.75 dB
Home THX mode (re 141.4 mV)+0.75 dB
Home THX re-equalization error
worst case
Home THX surround-channel
equalization error
worst case
Channel separation (100 Hz to 7 kHz)
left output, right driven>65 dB
left output, center driven >44 dB
left output, surround driven>48 dB
center output, left driven >55 dB
center output, surround driven>60 dB
surround output, left driven>53 dB
surround output, center driven>67 dB

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Nakamichi DR-1 Cassette Deck

HIRSCH-HOUCK LABORATORIES

rom its invention of the threehead cassette deck and the closedloop, dual-capstan tape transport to its unique head construction and user-adjustable azimuth, Nakamichi has long been known for finding imaginative ways to get the highest possible performance from the cassette medium. With the midprice DR-1 cassette deck, Nakamichi has added to the list of its innovations by mounting the playback circuitry right at the head assembly, eliminating the usual noise-prone wire connection to the main circuit board. Other DR-1 features include Dolby B and C noise reduction, user-adjustable bias, a switchable FM-multiplex filter, and an output-level control.

Having separate recording and playback heads enables users to compare the incoming signal directly with the recorded result. It also allows for the relatively wide record-head gap needed to maximize signal-to-noise ratio (S/N) during recording and the very narrow playback-head gap essential to resolve the highest treble frequencies during playback.

Like other three-head Nakamichi

cassette decks, the DR-1 steers clear of the usual arrangement in which recording and playback head elements are "sandwiched" within a single casing. The DR-1's heads are completely separate from each other, which is more difficult to implement but prevents the strong recording currents from leaking into the playback circuitry, where they could interfere with the proper operation of the Dolby noisereduction circuits.

Another difference from standard practice is in tape handling. In most decks, the felt pad visible in a cassette's center opening is needed to press the tape against the head, and the "scrape flutter" it causes actually adds

DIMENSIONS

17 INCHES WIDE, 41/2 INCHES HIGH. 121/2 INCHES DEEP

> PRICE \$929

MANUFACTURER

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to the playback noise level. In a welldesigned tape drive, however, that pressure pad is unnecessary. A pair of projecting bosses on the DR-1's playback-head casing keeps the pressure pad away from the tape, eliminating it as a noise source. The recording and playback heads themselves are made of Nakamichi's proprietary Crystalloy core material, which is said to have better low-level linearity than the more common ferrite materials.

A user-adjustable playback-head azimuth control is included to eliminate treble loss when tapes recorded on a slightly misaligned deck are played back on the DR-1. A green LED signals that the playback head is at its factory-adjusted position. The LED goes out when the control is rotated to make any azimuth readjustment during playback, and it flashes red if the control is left off-center during record/ playback on the DR-1 itself.

Closed-loop, dual-capstan drive systems have become the rule in highquality cassette decks, because isolating the length of tape that is actually passing across the heads can reduce wow and flutter. The benefit can be lost, however, if the two capstans and their flywheels are the same sizes and § rotate at the same speed, for the tiniest imperfections in them can reinforce each other with each rotation, inducing wow. Nakamichi's Asymmetrical

"Definitive's Subwoofers Deliver Ultimate Bass Performance!"

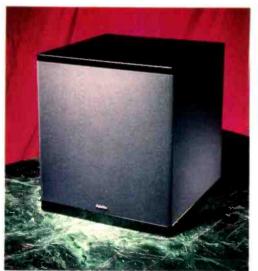
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Dual-Capstan Diffused-Resonance system, therefore, uses capstans and flywheels of different sizes, and all of the transport parts are designed so that they have no common frequency of vibration.

A DC servomotor drives the capstans, and a separate DC motor drives the reels. A third DC motor operates the head and pinch-roller assembly through a cam system that eliminates the mechanical noise and shock of solenoid operations. Any initial tape slack is automatically taken up when the cassette-well door is closed. The door itself is easily removable for routine head cleaning and demagnetizing. A transparent window in the door makes it possible to view the amount of tape remaining on a side, though it is not wide enough to read the label.

Signal levels are shown on a twelvesegment-per-channel peak-indicating LED display, which is calibrated from -40 to +10 dB. Though unstated, its 0dB point corresponds to the official Dolby calibration level.

The display also indicates the deck's operating mode, the setting of the tape-monitor switch, which noise-reduction system is active, the setting of the FM-multiplex (MPX) filter, and the tape type in use. This last is of particular importance because the user has to manually select the appropriate bias and equalization for a cassette according to its tape type (Type I, II, or IV). Since almost all other cassette decks today make that selection automatically, it's easy to overlook it. The four-digit LED counter registers reelhub revolutions only, not elapsed or remaining time on the side.

The DR-1's front panel has the usual transport pushbuttons, recordinglevel and balance controls, and Dolby B and C switches. The bias control can be used to optimize the recording bias current for different tape formulations within the same type, but the adjustment must be made by ear, as no calibration facilities are included.

In play, stop, or pause mode, pressing the counter-search button causes the deck to fast-forward or rewind the tape to the zero setting on the counter and then stop or begin playback from there. Pressing fast-forward or rewind twice causes the tape to advance rap-

MEASUREMENTS

Fast-forward time (C-60)	.92 seconds
Rewind time (C-60)	.92 seconds
Speed error	-0 .1 9 %
Dolby tracking error	
Dolby B	+0.6, -0 dB
Dolby C	+1.4, -0 dB
Wow-and-flutter	
DIN peak-weighted	0.058%
wrms	0.029%
Line input for indicated 0 dB	65 mV
Line output at indicated 0 dB	0.67 volt
Meter indication at IEC-stand	ard
0 dB	+1 dB

TDK AD (TYPE I, FERRIC) IEC 0-dB distortion

.0.74% Meter indication at 3% THD + +5 dB

Signal-to-noise ratios (in decibels):

	Unwid.	A-wtd.	CCIRIARM
NR off	54.8	58.4	55.8
Dolby B	63.1	68.1	66.1
Dolby C	65.3	74.6	74.6

TDK SA (TYPE II, CHROME-EQUIVALENT)

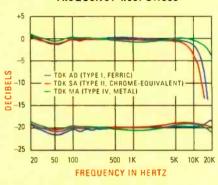
IEC O-dB distortion .0.93% Meter indication at 3% THD +

noise +5 dB Signal-to-noise ratios (in decibels)

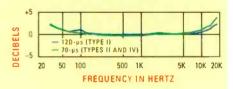
	Unwid.	A-wid.	CCIR/ARM
NR off	58.4	63.0	60.8
Dolby B	64.6	72.0	70.6
Dolby C	66.0	77.2	77.1

TDK MA (TYPE IV, METAL) IEC O-dB distortion 0.62% Meter indication at 3% THD + +7 dB noise Signal-to-noise ratios (in decibels) CCIR/ARM Unwid. A-wid. NR off 59.4 63.4 60.9 Dolhy B 66.4 72.6 71.0 Dolby C 67.9 78.6 78.4

RECORD/PLAYBACK FREQUENCY RESPONSES



PLAYBACK-ONLY RESPONSES (IEC-STANDARD BASE TEST TAPES)



idly for 5 seconds, then play for 5 seconds, and so on until you press stop. Fully automatic rewind and replay can be selected at one position of the otherwise conventional external-timer switch.

A switchable multiplex filter is provided to prevent residual stereo-FM subcarrier signals from interfering with the Dolby circuits. The filter should be switched out when not needed, however, as it limits high-frequency response to approximately 16 kHz. Critical recordists will appreciate that the output-level control affects the signal not only at the front-panel headphone jack but at the regular line-output jacks on the rear as well, enabling the user to match the playback level against a CD or other source for accurate A/B comparisons. Rear-panel connections consist of the normal line-in and line-out jacks, plus jacks for an optional remote control.

The DR-1's playback frequency response was very flat from 63 Hz to 10 kHz, rising to between +2 and +3 dB at the 31.5-Hz and 18-kHz limits of our IEC (BASF) test tapes. As we have frequently observed, the rising treble response is probably a characteristic of our test tapes, which were recorded slightly "hot" to compensate for anticipated playback-head losses. The bass rise, too, is the predictable "fringing" response that comes from using full-track test tapes with quarter-track stereo heads.

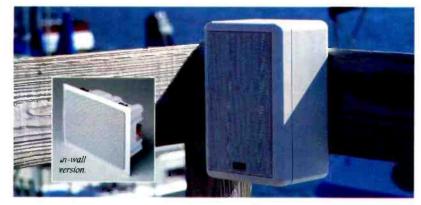
Tested with our representative "center-line" tapes (TDK AD, SA, and MA), the DR-1's overall record/playback frequency response was within ±1.5 dB from 20 Hz to 20 kHz at the customary -20-dB recording level. At 0 dB, where treble saturation is inevitable, response from the ferric tape very nearly equaled that of the metal, the two tapes being down by 3 dB at 12 and 12.5 kHz, respectively. Because Dolby C somewhat reduces the treble pre-emphasis that is partly responsible for the saturation, response from TDK MA extended all the way to 20 kHz (-2.8 dB).

With Dolby C noise reduction, signal-to-noise ratios for the three tapes were very high. Wow and flutter were commendably low, as were Dolby tracking errors and speed errors. Both line-input sensitivity and line-output level were entirely normal. Fast-winding time in either direction was about average for the DR-1's price class.

The DR-1 is well laid out and extremely quiet electrically and mechanically. Users unfamiliar with the Nakamichi tradition will undoubtedly find it hard to become accustomed to selecting tape types manually, but this feature does permit proper playback of the occasional ferric (Type I) tape recorded with the quieter chrome (Type II) equalization.

Playback of prerecorded tapes was excellent, if seemingly slightly bright on the high end. And record/playback response was superb. At the most elevated volume levels, with exceedingly quiet musical passages, we could detect the lack of the newest Dolby noise-reduction system, Dolby S; there was some faintly audible lowfrequency "grunge" that Dolby S would have removed. Frequency response and dynamic range were so wide and distortion so low with Dolby C, however, that it was almost impossible to distinguish between source and tape. We detected no loss or shift whatever in stereo image.

Such performance does not come cheap, and the DR-I is at the upper end of the midprice spectrum. But it is a triumph of engineering at the service of music, and well worth the money.



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TEST REPORTS



Soundwave Point Source 3.0 Loudspeaker System

HIRSCH-HOUCK LABORATORIES

ost loudspeaker designers agree that wide-angle horizontal sound dispersion (at least in the forward hemisphere) is desirable for the most natural sound quality. Over the years, various unconventional techniques have been used to increase dispersion, such as multiple drivers facing in different directions, deflecting structures in the speaker enclosure, and so on. Many of these techniques achieve some of the intended effect, but they typically fall short of completely eliminating the "beaming" of high-frequency sound in specific directions rather

than spreading it evenly throughout the listening area.

The Soundwave Point Source speakers from Vero Research Corporation represent yet another approach to min-

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MANUFACTURER

SOUNDWAVE, VERO RESEARCH CORP., DEPT. SR. 274 N. GOODMAN ST., ROCHESTER, NY 14607

imizing the beaming effect, one based on fundamental physical principles instead of more obvious mechanical structures. The Point Source 3.0. which is typical of the series, is a twoway floor-standing system designed to approximate a "point source" of sound (which is inherently omnidirectional). The manufacturer claims that the Soundwave design is closer to being a point source than any other full-range loudspeaker currently made.

The Point Source 3.0 is a five-sided columnar speaker with no parallel sides. The two front sides form a "V" whose point faces the listener. A 1inch soft-dome tweeter, with a powerful yet compact neodymium magnet, is installed on the front edge, about 34 inches from the floor. The width of its "front baffle" is only 58 millimeters (just over 2 inches), contributing to the system's wide horizontal radiating angle.

The two 8-inch woofers (which operate below 2.2 kHz) are on the front sides of the cabinet, angled at 64 degrees to the left and right of the tweeter axis. In a variation of the D'Appolito configuration (with the tweeter located between two woofers), the centers of the inward- and outward-facing woofers are respectively 21/4 inches above and below the tweeter axis (the speakers in each pair are designated for left or right placement to insure correct system behavior). This is an exceptionally compact placement of three drivers in a system designed to cover a 180-degree (2π) forward-facing solid angle. The crossover system also delays the tweeter output until the signals from the woofers reach the plane of the tweeter's acoustic center.

Vero Research says that at 14 kHz the Point Source 3.0 has a forward horizontal radiation pattern of 180 degrees and a vertical coverage of +90 to -20 degrees, made possible by a second, upward-facing 1-inch soft-dome tweeter (with a conventional ferrite magnet) mounted flush with the top of the cabinet.

The sealed enclosure, completely filled with a spiral of acoustic foam, is § made of rigid, braced MDF (mediumdensity fiberboard), and a special decouple the drivers from the cabinet

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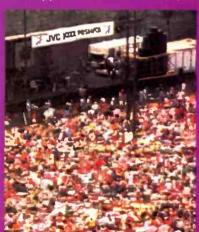
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TEST REPORTS

panels. The cabinet is completely covered by a black stretch "sock" cloth grille, and its top is capped by a ½-inch-thick high-gloss black acrylic plate, with a grille protecting the upward-facing tweeter. The speakers are supplied with both rubber mounting feet and spikes for installation on hard or carpeted surfaces. Each speaker weighs 60 pounds.

Two pairs of gold-plated multiway binding posts, compatible with wires, lugs, and single or dual banana-plug connectors, are recessed into the lower part of the cabinet's back panel. The two pairs of posts, joined by removable gold-plated straps, go to the highand low-frequency crossover sections, permitting biamplification or biwiring. Near the posts is a three-position knob that shifts the woofer level 1.5 dB above or below its normal setting. Higher on the rear panel, a removable rubber plug covers a hole leading to the interior of the cabinet. Vero Research says that removing the plug raises the woofer's O from 0.5 to 0.7, slightly increasing output in the vicinity of the low-frequency resonance.

Vero Research's specifications for the Point Source 3.0 include a frequency response of 34 Hz to 20 kHz ±3 dB into a 2π (180-degree) solid angle, distortion of less than 1 percent from 60 Hz to 20 kHz (level unspecified), and a sensitivity of 90 dB sound-pressure level (SPL) at 1 meter with a 1-watt input. The system's nominal impedance is 5 ohms, with a 4.7-ohm minimum. The Point Source 3.0 is recommended for use with amplifiers rated between 50 and 300 watts, and its maximum rated output is 110 dB SPL on program peaks.

We placed the two speakers approximately as recommended, 6 feet apart, 4 to 5 feet from the side walls, and 3½ feet in front of the wall behind them. The room-response plot had a slight downward slope above about 1 kHz, and the close-miked woofer response sloped off gently from its maximum at 100 Hz to join the room curve at about 1 kHz. The composite response curve, though very smooth, sloped downward by 6 or 7 dB from 70 Hz to 20 kHz.

Quasi-anechoic MLS frequency-response measurements showed an onaxis response variation of only ±3 dB from 300 Hz to 19 kHz at 2 meters. In the tweeter range, from 2 to 19 kHz, the variation was less than ±2 dB (except for a +3-dB reading at 10 kHz).

We measured the horizontal dispersion over a ±45-degree angle with a sweeping noise signal in the tweeter range (above 2 kHz). Although the off-axis output level was 2 to 6 dB lower than the on-axis readings, the off-axis frequency response was very similar to the forward response up to about 15 kHz. Group delay, measured on the tweeter axis, varied only ±0.3

Rotating the speakers
90 degrees, so that they
faced each other,
caused a slight softening
of the high end, but
there was no serious loss
of frequency balance.

millisecond from below 2 kHz to 20 kHz, reaching a maximum of 1.4 milliseconds at 50 Hz.

Minimum system impedance was 4.8 ohms at 130 Hz (it also reached 5 ohms at 20 Hz), with peaks of 21 ohms at 52 Hz and 15 ohms at 1 kHz. The impedance remained well above the rated 5 ohms over most of the audio range. We also measured the bass impedance after removing the rubber plug from the rear panel; this shifted the bass resonance peak from 52 to 59 Hz and reduced its amplitude from 21 to 17 ohms, as well as introducing a number of minor phase irregularities between 20 and 30 Hz. We could find no advantage to removing the plug, though, and left it in place for our other measurements and listening tests.

Sensitivity measured 88 dB, slightly below the 90-dB rating. At a 3.5-volt drive level, corresponding to a 90-dB SPL, the woofer distortion was very low, 0.4 to 0.6 percent from 55 Hz to 1 kHz and less than 1 percent all the way to the 2.2-kHz crossover frequen-

cy. It rose to 1 percent at 50 Hz, 2 percent at 40 Hz, 4 percent at 30 Hz, and only 5 percent at 20 Hz.

The Soundwave Point Source 3.0 is one of the very few speakers that we have found able to absorb all the short-term peak levels reached in our single-cycle power-handling tests without damage or gross audible distortion. At 100 Hz, although their acoustic output was visibly distorted, the woofer cones had not reached their suspension limits at the point where our driving amplifier clipped (1,150 watts into 5 ohms). At 1 kHz (still in the woofer range) the amplifier clipped at 480 watts into 15 ohms, and at 10 kHz (in the tweeter range) the amplifier clipped at 1,100 watts into 6 ohms.

The speakers typically sounded very much the way their measured frequency response would suggest. Their bass reproduction was impressively strong and clean down to the 30-Hz region and below (a subwoofer would contribute little to these speakers). The middle and upper frequencies, though very much present, tended to sound a bit subdued, especially in comparison with conventional speakers having a strong or extended top-end response.

The speakers' wide dispersion was easily demonstrable; when we turned them 90 degrees (so that they faced each other), the principal audible result was a slight softening of the top end, but without any serious loss of frequency balance.

Speaker preferences are a highly personal matter, which is one reason why we stress the importance (actually, the *necessity*) of listening to speakers before making a selection. That is especially important when considering a purchase in this price range. There were substantial differences in sound character between the Soundwave Point Source 3.0 and other speakers of comparable price to which we compared it, side by side, with a variety of music. We found ourselves preferring one or the other depending on the program material.

One thing is certain, however—the Soundwave Point Source 3.0 sounds (and looks) like a \$2,500 speaker, and if you are considering a purchase in that range, try to hear it if you can.

ONKYO INTRODUCES THE WORLD'S FIRST THX RECEIVER

New TX-SV919THX Takes Home Theater to the Next Level

JUNE 1994, RAMSEY NJ — In a development certain to change the Home Theater playing field, Onkyo Corporation began shipping the world's first Home Theater THX Receiver, the Onkyo TX-SV919THX. The company also announced the release of a complete THX Speaker System designed to complement its new receiver, providing a total THX package at a cost well within reach of most enthusiasts.

Experts agree THX has become the new standard for a multi-channel sound experience, both in movie theaters and in the home. Until the Onkyo break-through, however, the only choice was very expensive separate components.

The Onkyo TX-SV919THX receiver features 100 watts across the three front channels including the center and 50 watts for each of the surround channels. Discrete output stages for all channels insure that the higher performance demands of movie sound-tracks—everything from whispers to weapons—will be

flawlessly reproduced. For decoding, the TX-SV919THX offers a digital THX decoder, a digital Dolby Pro Logic decoder and eight digital soundfield modes. Handling these critical functions entirely in the digital domain delivers a level of accuracy in movie dialogue and special effects that a sound editor would envy, plus a variety of concert hall ambiences sure to satisfy any music lover's sense of adventure.

Convenient operation via a multicolored on-screen menu and programmable remote further distinguish the TX-SV919THX.

And, while there are enough inputs (10 audio/6 video) to run a small studio today, Onkyo has looked ahead to tomorrow as well: the TX-SV919THX is Dolby AC3 ready.





The new Onkyo THX-SYSTEM 1 is a THX Certified speaker system with a powered dual subwoofer system. Onkyo has designed this speaker system to satisfy not only the stringent requirements of THX, but also the most discriminating audio listeners. In order to achieve both of these goals, Onkyo needed to develop all new drivers for the system. The Bio-Hybrid woofer cone material that Onkyo created provides the lightness of paper and the stiffness of synthetic materials, while the BRaDD titanium tweeter design utilizes a unique method to eliminate resonance in the audible range, a common problem with metal domes. By utilizing these new exclusive materials, Onkyo has designed the THX-SYSTEM 1 to be as exceptional for music as they are for movies.

Home Theater has reached the next level, and Onkyo has shown the way with its new TX-SV919THX receiver. Hear it now at your local Onkyo dealer.



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TEST REPORTS



Rotel RB-956AX Six-Channel **Power Amplifier**

JULIAN HIRSCH • HIRSCH-HOUCK LABORATORIES

he growing popularity of surround sound, for a home theater or simply for enhanced enjoyment of recorded music, has been accompanied by a proliferation of multichannel receivers as well as a number of preamplifiers with surround-sound capability. A surroundsound system normally has five or six channels of amplification (sometimes as many as eight or more), including two for the main stereo speakers, one for a center speaker, a pair for surround speakers, and possibly one or more for subwoofers.

An A/V receiver has most or all necessary amplifier channels built in, but an A/V preamplifier, or control amplifier, typically requires several external stereo power amplifiers to drive the various speakers. Aside from cost and space considerations, that can entail a considerable amount of signal and power wiring.

A logical alternative would be a single six-channel power amplifier, essentially three stereo amplifiers in a single package. Such products are now

making their appearance, and we have had the opportunity to put one through its paces.

The Rotel RB-956AX contains six nominally 30-watt (but conservatively rated) amplifiers in a single unit somewhat smaller than a typical A/V receiver. The channels are grouped in three stereo pairs, with independent signal-input jacks and speaker-output terminals. Each stereo pair also has a small switch on the rear apron, near its input and output connections, that converts it to bridged mono operation providing triple the rated power of one of its stereo channels. Another option

DIMENSIONS

173/8 INCHES WIDE, 35/8 INCHES HIGH, 155/8 INCHES DEEP

PRICE

MANUFACTURER

ROTEL OF AMERICA, DEPT. SR, P.O. BOX 8, NORTH READING, MA 01864-0008

is biamping in a conventional stereo system, with two of the amplifier pairs separately driving the tweeter and woofer sections of speakers whose low- and high-frequency sections have separate inputs; the third amplifier pair could be used for another purpose, such as driving a subwoofer or speakers in another room.

The RB-956AX's front panel contains a pushbutton power switch and three small knobs for separate level adjustment of each channel pair. Colored lights above the knobs indicate whether each amplifier pair is operating in its stereo or bridged mode.

In a surround-sound system, it is virtually impossible for all channels to be driven to their maximum output simultaneously, and we have had unhappy experiences when AC line fuses blew in such operation. Although the RB-956AX is very well protected, the fuses are internally mounted (replacing the fuses in the speaker outputs requires some amplifier disassembly). Therefore, we tested only one pair of channels at a time.

