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### UNPLUGGED

3 New Wireless Headphones Go Head to Head

## STOCKING STUFFERS

'Tis the Season...



How to Keep Your CD's Spinning For a Lifetime

## TEST REPORTS

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In our never ending quest for reproducing the fine quality of a live performance, we took our award winning and critically acclaimed GCD-600 and made it a bit, actually four bits, better.

We added the latest Burr Brown 20-bit ladder-type D/A converter – the same one used in our GDA-700 separate Digital-to-Analog converter. The result is a level of sonic performance usually reserved for stand alone D/A converters and C/D transports.

But that's not all we did. To achieve the lowest levels of noise and distortion, our GCD-700's analog section features the same Class A amplifiers we use in our top-of-the-line GFP-565 preamplifier.

The GCD-700 also boasts a superior power supply with two transformers. One for the analog section and one for the digital section, each housed on separate

# bit counts. Adcom's GCD-700 CD player.

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circuit board assemblies to eliminate EMI and RF interference.

By now you're probably asking yourself, "How good does it really sound?" Let your ears be the judge. Visit your Adcom dealer for a demonstration of this remarkable new player. You'll discover that the new GCD-700 sounds exceptional and is sensibly priced. What else would you expect from a component that is every bit pure Adcom?



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COMPONENTS

We offer both, but which is best for you?

#### INTEGRATED SYSTEMS

By an integrated system we refer to one in which the electronics and the speakers are engineered together and sold as a unit. If such a system is properly designed it can always outperform a system built from separate components. The reason is fundamental. In a complete system, the



design of the electronics is specific for the characteristics of the speakers and vice versa.

Thus, if you are looking for the best performance, the Lifestyle<sup>®</sup> 12 home theater system is the best we offer and we believe the best performance available. We suggest you compare its sound to that of any other home theater system, regardless of size or price, to appreciate the difference Acoustimass<sup>®</sup> system technology makes.

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If you already own a home theater system with separate components and are looking to improve the sound without replacing all your equipment, we now offer the new Acoustimass 10 home theater speaker system specifically engineered for this purpose.

The key to the performance is Acoustimass speaker technology. Recently there are visual copies of the Acoustimass module called 'subwoofers.' None of them are similar to Acoustimass modules on the inside and none have the performance. Be sure to look for the Acoustimass label on the speakers you purchase.

Call for names of selected Bose<sup>®</sup> dealers where you can hear the Lifestyle<sup>®</sup> 12 home theater system or Acoustimass 10 speakers. Experience the difference Bose technology makes.



The Lifestyle<sup>®</sup> 12 home theater system. A fully integrated system, engineered to be the best sounding, easiest to use home theater system ever. [Acoustimass<sup>®</sup> module not shown.]



The new Acoustimass 10 home theater speaker system. Engineered to maximize the sound quality of your other home theater components. [Acoustimass® module not shown.]



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#### BY BOB ANKOSKO & WILLIAM LIVINGSTONE

#### **DVD: HURRY UP, WAIT?**

As we went to press, there was still no definitive word on whether or not any DVD players would reach store shelves in time for the Christmas rush. But Toshiba, Pioneer, and Sanyo joined Panasonic's parent company, Matsushita, in announcing that they would go ahead with plans to offer DVD players for sale in Japan beginning in November or December, even though details of a copy-protection mechanism had not yet been resolved. The initial batch of DVD software slated for release in Japan is music videos, not major films.

In other DVD news, JVC announced that it will begin manufacturing discs in April at its facilities in Sacramento, California, and Tuscaloosa, Alabama. Initial output is pegged at 600,000 discs a month.

#### A/V DIGEST

Most of us leave the boob tube behind when we go away for a nice quiet weekend. Now RCA is encouraging us to take it along with the DSS Travel Kit (\$199), which includes a quickmount 18-inch dish said to be compatible with most Digital Satellite System receivers, as well as mounting hardware, tools, and a carrying case.... Sony announced that it will introduce the world's first text-capable CD player in November in Japan. The \$550 deck can display artist names, album or track titles, and other information when such details are contained on a CD. Sony Music plans to release 100 "text CD's" in Japan to support the new players. Sony also announced that it has teamed up with Sharp to collaborate on a largescreen flat-panel TV. . . . Four new car head units from Blaupunkt — two CD and two cassette — incorporate a Tuner Timer that lets you

program an automatic turnon time for any radio station so that you won't miss a traffic report, a favorite news show, a big ball game, or a music special.