The amplifier's frequency response was quite flat from 20 Hz to 20 kHz, falling off to -2 dB at 80 kHz and -6 dB at 190 kHz. Rated at 30 watts per channel into 8 ohms, the RB-956AX actually clipped at 48 watts, 2 dB better than specified. At 30 watts, its distortion (including noise) was between 0.05 and 0.06 percent from 20 Hz to \$ 20 kHz. The minimum distortion reading of 0.03 percent occurred at 40 watts. Into 4-ohm loads, the clipping power was 70 watts, and the minimum distortion reading was 0.05 percent at 55 watts.

Although the RB-956AX's power rating is relatively low compared with those of most stereo components, it had very adequate clipping and dynamic headroom and never ran out of reserves during our listening tests in a conventional stereo system. The amplifier was totally free of thumps or clicks when being turned on or off, and it ran cooler than any other amplifier we have used in some time. Even during full-power testing its top became only slightly warm; in normal listening its warmth was barely detectable to the touch.

A neat and workmanlike assembly may not have much to do with an amplifier's sound, but it says a lot about the care that went into its design and construction. The inside of the Rotel RB-956AX is as neat as the proverbial pin. A single large circuit board contains all the amplifier components except for three sets of internal heat-sink fins along the sides and rear of the unit. Two smaller boards carry the power-supply components, and the large toroidal power transformer is at

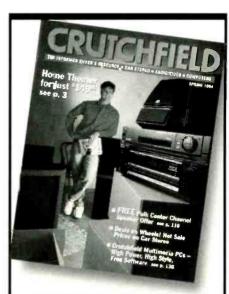
MEASUREMENTS

All made with two channels driven
Output at clipping (1 kHz, 0.1% THD+N)
8 ohms
4 ohms 70 watts
Clipping headroom (re rated output)
8 ohms
Dynamic power
8 ohms 45 watts
4 ohms 78 watts
Dynamic headroom (re rated output)
8 ohms 2.1 dB
Distortion at rated power
(THD+N) 0.035%
Sensitivity
(for I watt output into 8 ohms) 150 mV
A-weighted noise
(re I watt output)
Frequency response
20 Hz to 20 kHz +0, -0.15

front and center, well away from the signal circuits.

The Rotel RB-956AX should be an excellent complement to an A/V tuner/preamplifier, making possible a full-featured home theater without visual domination by a large A/V receiver or the complication and expense of installing the equivalent in separate stereo amplifiers.





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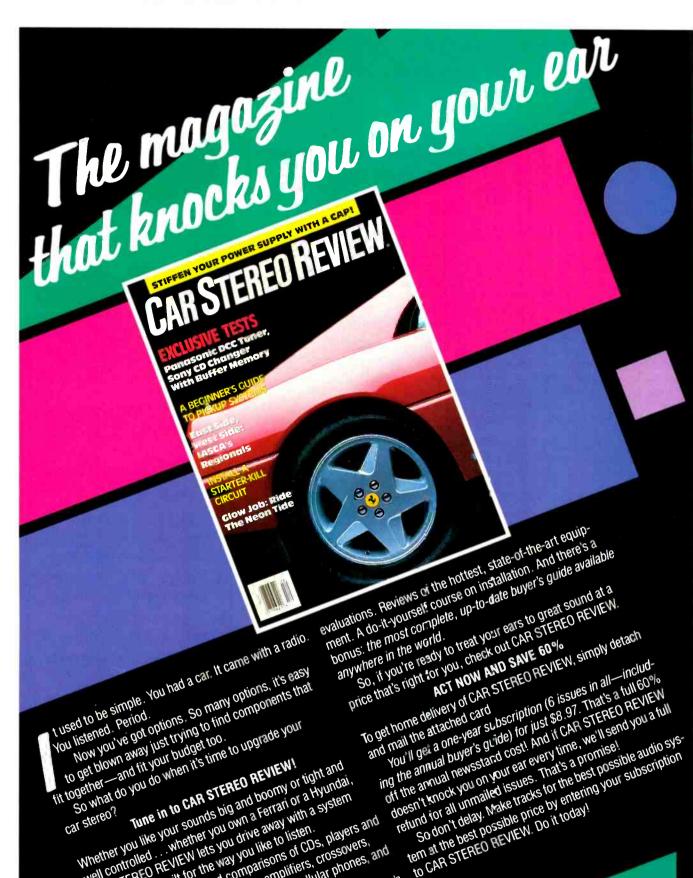
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CAR STEREO



Alpine 5960 Compact Disc Changer

ompact disc changers are the hottest-selling items on the 12-volt scene. Almost everybody loves the opportunity to cruise with hours and hours of his favorite music at his fingertips. Many current changers are so small that they can be shoehorned into a glove compartment or under a front seat, eliminating the hassle of trunk-mounting. If your head unit has changer-control capability built in, installation can be a matter of minutes.

The Alpine 5960 can be operated from a suitable head unit or a separate controller and is small enough to fit almost anywhere—about 30 percent smaller than previous Alpine changers, in fact. It is a six-disc model housed in a metal case with a plastic front. As usual, the transport mechanism and electronic circuitry are on a subchassis that is suspended within the outer case. A combination of springs and silicone-filled dampers all around provide mechanical isolation from shock and vibration. Owing to a clever bit of design, the front of the changer is only 10 inches across and the cartridge-loading slot is greater than half that width, yet the slot is covered by a sliding door. The trick is a two-piece door that slides within itself. The loading slot is covered when

the door is closed because the door is extended, but when opened the door collapses, fully revealing the slot.

The changer can be mounted horizontally, vertically, or at increments of 22.5 degrees in between. Accordingly, one side of the chassis sports a springloaded lever with five indents across a quarter circle that's used to adjust the suspension for mounting angles of 0, 22.5, 45, 67.5, or 90 degrees.

The 5960's disc cartridge (magazine) has plastic sleeves that slide out completely to load and unload discs. The first disc goes on the bottom of the stack, label side up. The cartridge is loaded into the changer with a gentle shove and retrieved by pressing an eject button mounted on the changer subchassis. Internal operation is fairly simple: The changer mechanism pulls the tray for the selected disc from the

DIMENSIONS

10 INCHES WIDE, 21/2 INCHES HIGH, 6 INCHES DEEP

PRICE

\$420

MANUFACTURER

ALPINE ELECTRONICS OF AMERICA, INC., DEPT. SR. 19145 GRAMERCY PLACE. TORRANCE, CA 90501

side of the cartridge and places the disc onto a spindle. In this design, however, interior volume is conserved by only partly withdrawing the trays from the cartridge; discs are played while still half inside the cartridge.

Alpine engineers have packed a number of technological goodies into the 5960. For example, its dual digitalto-analog (D/A) converters are 1-bit designs, which insures stable performance in spite of temperature variations--- an important consideration in a car environment. A digital servo circuit is employed to minimize error in the disc-transport tracking and focus operations.

Lab Tests

All of that high-tech design effort paid dividends on the test bench as the Alpine 5960 breezed through the rigors of measurement. (All measurements were made through the preamp outputs of the controlling head unit, an Alpine 7816 CD receiver.) Frequency response was quite flat, falling off a mild 0.7 dB at 20 kHz, and the de-emphasis error was small. Channel separation, signal-to-noise ratio (S/N), and dynamic range were all excellent. Distortion was low, and the D/A converter's low-level linearity was better than average. The laser transport was able to negotiate (with some skipping) the 4,000-micrometer defect in the Pierre Verany #2 test disc, the largest on the disc. Overall, 12-volt CD changers don't get much better than this.

Installation

The changer is shipped with three transport screws threaded through the bottom of the chassis. My first step was to remove the screws and cover the holes with self-sticking pads to keep dust and dirt from entering. As usual in a changer installation, the first decision was mounting angle. An Ltype mounting bracket is positioned at each end of the changer and fixed at the selected angle by means of hex bolts. The L brackets themselves are mounted to the car with self-tapping screws or attached to baseplates that in turn are screwed to the car. (All of this installation hardware, by the way, is changer vertically, set the suspension supplied with the 5960.) I mounted the

CAR STEREO

lever accordingly, and bolted the L brackets to the floor of the front trunk of my Porsche 911.

Electrical installation of the 5960 is simplicity itself. The only connection, in fact, is a pigtail with an 8-pin DIN connector. All power, ground, control, and audio signals are conveyed along this cable, which connects to a 17-foot extension cable that plugs into the back of the head unit or controller. On occasion, noise or interference may attack the cable, particularly over a long run, so it might be necessary in some cases to distance the cable from car systems that generate noise.

The 5960 can be controlled by a wide variety of Alpine CD and cassette head units and dedicated controllers—any Shuttle Control unit will do the trick. Be aware, however, that the recently introduced Alpine Intelligent Network, or Ai-NET, which buses together a variety of Alpine components. cannot be used to control the 5960.

Road Tests

Installation completed, I lingered in the garage, checking out a few details. First I toyed with the disc cartridge. Frankly, the 5960's slide-out-sleeve cartridge is my least favorite among the several designs around. It is awkward to use—too easy to drop a sleeve or get one in crooked. To its credit, the newer version supplied with the 5960 omits the push-in tab used in many other cartridges, so instead of needing three hands to load discs, you need only two. But I still pine for a disc cartridge that is truly easy to use yet suitable for a small changer.

Next I loaded in some discs and simply changed from one to another. On average, it took about 8 seconds to change discs-about par for current changers and somewhat faster than previous Alpine models. One of the discs I loaded contained a silent track, which I auditioned in the dead quiet of my garage, volume cranked, engine both on and off, to make sure there were no noise problems in the system. There weren't. Still, others may not be so lucky. Although the 5960's single DIN cable is the ultimate in hook-up convenience. I wish that a fiber-optical connection were available as well.

Since this diminutive unit will cer-

MEASUREMENTS

Measured through an Alpine 7816 CD receiver. All figures are for the worse of the two channels.

Maximum output level2.16 volts
Frequency response
20 Hz to 20 kHz +0 dB, -0.7 dB
De-emphasis error (at 16 kHz)0.15 dB
Channel separation
1 kHz
20 kHz
Signal-to-noise ratio
(A-wtd., re 0 dB)98.1 dB
Dynamic range (A-wtd.)94.7 dB
Distortion (THD+N at 1 kHz)
at 0 dB
at -20 dB
Linearity error (at -90 dB)+1.6 dB
Interchannel phase error
(at 20 kHz)
Defect tracking (Pierre Verany #2
test disc) 4,000 μm
Impact resistance R

tainly be incorporated in many car interiors, I gave an up-close listen while it changed discs and came away with the impression that it was quieter than most others. Later, from some technical information Alpine supplied, I learned that sliding cams are used to change discs and that they are indeed quieter than the gears used in most other changers.

Installation and check-out chores painlessly completed, I loaded in a sextet of my favorite discs, fired up my motor vehicle, left the garage, and immediately pulled into a nearby shady spot, engine idling. Taking advantage of that relatively quiet environment, I settled in for some critical listening. Starting with solo instruments and sparsely orchestrated chamber music, I listened carefully for the subtle nuances that a good CD reproduction system should deliver, and I was not disappointed. I felt that the changer's circuitry, particularly its D/A converter, did an excellent job of providing a high-fidelity signal with great transparency.

I switched to more progressive music with harder-hitting bass and vocals, and again, I liked what I heard. I felt that the changer was outstanding in its ability to convey the full power of even forceful music. In short, in any installation I can conceive of, any audible problems would almost certainly be well downstream of the 5960. I should also mention, for completeness, that the Alpine 7816 CD receiver did an excellent job of controlling the changer, with speedy access and no glitches.

Popping the clutch, I accelerated to another part of my test. In particular, I cruised a number of very bumpy roads, listening for any changes in CD playback quality. Vibration is a menace to reproduction. Any increase in error rate caused by transport instability that pushes past the player's ability to completely correct errors will result in interpolation. I listened for telltale bursts of distortion, but I did not hear any even while traversing roads that cry out for taxpayer revolt. In short, I give this changer high marks for its ability to shrug off road insults.

Of course, every product has its limits, and I was able, with difficulty, to find the 5960's. Specifically, it was sensitive to lateral shock during sharp cornering. In other words, a very bumpy hairpin turn would cause the changer to skip. That kind of situation maxes out the suspensions in most changers, and the 5960 was no exception. Frankly, in most cars, even on bad roads, you can't get the changer to this point. My Porsche, with its hard suspension and nimble steering, provides an abnormally tough test.

If you're the kind of person who regularly enjoys listening to music while attacking very bumpy roads with sharp corners at high speeds, generating G forces greater than those experienced by astronauts, I recommend that you take out a life-insurance policy naming me as the beneficiary. In addition, I recommend that you look beyond the 5960 for a changer that will accommodate your thrills.

Seriously, though: If you are a normal driver who drives sanely and appreciates first-rate sound and precise, reliable disc selection, I certainly do recommend the Alpine 5960, a CD changer for the rest of us. It is a tribute to Alpine's engineering team that so many good attributes could come in such a small box.



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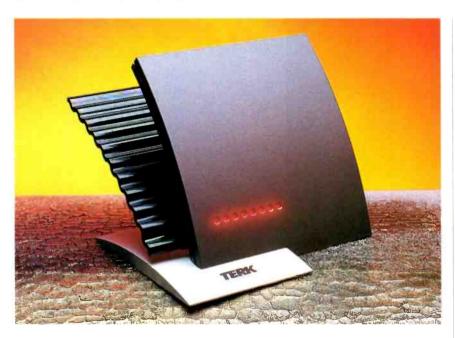
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TEST REPORTS



Terk AM-FM Q Powered Antenna

JULIAN HIRSCH . HIRSCH-HOUCK LABORATORIES

he antenna is one of the most important-and least appreciatedcomponents of any home entertainment system that includes reception capability for TV or FM (or AM, for that matter). It should be obvious that a tuner intended to receive broadcast signals must first have those signals available at its input (the antenna connector). What gets them there is the antenna.

There is an old axiom among radio amateurs (and professionals) that for best results an antenna should be as large and as high as possible. In the context of home reception of broadcast FM or TV signals, this requirement can best be satisfied by a welldesigned multi-element Yagi antenna, preferably rotatable, and mounted well above local structures and trees.

Most people are not fortunate enough to have such an installation unless they are located in rural areas and find it necessary for receiving stations at a considerable distance (say, 50 to 100 miles or more). The rest of us usually have to settle for a simple folded dipole (supplied with most tuners and receivers) tacked to the wall or laid behind a piece of furniture. The limited effectiveness of such an antenna is further reduced by location and orientation constraints that are imposed by room decor, windows and doors, and so on.

Small, internally amplified FM antennas, styled to be more acceptable than a tacked-up piece of twin-lead transmission line, have been available for a number of years. Most do work after a fashion, but each seems to have its own weak points, either aesthetic or functional.

The new Terk AM-FM Q powered

DIMENSIONS

5 INCHES WIDE, 6 INCHES HIGH, 61/2 INCHES DEEP

PRICE \$99.95

MANUFACTURER

TERK TECHNOLOGIES, DEPT. SR, 65 E. BETHPAGE RD., PLAINVIEW, NY 11803

antenna is an interesting and attractive variation on the miniature indoor FM antenna, though it also functions on the AM band. Terk calls it a "stereo" antenna, but there are no special requirements for a "stereo" antenna as opposed to a "mono" antenna, since both modes are susceptible to distortion from multipath reception, and I have yet to see a miniature antenna (or any indoor antenna, for that matter) that can alleviate a multipath problem.

The Terk AM-FM Q is somewhat more compact than most indoor antennas, and more attractively styled. Its FM section is a curved rectangular black panel measuring 5 x 51/2 inches, angled about 45 degrees backward on a small white base. The AM antenna, just behind the FM antenna, is roughly the same size and shape, but it is hinged at the bottom. Terk says the AM antenna normally performs best (and allows the FM antenna to perform best) in a horizontal orientation.

Both sections of the AM-FM Q are powered, meaning that their outputs are boosted by an amplifier before reaching the receiver's antenna connector. Terk says the amplifier uses low-noise gallium-arsenide (GaAs) components. The AM-FM Q has a 75-ohm F-type coaxial output and a matching transformer whose short wire-lead outputs are fitted with spade lugs for use with 300-ohm tuner inputs. It is not clear—nor does it matter to the user—whether the amplifier is located in the antenna plug or the antenna structure. The AM-FM Q is powered from a small external 12-volt DC supply that plugs into a 120-volt AC outlet and may either be left operating constantly or switched on and off as required.

Many of the Terk AM-FM Q's basic features are found on other miniature indoor antennas, but the Q differs from most others in having two modes of amplification: wide-band and narrow-band. In the wide mode the amplifier boosts the level of all signals more or less uniformly across the 88to 108-MHz FM band as well as the AM broadcast band. In the narrow, tunable mode its maximum gain can be set at any point in the band, giving a station at that frequency an advantage over, for example, stronger signals nearby that might crossmodulate with the desired one and cause interference. The amplifier's gain, in either mode, can be adjusted by a thumbwheel set into the side of the FM antenna, where a tuning thumbwheel is also located.

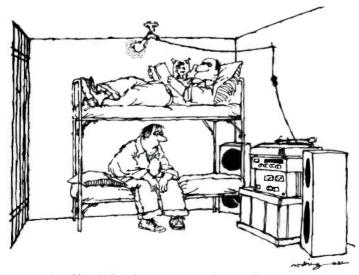
A novel feature of the AM-FM O is an illuminated frequency scale consisting of a row of eight green LED's across the lower portion of the FM section. Each LED is identified with the approximate frequency corresponding to it (with separate markings for AM and FM); the one corresponding to the currently tuned frequency changes to red. This tuning scale enables the antenna to be set in advance for the frequency of a desired station, although that is best done while watching the receiver's signal-strength indicator or listening to the audio while adjusting for minimum noise.

Since no performance specifications are provided for the Terk AM-FM Q, and we lack the specialized facilities for accurate antenna measurements, we chose the most practical approach—establishing the benefits the antenna provides in actual listening. We made measurements only for FM, although we did use the AM antenna, too, in order to verify its effectiveness.

We connected the antenna to a tuner's 75-ohm coaxial input and placed it on a steel shelf in our laboratory, a room at about ground level. Starting at 88 MHz (the low-frequency end of the FM band), we tuned in each receivable station. We noted the signal strength, indicated by one to five LED's on the tuner display, first with the antenna in its wide-band (untuned) mode and again in its tunable narrowband mode, adjusted for a maximum indication on the tuner display.

Then we took the tuner to the lab bench and connected it to our FM signal generator to measure the actual input signal (in dBf) corresponding to all the tuner's signal-level indications at various frequencies over the entire FM band. From this we were able to establish the approximate gain (boost) of the antenna amplifier in its narrow mode relative to its wide (untuned) mode. We had no way to establish the actual antenna gain (compared to an indoor dipole) in its wide-band mode.

The tuner received forty-one listenable signals, most of them in stereo. The maximum gain in narrow mode was typically 13 to 20 dB, although in some instances it exceeded 30 dB. The value of this gain is not related to the particular tuner (a moderate-price unit we have had for a number of years). The Terk AM-FM Q did a very adequate job of pulling in a full band of FM stations, using an unexceptional tuner in a much-below-average location. It also worked well on AM. The bottom line: The Terk AM-FM O is a very practical solution for anyone who needs a functional, attractive, and affordable indoor antenna.



", . . . Uh-oh! Frankie just got it—the amplifier's clipping."

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"God is in the details," a famous architect was fond of saying. He was talking about how the architectural details of a building—the doors, windows trim, and ornaments—are at least as important as its overall shape and layout. The same goes for the design of a complex electronic product such as an A'V receiver. It's now rather easy to "design" the basic building blocks of a receiver. Circuit diagrams for emplifiers, Dolby Pro Logic decoders, and AM/FM tuners can be found in the recipe-like cata sheets freely supplied by the manufacturers of the relevant special-purpose integrated circuits. But while the circuit subsections may operate well and produce good measurements in a lab test, getting the operational details just right is still no mean feat. There is no receiver designer's Bible with commandments telling what type of speaker connector to use, how to lay out the rear panel, or how many input-selector buttons to put on the remote control. Yet such details can make or break a receiver's usability, especially at the lower price levels, where brand competition is fierce and designers struggle to incorporate as many features as manufacturing costs will allow without compromising pasic performance.

The three receivers chosen for head-to-head testing here are well matched in all areas, so well matched that we decided to dispense with the traditional comparative listing of performance and convenience features. Kenwood's ER-V5560 (\$329), Sony's STR-D615 (\$350), and Technics' SA-GX470 (\$300) have very similar features.





Each receiver has A/V connections for a VCR and a laserdisc player or playback-only videocassette machine as well as audio-only connections for a tape deck, a CD player, and a phonograph. All the video connections use standard composite-video phono jacks. The internal AM/FM tuners can all store at least twenty station presets. All come with infrared remote controls capable of controlling other, samebrand equipment. While each receiver has connections for the five basic speakers of a surround-sound setupleft, center, and right front and two surrounds (invariably called "rear" speakers in the manuals)-none has connections or outputs for directly feeding a subwoofer. But all of them do have 1/4-inch headphone jacks and connections for a second set of main speakers.

There are some very slight differences in features. The Kenwood and Technics receivers both connect the surround speakers in series (see "Bottom Feeding," page 51, for more on why that is important and on what other features you may have to give up by buying a low-price receiver). Only the Kenwood has a loudness-compensation control, connections for two audio-only recorders, and jacks for system-control cables to carry disc-start information between a same-brand turntable, CD player, and tape deck for

semi-automated recording. The Sony and Technics both have thirty radio presets, while the Sony is the only one with a bass-boost button, which in this case increases response to the main loudspeakers by 8 dB at 60 Hz (best used with speakers that have inadequate bass response). Sony's is also the only model with music-oriented surround enhancement modes, though they aren't balance-tipping in performance. In short, there's nothing significant to prefer in features, though Kenwood's second set of audio-recorder connections may tip the balance for a few, and the series connection of the surround speakers in the Kenwood and Technics receivers may point others toward the Sony.

Watt's the Difference?

On paper the receivers are not matched in output capability. But if you do the calculations, you'll find that in surround operation the rating of the Technics (55 watts each for the front left, right, and center speakers, 30 watts each for the surrounds, both with 0.8 percent harmonic distortion) is only 1.05 dB lower in the front channels and only 1.76 dB higher in the surrounds than the Kenwood (rated for 70 watts across the front, 20 watts for the surrounds, with 0.9 percent harmonic distortion) and the Sony (rated for 70 watts across the front, 20

watts for the surrounds, with 0.8 percent harmonic distortion). Such small differences (as measured in decibels) will rarely, if ever, be audible when playing soundtracks. The distortion specifications for all three models are rather high, however. I would have preferred to see the power specs for the front channels given with distortion limits of 0.1 percent.