#### **AIRING THE MET**

The Texaco-Metropolitan Opera International Radio Network begins the 1996-97 season of live broadcasts from the Met on December 14 with a performance of Donizetti's L'Élisir d'Amore and continues for twenty Saturday afternoons through April 26. This is the 57th season that Texaco has funded the Met on radio, the longest sponsorship in broadcasting history. Texaco also underwrites the Met on PBS TV and will present a telecast of Mozart's Cosi Fan Tutte on December 30.

#### EXTRA! BUYER'S GUIDE!

The 1997 edition of STEREO REVIEW's Stereo Buyer's Guide is now available on newsstands, or it can be ordered for \$7.95 (includes \$3 shipping and handling) by calling 1-800-544-6748.

#### **MUSICALS, BOOKS**

Recordings from the British company Jay Productions are now being released in the U.S. and Canada. Featured are new all-digital recordings in Dolby Surround of such musicals as Oliver!, Grease, Guys and Dolls, Jesus Christ Superstar, and Kiss Me, Kate. Most feature British casts, and Queen guitarist Brian May appears in The Rocky Horror Show as Eddie, the role made famous by Meat Loaf.... In the 1996 Musical of the Year contest held in Denmark by the audio manufacturer Bang & Olufsen, Craig Bohmler of Los Gatos, California, won first prize with his Enter the Guardsman. Paul Johnson of Seattle finished third with Red Red Rose. In its stores worldwide, B&O will sell CD's and a video of



#### IN SEARCH OF THE INVISIBLE SPEAKER

In September we reported on the HydroSonic Interactive Bass Sound System, a subwoofer from Sound Related Technologies that uses a water-filled chamber to reproduce sounds far below the range of human hearing. Now there's a speaker technology in the wings called the HyperSonic Sound (HSS) system, said to produce sound from thin air. No bulky boxes. No drivers. Instead, sound is reproduced by a couple of pea-size piezoelectric crystals with small cones attached to them that radiate ultrasonic beams. Sound is created in midair where the beams meet.

Describing his patent-pending invention as a new paradigm in sound reproduction that will make existing speakers obsolete, Dr. Elwood "Woody" Norris, chairman of American Technology Corp. of Poway. California, says: "We employ ultrasonic waves in such a way that they interact in space and produce audible sound. Traditional loudspeakers mechanically beat the air in a piston-like action to inefficiently produce sound and in the process produce many forms of distortion. HSS technology creates sound with ultra-wide dynamic range and ultra-wide frequency response." Norris says the HSS system, which is compatible with existing audio equipment, has sparked interest among nearly fifty companies, including a known speaker firm that wants to license the technology. For a rundown of the invention, visit ATC's World Wide Web site at www.atcsd.com.

the contest as presented on Danish TV.... Amadeus Press has published Jussi (\$39.95) by Anna-Lisa Bjorling and Andrew Farkas, a biography of the Swedish opera star Jussi Bjorling. Meanwhile, Simon & Schuster has published Philip Norman's biography of the influential early rocker Buddy Holly, *Rave On* (\$24).



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Get a bigget rush from your music. Only Sony headphones can capture the spirit and sound of the original recording. That's because no one knows more about sound reproduction than we do. And no one applies that technology to headphones better. We make more headphones than any other manufacturer—from noise cancellation to wireless. There's only one way to make your favorite rock livelier. Sony headphones. WITH OUR NEW SYSTEM, YOU CAN BASICALLY CONTROL EVERYTHING IN YOUR HOUSE BUT YOUR KIDS. But oon't think we're not working on it.

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Welcome to Stage 3, A new line of Kenwood home products designed to simplify the way people interact with their technology. The Stage 3 Home Theater Controller (KC-Z1) features Dolby\* Digital (AC-3) and

THX<sup>®</sup> Cinema for surround sound. But the heart of Stage 3 is the portable TouchPanel. This <u>intultive graphic interface le</u>ts you do every-



thing from adjusting the volume to cueing up your Laser Disc from any room in the house. The TouchPanel puts the power over technology back where it beigngs. In the hands of the

> people. For the nearest dealer, call 1-80C-KENWOOD or check ou: our new web site at www.kenwoodusa.com.



HOME AUDIO, CAR AUDIO, COMMUNICATIONS CRCLE NO. 22 ON READER SERVICE CARD



Pioneer's PD-F605 25-disc CD changer. Onkyo's DX-C730 6-disc carousel changer, and California Audio Labs' lcon MkII CD single-disc player represent some of the options you have if you're shopping for a CD player. See page 66 for more.

Photograph by Dave Slagle

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# Stereo Review

## December 1996

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POLICE INCIDENT REPORT: Officers responded to call from concerned citizen regarding shocking sounds and deep bass vibrations emanating from house next door. Further investigation revealed source of sound to be occupant's state-of-the-art Pioneer Advanced HomeTheater System. After questioning, officers learned that Dolby Digital (AC-3<sup>TD</sup>) technology provides sturning sound reproduction with 6 independent digital channels) Supercharged audio and video performance

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was traced to Pioneer LaserDisc player. Cinema Wide System projection monitor identified as source of razor-sharp visuals. Officers concludec Pioneer Advanced HomeTheater System equal to or better than movie theater experience. Office s decided to confiscate the system as evidence and place it in precinct break room until further notice. END OF REPORT. Call 1-800-PIONEER for a dealer near you. Pioneer Advanced HomeTheater. You're surrounded.

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## LETTERS

#### **Dolby Digital Chips**

In the October test report on the Kenwood KC-Z1 home-theater controller. David Ranada reported that Zoran's Dolby Digital (AC-3) chip does not meet THX specifications for surround-channel noise. Does the Motorola DSP56009 chip suffer from this same problem? Are any manufacturers of Dolby Digital components currently using the Motorola chip? ROBERT B. KANE Ft. Thomas, KY

The Zoran chip did not meet THX specs for the surround-channel noise-reduction calibration point in the Dolby Pro Logic + THX mode. The +6-dB error we found has less to do with noise performance than with possibly audible level-dependent frequency-response errors in the surround channel. In fact, the previous sentence in the test report refers to "the low noise levels we measured." We haven't yet tested a processor employing the Motorola AC-3 decoder chip, although it is beginning to appear in components from many manufacturers.

#### **Surround Shootout**

I enjoyed Tom Nousaine's comparison of home-theater speaker systems ("Surround Shootout" in September) very much. Unfortunately, the Cambridge SoundWorks Ensemble speaker system he tested was not set up properly, which I suspect caused his expert listeners to evaluate it less favorably.

I bought one of these systems several months ago. After considerable experimentation with the satellite speakers in various positions, I concluded that the high-frequency and midrange switches on the backs make an important difference in the sound. In Mr. Nousaine's test the switches were left in the "normal" position, which would appear to make sense. But that position is only appropriate when the speakers are next to a wall. If they are on stands away from walls, as in his test, the midrange switches should be in the "increase" position, and I also tend to prefer the high-frequency switches in the "decrease" position.

These speakers produce a very crisp, clear sound, and when they are away from the wall, positioning the switches as I described removes the harshness from the sound and provides very lifelike reproduction.

TOM SLOCOMBE Orange, CA

Tom Nousaine replies: I applaud Mr. Slocombe's efforts to improve sound by experimenting with speaker placement. In the section of the Ensemble owner's manual that discusses the use of these switches, there is no mention of speaker placement. In my listening room (note the emphasis), with the speakers on stands, the sound was most natural when the switches were in their "normal" positions. But it's important to remember that the sonic character of any speaker is heavily influenced by the size, shape, and absorption characteristics of the listening room as well as where it is placed in that room. In other words, there's no right or wrong position for those switches — it's what sounds best to your ears that counts.

#### **DVD** Resolutions

I have been hungrily following the progress of DVD technology for months. In almost every article I've read DVD is touted as having about 600 lines of resolution, but in "DVD's First Act" in October Joseph Palenchar stated that it will have 480 lines. What happened to the other 120 lines? Is this a new type of royalty or tax we have to pay? KARL HUDDLESTON Orem, UT

Horizontal resolution of DVD movies encoded with MPEG-2 has been expressed by manufacturers as either 720 pixels per line or simply as 480 to 500 lines; both mean the same thing. In comparison, the laserdisc is capable of 400 to 425 lines of resolution.