In two-channel operation into 8ohm loads, the power ratings differ more, but again not significantly. The Kenwood's 70-watt spec is 1.55 dB lower than the 100-watt Sony and Technics ratings, again a small difference. Sony's relatively high distortion specification of 0.8 percent—more than 10 times that of the other unitsis, however, worrisome. Depending on the distribution of distortion products, 0.8 percent harmonic distortion may be audible on very critical program material. Little else in the amplifier or tuner portions of the spec sheets stands out as significantly better or worse for any of the three receivers. So far, on the basis of specifications, this is definitely an apples-to-apples comparison.

Lab Results

The first decision-swaying details start coming out in the lab-test results (see table on page 50). The tuner measurements, while not equivalent, were equally balanced in performance. But in the two-channel mode the Sony STR-D615 and Technics SA-GX470 had *slightly* better amplifier performance than the Kenwood KR-V5560. By and large, our power measurements followed the manufacturer's ratings, coming out with the same relative order.

Dynamic power and dynamic headroom are particularly revealing. The Technics receiver's dynamic power outputs were 1.7 to 1.8 dB higher than the Kenwood's—that is bordering on the significant—but only 0.4 dB higher than the Sony's. With steady-state power delivery, on the other hand, the Technics' 170-watt clipping-level output into 4 ohms at 1 kHz was only 0.9 dB louder than the corresponding Kenwood output, the lowest of the three, again showing the misleading nature of wattage ratings and measurements if they are not converted to decibel equivalents for comparison.

Frequency-response measurements of amplifiers and receivers usually produce rather uninteresting results—flatness everywhere—but this time they did not: Both the Kenwood and

Sony receivers had front-channel responses that straved from flat when their tone controls were set to their center-detented positions. For smoothest response, the Kenwood had to have its bass knob rotated to 10 o'clock. Sony's bass knob had to be turned to 11:30 and its treble knob all the way down to 9:00. (All these settings were used to produce the surround-sound frequency-response data in the table.) There's no telling whether that behavior was a mere sample-to-sample variation, which I would then consider excessive, or an actual design "feature," in which case I think the detents should be moved. Such details can audibly affect sound quality.

The higher distortion spec for the Sony unit was confirmed by our measurements. Spectrum analysis of distortion products produced by the receivers in two-channel mode at five frequencies across the audio range consistently showed greater amounts of high-order harmonics for the Sony. While those high harmonics were all at fairly low levels in our tests, it is conceivable that they could be above audibility thresholds at times.

Still, even in Dolby Pro Logic operation the receivers performed just about equally well in all respects, with one exception. Both the Sony and Technics models had their Dolby Pro Logic surround-channel noise-reduc-



DIMENSIONS 17 x 53/4 x 115/4 NCHES

> WEIGHT 151/4 POLINDS

MANUFACTURER

SONY ELECTRONICS, DEPT. SR, SONY DR., PAFK RIDGE, NJ 07094

tion points set too high, the Technics by quite a bit. The figure for the Sony was harder to call than it should have been, since its frequency-response deviations at most tested levels (fortyseven 1-dB steps descending from 7 dB above the Dolby reference level of 247.5 millivolts) precluded a close match with overlaid ideal-decoder responses—even after computerized correction for both the Sony's overall downward-sloping surround response and the standard Pro Logic surroundchannel rolloff above 7 kHz. Although it uses the same Dolby Pro Logic chip as the Sony, the Kenwood receiver was calibrated more accurately in this regard and also had a good match to reference Dolby-decoder responses at most levels.

Listening Tests

All three receivers could play quite loudly on movie soundtracks without obvious distortion, soundtracks not being as critical in this regard as wellmade music recordings. The sound steering among the various surround channels that is the essence of Pro Logic operation was just about the same from all three units and as accurate as I have heard from any A/V receiver. In fact, the only significant sonic difference I noted was the slightly higher noise levels from the Technics. So even here the receivers are fairly well matched. But the balance is starting to sway.

Usability

Details start to become overwhelmingly important at what computer types call the "user interface," particu-



WEIGHT

221/4 POUNDS

MANUFACTURER

TECHNICS, DEPT. SR, ONE PANASONIC WAY, SECALCUS, NJ 07094

TUNER SECTION STR-D613 SA-GX470	MEASUREMENTS				
TUNER SECTION		KENWOOD	SONY	TECHNICS	
FM only except frequency response Sensitivity (50-BB quieting, stereo) 41.5 dB					
Sensitivity (S0-dB quieting, sierce) 41,5 dBf 38 dBf 41 dBf 59 dBf 50 dB 71 dB 60 dBf 67.5 dB 70 dB 53 dB 53 dB 53 dB 75 dB 75 dB 64 dB 65 dBf 65 dBf 67.5 dB 75 dB 64 dB 64 dB 65 dBf 67.5 dB 67.5 dB 64 dB 65 dBf 67.5 dB 65 dBf 67.5 dB 65 dBf 67.5 dB 64 dB 65 dBf 67.5 dB 65 dBf 67.5 dB 65 dBf 67.5 dB 65 dBf 67.5 dB	TUNER SECTION				
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Distortion (THD + N at 65 dBf) 3.3%, mostly carrier leakage carrier leakage Carrier leakage Carrier leakage Carrier leakage Carrier leakage Carrier leakage Carrier leakage S dB T o dB S 3 dB Alfernate-channel selectivity 50 dB 7.5 dB 5 dB 5 dB Pilot-carrier leakage Pilot-carrier leakage Pilot-carrier leakage Pilot-carrier leakage Pilot-carrier leakage T o dB T o dB 5 dB Pilot-carrier leakage Pilot-carrier leakage T o dB	Sensitivity (50-dB quieting, stereo)	41.5 dBf	38 dBf	41 dBf	
Carrier leakage S3 dB	Signal-to-noise ratio (stereo, at 65 dBf)	67.5 dB	71 dB	69 dB	
AM rejection 35 dB 70 dB 53 dB 75 dB 75 dB 64 dB 75 dB 75 dB 64 dB 75 dB 75 dB 75 dB 64 dB 75 dB	Distortion (THD + N at 65 dBf)	3.3%, mostly	0.67%	1.75%, incl.	
Albernate-channel selectivity		carrier leakage		carrier leakage	
Adjacent-channel selectivity Pilot-carrier leakage (19 kHz) Pilot-carrier leakage (19 kHz) Hum — 75 dB — 79 dB Channel separation (at 1 kHz) Prequency response FM hand — 80 Hz to 15 kHz, +1.3, -3 dB — 44 dB — 34 dB Frequency response FM hand — 75 Hz to 2.8 kHz, +1.3, -3 dB — +1.9, -0.7 dB — 40.1, -1.3 dB AM band — 75 Hz to 2.8 kHz, +0.8, -6 dB — +0.2, -6 dB — +0.1, -6 dB AMPLIFIER SECTION Output at clipping (1 kHz) two-channel operation (8/4 ohms) surround operation, enter (8/4 ohms) Signal-to-noise ratio (A-wdl, two-channel operation, CD input, re 1 watt) Frequency response (wideband mode) left channel — 25 Hz to 20 kHz, +0.3 dB — +0.1, -3 dB — +0.1, -3 dB — +0.1, -3 dB — +0.1, -3 dB — +0.2, -6 dB — +0.3 dB — +0.4 -3 dB — +0.5 -0.6 dB — +0.3 dB — +0.3 dB — +0.5 dB — +0.4 -3 dB — +0.5 dB — +0.5 dB — +0.4 -3 dB — +0.5 dB — +0.4 -3 dB — +0.5 dB — +0.5 dB — +0.4 -3 dB — +0.5 dB — +0.5 dB — +0.4 -3 dB — +0.5 dB — +	AM rejection	35 dB	70 dB	53 dB	
Pilot-carrier leakage (19 kHz)	Alternate-channel selectivity	50 dB	75 dB	64 dB	
Hum	Adjacent-channel selectivity	6 dB	7.5 dB	5 dB	
Channel separation (at 1 kHz) 37 dB	Pilot-carrier leakage (19 kHz)	−35 dB	-68 dB	−35 dB	
Frequency response FM band 30 Hz to 15 kHz. +1.3, -3 dB +1.9, -0.7 dB +0.1, -1.3 dB AM band 75 Hz to 2.8 kHz. +0.8, -6 dB 40.2, -6 dB AMPLIFIER SECTION Output of clipping (1 kHz) two-channel operation (8/4 ohms) surround operation, center (8/4 ohms) surround operation, center (8/4 ohms) Surround operation, surround (8/4 ohms) Surround operation, center (8/4 ohms) Signal-to-noise rotio (A-wtd., two-channel operation, CD input, re 1 watt) Frequency response (one controls centered, 20 Hz to 20 kHz) DOLBY PRO LOGIC PERFORMANCE Frequency response (wideband mode) left channel 25 Hz to 20 kHz. +0, -3 dB +0.1, -3 dB +0.1, -0.6 dB DOLBY PRO LOGIC PERFORMANCE Frequency response (wideband mode) left channel 25 Hz to 20 kHz. +0, -3 dB +0.5, -0.6 dB +0, -3 dB +0.5, -0.6 dB +0, -3 dB +0.5, -3 dB +0.5, -3 dB -0.3 dB +0.3, -3 dB -0.3 dB -0.	Hum	-75 dB	-75 dB	-79 dB	
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+0.8, -6 dB	AM1 - 4	2511 20111	0011 - 00111		
AMPLIFIER SECTION Output at dipping (1 kHz)	ANI band				
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Output at clipping (1 kHz) 1xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx	AMBUSIES STATION				
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## 10.5 10 dB 10.		+0, -3 als	+0.5, -0.6 dB	+0, -3 dB	
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#03 dB #0.5, -3 dB #0.4, -3 dB #0.5, -69.3		0011	2011 7 20111		
## A-weighted noise main (re 200-mV input)	surround channel				
main (re 200-mV input)	6 MA 4 1	+0, -3 dB	+0.5, -3 dB	+0.4, -3 dB	
Center (re 141.4-mV input)		72 (10)	72.7. ID	70.5 13	
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	(worst case, 100 Hz to 7 kHz)				
		surround driven	right driven		

larly for the "entry-level" user to whom these receivers would be most appealing. I'll discuss the three models in alphabetical order, although that may give undue prominence to the Kenwood's faults, some of which are also found in the other two receivers.

Neither the Kenwood nor the Technics has an indicator on the all-important volume knob that's easily visible from a short distance away, and neither has a front-panel readout or onscreen display of the volume setting. The Kenwood's design exacerbates this undesirable situation since its remote has only one input-selector button. You must cycle through the array of signal sources to get to the one you want. The continuously rotating inputselector knob on the front panel operates in the same way. While you could solve the volume-control indicator problem with a dab of bright paint on the knob, the input cycling cannot be changed.

The buttons on Kenwood's handset are differentiated only by position, with poor low-light visibility of their labeled functions to boot. As if to compensate, there are relatively few buttons in all, which makes them easier to memorize. All the receiver controls are clustered in one area except for the tuner-preset buttons, a better arrangement than on most remotes.

ther details: While the Kenwood has two AC convenience outlets on its rear panel (the others have only one), it also has a user-unfriendly layout of input and output jacks. The various phonojack connectors are arrayed vertically, which makes it difficult to find one by feel while reaching around from the front. And the connectors for the five surround-mode and two remote speakers are laid out as if to promote confusion, with the connectors for the main front and the remote speakers oriented one way and those for the center and surround speakers oriented another way (the Sony receiver has the same undesirable layout). The task of speaker hookup is tedious enough already (second only to schlepping a subwoofer around a room trying to find where it sounds best), but at least once you figure out the connection scheme—if you figure it out—you won't have to worry about it again until you have to reconnect a speaker.

Kenwood's 1-dB adjustment steps for the center and surround speakers, while the same as those in the Sony

BOTTOM FEEDING

t the price level of the receivers tested here, you can't expect the full array of performance and convenience features offered in \$1,000 units. But what do you give up by bargain hunting among A/V receivers? Where are the tradeoffs?

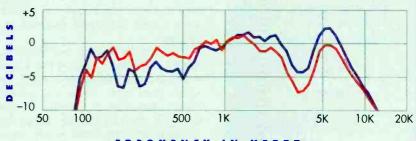
You don't necessarily lose in overall sonic performance. The most obvious datasheet limitation of lower-cost A/V receivers is in their output power, especially in surround mode, where more money will get you considerably more power, at least as measured in watts. But remember that to obtain an audibly significant increase in output capability you'd have to at least double the power ratings. Many \$1,000 A/V receivers don't approach twice the rated power of the ones tested here. For all systems except those in very large rooms or with unusually inefficient loudspeakers. these three receivers are amply endowed with power.

The relative ease of designing rather complex circuitry today, thanks to the use of "predesigned" integrated circuits, also leads to good, or at least consistent, performance. The same analog Dolby Pro Logic decoder chips are used throughout many companies' A/V receiver lines except in the very top units, which may use digital signal processing (DSP) for that function. Those chips, now substantially improved from the first generation of analog Pro Logic devices, establish a receiver's surroundsound performance, which will therefore be basically the same for many different models. Where they exist, the audible limitations of low-cost A/V receivers aren't in Pro Logic operation.

The most common and most significant limitation I've found so far is that many lowprice and even some midprice A/V receivers connect the two surround speakers in series even if they have separate rear-panel connections. The dead giveaway is the requirement that two surround speakers be used in order to get any surround-channel sound at all. Series connection of loudspeakers is never a good idea because the impedance variations of one speaker impose themselves—unpredictably—on the frequency response of the other speaker.

The accompanying graph shows the change in measured frequency response of a low-cost surround speaker-driven from one of the series-connecting receivers in this article—when it is in series with an 8ohm-load resistor (blue trace) and when it is in series with another speaker of the same type (red). That the red trace shows better

If your A/V system is not fully equipped, you can substitute inputs: Any equipment with a line-level output (practically everything except a phonograph) can connect to any line-level input on the receiver (all except the phono input). A second audio tape recorder could be hooked up to the VCR audio connections, for



FREQUENCY IN HERTZ

mid-frequency response is less important than that there is an audibly significant difference between the two traces. Substitute another pair of speakers and the change could be for the worse. Such seriesconnection effects cannot be compensated for nor easily predicted. Since I know of no speaker company that intentionally designs its surround speakers to sound best when driven in series-connected pairs, if all other things were equal I would prefer an A/V receiver that provided parallel-connected surrounds to one with series-connected outputs.

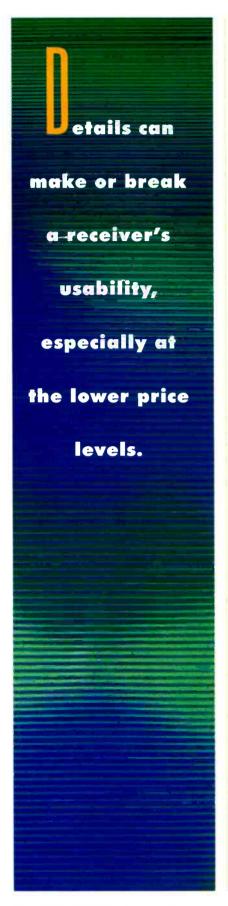
Otherwise, most of what you give up when you shop at lower price levels is the flexibility afforded by "convenience" features. Although it is the least "sexy," the most important such feature is being able to accept a large number of external signal sources. For example, while all the receivers here have enough inputs for a basic A/V system (one each for a VCR, laserdisc player, CD player, audio-only tape recorder, and phonograph), none will let you plug your camcorder into the front panel. And if you wanted to add a DCC, MiniDisc, or DAT recorder to your system, the analog cassette deck would have to go, or you would have to purchase an external switchbox.

example. Still, down the road, running out of inputs will probably be a primary motivation for an upgrade.

Other features that you may decide to live without include:

- · A universal (programmable) remote control, which you can buy separately.
 - S-video connections and switching.
- On-screen displays of receiver status (these vary widely in usefulness).
- · A dedicated subwoofer output (most powered subwoofers allow you to tap into the receiver's main speaker outputs, a workable if not ideal alternative).
- · Surround-sound modes intended for soundtrack ambience enhancement beyond Dolby Pro Logic (few are good).
- · Surround-sound modes intended for music or mono-source enhancement.
- · Built-in signal processing (equalizer, dynamic-range processor, etc.).
- Mare flexible switching between components, such as being able to record one program while viewing/listening to another.

I would, however, be willing to pay more just to get binding-post speaker connectors, but the decidedly unflexible and otherwise annoying snap or spring type of connector is unavoidable on all but top-of-the-line receivers. —D.R.



and Technics receivers-and, for that matter, most other A/V receivers—are a bit too widely spaced for really precise level matching. And the Dolby Pro Logic test tone comes on at too low a level, compared to typical laserdisc levels, so that you have to turn the volume up rather high to make the adjustment. (Remember where you set it-you can't tell from the front panel-or you will have a rude awakening when switching back to program material.) The low-level test tone seems to be a characteristic of the Dolby Pro Logic chips used, as it's the same in the Sony and Technics receivers.

Unlike the Kenwood and Technics, Sony's STR-D615 lacks a Pro Logic test-tone control on the front panel. So years from now, when the remote breaks, gets lost, or is eaten by the dog, you won't be able to balance the speakers properly. And in any case, depending on the sensitivities of the speakers and where they are located, balancing the speakers in Pro Logic mode with the Sony may require what may appear to be excessively high settings. Using a set of Home THX speakers we reviewed recently, I had to dial the surround level all the way up (+10) to obtain equal sound-level readings from all five speakers. If the surrounds had been a couple of decibels less sensitive, or located farther away, the Sony would not have been able to balance them properly. This is one very important detail users should check out as soon as they get this receiver home and hooked up.

In comparison, it's a truly minor matter that setting Pro Logic balances with the Sony doesn't also set balances for its music-enhancement modes. Those processing modes, called Hall and Simulated, are essentially just varieties of inverted-phase channel cross-feeding that can, depending on the program, add a little spaciousness to music or mono soundtracks with surprisingly little coloration compared to similar schemes I have heard. These modes are best used, however, when listening from a point midway between the front speakers. And the Hall mode does not provide, as the manual claims, a "reverberation effect." You do not get the multiple decaying reflections that characterize true synthesized reverberation, but only one timedelayed ambience reflection—which, it must be said, may actually be sufficient for many types of music.

The Sony's rear panel is easy to navigate except for the confusing speaker connectors mentioned earlier. The inputs are arrayed horizontally, with the VCR and laserdisc video connections located directly above the corresponding audio ones, not separated entirely from the audio jacks as in the Kenwood and Technics. The frontpanel volume knob has a position-indicating LED. The remote can be used to control other Sony equipment, if you can figure out that section of the manual. Only the volume buttons are differentiated by shape from the other remote buttons, but the handset is otherwise well laid out, with good reduced-light visibility.

he Technics SA-GX470's rear panel has a vertical connector arrangement, with video connectors separated from their corresponding audio jacks. On the other hand, it does have the most logical and consistent speakerconnector arrangement (+ on top, - on bottom) of the three receivers. Only the center-speaker connectors are separated from the others. The Technics remote is the only one to have wellseparated buttons differentiated by size and shape, which makes its poor low-light visibility less important. And even though it uses two AAA batteries rather than two higher-capacity AA cells like the other remotes, it is the easiest handset to negotiate without practice. One detail that, astonishingly, has been overlooked is that the remote has no input-selector button for the second video input (where you'd normally hook up a laserdisc player); you can select it only from the receiver's front panel.

In the Balance

For me, the weight of various details swings the balance away from the Kenwood and toward the Sony and Technics. The Sony has the important advantage of parallel surround-speaker connections, while the Technics will probably be easier for beginners to hook up and use. I remain baffled, however, as to how such obvious and important points as nonflat frequency responses with the tone controls set at neutral and missing input-selector buttons could pass muster. Even though the buyers of these receivers may be paying less than those who can afford premium models, they still deserve attention to detail.

MOVINGS



How to

prepare

your A/V

treasures

for the

big trip

t was the footnote that caught my attention. When a prominent member of the audio community put his house up for sale a few years ago, he added a page to the realtor's fact sheet describing in detail his superb audio/home-theater system and suggesting that, for a slight premium, a buyer could have the whole works along with the house. After building and polishing his system over something like two decades, he was ready to leave it behind and was looking forward to starting all over with new gear.

Few of us have that luxury. Most of us will move several times before we end up in our retirement cottages, and most of us will want to take our audio/video systems with us. At the very least, we'll need to transport our recordings even if we do leave the equipment behind.

If you're contemplating having a professional moving company look after your furniture, it may be wise to consider having it deal with your home-entertainment gear as well. One major advantage to having the pros pack it is that if anything arrives at your new home damaged, they may be liable for some or all of its value. The service will probably cost you extra, however, and some-

thing irreplaceable could be damaged, particularly when it comes to

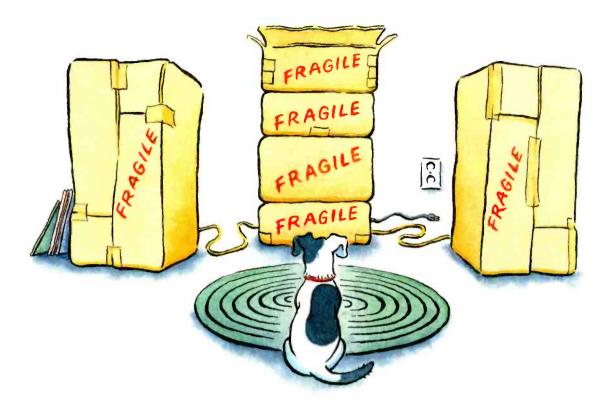
rare recordings. So check out the options offered by the moving company, but be prepared to do the packing and moving yourself if you are left with any doubts about the movers' care or capabilities.

In fact, you may have to do only minimal packing, depending on what you're moving and where it's going. If, for instance, you have a fairly modest amount of gear and you're just moving across town, you might be able to simply put the equipment on the seats of your car and transport it yourself. The seats will cushion components against shock, and you can use the seatbelts to make sure things don't shift around. You may have to make several trips if you have a lot of equipment, but doing it yourself is the best assurance of peace of mind.

Going the Distance

For long-distance moves, however, or if you're planning to put your possessions in storage for a while, some form of secure packing will be necessary. By far the best is the packing the equipment came in—if you still have it. Manufacturers usually recommend hanging on to the boxes, but often

store and most of us eventually discard them. If you do have to use



other boxes, check out such likely sources for them as supermarkets, liquor stores, and friends who have recently bought A/V gear. Try to find boxes that are big enough to hold the components with an inch or so to spare in each direction, but not so big that the equipment can rattle around inside. A good strategy is to start picking up appropriate cartons whenever you see them, well in advance of the move; even if one proves unsuitable, you can use it for other things you have to transport.

In order to pack up your components, you will have to dismantle the system, of course, but before you do, give some thought to how you'll reassemble it in your new digs. Assuming that you intend to set it up pretty much as it is now, you can save yourself a lot of time and grief by carefully labeling all the patch cables before you disconnect them. Fold strips of masking tape around the ends of each cable just behind the plugs, and use a ballpoint pen to note where each plug goes (if you decide to use a cable for something else later, the labels can easily be removed). Indicate the component a plug is attached to and the exact legend on the jack where it connects. That will enable you to reconnect your system in very little time; even if you change things afterward, you'll have an easy starting point.

As far as packing the cables goes,

there is usually room for them in the same boxes as the components they go with. You may even have enough room to leave some of them connected (just make sure there's no pressure on a cable that causes it to kink, particularly at the jack). But even if you leave a cable connected, be sure to label it—you may have to unplug it temporarily when you get to the new location.

Before you start putting them in boxes, some components may need a bit of preparation. Many CD and laserdisc players come with transit screws to prevent their internal components from shifting about during a move. Those screws should be tightened securely according to the instructions in the owner's manual. If the screws are removable, you should have kept them with the manual when you bought the player; if you didn't, this is one component you should consider moving by hand.

A turntable presents special challenges because of its many delicate mechanical parts. The ideal way to prepare it, if you still have the original packing materials, is to take it apart and return it to the state it was in when you bought it. Often that means no more than removing the platter and taking the tonearm assembly apart, but there may be more steps, all of them fiddley.

If you don't have the original carton, make sure the various moving parts are firmly secured. Remove anything you can-arm counterweight, antiskating element, and so forth-and put the parts in a plastic bag to go into the box with the turntable. If the platter is removable, take it off and wrap it in something soft (towels are good) so that it won't do damage if it shifts. If the platter can't be removed, secure it with strips of strapping tape to make sure it's immobile (if it's loosely suspended, put wedges of wadded-up paper under the rim at several points before taping it down). Secure the tonearm to its rest with tape or rubber bands. If the headshell is removable, take it off and package it separately, guarding the cartridge carefully. If you have to leave the cartridge in place, try to rig some sort of shield so nothing can touch the stylus (tip: try the cardboard roll toilet paper comes on).

The trick to replacing a component in its original packing is figuring out how it fits into the foam spacers and then carefully sliding the whole shebang into the box. With heavy gear, such as large speakers and power amplifiers, it's often better to slip the box over the component than to risk a hernia. Don't forget to put the remote controls in the boxes with the components they control. For an added dose of protection, wrap the cables for a component around its remote, then gently wedge it between the component and the box. Remove the batteries

first, however, as the chance of a button's being continually pressed is great; that won't do any harm, but it will drain the batteries very quickly.

For boxes other than the original ones, start with a layer of padding in the bottom. Crumpled newspaper is okay for this, or you might use linens or laundry—you have to move that stuff anyway. Place the component in the center of the box and add padding around the sides, tucking in cables and accessories where appropriate.

When packing speakers, if you can place two in the same carton, make sure their front panels face each other; a sheet of corrugated cardboard between them will add some protection. Finally, cover the top of the equipment with enough padding that the box is solidly level when closed but not bulging. Then securely fasten it shut with strong packing tape or strapping tape. Duct tape works well, too, but masking tape isn't strong (or sticky) enough. Label the box with its contents, and write "Fragile" in large letters on every surface. It's also a good idea to draw arrows and write "This Side Up" on the sides, especially if it's going in the moving van.

Safeguarding Your Recordings

Once the equipment is dealt with, carefully pack your recordings. Vinyl LP's are the trickiest to deal with as they are the most vulnerable to damage. The same goes for laserdiscs, which share the size and fragility of LP's and should be treated the same way, perhaps even packed with them.

The ideal carton is strong and measures about 12 inches wide and 12 inches high, so that discs will fit without shifting; simply pack enough discs in the box that they fit snugly without being crammed in. Such boxes do exist-record companies use them, of course, and eggs are often shipped to stores in them. But if you have to compromise, you can find canned-goods and liquor boxes that will work, although you'll usually have to add some wadded newspaper at one side to make the discs secure. Whatever you do, pack the records on edge, tape the boxes securely, label them, and mark the sides with arrows and "This Side Up," especially if they are going into storage. And don't get too ambitious about the number of discs you put into one box—a cubic foot of vinyl weighs almost as much as a concrete block. and someone (probably you) is going to have to carry it.

Tapes and CD's are more forgiving. Pack them tightly (in their cases or jewel boxes) with as few gaps in the cartons as you can manage, and fill up the gaps with padding or newspaper. For long storage, pack CD's on edge like LP's, and if you're packing audio or video tapes, be sure to keep them away from magnetic fields.

n the end, the biggest factor in getting your precious audio and video equipment where it's going without damage will be careful transport, but you can hedge your bets considerably by a little planning and some sensible packing before the movers arrive. Bon voyage!

Before you dismantle your system to move it. give some thought to how you'll reassemble it in your new digs.





atience is a virtue, especially when you're plotting a longterm home theater project against a shortfall of cash. As a salesperson at Columbia Audio/Video in Highland Park, Illinois, Michael Rubenstein is no stranger to the expandas-you-go school of home theater, so he felt right at home when we asked him to work up a strategy for a mystery shopper who wants to assemble a home theater system not in one fell swoop, but in three steps.

Since the video-oriented customer already owns a 35-inch TV and a hi-fi VCR, Rubenstein recommends starting with a basic audio package that will provide big sound to match the TV's big picture. The \$1,500 package includes Nakamichi's RE-2 stereo receiver, a straightforward two-channel model, and a Mirage satellite/subwoofer system comprising a pair of M-190i two-way speakers and the PS-12-90 powered subwoofer.

The 55-watt-per-channel Nakamichi RE-2 shuns bells and whistles in favor of simple operation, and according to Rubenstein it delivers plenty of power for medium and large rooms. It has ten AM/FM station presets, a remote control, and, most important, a set of pre-out/main-in jacks that set the stage for the eventual home theater upgrade.

Rubenstein chose the 13½-inch-tall Mirage M-190i's for their ability to perform well with both music and movie soundtracks. "These speakers are very versatile," he explains. "They produce rich, detailed sound with any type of music. They're good family speakers that will play the kids' rock equally as well as the parents' jazz.'

The PS-12-90 subwoofer picks up where the satellites leave off, providing output down to about 28 Hz from a compact 17 x 16 x 17-inch cabinet. Its 12-inch driver is powered by a built-in 90-watt amplifier, which frees up the Nakamichi receiver to power the M-190i's. Bass level is easily adjusted via a knob on the sub's back panel. Thanks to its relatively small size, the PS-12-90 can be placed almost anywhere—behind a sofa or chair, in an equipment cabinet—or it can be used as an end table.

Phase Two of Rubenstein's plan which is likely to come sooner rather than later once the Nakamichi/Mirage quartet is fired up-calls for the addition of a \$799 Marantz LV500 combination CD/laserdisc player, which features an automatic-side-change mechanism for laserdisc playback and direct track/chapter access via the remote control. "The LV500 is very durable and provides a sharp picture and accurate sound," Rubenstein says. noting that its fast, quiet transport sets it apart from other combi-players.

The third and final phase involves the addition of a \$600 Adcom GSP-560 surround processor/amplifier, connected using the receiver's preout/main-in jacks, a center speaker, and two surround speakers. In addition to the Dolby Pro Logic decoding that's needed to bring movie soundtracks to life, the GSP-560 offers a five-channel matrix mode for non-Dolby-encoded movies as well as three music modes—Concert Hall, Nightclub, and Five-Channel Stereo, which is designed to enhance the depth of the soundstage.

The GSP-560 also contains extra amplification to drive the surround and center-channel speakers. It can deliver 40 watts to each of two sur-

3-PHASE HOME THEATER PLAN

Columbia Audio/Video, Highland Park, IL

Phase 1

Nakamichi RE-2 receiver (\$649) Mirage M-190i speakers (\$250 a pair) Mirage PS-12-90 subwoofer (\$550)

Phase 2

Marantz LV500 combi-player (\$599)

Phase 3

Adcom GSP-560 processor/amp (\$600) Mirage MCC center speaker (\$170) Mirage M-190i speakers (\$250 a pair)

round outputs-more than enough relative to front-channel power—and 80 watts to the center channel, 25 watts more than the receiver's left- and right-channel output. And for maximum flexibility, each of the GSP-560's five channels has a preamp output, which makes it easy to increase power for any channel using an outboard amplifier.

Having more power for the center speaker is no problem for Rubenstein since the center speaker plays a key role, especially in reproducing dialogue. And even if the center speaker-or the surrounds, for that matter—needs to be throttled back a bit, the adjustments can be made using the processor's remote control, which has level buttons for the front, center, and surround speakers.

"Some surround-sound processors don't let you control volume with the remote," he says, "and that makes it difficult to match levels at the listening position. You have to keep getting up and going over to the unit. With the remote, you can make an adjustment and immediately hear how it sounds from the listening spot."

Sticking with Mirage, Rubenstein recommends the magnetically shielded MCC center-channel speaker and a second pair of M-190i's as the surrounds, which bumps the total cost of this stage up to \$1,020. Using speakers from the same maker provides consistency in timbre, Rubenstein notes, so transitions are smooth and natural when sounds move from side to side and front to rear.

With Phase Three complete, the total system cost comes to \$3,268more than many people think they can afford when they first consider a home theater setup. "Customers see and hear the value and quality of our home theater systems when they get a demo," Rubenstein says. "But often they can't afford the complete system. 2 When they realize they can do it in § stages, without compromising the \$\\ \rightarrow\$ sound at any point along the way, they're ready to go." All it takes is a 🖁 little patience.



RECIPE FOR A 3-PHASE
HOME THEATER





PORTABLE PLEASURES

istorians, or humorists, trace personal stereo back to the mid-Sixties, when a mobile music lover strapped a Norelco Carry-Corder (the first portable cassette player) to his waist and plugged in a pair of Koss PRO-4A headphones. The ensemble weighed several pounds and reproduced music in glorious mid-fi mono. But it was portable. Flash forward about fifteen years to the arrival of the Sony Walkman, the first truly "personal" portable. It teamed a stereo cassette player about a third the size of the Carry-Corder with ultralight headphones, and the whole works weighed less than a pound.

Eleven of the latest, hottest, smallest, neatest little gizmos you can get for your personal entertainment

The Walkman, which spawned a whole new category of headphone stereos, caught on faster than a skater on rollerblades, and it changed our culture.

For the first few years, cassettes were the center of the personal stereo universe, but radios and combination cassette/radios from a variety of manufacturers soon broadened the selection. Then, in 1984, Sony introduced the Discman, the first portable CD player. It was about as compact as the Carry-Corder but with a shorter battery life. CD portables evolved on a fast track, though, and in just a few years matched the weight and battery life of their cassette counterparts.

Today the technology continues to evolve as manufacturers search for ways to make their personal portables stand out from the hordes of competitors. Their efforts have yielded some interesting and unusual personal portables—from ultracompact players and recorders in several different digital formats to conventional-looking models offering special enhancements to unique hybrids that do more than merely play music. Here are some of the most impressive.

Sounds Fun

When the melodies become monotonous, the bold play games. The Genesis CDX portable video-game console from Sega, the company that gave the game world Sonic Hedgehog, looks like a CD portable on steroids. You can hook the \$399 device up to any TV and play Sega CD's or Genesis game cartridges (there's a slot on the top of the machine behind the hinged CD lid), or you can use it to spin audio CD's. Sega supplies the game controller (or "arcade pad" as they call it); you supply the headphones.

In its role as a CD player, the CDX can be powered by two AA batteries and used on the go, in which case it offers only basic controls: stop, play, pause, and track skip/scan. But when you connect the player to a TV or video monitor and pop in a CD, an elaborate graphics control panel appears on screen, providing access to additional features like shuffle play and track-sequence program-

BY RICH WARREN

ming. You use the arcade pad to operate the graphics controls. When the CDX is connected to a TV, you can also view the graphics on those hard-to-find CD+G discs. Sega's next innovation should be a portable that lets you play cartridge games while listening to audio CD's.

Picture This

Kodak's PCD 970 portable Photo CD player puts a whole new spin on your family photo album. Connect it to any TV and you can view—and manipulate—high-qual-



























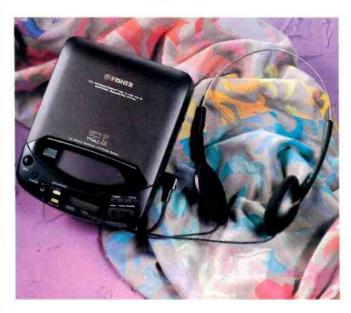
Especially for joggers: Sanyo's SPT-1500 AM/FM stereo cassette player, dubbed the Sportable (\$70), incorporates an electronic calorie meter and a pedometer so you'll know just how much you've burned off.



Kodak's PCD 970
(\$449) lets you
view and manipulate
the color images
on a digital Photo
CD the same as
full-size models do,
and when you're
finished rearranging
the family photo
album, you can play
a music CD.



The defeatable electronic antishock system in the Fisher PCD-60 (\$220) makes CD listening practical for bicyclists and skaters.



ity color images on a Photo CD (custom made from an ordinary roll of 35mm film or purchased as a prerecorded disc). Or put in four AA batteries, plug in the supplied headphones, and use it as a portable CD player. No miniplug outputs here; the side panel contains RCA jacks for stereo audio and video as well as multipin connectors for an S-video jack and an optional RF modulator for TV's that don't have A/V jacks. The \$449 player comes with a wireless remote control and has an LCD panel that displays the current track/photo number, among other things.

s a Photo CD player, the PCD 970 performs the same impressive tricks as its full-size brethren: Images can be cropped, rotated, or enlarged using the remote control. The player also has a feature called favorite picture selection (FPS) that lets you rearrange and recompose the photos on a disc to your heart's content and then save the results; whenever that disc is inserted, the edited sequence appears. As a CD player, the PCD 970 gives you the usual features plus twentytrack programming for the current disc and favorite track selection (FTS), the audio counterpart of FPS.

Battery Booster

Time flies faster when you're flying with your favorite tunes. Unfortunately, those long flights often end in silence when the batteries bail out before the airplane lands. Panasonic's sleek SL-S180 portable CD player can serenade you all the way from Los Angeles to London on a pair of AA alkaline batteries. Its 11-hour battery life (under optimum conditions) is one of the longest among CD portables. The slim, rounded player raises its lid all the way at the touch of a button, making it easier to load discs in cramped airline seats, and its recessed, sculpted play/ pause and stop keys offer tactile feedback during those dark all-night flights. The player, which uses Panasonic's MASH 1-bit digital-to-analog converters, sounds very good, too. Last but not least, the oversized cushions on the supplied headphones are surprisingly comfortable. Flying with the SL-S180 is a real super-saver at \$150.

Shock Warrior

When turbulence hits, whether in the air or on the roadways, Fisher's PCD-60 is equipped to handle it. The \$220 portable CD player incorporates a defeatable electronic antishock system that greatly reduces audible mistracking when the going gets rough. When the antishock circuit is engaged, the disc spins at twice its normal speed, enabling the player to read ahead and store 10 seconds of digitized music in a buffer memory. If a jolt causes the player's laser pickup to lose its place, no problem—the buffer fills the gap so the tunes keep on flowing. At last, CD listening is practical for bicyclists and skaters. (Sorry, joggers will have to stick with cassettes.)

Fisher uses data-reduction technology (akin to that used in the MD and DCC formats) and computer memory chips to achieve the 10-second buffer, which is considerably more shock resistant than the 3-second buffer used in most other CD portables. Although data reduction reduces sound quality slightly, you'll never notice it when using the player on the go. And should you want to do some serious listening, simply switch the circuit off-which, by the way, also extends battery life.

Sportable Portable

Joggers who use headphone stereos to keep up the pace can now watch their calories burn away without skipping a beat. Sanyo's SPT-1500 AM/ FM stereo cassette player, dubbed the Sportable, incorporates an electronic calorie meter and a pedometer. You select an exercise program (walking, exercise walking, or jogging) and key in the length and speed of your stride, your weight, and the distance you're going, and the \$70 SPT-1500 will tell you how many calories you've burned at any point along the way-simply press a button and the number appears in the player's LCD screen. (You can also burn off a few calories trying to figure out the bilingual instruction sheet!) The pedometer keeps track of distance and beeps after each mile is completed as well at the end of a preset distance.

The Sportable has an autoreverse tape mechanism and comes with headphones, a detachable belt clip, and an adjustable waist belt. A separate lithium battery makes sure that the calorie counter and pedometer keep on working even when the two AA batteries that power the radio and tape player run out of steam.

Analog Feature Fest

The Aiwa HS-JX707 stands as the last bastion of extremely compact, fea-







The Philips DCC170. due to hit store shelves this fall, is the first portable Digital Compact Cassette recorder. It plays both conventional analog cassettes and DCC's, and at 1.1 pounds it's among the smallest cassette portables.

Aiwa's HS-JX707 cassette recorder and AM/FM radio (\$400) will fit in a shirt pocket, but it features autoreverse, a microphone input, Dolby B and C, a timer/alarm, and BBE "highdefinition sound."

Panasonic's SL-S180 CD player (\$150) boasts one of the longest battery-powered play times of any portable: 11 hours from a pair of AA cells.

Sony's triple threat: from top, the MZ-E2 (\$550), the world's smallest MiniDisc player; the NT-1 Scoopman (\$1,000), a digital recorder not much larger than a pack of chewing gum; and the WMD-DT1 Walkman, a \$500 **DAT** player about as big as a pack of kingsize cigarettes.

Sharp makes

the world's smallest

MiniDisc recorder.

the \$800 MD-M11.

only 13/16 inches

thick and 10.6

ounces light but

packed with all

the fun MD

features.

SONY

Like a CD portable on steroids, Sega's Genesis CDX videogame console (\$399) can play Sega CD's, Genesis game cartridges, audio CD's, and even graphics CD's (CD+G).



ture-laden AM/FM stereo cassette player/recorders. The \$400 black metal-cased unit is only a quarter of an inch thicker than a standard cassette box, so it will fit comfortably in most shirt pockets. You can record via its stereo microphone mini-jack or from its tuner-it even has a timer that can be set for unattended off-air recording. The timer also doubles as an alarm clock with a sleep button. When the alarm goes off, a series of beeps emanate from the player itself, and then the radio or tape begins playing

through the phones.

The HS-JX707 has an autoreverse tape mechanism and offers Dolby B and C noise reduction. It's capable of delivering an hour and a half of playback on a 10-minute charge—a handy feature for anybody on the run. Snap on the supplied battery pack, which holds two AAA alkaline batteries, and you can get 8 hours of playback. To reduce fumbling around in dark environments, a synthesized voice tells you which button you just pushed. The HS-JX707 is also the only personal stereo to incorporate BBE "high definition sound" (licensed by BBE Sound, Inc.), a defeatable circuit that recording engineers would call a "sweetener." It provides two levels of processing to improve musical clarity in noisy environments.

DAT Dwarf

Want to take the ultimate tape format on the road? Sony's \$500 WMD-DT1 DAT Walkman occupies the same space as a pack of king-size cigarettes and weighs only half a pound. It offers the superb fidelity and features, like high-speed search, that have endeared the DAT format to audiophiles. Except for a couple of buttons that open the cassette and battery compartments, the player's sleek gray chassis has no controls. All buttons are located on the key-chain-size remote built into the cord leading to the earbud headphones.

The face of the remote sports a small LCD panel that is flanked by relatively large play and stop buttons: the other half-dozen or so controls are hidden on the edge of the tiny controller. One of those buttons engages a two-position digital volume limiter that compresses dynamic range—a handy feature when the ambient noise level is high. Best of all, this player can participate in any activity, since the DAT format is inherently shockresistant.

Micro Hi-Fi

The Sony NT-1 Scoopman makes the WMD-DT1 look like a Boeing 747. Not much larger than a jumbo pack of chewing gum, this micro digital recorder is one of Sony's best-kept secrets. Although it's marketed primarily as a high-tech dictation machine, the \$1,000 recorder is capable of reproducing music with remarkable fidelity (equal to DAT's long-play mode); it even incorporates the SCMS copy-protection chip. The NT-1 can record up to 2 hours on a tiny, 3/16inch-thick cassette about the size of a postage stamp, and it will play for 7 hours on a single AA alkaline battery. Recording levels can be set either automatically (the default position) or manually.

The NT-1's small LCD window displays an abundance of information, including time remaining on the tape, recording/playback levels, the time of day, and the date (memory is maintained by a separate, dime-size lithium battery). The recorder comes with high-quality earbud headphones, a clip-on stereo mike with a table stand and attenuator, and a line-in/out interface/AC power supply.

A DCC First

The Philips DCC170 will be the first portable Digital Compact Cassette (DCC) recorder to hit store shelves when it arrives this fall. The 1.1-pound handheld device ranks among the smallest cassette portables and is 30 percent smaller than the currently available DCC130 portable player. It plays both conventional analog cassettes and DCC's and records digitally via its coaxial or optical digital inputs. The DCC170's rechargeable Ni-Cd battery provides 2 hours of digital recording time, 3 hours of DCC playback, and 4 hours of playback with analog cassettes. If the unit is idle for 3 minutes, it shuts down to conserve power. A remote-control bulge on the headphone cord simplifies operation when you're too active to fumble with the player.

Smallest MD Recorder

Sony may have invented the Mini-Disc (MD), but Sharp's got the smallest MD recorder. The \$800 Sharp MD-M11 is only 13/16 inches thick and 10.6 ounces light. The tiny package holds all the features that make MD a fun format: You can skip between songs almost instantaneously, just like CD, and when it comes to recording com-

pilation discs, you can divide, combine, move, and erase tracks by simply pressing a few buttons-no more tedious rerecording. You can also create electronic labels for each disc, anything from a song title to a personalized message, that appear in the recorder's LCD window when the disc is inserted.

Like all MD portables, the MD-M11 incorporates a 10-second buffer memory that shrugs off external shock. Recording time is 2 hours with the internal rechargeable lithium battery, 6 hours with the optional alkaline battery pack, and playback time is even longer. While just short of CD in terms of sound quality, MD certainly outshines the best analog cassettes.

Smallest MD Player

Sony may cede the MD recorder championship to Sharp by fractions of inches and ounces, but the \$550 Sony MZ-E2 reigns supreme among midget MD players. Roughly the same size as a standard analog cassette case, this 7.2-ounce player will slide easily into anybody's shirt pocket. It'll play for 2 hours when powered by its rechargeable lithium-ion battery. Snap on the supplied sidecar battery pack, which holds a trio of alkaline AA's, and it'll run for 7½ hours—long enough to fly from Chicago to London.

A miniature LCD panel/remote on the headphone cord provides quick access to the controls when the player is tucked away in your pocket; the micro controller even has a clip for attaching it to your shirt or coat. Album and song titles and artists' names scroll across the LCD, which can also display battery status, track number, and time. Thanks to the format's shockproof buffer memory, it takes a fair amount of violence to mute this player.

he ideal personal portable of the not-too-distant future will be powered by a tiny rechargeable battery that provides 20 hours of music on a single charge. It will incorporate noise-canceling circuitry, sound incredibly lifelike, and be totally immune to motion sickness. While we'd like it to be pocketsize, we'll settle for something a little larger—as long as it has a digital tuner and plays CD's, MD's, all manner of digital cassettes, and whatever other neat formats happen to come along. In the meantime, the uncommon portables available today promise plenty of fun and fidelity.

ADDING PUNCH TO PORTABLES

Some people want their freedom and their fidelity, too. But even the best portables lack the punch to reproduce true audiophile sound. Enter the HeadRoom Corp. of Bozemar, Montana, maker of the Head-Room headphone amplifier and audioimage processor. Whereas the output of most portables peaks at 40 milliwatts, the HeadRoom produces ten times that using only four AA batteries.

The nondescript black box weighs 11/4 pounds and measures about 6 x 51/4 x 1 inches, which takes It out of the realm of pocket sound. It comes in three physically identical versions: standard (\$199), premium (\$299), and supreme (\$399). Each raises the sound-quality ante. The company prefers to sell its processors bundled with select headphones and also offers an array of carrying cases, battery packs, and accessories that could easily push the ticket toward \$1,000.

Far more than an amplifier, the Head-Room contains sophisticated filtering and time-delay circuitry that subtly compensates for the annoying problems of headphone listening, like the middle-of-your-head imaging phenomenon. The result is a natural, realistic stereo image rarely heard from headphones. The company publishes an 11-page white paper to explain what its black box accomplishes and how it does it. (Call 1-800-828-8184 to request a copy or other Information.)

Take my word for it: The HeadRoom amp can make a topnotch portable CD player with superb headphones rival significantly more expensive home components. It certainly reduces portability, however, and at 2 or 3 hours (depending on the model), its battery life is significantly shorter than that of most portable CD players. If you refrained from buying a portable CD player because of sonic reservations, the HeadRoom will demolish them. On the other hand, if you dash between farflung airport gates with a carry-on, you might be willing to trade inferior sound for a lighter load.

THE BUZZ ON CABLE TV

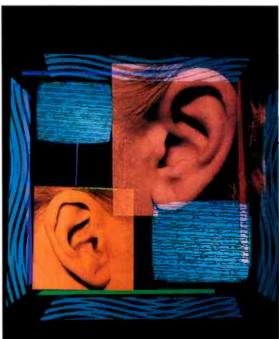
BRET PETERS

/ hen you crank up the volume of your A/V system, do you get a background buzz that invades quiet movie scenes and musical passages like a pesky bee at a summer barbecue? Do creeping horizontal bars mar an otherwise decent TV picture? Such audio and visual annovances are often caused by a faulty electrical ground, incorrect wiring, corrosion, or even an improper cable-TV hookup. Now, I'm not going to tell you how to get HBO for free, but I will offer some advice on how to troubleshoot noise problems and tell whether or not your cable-TV hookup is the culprit. But first a little background.

Cable TV and Your **Electrical Service**

The three wires that make up a residential electrical system correspond to the three holes in a standard wall outlet: The "hot" wire (red or black) connects to a plug's narrow blade, the "neutral" wire (white) connects to the wide blade, and the ground wire (bare copper) connects to the round hole. The neutral wire, which is connected to the ground in the breaker box, carries the return current from whatever device is plugged into the receptacle.

In order to comply with National Electrical Code (NEC) rules, your cable-TV company is required to attach, or "bond," the shield of the coaxial "drop cable" running into your house to the electric-service neutral; this connection is made at the electric meter where the service enters the house. Unless you live in an older house, there is usually a 6-gauge copper wire running from the electric-service neutral that attaches to both a copper-clad steel ground rod and the main water pipe entering the house. (The steel rod, 8 feet long, is driven into the earth to



provide a path to ground from the electric-service neutral and to dissipate static buildup and other natural phenomena such as lightning.) The drop cable ties into this grounding network via a solid-copper wire (usually 14 gauge) running from a screw attachment that's spliced into its shield.

Another hookup scenario is based on an old misconception in the cable-TV business, that the installer could drive a separate ground rod and attach the drop cable's shield to it. That arrangement is correct only if the new rod is also bonded to the electric service (via a 6-gauge wire), making it a part of the house's complete grounding system.

In either case, the really important issue here is bonding, not grounding. The point of bonding is to eliminate the possibility of a large difference in electrical potential between two devices in the house, which could create an electrical hazard. If every electrical

device in the house were to rise to 10,000 volts, there wouldn't be any difference of potential and thus a smaller chance of accidental electrocution. But if the cable-TV feed alone were to rise to 10,000 volts, or fail to do so when everything else in the house was rising, then a very real hazard would exist.

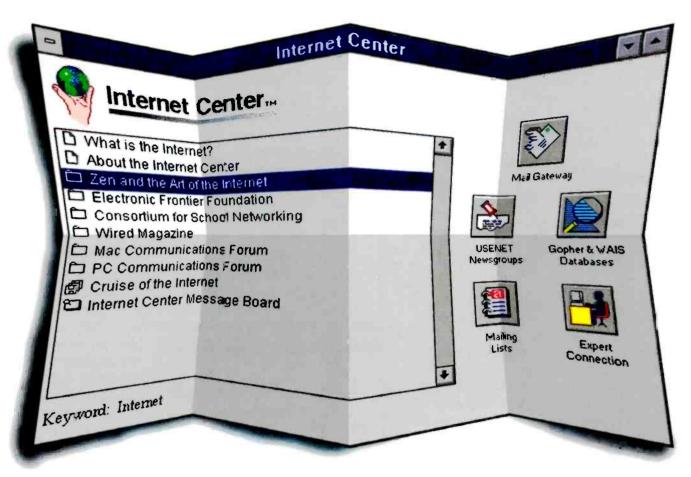
Signal Leakage

The cable-TV industry is also subject to various FCC (Federal Communications Commission) rules, including an important technical parameter called the CLI (Cumulative Leakage Index) that calls for regular, systemwide monitoring for RF (radiofrequency) leakage. If there is a problem that causes an RF signal to leak out of the cable system into the open air, the leak must be measured and recorded, and the problem must be repaired im-

mediately. All leaks contribute to the CLI number that must be reported to the FCC. The cable company has the authority to discontinue service if inhome equipment is a source of this radiation and the owner refuses to correct the problem.

Some do-it-yourself noise remedies can cause signal leakage as well as other problems. The dual-balun transformer described by Peter Mitchell in "Getting the Hum Out" (STEREO RE-VIEW, November 1993), for example, will leak, but the leakage might not be detected because of the low level of cable-TV signal typically found in the home. The device could also invite interference from external sources, since frequencies assigned to aircraft, amateur radio, and other broadcast serteur radio, and other broadcast services are also used by cable-TV operators. You might see squiggly lines on the channels above Channel 13 and the channels above Channel 13 and ghosts on any of those channels that are used by local broadcasters. Strong

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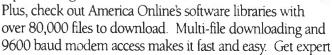
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local interference could even wipe out the data carriers that deliver cable radio services like DMX (Digital Music Express).

As long as your electrical and cable-TV systems are properly wired, there is no reason to destroy the shield integrity of the cable. And if background hum stops when a dual balun is spliced into a cable-TV line, that means the cable is carrying electrical current—a potentially dangerous condition.

The Buzz on Hum

You can have the quietest amplifier in the world, but if the AC power feeding it isn't up to par, your system will not perform at its best. So what can you do about a hum problem? The first step is to remind yourself that the electricity in your home can kill you. Be sure to proceed with care at all times, and get qualified help if any electrical repairs are necessary.

You've probably already spent thousands of dollars on your A/V system, but I recommend that you spend \$5.99 more on a Radio Shack Model 22-101 AC outlet analyzer. This little gadget will tell you if the outlets you are using for your system are wired correctly. (While you're at it, check every outlet in the house, especially the ones in the kitchen and bathrooms.) Electricians are only human, God bless 'em. and I've found outlets that were miswired when the house they were in was built thirty years ago.

While you're at it, you might want to have an electrician check the wiring and connections in the outlets and in the breaker (fuse) box for signs of deterioration, especially if your house is more than twenty years old or if you live in a coastal area. Salt in the air can cause wiring to corrode. If the neutral return for an outlet becomes corroded to the point where it no longer properly conducts electricity, your cable-TV wire could become the neutral return for that outlet.

If you live in an older house that has only two-prong outlets, consider having an electrician rewire the outlets for your system with three-prong sockets, which have a ground receptacle. If a plug won't stay in an outlet, either the outlet or the plug is worn out and needs to be replaced. If you are using a three-conductor to two-conductor (cheater) adaptor for any of your equipment, you have broken a needed ground. These are the kinds of things that will inject hum into your system.

Here's another: Have you modified

any equipment plugs to fit into oldstyle outlets that accept two narrow prongs instead of one wide (neutral) and one narrow (hot)? If so, it'll be all too easy to switch the hot and neutral leads inadvertently, which not only creates a hum-producing ground loop but is a potentially dangerous condition. Never modify plugs! If you run out of outlets, go to the hardware store and buy a power strip!

After you finish looking around inside, go outside and visually inspect your electrical service. If any of the wires or connectors look loose or corroded, call the electric company and ask to have the hardware inspected (please do not attempt repairs yourself). The technician should also examine the neutral wire that runs from the street to your house for poor conductivity. The cable-TV shield and the neutral are electrically connected at both the house and the pole. The amount of current the cable carries will be greater if the neutral has a loose or corroded splice or connection.

Next, visually inspect the cable-TV bonding wire (if there is one). Is it attached to the electric-service ground as it should be? If it isn't, or if you can't find a bonding wire, call the cable company and ask them to inspect the hookup and make any necessary repairs (again, don't get any bright ideas -let the cable company do the work). In addition to producing an audible buzz, noise generated by the cable-TV system will appear in the TV picture as two horizontal bars that scroll slowly up the screen, though problems unrelated to cable TV, such as damaged interconnect cables, can create similar disturbances.

Now, I know you want to run linelevel audio all over the house, but lengthy unbalanced and unisolated audio lines are guaranteed to put some hum into your system. A mere 0.01 volt induced into an audio line is all it takes to produce an audible buzz. One way to solve this problem is to isolate the noise from the audio signal by installing a few tiny transformers. I hear the groan of the purists already. But which is worse, hum 20 dB below the music or a couple of decibels of lowfrequency rolloff? Okay, then, Get Radio Shack No. 273-1374 transformers: you'll need four for a stereo pair. Transformers work for the pros, and they should work for you.

Bret Peters is a field engineer for TCI Cablevision in Tulsa, Oklahoma,

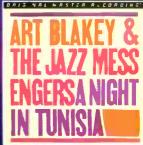
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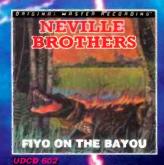




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STEREO REVIEW'S
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The Pretenders: The Mother of All Albums?

n the new "Last of the Independents." head Pretender Chrissie Hynde makes a convincing case that punk is a state of mind, not a matter of age. For that matter, she's living proof that punk music needn't be confined to loud/fast/unmusical stereotypes, either. Hynde sings prettier than Barbra Streisand on this album, but her words bruise as often as they soothe. She's as tough as nails-for the sake of the edge-dancing thrills that make her feel alive, for the sake of survival in a world that gives no quarter-without surrendering her mysterious, feline femininity. She shouts her creed in no uncertain terms in one of the album's best tracks. I'm a Mother, letting the words fly over scratchy, wah-wah guitar and a seductive shuffle beat: "I understand blood and I understand pain / There can be no life without it, never doubt / I'm a mother." Yeow!

"Last of the Independents" recalls the feral feistiness that made the first Pretenders album (1980) such a milestone. A lot of water has passed under the bridge since that epochal release (two founding members have died, and original drummer Martin Chambers has rejoined the band). but Hynde's bohemian wanderlust remains remarkably undiminished. She can, in a song like Night in My Veins, romanticize a walk on the wild side like no one since Lou Reed. Set to one of her comeliest melodies, her voice fluttering like spirits dancing over the city streets, Hynde sings, "It's just the night in my veins / Making me crawl in the dust again." A trace more menace infuses the opening track, Hollywood Perfume, which finds Hynde flirting coquettishly with the "neon sex and doom / Of your Hollywood perfume." Guitars scratch and jangle like Shaft gone grunge, occasionally dropping out to reveal a bass line that beckons like a hustler coaxing you down a dark alley with the promise of thrills and intrigue.

Hynde flirts with darker forces still on 977, a grand, echo-filled ballad about an abuser and a willing victim, and in *Revolution*, where she sings of being knocked off course ("Bring on the revolution / I want to die for something"). The mix of Saturnalian craving and unswerving de-



votion gives "Last of the Independents" its restless sense of texture. On *Rebel Rock Me*, a punkabilly blowout à la Tattooed Love Boys, Hynde tosses off lines with a devil-may-care insouciance. On the very next song, she's hailing her paramour's Love Colours with an almost mystical radiance.

It was Oscar Wilde who said "We are all in the gutter, but some of us are looking at the stars." Chrissie Hynde, who quoted the line in one of her best early songs, is one of those people, and in "Last of the Independents" she's still looking.

Parke Puterbaugh

THE PRETENDERS

Last of the Independents

Hollywood Perfume: Night in My Veins; Money Talk: 977: Revolution; All My Dreams; I'll Stand By You: I'm a Mother; Tequila; Every Mother's Son: Rebel Rock Me; Love Colours: Forever Young SIRE 45572 (49 min)

Beethoven Sonatas Straight Up From Kovacevich

ome Iwenty-five years ago the young pianist then known as Stephen Bishop made some quietly provocative recordings of Beethoven sonatas and concertos—provocative in the sense of calling attention to the music on its own terms rather than allowing it to serve as a mere performance vehicle. Now, as the mature Stephen Kovacevich (having reclaimed his family name and ethnic identity), he has preserved and deepened his essentially self-effacing approach, in this music and in the Schubert and Brahms he has recorded in recent

BEST MONTH



Pianist Stephen Kovacevich

years, to achieve what might be called an exalted level of clarification.

There are no overt virtuoso gestures in his new CD of three Beethoven sonatas, nothing to suggest epic philosophic struggle; one feels the focus squarely on how best and most directly to get to the heart of the music and make its structure as well as its content both clear and meaningful. It's the sort of patrician humility, if you will, combined with great intellectual vigor, that we used to identify with the great English pianist Solomon, whose career ended when he was just about Kovacevich's present age.

But these performances are neither mere copies nor "throwbacks." They are simply very welcome evidence that directness and unfabricated intensity can still get the listener freshly involved in even the most familiar music on a heightened level of respect and affection. The strongest segment of this recital is, as it has to be, the Sonata No. 31, Op. 110. Kovacevich does not allow the slightest hint of portentousness in this work's opening, but he does see that it sings, and his progress from that point to the uninflated affirmation at the end is as remarkable for the momentum sustained as for the details brought to light.

The same virtues are apparent throughout the miniature Sonata No. 24, Op. 78. If the "Waldstein" Sonata (No. 21, Op. 53) has had some more dramatic readings, and some more poetic ones, Kovacevich's makes good musical sense and is never less than absorbing. The entire

program benefits from near-ideal piano sound. Richard Freed

BEETHOVEN:

Piano Sonatas Nos. 21, 24, and 31 Stephen Kovacevich

EMI 54896 (53 min)

Maggie Estep's Rant-and-Roll

n her debut album, Maggie Estep is quick (within three minutes, actually) to point out that she's not a normal girl, and when you hear her you'll doubtless concede the point. A young (thirty-two), Jersey-born product of the downtown Manhattan poetry scene, Estep is smart, sexy, hilariously funny, and quite often pissed off-at guys in cars who yell stupid things at her when she's riding her bicycle (Car Guy), at dumber-than-dirt men she's hung up on (The Stupid Jerk I'm Obsessed With), or even the difficulties of getting a good Vegetable Omelet on the Lower East Side. She also has an endearingly nasal New Yawk voice and fronts an abrasive noiserock band (starring semi-legendary Bush Tetras guitarist Pat Place) that matches her rants with appropriately metallic riffing. So if right about now you're thinking, "Hmm, sounds like a Patti Smith for the Nineties," you're not that far off the mark.

The parallel is not exact, of course. Smith was fixated on the nineteenth-century French symbolist poets and, on record at least, not exactly what you'd call a laugh riot; she also had, almost from day one, a sure grasp of traditional rock song structure. Estep is really more out of the beatnik performance tradition, and so the music on "No More Mr. Nice Girl" is essentially functional, a post-modern rock equivalent of bongo drums at a poetry reading (only two tracks here-Paradise Lost and Rip Trip Strip—have anything like a melodic hook or anything as mundane as a chorus). Still, you won't mind much because (a) she expresses herself so amusingly (much of it unprintable in a family magazine, but trust me); (b) her attitude is, unmistakably, pure rock-and-roll (in Sex Goddess of the Western Hemisphere she claims she doesn't even have to have sex to be the titular goddess because, after all, she simply is ...); and (c) she employs the phrase "bite me" with more panache than anyone since the robots on Mystery Science Theater 3000.

In short, "No More Mr. Nice Girl" is both one hell of an album and an early

Maggie Estep: who needs normal?



glimpse at a probable big star in the making. Nice job, kid. Steve Simels

MAGGIE ESTED

No More Mr. Nice Girl

Hey Baby: I'm Not a Normal Girl: Paradise Lost; Even If; Car Guy; The Stupid Jerk I'm Obsessed With; My Life of Gardening: Fuck Me; Scarification; Pee Lady; Sex Goddess of the Western Hemisphere: 1 Swear: Vegetable Omelet: Rip Trip Strip; Ingeborg, Mistress of the Dark; Bad Day at the Beauty Salon NUYO/IMAGO 21044 (41 min)

Masur Conducts A Shattering "Babi Yar" Symphony

he New York Philharmonic concert of January 14, 1993, under Kurt Masur-recorded live by Teldec and now released on CD-was something of a special occasion. Not only did it mark the orchestra's first performance of the Shostakovich Symphony No. 13 ("Babi Yar"), consisting of his 1962 settings for bass, male chorus, and orchestra of five remarkable poems by Yevgeny Yevtushenko, but the poet himself was on hand to read, as preface to the symphony, the poem from which it takes its title.

In commemorating the Jews massacred by the Nazis in 1941 at a ravine, Babi Yar, just outside Kiev, Yevtushenko produced a searing indictment of Soviet anti-Semitism, and Shostakovich's harrowing musical treatment of it led to a virtual ban on further performance of the symphony in the Soviet Union of the 1960's. That the words of "Babi Yar" retain relevance in the 1990's gives more than the usual significance to Masur's programming of the work. The succeeding movements offer music that is by turns savage, somberly indignant, bone-chilling, and, at the end, cautiously hopeful, with belief in the human spirit inspired by the great figures of the past: "Their belief is my courage."

Yevtushenko's surpassingly eloquent reading is a hard act to follow, but bass Sergei Leiferkus, the men of the New York Choral Artists, and the musicians of the New York Philharmonic come through magnificently from first to last.

Leiferkus does not have quite the black Russian bass coloration that the first pages seem to demand, but as the performance proceeds his voice becomes warmer and deeper, and he achieves a pitch of emotion comparable to Yevtushenko's at the high points of "In the Store" and in "Fears," with its creepy introductory tuba solo. As for the orchestra, Masur has the players eating out of his hand, whether it be in soul-shattering fortissimos or in the tender vernal pages of the finale, which bear a kinship to the consolatory final pages of Shostakovich's Eighth Symphony.

As if the "Babi Yar" reading at the start of the concert were not enough, the quiet close of the symphony with its ethereal celesta sounds gives way to Yevtushenko's first public reading of "The Loss." written and spoken in English. It makes the whole occasion painfully apropos to the Russia of today-not to mention the Balkans, Somalia, and the rest: "Is it true that we, Russians / Have only one unhappy choice-the ghost of Tsar / Ivan the Terrible? / Or the ghost of Tsar Chaos?"



Poet Yevgeny Yevtushenko with the New York Philharmonic

The recorded documentation of this event, beautifully produced by Teldec. left me in a state of stunned heartbreak. David Hall

SHOSTAKOVICH:

Symphony No. 13 ("Babi Yar")

Leiferkus: Men of the New York Choral Artists: New York Philharmonic, Masur TELDEC 90848 (67 min)

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NEW RECORDINGS REVIEWED RY CHRIS ALREPTSON. FRANCIS DAVIS, PHYL GARLAND, RON GIVENS, ROY HEMMING, ALANNA NASH. PARKE PUTERBAUGH, AND STEVE SIMELS

POPULAR MUSIC

DEROPAH ALLEN

All That I Am

GIANT 24552 (38 min)

Performance: Seductive Recording: Very good

ce songwriter Allen keeps missing the brass ring as a soloist, but it isn't for lack of good tunes and a winsome voice. Here, on a more countrified album than last time out (her co-writers include husband Rafe Van Hov, Mary Ann Kennedy, Kye Fleming, and Billy Burnette). Allen moves through a variety of styles, shining brightest on the gospel-tinged Break These Chains. the Carlene Carter-ish neo-rockabilly of Give It to Me, the Patsy Cline-derived Thinkin' Again, and the torch ballad Hurt Me. As a singer, Allen sometimes writes bigger melodies than she can easily accommodate, but as a writer, she's more complex than she appears. And as an all-around performer, she deserves more success than she's achieved. Have a listen.

THE AUTEURS

Now I'm a Cowboy VERNON YARD/VIRGIN 39597 (42 min)

> Performance: Biting Recording: Good

With his wispy voice and droll, decadent lyrics, the Auteurs' Luke Haines comes off as a kind of Marc Bolan for the Nineties-or, given his songs' ironic commingling of comedy and tragedy, with tough and lovely music limning an urban aesthete's demimonde, maybe I mean Lou Reed. Either way, the Auteurs are one of the most intriguing bands on the alter-indie scene, and Haines's songwriting style and moody presence are the stuff of which long careers are made.

"Now I'm a Cowboy" fairly bristles with nervous energy and driving melodies that carry an undertow of melancholy. You can practically see the vapor trails on Lenny Valentino, which opens the album with a



furious kick. Then comes Brainchild, a deceptively delicate and disarmingly literary kiss-off that hurls the barbed but curious indictment. "Stole away my life, stole away my time, stole away my mind / You're a thief with style." Swooning cello and stark piano chords bolster the Auteurs' guitarcentered minimalism with bold, bleak strokes. Haines's guitar attains a bottomless, pulverizing echo on the scarifying Life Classes/Life Model. Contrasting passages that are beautiful and brutal, melodic and thrashy, trace the distance between desire and reality on the streets where dreams turn to self-destruction. The full horror can be discerned in Haines's offhand delivery of the final track, Daughter of a Child, a tantalizingly ambiguous tune that could be about a physical disappearance or spiritual dissipation. Not to be missed.

LUKA BLOOM

Turf

REPRISE 45608 (55 min)

Performance: Intimate **Recording: Pristine**

fter the onrushing ebullience of his first A two albums, Luka Bloom's new "Turf" is markedly more measured and deliberate, implying that his boundless, conquer-theworld idealism has yielded to a more

worldly-wise maturity. Bloom, like Pablo Picasso and Joni Mitchell, appears to have entered his "blue" period. But "blue" doesn't necessarily equate to "blues," and such songs as True Blue and Blue to Begin are not so much downbeat as ruminative. With the exception of Right Here, Right Now-a virtuoso turn in which Bloom strums his electro-acoustic guitar with a speed and finesse worthy of early Leo Kottke—his touch on the strings is more often designed to bring out the intimacy in each song than to dazzle the ear. "Turf" rewards close listening to such subtle gems as Holding Back the River, with the sweet Fiftiesstyle curvature of its melody, and Freedom Song, an eloquently understated paean to feminist pioneers Rosa Parks and Nan Joyce. The single most lingering aspect of Bloom's songs is their humanity, an empathy for suffering that culminates in the key line of Background Noise: "Our tears are all the same."

BLUE RODEO

Five Days in July WEA 93846 (imported, 59 min) Performance: Lovely Recording: Very good

Recorded over the course of five days in July (hence the title), the latest Blue Rodeo album is their most relaxed, buoyant record to date. Spiritually akin to such down-to-earth fellow travelers as the Jayhawks and Joe Henry, the band embodies a fertile synthesis of folk, rock, and country. Their rootsy, wistful tunes are not dissimilar from Neil Young's in his more introspective moods, either.

An organic album on which songs caress the ears as easily as a late-afternoon breeze rustling the treetops, "Five Days in July" flows from start to finish with an unhurried. conversational gait. Blue Rodeo performs with the deceptive ease and companionable interplay of a veteran bluegrass ensemble. topped off with rolling keyboard and accordion. Guitarists/singers Jim Cuddy and Greg Keelor continue to write songs that have an indomitable, inquiring spirit about them. Cynthia, reminiscent of the Byrds' brief flirtation with country-rock, and the haunting, prayerful What Is This Love, ballasted by mournful cello and guest vocals from Sarah McLachlan, are particularly strong. The album culminates with the exquisitely meandering 91/2-minute medley of Know Where You Go and Tell Me Your Dream, ascending into a meditative ether before coming back to earth with a wonderful a cappella finale.

Canada's Blue Rodeo: trapped in the Great White North?



For some unfathomable reason, Blue Rodeo does not have an American label for this record, but copies can be ordered from Canada by calling 1-800-263-4020. As the TV announcer says, "Do it today."

> PETER CASE Sings Like Hell VANGUARD 79476 (42 min) Performance: Folk city Recording: Unpolished

ou've got to admit that Peter Case has a sense of humor—the cover of his new album of folk standards, all raw and unadorned, and sung with a ragged, studied sincerity, depicts a faded Holiday Inn sign with the title spelled out in neon and the words "Live Music" sloppily arrayed below it. Case apparently harbors no illusions about the salability of this blatantly uncommercial project. Much of the program is drawn from the traditional folk canon-for example, Banks of the Old Ponchetrain (herein mistitled Lakes of Ponchartrain). As a gesture of renunciation of all that's contemporary and defiled, it's a brave move by Case. But if a listener wants an exercise in roots music, why not go for the real archival thing? In any case, there's something vaguely off-putting about Case's folkpurist pose; having already made some of the most memorable pop-rock of recent years, both on his own and with the Plim-

THE HORROR, HORROR



hate myself and want to die, as Nirvana sang. Why? Because I just heard "Symphonic Music of the Rolling Stones" (RCA 62526). Yes, somebody thought it would be a good idea to have various classic Stones songs played by the London Symphony Orchestra, with new vocals provided by the likes of Mick Jagger himself (why? Why? WHY?!?!), Michael Hutchence of INXS (who croaks his way through Under My Thumb), and even opera star Jerry Hadley (a Sympathy for the Devil that sounds like the audition scene from The Producers). For unintentional laughs, this is a hard album to beat, but it also leaves me with one burning question-is it too late to apply for membership in some other generation? S.S. souls, it's disconcerting to see him come on like a musical Luddite.

HACKBERRY RAMBLERS

Cajun Boogie

FLYING FISH 70629 (36 min)

Performance: Arthritic but able Recording: Good

the Hackberry Ramblers have been together an astonishing sixty-one years. with the two co-founders, guitarist Edwin Duhon and fiddler Luderin Darbone (now in their eighties) still at the forefront after numerous personnel changes through the decades. A swing dance band with a Caiun accent, the Ramblers are that rare American entity—a regional phenomenon that hangs in there for love of purpose, not for riches or trends. Once recording stars for RCA's old Bluebird label, the Louisiana-based Ramblers have paid their dues and then some-they were among the first Cajun bands to abandon the accordion's dominance for the more American guitar-fiddle string-band sound. Much of this program, especially the performance of Oid Pipe Line with guest vocalist Rodney Crowell (who grew up listening to the Ramblers in Houston), resembles a live country radio broadcast of old, when performers traded stanzas-and jibes-at the microphone. The Hackberry Ramblers may not move as fast as they used to (Beausoleil fiddler Michael Doucet picks up the slack on several tracks), but what they lack in technical virtuosity, they make up for in spirit. As they assert at the end of Old Pipe Line. "Man, if you don't like that, you don't like fried chicken!" 'Nutf said.

INDIGO GIRLS

Swamp Ophelia

EPIC 57621 (51 min)

Performance: Pretentious Recording: Very good

Will the Indigo Girls ever become women? On their sixth major-label release, their tone poems (they aren't really songs) remain unabashedly adolescenttalking of spin-the-bottle parties and intense high-school crushes gone sour. The Indigo Girls are stuck in that college-freshman phase where everything is just, like, really deep. They're feeling major, like, really esoteric pain, and they want you to feel it, too. I mean, hey, aren't we all in this karmic

Well, yes and no. The Indigo Girls are folkies who dress up their sound with a gaggle of acoustic and percussion instruments, and it's the arrangements that save them, because underneath the opaque lyrics are (very) slight melodies and themes. And while they may have big, right-in-your-face voices, what's the point when it's hard to take the rest of what they do seriously? For example, the worst track here, Touch Me Fall, goes off into string-quartet and freeform-jazz noodling that virtually defines the word pretension. To be fair, the album does have its moments: Power of Two, a Seventies singer-songwriter (can you say Carole King?) pronouncement about a romantic getaway, and This Train Revised,

which works because of coherent lyrics, dynamic percussion and strings, and passionately intertwined voices. Here, for once, the Indigos hit upon a strategy beyond their usual pathetic whining. Hey, Girls: Angst is angst, but it's listenable only when applied to something more tragic than Zen.



KING MISSILE ATLANTIC 82589 (00 min) Performance: Annoying **Recording: Grating**

Ing Missile is the kind of band that makes cleverness seem less a Godgiven talent than a character flaw. Led by John S. Hall, a "spoken-word artist" who's as voluble as Jello Biafra but not as incisive, King Missile spews scatological, myaren't-we-clever verbosity all over their self-titled third album. An insufferable smugness infects Hall's every utterance. and he seems to think that words of more than three syllables make him sound like some long-suffering Generation X savant. He isn't—and his band's arty/noisy bashing only compounds the aura of indulgent moronism masquerading as cutting-edge epistles. When good songs do pop up (such as the Iggy Pop-style apocalyptic rant Pigs and the improbably pretty Open Up), it only makes the wasteland in which they are incongruously planted seem all the more weedy. Hall offers an all-too-perfect selfassessment in Tongue: "Somebody should shut me up, that's for sure / Somebody should shut my white ass up, sure as chicken-fried steak

JIMMY LAFAVE **Highway Trance** BOHEMIA BEAT 0002 (69 min) Performance: Red-dirt rock

Recording: Very good n 1992, Austin roots-rocker Jimmy LaFave released a live album, "Austin Skyline," that was heavy on tunes from his obvious inspiration Bob Dylan, but also signaled the debut of an important writer and interpreter of intimate, poetic countryrock-soul songs à la Jimmy Dale Gilmore and Lucinda Williams (two of his biggest fans). Now, on his first studio release, LaFave taps into new power. As a singer, his rasp resembles the sound pumice might make rubbed straight across a big-toothed cheese grater, and he looks less like a pop star than a serial killer. But as a writer, LaFave is a beauty, whether he's crafting a hymn to a woman whose Dark Dancing

Johnny Cash, American Miracle?

That do you get when you sign the sixty-two-year-old John R. Cash, semi-washed-up country legend, to the label behind such rock acts as the Black Crowes, Slaver, and the Jesus and Mary Chain? You get an album that signals the creative rebirth of a distinctly American artist (one of the best records of his career, actually), and a whole new audience ready to embrace him. In short, something like a miracle.

The aptly named "American Record-



ings" (the title is a play on the name of his label as well as on his formidable reputation as a patriot and unique homegrown product) is fashioned from nothing but Cash's heroic bassbaritone voice and rudimentary acoustic guitar strumming. But for those who assume that this craggy country icon-a sort of human Pike's Peak on the musical landscape-is ready to retire to Branson,

listen up. This record announces that he's got a couple of lifetimes to go, and it proves what you always suspected: Cash is country's original crazed gonzo poet, all that syrupy Man-in-Black crap be damned.

If you don't believe it, take a look at his face on the cover. Are those eyes spooky, or what? Johnny Cash may be the most complex figure ever to emerge from Nashville. He's capable of wholeheartedly going the Billy Graham route-and has. But in counterpart to the pious, repentant side, there's a darker half of his moon, a place that prodded the firebug in him into setting blazes in the closet in his wildest pillpopping days and to write the lyrics to a song like this album's Delia's Gone. Here, in an opener that sets the tone for the album, Cash clinically details how he tied his girlfriend to a chair and shot her twice-cnce in the side to wound her, a second time to end her suffering-because she was "triflin', lowdown and mean . . . made me want to

grab my submachine." This happy little venture into homicide is chilling because it comes so unexpectedly, and because it's delivered without a hint of remorse. Indeed the song's protagonist's only regret is for himself-he would have had a woman if he hadn't shot her. Isn't that the definition of a psychopath? A killer without a conscience?

In a sense, the rest of Cash's brutally honest album is an extension of that song: The program, with songs by Glene Danzig, Leonard Cohen, Tom Waits, Loudon Wainwright III, Nick Lowe, and a surprising number by Cash himself, sounds like the last-hour ruminations of a Death Row inmate, alternately boastful and apologetic, dealing the cards in his own apocalypse, In Thirteen, Cash explains his origins as anti-hero ("I was born in the soul of misery / Never had a name / They just gave me the number when I was young"), and in the memorable Nick Lowe song he laments The Beast in Me. Elsewhere, in the more familiar Why Me Lord and Bird on a Wire, he turns prayerful and sorry that he has "torn everyone who reached out to me."

Whether portraying the Vietnam vet who still hears the screams of men and monkeys in the jungle (Drive On), or inhabiting Wainwright's comlcal The Man Who Couldn't Cry, Cash, singing in a newly dusted-off, full-bodied voice, sounds authentic-in part because he no longer has the formulaic Nashville instrumentation and image packaging behind him. Here, he's not Johnny, just John R., troubadour, for the most part recorded alone with his guitar and his demons in producer Rick Rubin's living room or in his own secluded cabin. From the sound of it, these are places where he might want to take up permanent residence; like most of us, Cash is safer anywhere than locked up solely inside his own head. Alanna Nash

JOHNNY CASH

American Recordings

Delia's Gone; Let the Train Blow the Whistle: The Beast in Me; Drive On; Why Me Lord; Thirteen; Oh Bury Me Not; Bird on a Wire; Tennessee Stud; Down There by the Train; Redemption; Like a Soldier; The Man Who Couldn't Cry **AMERICAN 45520 (42 min)**

Eyes see into his soul or putting the roadhouse rock to Austin After Midnight. Backed by his own terrific Night Tribe band, which he lovingly showcases with lots of extended solos. LaFave knows how to set the sky on fire with a raunchy-andready Jerry Lee Lewis attitude (Shakin' in Your Hips). He also knows how to sweettalk a woman when the 3 a.m. blues settle in (Leslie, Talk to Me), or open up his heart in a sweet-sad ballad (Cafe in the Rain). It takes a lifetime of bad luck to earn the kind of deceptively effortless phrasing LaFave delivers here, and if there's a heartache behind every line on his middle-aged face, no wonder he sings this way.

LaFave is an Austin legend in the making. Why? He's just that good.

NITTY GRITTY DIRT BAND

Acoustic

LIBERTY 28169 (42 min) Performance: Renewed Recording: Good

Just when they seemed down for the count, the Nitty Gritty Dirt Band comes back with a quiet but substantial album that should go a long way toward rescuing their reputation. Jeff Hanna and company harmonize with a blend as contemporary and tight as that of any of the new hot-shot countryrock groups, and while they're capable of a "Hee Haw" old-style country song like Sarah in the Summer (complete with corny harmonica solo), they're also not afraid of showcasing their dark side, as in the edgy outlaw tune Badlands. The album's allacoustic approach works particularly well on the spiritual This Train Keeps Rolling Along and on The Broken Road, an affecting. Bruce Hornsby-like declaration of melancholic love. Such a back-to-basics sortie, bolstered by more introspective and reflective material, is a good sign of the band's renewed creative dedication. If this is an example of what they can do when they aren't so concerned with courting country radio, the Dirt Band should stay unplugged for the duration.



PINK FLOYD The Division Bell COLUMBIA 64200 (67 min) Performance: Aged Recording: Very good

Forget about Jurassic Park. In the world of rock-and-roll, dinosaurs really do walk the earth again. And it's not a pretty sight. The summer of '94 has definitely brought the behemoths out in force—and



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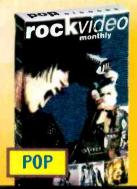
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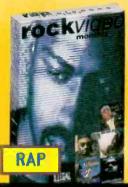
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there's not a velociraptor to be found. No. these dinos are a rather toothless bunch. Floydasaurus isn't the worst of the group— Trafficeratops is by far the feeblest-but this lumbering pink beast takes more than a few eras to get up to speed. Like most of the species, the brain is rather small, only capable of vague, half-baked sentiments. As for musical ability, Floydasaurus does manage to grind and gnash its way into a few moments of excitement (Gilmourian motion). But while something of this nature may have been inspiring long ago, during the Stoned Age, for now Floydasaurus seriously runs the risk of extinction.

BOZ SCAGGS Some Change

VIRGIN 39489 (50 min)

Performance: Smooth os silk Recording: Very good

hese days, Boz Scaggs is something of an anomaly, a fossil relic of the classic rock era. To attempt to praise someone like him is to risk alienating all the twentysomethings who just don't get it if it doesn't sound like a metal chain forced into a garbage disposal. But so what? Like an immaculate survivor of the Seventies whose remains have been perfectly preserved in amber, Scaggs picks up where he left of with "Silk Degrees," his suave, in-thepocket 1976 album that marked the point where soul crossed over into disco without selling out.

Scaggs essentially sat out the Eighties, save for one arid, best-forgotten "come-



back" album. "Some Change," by contrast, is his real comeback, a reconciling of the high-gloss pop-soul of "Silk Degrees" with the rootsy low-down blues of his eponymous first album. For about 40 of its 50 minutes, "Some Change" simmers with a stylish aplomb that makes Scaggs's bluesy overview resound in a way that's classy and timelessly hip. He hits the nail square on the head with the opening cut, You Got My Letter, and the 6-minute title track that follows. The former sizzles at a wicked clip, with a fine set of blues lyrics and Scaggs's fluent vocals fleshing out a tune that could make even the most lead-footed curmudgeon feel like moving to the music. "Some Change" is a two-man show, with virtually all instruments and vocals coming from Scaggs and helpmate Ricky Fataar. Toward the end, the whole thing gets a little too moody and ambitious for its own good. like some unholy cross between Steely Dan and

Toto. Still, the thrill of hearing, on most of "Some Change." Boz Scaggs sing like a bird and play some impeccably soulful guitar for the first time in way too many years is definitely cause for celebration.





SURGERY Shimmer

ATLANTIC 82579 (45 min) Performance: A fine mess Recording: Murky

ey, this new Red Hot Chili Peppers album is way cool. Same great alternafunk beats. But the punked-out melodies are more filling. These dudes are rocking out. What's really great is how you never know exactly where their heads are. How about Bootywhack, where they say, "I hate this music and I hate this night / I want to smash every stereo in sight." Cool. And Shimmer is way creepy, with that stoner voice talking about how somebody starts to "shimmer . . . shimmmmer . . . shim . . . mer." Then they rip through Vihe Out and Mr. Scientist. Very thrashy. Then the stoner dude is back, putting his chick in her place: "This meant nothing at all / I shoot out the lights / We talk in the hall." Yes! And there's more: Some metal stuff, some blues stuff, some more punk stuff-righteous, man. Are these guys serious, or what?

TOWNES VAN ZANDT Roadsongs

SUGAR HILL 1042 (57 min) Performance: Laconic Recording: Good

s a writer, Townes Van Zandt has con-A tributed several of progressive country's more haunting and enduring songs (Pancho and Lefty. If I Needed You) and influenced a score of important left-field writers from Guy Clark to Lyle Lovett to Steve Earle. As a singer, with his wavering pitch and monochromatic tone, he's likely to make you think, "If this guy can get up

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on a stage with an acoustic guitar, heck, so can !!"

That said, Van Zandt knows how to peel back the layers of a song and get to the core. On this live album, recorded in 1992 but just released domestically, he shelves his own material to interpret the folk, rock, country, and blues songs of others including Bruce Springsteen (Racing in the Streets), Bob Dylan (Man Gave Names to All the Animals), the Rolling Stones (Dead Flowers), Joe Ely (Indian Cowboy), and Lightnin' Hopkins (Automobile Blues). Backed by a four-piece acoustic band (Owen Cody's fiddle will alter your soul), he turns in a performance that is at turns hypnotic and somnambulistic, the latter most antly describing the record's overriding mood. On the whole, Van Zandt is best when he mixes up the tempo and combines spiritual quests with metaphysical solitude. For that, dig out his original material.

Collection

SOUL TRAIN HALL OF FAME 20TH ANNIVERSARY

RHINO 71618 (three CD's, 225 min)

Performance: Soul cornucopia Recording: Variable

his handsome boxed set celebrates the durability and diversity of black dance music, the hits that enabled Soul Train (the African-American version of American Bandstand) to become one of the longestrunning shows in the history of television (first aired in 1971). Since most best-selling black artists appeared on the show at one time or another, it is also a retrospective of the two musically fertile decades that followed the more celebrated Sixties.

The Sixties soul spillover is most evident in the first disc, which features favorites from 1972 through 1977. Here James Brown grunts and huffs his way through Part 1 of Cold Sweat, Al Green insinuates that he knows the secrets of Love and Hanpiness, and B.B. King laments that The Thrill Is Gone. Slipping into a gospel vein, Bill Withers cries out Lean On Me, the Chi-Lites croon Oh Girl, and Gladys Knight and the Pips take a Midnight Train to Georgia. All that's before we even get to such treats as Earth, Wind and Fire's Reasons, Natalie Cole's This Will Be, and George Clinton and Parliament's Tear the Roof Off the Sucker (Give Up the Funk).

A delicious nostalgia is sustained for nearly 3 hours, as the set moves from the Seventies into the middle Eighties with a stronger emphasis on electronic effects and elaborate production. But the song selection is so good that we only become aware of real change with the introduction of rap and hip-hop (by Whodini, Kool Moe Dee, and M.C. Hammer) on the second half of the third and final disc. Music this good can stand on its own merits, but as usual with Rhino the packaging is a nice bonus, including an interview with Don Cornelius, the Chicago deejay who conceived Soul Train and hosted it through most of its years on the air. P.G.



THE FLINTSTONES Original Motion-Picture Soundtrack

MCA 11045 (43 min)

Okay, they had the wit to include Walk the Dinosaur by Was (Not Was), and the B-52's were a shrewd choice for the theme song. But basically, this is like the movie itself—the crass commercial calcuation behind the whole thing gets real irritating real fast.

S.S.

PETER GALLWAY Small Good Thing

GADFLY/ALCAZAR 202 (52 min)

Stylistically, it's hard to classify singer/songwriter Peter Gallway; his music here veers (most attractively) from sort-of-folk to sort-of-jazz-pop to sort-of-lots-of-other-things, including a blue-collar observational lyrical style inspired by Raymond Carver. Whatever, this is a quiet stunner of an album—haunting and, in its peculiarly low-key way, utterly unique. S.S.



JIMI HENDRIX Blues

MCA 11060 (73 min)

A superb collection of (mostly) previously unreleased tracks and outtakes, including an acoustic twelve-string version of *Hear My Train a Comin*' that by itself could justify Hendrix's legend. The sound quality is necessarily variable, but if that bothers you you're just being difficult. *S.S.*

EDDIE LAWRENCE The Jazzy Old Philosopher

RED DRAGON/SONY 57756 (57 min)

Hey there, metalhead: here's newly recorded comedy from the same comball school as Henny Youngman. Of course, if you laughed at Lawrence when you were a kid (as I did), you'll find this album a nonstop hoot, especially when it takes on unexpected subjects like Boy George and Axl Rose.

S.S.

OFICINA DE CORDAS

Pernambuco's Music

NIMBUS 5398 (51 min)

This CD presents beguiling and largely unfamiliar traditional music from the state of Pernambuco in the northeastern part of Brazil. Nostalgic and melancholy pieces alternate with upbeat dance tunes, all presented with fresh and unusual instrumental colors.

William Livingstone

GARY RICHARD AND RICHARD HOOPER

Spirits of the Ancestors

WORLD DISC MUSIC CDM 26 (45 min) Aside from a few tom-toms, there is no attempt to imitate Indian music in this tribute to Native Americans from the Arctic to Amazonia. Natural sounds (thunder, splashing water, bird calls) blend with impressionistic music to form what could be the soundtrack for a classy documentary or a film like *Dances with Wolves*, but it stands beautifully on its own. W.L.



STUTTERING JOHN

ATLANTIC 82542 (60 min)

Howard Stern's guerilla interviewer fronting a pop/metal band? Not a bad idea, it turns out, since his group recalls entertaining New York City wiseacres like the Dictators rather than macho nitwits like Mötley Crüe. Pick hit: Get Off My Lawn, which (if Mick Jagger has a sense of humor) could be the theme song of the current Rolling Stones tour.

S.S.

TELEVISION THEMES: 16 MOST REQUESTED SONGS

COLUMBIA/LEGACY 53609 (36 min)

A mixed bag. Frankie Laine's Rawhide here is the real (soundtrack) thing, as is Flatt and Scruggs's Ballad of Jed Clampett. But there are also a lot of rerecorded ringers, including a sacrilegiously mellow Ray Conniff version of the Perry Mason theme, for my money the greatest piece of music written in the last hundred years. Disappointing.

S.S.

TIBETAN BUDDHIST RITES FROM THE MONASTERIES OF BHUTAN

LYRICHORD 9001 (four CD's, 189 min) In addition to the long horns, cymbals, and monotone chant that are familiar from other Tibetan Buddhist recordings, this set includes bells, speech, flutes, and plucked strings, creating a varied mosaic of sacred rituals, literature, and dance. The sense of important messages from another world is always present, and unless you're a committed specialist, this may be all the Tibetan music you will ever need. W.L.

WHAT IS BHANGRA?

IRS 29242 (66 min)

Answer: a combination of various dance music styles (from house to reggae) crossed with traditional Indian pop from the Punjab that's the current rage in the U.K. and less weird than you'd think. It kinda sounds like some non-Englishspeaking Manhattan taxi driver playing his cassette deck and radio simultaneously. S.S.



CHARLIE BYRD

Aquarelle

CONCORD JAZZ 42016 (59 min)

Performance: Not the early Byrd Recording: Very good

In my disc-jockey days, some thirty-five years ago, I was fond of treating my listeners to Charlie Byrd's Savoy album "Blues for Night People," a set of performances that perfectly adapted the Spanish guitar to jazz. Byrd always straddled the fence between jazz and classical music (in the latter arena, he was billed as *Charles* Byrd), but with Segovia around, I found him far more interesting as an exponent of the former.

His new album features Byrd as a member of the Washington Guitar Quintet, playing a mixture of jazz, classical, and pop. It is an unfocused program that sometimes borders on New Age, but there is enough substance in it to warrant a recommendation. The adaptation of a Vivaldi concerto grosso is the stuff candlelight and ocean sunsets were made for, and the performance of Mozart's Quintet in A Major for Clarinet and Strings adheres to the original score, but I prefer the group's renderings of three piano compositions by the enigmatic Bix Beiderbecke: In a Mist, In the Dark, and Candlelights. Those compositions and Laurindo Almeida's Los Angeles Aquarelle Suite-an extended work that was composed for the WGQ-are the meat of this eclectic collection, which also contains two Antonio Carlos Jobim compositions and three not-so-interesting performances of Gershwin tunes. To sum up, this is a pleasant albeit lethargic hour of music that lacks the vigor and swing of which Charlie Byrd is capable.

LENA HORNE

We'll Be Together Again BLUE NOTE 28974 (58 min)

Performance: Yes, but . . . Recording: Very good

t seventy-seven, Lena Horne still looks as striking as ever, but, as her new album demonstrates, her voice is beginning to show the years. Although largely programmed as a tribute to Billy Strayhorn, 'We'll Be Together Again" includes songs by other composers, ranging from Kris Kristofferson to Stephen Sondheim. There's an unbearable Day Follows Day done as a duet (long distance, Sinatra-style) with Johnny Mathis, and Old Friend, a forgettable Sondheim opus. The rest of the album is palatable, if uneven. On some tracks there's a twenty-piece string section, on others a brassy big band sprinkled with jazz luminaries. Saxophonist Houston Person handles the solo chores with typical poise. and former Gillespie bassist Benjamin Brown lends his easy gait to the proceedings, but Horne's wobbly vocals are distressing throughout. When a terrific performer no longer sounds terrific it's time to stop, and at this point, I'm afraid, Lena Horne should put away the music.

ATLANTIC JAZZ 82538 (71 min)

Performance: Still kickin' Recording: Very good

he Modern Jazz Quartet ("retired" in 1974 but reunited a decade later) is celebrating its fortieth anniversary with this new album featuring some special guests. The focus here is on unfettered jazz, but the program starts off on a slightly commercial note—a hip-bop intro by the vocal group Take Six that leads into Bobby McFerrin's rendering of Bag's Groove. I like McFerrin in small doses, and he works well with the MJQ, especially in a version of Billy's Bounce that has him vocalizing in unison with Milt Jackson and John Lewis, Phil Woods, an alto saxophonist from whom we don't hear enough, is wonderful on All the Things You Are and Django. Wynton Marsalis's muted trumpet work is exemplary on Cherokee and even better on Willow Weep for Me; his brother, saxophonist Branford, is heard to advantage on Easy Living. Trumpeter Freddie Hubbard and tenor saxophonists Nino Tempo and Jimmy Heath (brother of MJQ bassist Percy) each



The MJQ at forty

make one pleasant appearance, and two tracks are graced by the presence of Illinois Jacquet and Harry "Sweets" Edison, a splendid tenor/trumpet combination that fits into the MJQ mold like a well-worn glove. All in all, a treat for your ears. C.A.

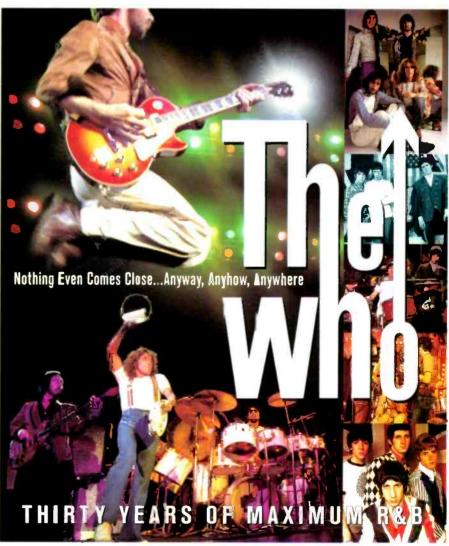
JOE TURNER
Big, Bad and Blue
RHINO 71550 (three CD's, 189 min)
Performance: Big, bad, and blue
Recording: Good to fine

With his 1954 hit Shake, Rattle and Roll, veteran blues and jazz belter Big Joe Turner became a rock-and-roll star at the age of forty-five, but as he observed at the time, "It wasn't but a different name for the same music I'd been singing all my life." Turner's most interesting work—originally recorded for Atlantic—is well represented in this new anthology, but as usual Rhino has leased selections from Turner's stays at other companies, making this a comprehensive set that should delight any lover of the big man's music. The collection goes back to Turner's performance at the 1938 "From Spirituals to Swing" Carnegie Hall concert, and it also includes

Vocalion, Decca, National, and Down Beat sides featuring accompaniment by the likes of Hot Lips Page, Frankie Newton, Allan Eager, Don Byas, Joe Newman, Art Farmer, and Meade Lux Lewis. There is also a good previously unissued 1945 performance (I'm a Lovin' Man), a 1940 Decca single of Turner doing Careless Love Blues as an obvious nod to Lonnie Johnson (with pianist Willie The Lion Smith), and, of course, several collaborations with pianist Pete Johnson, Turner's close associate in his early years. Some of the later tracks are less than stellar (Time After Time, a misguided

1959 trip to ballad territory), but, surprisingly, some cuts from the same period (Honeydripper, Can't Read, Can't Write Blues) are superb.

Technically, a few of the pre-tape sides could have been transferred more carefully (sound ranges from harsh to muddled), but most of these sixty-one selections are satisfying. The accompanying fifty-two-page booklet contains detailed discographical information, photographs, vintage advertisements, a bibliography, Ahmet Ertegun's recollections, and an informative essay by Peter A. Grendysa. Bravo, Rhino! C.A.



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RICHARD FREED, DAVID
HALL, GEORGE JELLINEK,
ERIC SALZMAN, AND
DAVID PATRICK STEARNS

BEETHOVEN:

Triple Concerto; Choral Fantasy

Beaux Arts Trio; Central German Radio Choir; Leipzig Gewandhaus Orchestra, Masur PHILIPS 438 005 (52 min)

Performance: A pleasure Recording: Sumptuous

Pianist Menaham Pressler has been the constant factor in the Beaux Arts Trio since its founding in 1955, but in the last few years the group has gone through major changes as Ida Kavafian (violin) and Peter Wiley (cello) replaced Isidore Cohen and Bernard Greenhouse. This recording is my first encounter with the reconstituted en-

SUMMER'S BACH

art of conductor Helmuth Rilling's activities as music director of the annual Oregon Bach Festival has been making recordings. Recent summers have resulted in two CD's of the Bach Orchestral Suites and, released just this past spring, one of Mendelssohn's A Midsummer Night's Dream. All three are on the Hänssler Classic label (distributed by Antara Music Group, 248 Second Ave. S., Franklin, TN 37064; telephone toll-free, 1-800-546-1546). This July Rilling and the Festival Orchestra were joined by soloists Carol Wincenc on flute, Jeffrey Kahane at the harpsichord, and others for a recording of the complete Brandenburg Concertos.



Conductor Helmuth Rilling

semble, and to judge from both their teamwork and their individual musicianship in the Beethoven Triple Concerto, the new trio is a success on all fronts. Pressler, Kavafian, and Wiley blend beautifully with Kurt Masur's Leipzig orchestra and at the same time make the listener pleasurably aware of the elegant give and take among the soloists themselves. The lengthy opening movement has a sense of ceremonious Classicism, the slow movement offers both serenity and wonderful solo interplay, and the splendidly virile rhythmic pulse of the finale never becomes tiresome. The sonics are very spacious and rich, sometimes blurring low-register transients but for the most part beguiling.

As if the Triple Concerto were not enough of a challenge for the Philips production crew, it is coupled with the even more formidable Choral Fantasy, which has a prominent solo-piano role, especially in the improvisatory opening. It's tricky to balance the piano with the chorus, five vocal soloists (here apparently drawn from the chorus), and the orchestra, but the task is exceedingly well handled in this recording, which features Pressler in the piano part. His approach to the extended opening is leonine in the best Beethoven fashion—the instrument virtually leaps out of the speakers. The vocal soloists and chorus also do very well indeed, without being obtrusively prominent. Thanks to Masur's benign yet firm direction, both works provide wholly enjoyable listening experiences. D.H.

BERLIOZ: Messe Solennelle

Soloists: Monteverdi Choir; Orchestre Revolutionnaire et Romantique, Gardiner PHILIPS 442 137 (61 min)

Performance: Hot Recording: Live from Westminster

Usually with a composer's early works, one must search for his fledgling personality under a multitude of musical influences. With Berlioz, it's exactly the opposite: In this recently rediscovered Mass that he wrote at age twenty-one, we can hear the original Berlioz before he toned himself down. He certainly needed to. At times the music is so outrageously and delightfully vulgar that you suspect the composer forgot he was writing a Mass. It's no wonder he suppressed the work and recycled much of it in his later secular pieces, including the Symphonie Fantastique and the opera Benvenuto Cellini.

Heard in their original context in this electrifying and utterly convincing live recording from Westminster Cathedral led by John Eliot Gardiner, the familiar passages just prove how astonishingly precocious and original Berlioz was. The *Kyrie*, for instance, features one of his most collage-like fugues, with the contrapuntal strands spread over different parts of the orchestra and chorus to eerie, stunning effect. Every so often there's one of the galloping rhythms that would become a Berlioz trademark as well as numerous other devices he'd try later, often with more assured technical resources or within a more appropriate and balanced context.

Not every section in this ambitious, hourlong Mass is remarkable—some are dull, clumsy, and vague in intention—but such moments do provide some needed breathing space between the more feverish, musically orgiastic passages. A fascinating discovery.

D.P.S.



CHOPIN: Fantasy in F Minor; Three Waltzes; Polonaise, Op. 44; Three Nocturnes; Scherzo No. 2

> Evgeny Kissin (piano) RCA VICTOR 60445 (67 min)

Performance: Poetic Recording: Good live take

The Chopin recitals Evgeny Kissin gave early last year were filled with things listeners might want to preserve just the way they heard them; fortunately, RCA Victor did tape the one at Carnegie Hall, and a bit more than half of it is preserved on this disc. A remarkable level of poetry is maintained here. You can sense the spark of that mystically enabling contact with a live audience in the freedom, the intensity, and the spontaneity of Kissin's playing—qualities that would have been far less likely to be so prominent in the relatively sterile setting of a studio session.

If that playing is generally more expansive than driving, it is especially rich in thoughtful contrast, and never short on vitality. Kissin's approach to the Fantasy in F

Minor (spun out to 14 minutes), the Polonaise in F-sharp Minor, and the D-flat Major Nocturne is unusually large-scaled, but without a hint of monumentalism. These three pieces and two others here are followed by applause. The piano sound is vivid without being aggressive, and the promise implicit in labeling this disc "Volume I" is very welcome.

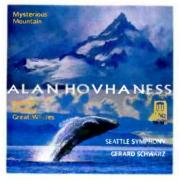
FAURÉ: Requiem DURUFLÉ: Requiem

Soloisis; Ambrosian Singers; Philharmonia Orchestra, Legrand TELDEC 90879 (78 min)

Performance: Contemplative, moving Recording: Textured and detailed

were organists, and both of their Requiems were clearly created from the choir loft. These gentle, unprepossessing works would seem almost too tender, too passive, for contemporary taste. And yet they have the power to move. The Fauré, by far the better known, is a true masterpiece of contemplative art that never raises its voice above a whisper. But what a whisper! The Duruflé, a lesser work but an attractive one, occasionally speaks up in fear and trembling, making it a bit more dramatic.

None of that would be so convincing if it were not for the high quality of the performances by a somewhat unusual team of three American singers (soprano Barbara Bonney, mezzo Jennifer Larmore, and baritone Thomas Hampson), a British chorus and orchestra, and, of all people. Michel Legrand, the French pop-song and movie composer. He turns out to be an excellent conductor, with an ear for the music's fine textures and exquisite details. *E.S.*



HOVHANESS: Mysterious Mountain; And God Created Great Whales; Alleluia and Fugue; other works

Seattle Symphony, Schwarz DELOS 3157 (60 min)

Performance: Excellent Recording: Good to spectacular

ack in the middle 1940's the Boston-born Armenian-American composer Alan Hovhaness was writing mystically oriented music something like that of John Tavener and Arvo Pärt today. This mini-anthology from Delos includes one of the finest of Hovhaness's works from that period, *Mysterious Mountain* (Symphony No. 2), which has a gorgeous hymnal opening akin to Vaughan Williams's Tallis Fantasia,

Russian Pioneer



rthur Lourié (1892-1966) is one of those shadowy figures we encounter now and then in reference books. But he was arguably the most important musical figure in Russia for a few years just after the Revolution, when he served as assistant for music to Anatol Lunacharsky, Lenin's commissar of public education. Although Lourié was one of the promulgators of a Futurist Manifesto on the eve of World War I, his own compositions were anything but conformist; he explored approaches and techniques we now identify with the more celebrated composers who introduced them a bit later.

Lourié left his homeland in 1922 and nineteen years later settled in the United States, where he died in relative obscurity. Some of his music was performed in New York City in 1968. The Soviets, however, expunged his name from all official reference sources after his defection. There have been very few performances of his music anywhere in the last fifty years.

How representative the works on this new CD are, I cannot say. They are all played by the apparently conductorless Deutsche Kammerphilharmonie. Its concertmaster, Thomas Klug, is the soloist in the first and briefest, *A Little Chamber Music*, which was the first piece Lourié composed after leaving Russia (1924) and as energetic as it is concise. The other two works were composed at the end of World War II, by which time Lourié had settled in America.

Little Gidding, sung (in English) by the tenor Kenneth Riegel, is a setting of portions of T. S. Eliot's Four Quartets. The half-hour Concerto da Camera for violin and strings is elegiac for the most part, or at least profoundly inward, and by all odds the most intriguing part of this collection. Gidon Kremer, who has hardly a bar of rest as soloist, seems especially at home in this piece, which seems to prefigure the contemporary music of Alfred Schnittke or Sofia Gubaidulina. The second and most extended of its six movements is essentially a duet between Kremer and Klug, the similarly striking fifth movement a rumination for the soloist with comments by the double-bass.

While this release may not certify a wholesale Lourié revival, it doesn't have to do that to justify itself or its claim on the listener's attention. The soloists and the orchestra convey nothing less than complete commitment to their assignments here, and Deutsche Grammophon has come through with a sonic frame that does them all proud. R.F.

LOURIÉ: A Little Chamber Music; Little Gidding; Concerto da Camera

Klug: Kremer; Riegel; Deutsche Kammærphilharmonie DEUTSCHE GRAMMOPHON 437 788 (55 min)

an impressive double fugue, and a finale beginning with an elemental ostinato-crescendo and concluding in the hymnal mode again. The remarkable 1958 Reiner/Chicago recording for RCA (now available on CD) was the only one for more than thirty years until a rather chilly version under Dennis Russell Davies came out on Musicmasters in 1989. Gerard Schwarz does much better by the work than Davies, and if the performance doesn't quite match the sensuous quality of Reiner's, it does represent the view of the composer, who was an active participant in the Delos project.

Pleasing but of slighter substance is the *Prayer of St. Gregory*, with its solemn song for solo trumpet, and the Prelude and Quad-

ruple Fugue, whose first full-orchestra recording, under Howard Hanson, I produced for Mercury in 1954. The piece stands up nicely here, but I still like the tautness and drive of the Hanson version.

And God Created Great Whales is a sonic showpiece not only for the oceanic timbres that Hovhaness conjures up but especially for the tracked-in "songs" of humpback whales recorded off the coast of Hawaii. Alleluia and Fugue (1941) is a fine string-orchestra study replete with lyrical canonic texture. The overtly Armenian Celestial Fantasy is fugal with a decided Eastern flavor, like much of Hovhaness's huge output. The recording job is first-rate from start to finish.

D.H.



Conductor Esa-Pekka Salonen

HUMPERDINCK: Hänsel und Gretel

Soloisis: Choruses: Staatskapelle Dresden, Davis PHILIPS 438 013 (two CD's, 103 min) Performance: Beguiling

Recording: Very good

lumperdinck's fairy-tale opera speaks to children of all ages. The music may be derivative—the Wagnerian cadence, sweep, and harmony are evident in every page. But beyond the obvious echoes of a more powerful pen, it sings with its own voice, clearly and effectively, combining enchanting melodies, spirited dances, and properly spooky effects.

The present recording embodies many of those qualities. Colin Davis willingly suspends the disbelief of maturity to conduct the Staatskapelle Dresden with lyrical and childlike involvement, and the orchestra responds with equal persuasiveness and skill. As Hansel and Gretel, mezzo-soprano Ann Murray and soprano Edita Gruberova convey the innocence of their characters without falling into excessive cuteness. Their voices are a little too similar in weight to distinguish them easily by ear alone, but that is no reflection on their performances.

As the Father, Franz Grundheber sings in a smooth, warm baritone, and he properly characterizes the role with a sense of good intentions, slight tipsiness, and loving concern for his children. Sopranos Barbara Bonney and Christine Oelze spin out their solos as the Sandman and Dew Fairy, respectively, with unaffected simplicity and purity of tone. The performances of two highly respected veterans. Gwyneth Jones (the Mother) and Christa Ludwig (the Witch), are marred by frequent unpleasant sounds, which are excusable to some extent on the grounds of dramatic verisimilitude, for the one plays a scold and the other an ugly crone. The women's and children's choirs of the Dresden State Opera sing jubilantly. In all, despite the reservations noted, I can recommend this recording for chil-R.Adren of all ages.

MAHLER: Symphony No. 4

Upshaw; Cleveland Orchestra, Dohnanyi LONDON 440 315 (57 min)

> Performance: Clarifying Recording: Likewise

hristoph von Dohnanyi's tempo for The opening movement of the Mahler Fourth is virtually the same as Bruno Walter's in his famous 1945 recording, the one that accomplished the big breakthrough for Mahler with the American public. While Dohnanyi's total timing exceeds Walter's and in the remaining movements reaches what is more or less today's norm, he sustains the impression of free-flowing spontaneity, utterly lacking in monumental gestures or self-consciousness. That unlabored approach is exactly what one wants in this of all Mahler symphonies, and the clarifying quality we have come to expect from Dohnanyi enables the work's unabashed radiance to rise directly from the music with an impact that could not be achieved with a heavy-handed interpretive overlay. Every detail is made to tell, and yet none stands out unnaturally. Dawn Upshaw's singing in the final movement, spot-on in respect to both precision and characterization, is all the more effective in the context so thoughtfully set and maintained through the preceding sections.

Dohnanyi's willingness to stand back a bit and let the music define its own terms may disappoint listeners accustomed to having sweetness and charm coaxed out, particularly in the slow movement. However one may feel about that, the brilliance and pliability of the orchestral playing and of Upshaw's singing, as well as the further clarification provided by the recording itself, must assure this new Fourth a place on any short list, even if it does not displace entrenched favorites. RF

MOZART: La Clemenza di Tito

Soloists: Chorus and Orchestra of the Zurich Opera, Harnoncourt TELDEC 90857 (129 min, two CD's)

Performance: Theater-worthy Recording: A tod resonant

a Clemenza di Tito, Mozart's final opera, is often described as an embarrassingly hurried retreat into the outmoded genre of opera seria, but in this often-explosive performance conductor Nikolaus Harnoncourt makes a powerful case for it as the stepping stone to a genre Mozart never lived to develop. Thanks in part to the biting, authentic brass instruments he uses, the performance is more urgent than any other on rec-



ord-Harnoncourt never lets you forget that in this opera buildings are being burned and assassinations attempted. Although even he can't make sense of passages where Mozart became sidetracked into dramatic irrelevance, he easily picks up the strands when the score again moves onto more meaning-

Compared with the vocally lustrous singers in John Eliot Gardiner's more historically minded recording for Deutsche Grammophon, Harnoncourt's cast isn't suave, but when the singers make unpleasant sounds, it's within the context of a thoughtful performance honed over a long run in the opera house. That is of paramount importance since all the major characters in this tale of manipulation and power grabbing § are driven to actions far beyond their usual ethical bounds, and those emotional progressions must be credible if Tito is to work as a theater piece. Harnoncourt's cast often succeeds brilliantly in that respect, particularly Philip Langridge (Tito). Ann Murray (Sesto), and the late Lucia Popp (Vitellia). This was Popp's last opera recording, and her previously light, coloratura voice had deepened into a rich, mezzo-ish instrument that enabled her to convey all of her character's skullduggery under a veneer of ele-

NIELSEN: Flute Concerto; Clarinet Concerto; Springtime on Funen; Imaginary Journey to the Faeroe Islands; Saul and David, Act II Prelude

Flemstrom; Rosengren: Swedish Radio Choir and Orchestra. Salonen SONY 53276 (75 min)

Performonce: Solid **Recording: Fine**

Esa-Pekka Salonen is a Nielsen conductor one can trust. Though his readings are not always the most spectacular or most revelatory on disc, he presents the music unvarnished, without emphasizing its atmospheric elements or sensual allure in order to make its craggy modernism more palatable. This new recording is particularly welcome since it features music from several of Nielsen's stylistic periods, ranging from the sunny, folk-like choral work Springtime on Funen to the bitter, puzzling Clarinet Concerto from 1928, three years before his death. And thanks to Salonen's interpretive honesty, the cross-references among these oddly diverse works become apparent, revealing the jagged line of the composer's creative development.

The best performances are of the concertos, which can seem like leftovers from his symphonies but here establish their own distinct identities. Hakan Rosengren's solo performance in the Clarinet Concerto may not have quite the range of expression of Niels Thomsen's on the Chandos CD of all three Nielsen concertos (including the one for violin), but at least the work seems much more "of a piece" in this reading. And Salonen does provide atmosphere when appropriate, such as in An Imaginary Journey to the Faeroe Islands, a "rhapsodic overture" from 1927.

(Regular reviews continued on page 86)

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Callas Live

ive recordings of Maria Callas's perfornances of Verdi's Macbeth and Donizetti's Anna Bolena at La Scala and of Bellini's Il Pirata at Carnegie Hall have long been available in various "unofficial" incarnations. Now they have been legitimized by release on EMI, the late diva's authorized label, with their musical values and sonic limitations intact. There is one decided improvement: J. B. Steane's insightful and informative annotations place all three recorded operas in their proper historical context.

Best of the three sets is unquestionably the Anna Bolena, stemming from La Scala's 1957 production. It was that revival with Callas that returned this opera to the active repertory after eighty years of oblivion, paving the way for later efforts by Caballé, Sills, Sutherland, and others. Callas is captured at her exciting best, and for once she is in able company. Giulietta Simionato's Seymour is of star caliber, Nicola Rossi-Lemeni, some rusty tones notwithstanding, is an ominous and regal Henry VIII, and Gianni Raimondi and Gabriella Carturan excel in smaller roles. Despite several unnecessary cuts sanctioned by conductor Gianandrea Gavazzeni, this pathbreaking effort, in relatively good sound, should not be overlooked.

EMI laudably indicates "the poor quality of the original recording" of Macheth (La Scala, Milan, 1952), and it is indeed a pity that posterity was not granted a worthier document of Callas in one of her most mesmerizing portrayals. (After those 1952 appearances she never again performed Lady Macbeth on stage, though she did record three important arias in EMI's London studios in 1958, reissued on CD in a collection of Verdi arias.) Even here, the wayward recording apparatus cannot conceal her manifold dramatic art as she contemptuously taunts Macbeth in Act I, infuses "La luce langue" with sinister forebodings, and makes the Sleepwalking Scene a haunting listening experience. As Macbeth, baritone Enzo Mascherini is clearly overpowered by Callas, but he has some impressive moments; the sturdy tenor of Gino Penno and the insinuating basso of Italo Tajo also deserve to be better served acoustically. Victor de Sabata's exciting leadership is just about undone by the distorted sound.

There is no audio disclaimer with // Pirata, which is sonically not much better, with particularly wretched results in the massed choral and explosive orchestral passages. Besides, the entire performance is plagued by incessant coughing from the



1959 Carnegie Hall audience. Callas is not in her best voice in her first scene, but she recovers later and earns her enthusiastic ovation in the opera's finale. Conductor Nicola Rescigno does what he can for this opera, surely not Bellini's best. The score is streamlined, and the cast includes the unsubtle but adequate tenor Pier Miranda Ferraro and the forceful baritone Constantine Ego. An unexpected and welcome bonus is a reprise of the Final Scene as recorded in Amsterdam with the Concertgebouw Orchestra a few months later, minus the chorus but in entirely listenable sound. G.L.

BELLINI: Il Pirata

Soloists: Orchestra and Chorus of the American Opera Society; Concertgebouw Orchestra of Amsterdam, Rescigno EMI 64938 (two CD's, 134 min)

DONIZETTI: Anna Bolena

Soloists; Orchestra and Chorus of Teatro alla Scala, Milan, Gavazzeni EMI 64941 (two CD's, 140 min)

VERDI: Macbeth

Soloists; Orchestra and Chorus of Teatro alla Scala, Milan, De Sabata EMI 64944 (two CD's, 139 min)

CALLAS LIVES

eventeen years after her death, soprano Maria Callas continues to be a best seller for EMI Classics, her exclusive label for more than twenty years. Her twenty-three complete opera recordings and her several aria collections, some of them in mono, have been reissued on CD at full price, simply because there is no need to discount them. Two repackagings of famous arias are on the charts at this writing, "La Divina" from last year and an earlier set titled "Maria Callas Sings Opera Arias," which, not coincidentally, contains the "La mamma morta"

aria that is featured in the movie Phlladelphia.

While Callas's art was often better revealed in extended scenes and in duets and ensemble work with other singers, her aria collections include priceless moments when her musical intelligence, vocal coloring, phrasing, and dramatic insight reveal the essence of the music. EMI's latest compilation from Callas's studio recordings, "La Divina, Volume 2," a July release, also includes a sample of "live" Callas: a selection from the famous 1958 "Lisbon Traviata." -Robert Ripps

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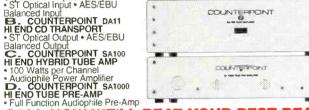
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RAVEL: Piano Concerto in G Major

Grimaud; Royal Philharmonic, Lopez-Cobos DENON 75368 (56 min)

Performance: Elegant Recording: Excellent

We have here what appears to be pianist Hélène Grimaud's first recording with orchestra, taped two years ago when she was at the ripe age of twenty-three, and anyone attracted to the possibly unique coupling should find it a very safe investment. Both performances here are light-tex-

tured and Gallic—which is to say, pointedly idiomatic in the Ravel concerto and refreshingly free of heaving and churning in the Rachmaninoff, which benefits more than a little from the linear clarity of Grimaud's approach while losing nothing in the way of real animation or tension. There is nothing tired about these fine tunes, after all, nor about Rachmaninoff's imaginative coloring of them.

Jesús Lopez-Cobos is an exceptional partner in both works, not merely "accompanying" but clearly sharing Grimaud's view of the music in every detail. You get a real

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sense that they are listening to each other and building upon one another's contributions, something that cannot be taken for granted in concerto performances but is wonderful when it happens. The piano and orchestra are superbly balanced in sound as vivid and clarifying as the performances themselves.

R.F.

RAVEL: Boléro; La Valse; Rhapsodie Espagnole; Daphnis et Chloé, Suite No. 2; Pavane pour une Infante Défunte

> Orchestre de Paris, Bychkov PHILIPS 438 209 (66 min)

Performance: Sensuous, exciting Recording: Colorful

What's Russian for "wunderkind"? Semyon Bychkov is, no doubt, a prodigy, and his Ravel is sensuous, colorful, playful, witty, and immensely exciting. He raises up the Orchestre de Paris to the status of one of the great orchestras.

These performances reveal the great strengths and some of the weaknesses of Ravel as a composer of orchestral dance music. Curiously enough, it is the Spanish material—the Rhapsodie Espagnole and the inevitable Boléro—that works least well, perhaps because Bychkov is too involved with color and is a bit hard and literal with rhythm. That is not a problem with La Valse or with the Daphnis ballet music, but it is less convincing with Hispanic rhythm.

Some of the balances and colors are unusual, probably not because of the recording but because the French players and their Russian conductor lean toward tonal qualities and balances different from the more familiar tonalities of Anglo-American or even German orchestras.

E.S.

ROCHBERG: Caprice Variations

Eliot Fisk (guitar)
MUSICMASTERS 67133 (75 min)
Performance: An astonishing romp
Recording: A class by itself

eorge Rochberg's Caprice Variations on, yes, Paganini's Twenty-Fourth Caprice (the same one used by Brahms, Liszt, and Rachmaninoff) was originally written in 1970 for solo violin. It appears here in a powerhouse transcription for classical guitar by Eliot Fisk, who also performs it in a most extraordinary and fantastical manner. The piece is an astonishing romp through the history of music from the Classical period to the present: from Beethoven to Schubert to Brahms to Mahler, Webern, and, well, Rochberg. Such stylistic freedom-postmodern, to say the least-is a little unsettling in the violin original, but it seems to suit the guitar quite well.

Fisk shuffles the variations so that only the first and last (the theme itself, which comes only at the end of the work) remain in place; the mix and match creates effective groupings and contrasts. But the success of his version lies deeper and has something to do with the guitar itself. This instrument, which Paganini played and wrote music for, lives mostly outside the main stream of Western classical music, and, as such, it stands more than a bit outside of Western musical history, making it the perfect postmodern instrument. In the hands of Eliot

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Fisk-who has transformed George Rochberg's transformation of Paganini (which invokes a long line of such transformations)this music takes on epic and transcendent dimensions. I listen to a lot of guitar albums, but this one is in a class by itself. E.S.

SCHUBERT: Piano Sonatos in C Mojor (D. 840), A Minor (D. 845), E Minor (D. 566), A Minor (D. 784), ond D Mojor (D. 850)

András Schiff LONDON 440 305/306 (71 and 75 min)

> **Performance: Committed** Recording: Very good

ndrás Schiff introduces these record-A ings of five Schubert piano sonatas the first two of a projected seven CD's-by pointing out that Schubert left several of the sonatas unfinished, and that in some cases there are even questions about which sonatas certain movements belong to. Schiff has made reasonable judgments on these matters, and he has generally omitted fragmentary material-except in two instances in which reconstruction was possible from existing sketches or, he says, the "fragments are of such extraordinary beauty that their exclusion would mean a major loss."

In Volume 1, for instance, he plays only the two movements of the great Sonata in C Major (D. 840) that Schubert completed. But on the same disc he gives us, as one of his two exceptions, the not quite finished allegro moderato in F-sharp Minor (D. 571) that was to be the opening of a sonata-and how poignant it is, so abruptly broken off at the point where Schubert left it.

Every performance is scrupulously complete in respect to repeats-the opening moderato of the C Major, for example, runs nearly 17 minutes-and tempos tend to be on the brisk side. Not for Schiff, for example, the sort of caressing reverie that Artur Schnabel made of the second movement of the D Major Sonata (D. 850). Schiff apparently sees this work as more overtly dramatic, as he signals by his fiery dispatch of its opening movement, and his sense of momentum serves the music as convincingly in its way as Schnabel's did. The fiery qualities are set in a sonic frame a bit leaner than may be ideal for this music, but Schiff never drives too hard; the power and drama are not conveyed without warmth, or without a smile where it is called for-as in the D Major's final movement, which is so often consigned to blandness by pianists intimidated by its apparent naïveté.

These performances make it clear that Schubert's piano sonatas, no less than Beethoven's, invite and sustain a variety of interpretive approaches. Listeners who have yet to discover the stature of these works should be enticed to explore further-and those who made that discovery long ago are perhaps even more certain to find these recordings indispensable alternatives. R.F.

.



Guit<mark>orist Fisk: astonishing Rochberg</mark>

R. STRAUSS: Ein Heldenleben: Metamorphosen

San Francisco Symphony, Blomstedt LONDON 436 596 (73 min)

Performance: Resplendent "Heldenleben" **Recording: Excellent**

in Heldenleben (A Hero's Life) is the major achievement here. Although endowed with the requisite thrust and authority. Herbert Blomstedt's hero is no swaggering Teutonic stereotype but suggests, rather, Walt Whitman's "Modern Man." And when



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HAYDN: Symphonies Nos. 93, 94, and 95

La Petite Bande, Kuijken **DEUTSCHE HARMONIA MUNDI** 77275 (66 min)

While Roy Goodman, Trevor Pinnock, and Christopher Hogwood have been exploring Haydn's little-charted early and middle symphonies, Sigiswald Kuijken's authentic-performance cycle has been going for the established masterpieces, and with gratifying results. Though Kuijken's lack of temperament and rhythmic snap results in first movements without much drama, his readings of the slow movements, which often sound threadbare with original instruments, are exquisite. D.P.S.

LISZT: Opera Transcriptions

Jean-Yves Thibaudet (piano) LONDON 436 736 (69 min)

Thibaudet's love for opera comes through at the keyboard as he plays these luscious operatic paraphrases with dash, flair, and a singing tone. The Concert Waltz on themes from Donizetti is especially daz-William Livingstone

SCHUBERT: Octet in F Major

Philharmonia Ensemble, Berlin DENON CO-75671 (61 min)

Chalk up yet another fine recorded realization of Schubert's now-discursive, now-probing Octet for Strings and Winds. These Berlin Philharmonic players take quite a Classical view of the first four movements, but they bring real Romantic heart and spirit to the fifth and sixth, with especially wonderful playing by the allimportant clarinet as well as the French horn and first violin. Very comfortable room sound—a nice amalgam of space and intimacy.

GOLUB KAPLAN CARR TRIO French Piano Trios

ARABESQUE Z6643 (71 min)

The Trio in G Major that Debussy composed at the age of eighteen was unearthed only a dozen years ago, but it is as well represented now as the works that sandwich it here, the Fauré Trio in D Minor and the Saint-Saëns Trio No. I, in F Major. David Golub (piano), Mark Kaplan (violin), and Colin Carr (cello) bring off the entire handsomely recorded program with evident affection and enthusiasm and are especially persuasive in the Saint-Saëns. RF

THOMAS HAMPSON

Romantic Songs by Berlioz, Wagner, and Liszt

EMI 55047 (77 min)

In each of these sixteen songs, the baritone Thomas Hampson skillfully communicates the poetry as well as the musical content. His diction in both French and German is unusually clear, and his affinity for the music is apparent throughout. Of special note are Berlioz's Le Coucher du



Soleil and Liszt's well-known Oh, Quand Je Dors, sung with melting legato. Most of the songs are not often heard, which makes the disc even more interesting. Sympathetic accompaniment is provided by Geoffrey Parsons.

JAZZ SONATAS

Waldman; Hyman; Hanna; An die Musik ANGEL 55061 (53 min)

Producers Ettore Stratta and Pat Philips had the idea of asking the jazz composer/pianists Dave Brubeck, Roland Hanna, and Dick Hyman to write sonatas, but the best pieces here, and the jazziest, are not sonatas at all. Hyman's Minotaur, brilliantly realized by him and violinist Yuval Waldman, was originally a film score, and Impromptu by Hyman and Hanna is, as you might guess, an improv. The actual sonatas (Brubeck's Quintet Sonata, Hyman's Sonata for Violin and Piano, and Hanna's Sonata for Chamber Trio and Jazz Piano) tend to have a light-classical pops sound and none of the qualitiesrapture, bite, dramatic form, inventionof either good jazz or good sonatas. E.S.

NEW WORLD GUITAR TRIO

Beethoven: Serenade in D Major Shostakovich: Three Fugues, Op. 8 **Debussy: Four Preludes** Meijering: Are You Afraid of the Dark?; The Insects Are Coming

TMR 93TMR-6 (56 min). Available from Select Music, telephone 1-800-75MUSIC. There is not a whole lot of music for three guitars, and the hard-driving, neo-flamenco pieces here by the Dutch composer Chiel Meijering must constitute a large part-certainly the most exciting part-of the repertory. To remedy that shortcoming, the members of the New World Guitar Trio have made some very stylish arrangements of pieces originally written for other instruments, which they play in a capable and laid-back manner that contrasts mightily with the Meijering.

the heroine enters, via Raymond Kobler's deliciously nuanced solo violin, she is very much the sweet young thing, but at the end of the work, following the hero's battles and recollections, she is a mature womaninfinitely comforting and consoling.

Besides thrust and authority. Blomstedt imbues his reading with genuine poetry, as in the pages immediately preceding the battle scene and in the marvelously delicate polyphonic weave of quotations of Strauss's own works that follows. The closing "Escape from the world and fulfillment" is as movingly played as I have ever heard it: Compliments not only to Kobler but also to the horn soloist. David Krehbiel, I haven't heard the final bars so gloriously executed. with perfect internal balance and dynamic control, since the Mengelberg/New York Philharmonic reading of hallowed memory. The London production crew as well as the orchestra were clearly in peak form for this recording. The amazing clarity of texture achieved in the battle scene is by itself worth the price of the CD.

The deeply stirring Metamorphosen is also played with great care, but it doesn't really come together until more than halfway through. If you like Ein Heldenleben, however, don't miss this CD.

Collection

KATHLEEN BATTLE AND JEAN-PIERRE RAMPAL

In Concert

SONY 53106 (77 min)

Performance: Musical ornithology Recording: Live from Lincoln Center

out the world's greatest flutist together with one of our purest and chirplest sopranos, and what do you think the subject of their discourse will be? You're right: birds. Lark, robin, curlew, blackbird, at least three nightingales, and an otherwise unidentified "sweet bird" make up the musical ornithology of this charming concert, which was recorded live in Alice Tully Hall at Lincoln Center three years ago. Even the Martinu Flute Sonata, Rampal's Battle-less solo, is said to have been inspired by the whippoorwill,

By far the best part of the program comes at the beginning: two ecstatic Handel arias (one in Italian, one in English), four vigorous Purcell theater songs, and some amorous French nightingales courtesy of Rameau. All are dispatched with panache, good humor, gorgeous tone (his flute and her voice are sometimes almost interchangeable), and an almost improvisatory quality that suits the Baroque music very well. The music that comes later-by Saint-Saëns, Roussel, Obradors, Martinu, and others-is pleasant but more self-conscious and less charming. Almost every possible combination of voice, flute, cello (Myron Lutzke), piano (Margo Garrett and John Steele Ritter), and harpsichord (Anthony Newman) is used. The sound is not as brilliant as the performances-boxy and, unlike the music. quite indoorsy. E.S.

Stereo Review

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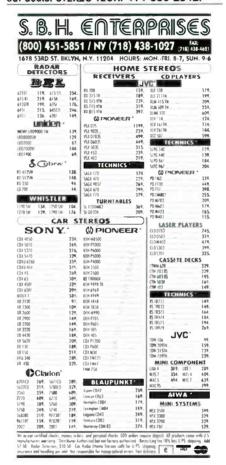
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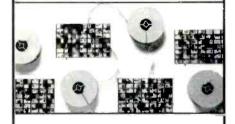
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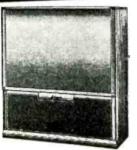
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August

TIME DELAY



Thorens TD-224 record player, a single-play turntable with a record changer on the side ("I can't think of a more intriguing, yet practical, conversation piece").

It Ain't the Meat, It's the Motion: As part of the issue's cover story, Alexis Badmaieff of Altec Lansing and Edgar Villchur of Acoustic Research debated the question, "Is a Good Big Speaker Better Than a Good Little Speaker?" No winner was declared.

30 Years Ago

Yeow! In August 1964 Technical Talk, Julian Hirsch noted that the Institute of High Fidelity's new standard for measuring amplifiers coincided with his own procedures with



Telex ST-20, 1964

the exception of measuring power-line current leakage. Such leakage, he observed, "sometimes means an unpleasant shock can be received when touching any part of a music system while also touching a radiator."

New products this month included Benjamin's Truvox PD-100, a four-track reel-to-reel tape recorder with a rated frequency response of 30 to 20,000 cps (Hz), and Telex's ST-20 stereophones (16 to 15,000 cps). In test reports, Julian Hirsch examined the "somewhat strange-looking"

Stereo Review SPECIAL SPEAKER ISSUE



20 Years Ago

Readers who thought August's cover picture was an art director's fancy were surprised when they opened the magazine: Technical Editor Larry



The Velvet Underground, circa 1969



Dok<mark>order 7140</mark> tape recorder, 1**9**74

Klein did, in fact, weigh in with plans for a build-it-your-self listening chair. Dubbed a "Nearphone," the installation utilized inexpensive 6-inch (or larger) single-cone full-range drivers.

In Best of the Month, Richard Freed raved over Vaclay Smetacek's Musical Heritage Society recording of the Russian Oratorio by Giuseppe Sarti, and Steve Simels extolled the merits of "1969 Velvet Underground Live" on Mercury. Elsewhere in the review sections, Noel Coppage approved of "Early Flight" by Jefferson Airplane ("Now this is the way to pillage those vaults") and James Goodfriend was steamed by Tomita's synthesizer versions of works by Debussy ("I wish I had it within my power to repay Mr. Tomita-say, with something like opening a McDonald's on Mt. Fuji").

Among the new products featured were Acoustic Research's LST-2 speaker system, with a 10-inch woofer and six midrange and high-frequency drivers (\$400), and

Akai's GXC-75D autoreverse cassette deck with Dolby B (\$429.95). In test reports, Julian Hirsch put the Dokorder 7140 four-channel tape recorder through its paces, finding the deck "adequate for the critical home recordist."

10 Years Ago

Polk's SDA Compact Reference System loudspeakers and Soundcraftsmen's DX4000 stereo preamp were among the



new products this month. After testing the Bose 901 Series V speaker system, Julian Hirsch noted that, like the original Bose 901 Direct/Reflecting speaker (1968), the Series V "sounds 'different' from almost any conventional front-radiating speaker one might name" and advised readers to listen to a proper demonstration before making a choice.

Aloha Oe: Recently returned from Panasonic's twenty-fifth-anniversary sales meeting in Honolulu, editor William Livingstone let drop that he'd become obsessed with old island standards. But after a friend called them "sleaze," he wrote, "I stopped talking to people about Beyond the Reef and Blue Hawaii.... Public taste in music is a tricky thing."

—Steve Simels

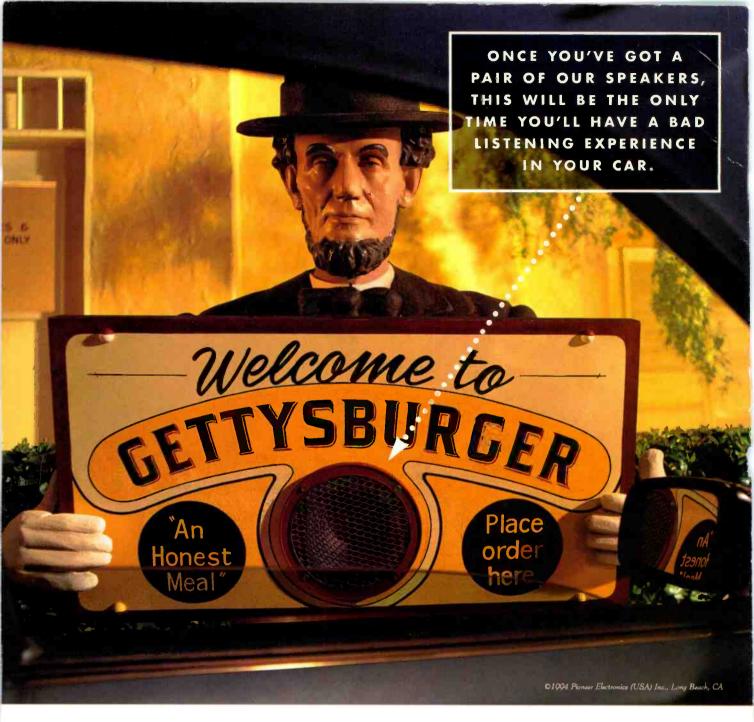


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