After reading your articles on DVD in the October issue, which described the highresolution pictures that these marvels of technology will reproduce, I have one question: What kind of television set (if one exists) will I have to purchase to appreciate the high-quality picture? KEN LESCHUK Winnipeg, Manitoba

You should always buy a TV with greater resolution than the video source you're watching. For DVD that means 500 horizontal lines or more. Most modern big-screen TV's can achieve this resolution, so you may not need to buy a new one as long as your present set has composite- or S-video A/V inputs. Serious videophiles may wish to upgrade to a display compatible with the "component-video" output to be featured on some high-end DVD players (as noted in "DVD's First Act" in October).

#### **Cinepro Amplifier**

The letter from Stephen Shenefeld of THX in September calls Cinepro's assertion that our Model 600X amplifier is based on a THX professional theater amp "misleading."

As Julian Hirsch correctly stated in his July 1996 review of the 600X, the amplifier is "a modifed version of a THX-certified professional amplifier" used in movie theaters worldwide. It is, in fact, identical except for a dozen components on the circuit board and the face panel, which was upgraded to make the unit suitable for home use. Furthermore, neither Mr. Hirsch nor Cinepro ever claimed that the 600X was certified by Lucasfilm Home THX.

Since the THX qualification specifica-



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satellite speakers, an in-line volume control, and a subwoofer. The subwoofer cabinet encloses a  $6\frac{1}{2}$ " woofer, a 3-channel amplifier, an electronic crossover and a control panel with two inputs and a bass level control. The satellite cubes are supplied with desktop stands, plus a velcro kit that lets you attach the cubes directly to a computer monitor.

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311 Needham Street, Suite 102, Newton, MA 02164 Fax: 617-332-9229 Canada: 1-800-525-4434 Outside U.S. or Canada: 617-332-5936 \* The subwoofers of both systems are designed to be placed on the floor, not on the same surface as the skallite speakers. 0: 1995 Cambridge SoundWorks.



tions are classified, neither Cinepro nor Mr. Hirsch has access to them to verify if a given amplifier performs up to (or exceeds) those specific performance parameters. A manufacturer must pay an "evaluation fee" to Lucasfilm, and then, if approved, must further pay a sum of money for every amplifier it sells that bears the THX logo. These expenses, of course, are ultimately passed on to the consumer. I feel that consumers should be able to rely on an independent assessment of the amplifier's performance, such as the one published in STEREO REVIEW.

I object to Mr. Shenefeld's implication that Cinepro was in any way intentionally misleading the public with its simple statement of fact regarding the professional heritage of this amplifier. ERIC ABRAHAM President, Cinepro Theater Products San Francisco, CA

#### **MiniDisc Maven**

With reference to the letter about MiniDisc (MD) from Patrick Maraj in October: While there has not been a whole lot of activity in the format in the consumer area, both Sony and Denon are doing quite well with their professional lines. Many broadcast stations and production houses are replacing openreel tape and "cart" machines with MD machines. Mr. Maraj can rest assured that blank discs will be available for some time.

The unfortunate fact, however, regarding

the consumer lines is that some publications jumped on the "reduced data" bandwagon, causing people to believe that the system was badly flawed and that cassettes actually sounded better. Compounding that, nobody in the retail stores ever bothered to learn how to use MD equipment. To this day I have yet to see one hooked into a dealer's system and a knowledgeable salesperson at hand to demonstrate the superb (perceived) sound and the super editing system — which, by the way, makes the portion you edit out available to record on again. Try *that* on your cassette deck!

RANDAL W. HOWARD Tucson, AZ

#### **Speaker Surrounds**

Many thanks to Dennis Eichenberg for his September article on home replacement of foam speaker surrounds. He encouraged me to tackle repairing the midranges and woofers in my four-way systems. I had considered having them reconed but wanted to retain the magnetic properties of the voice coils and the advanced design of the cones themselves. Since the manufacturer no longer carries replacement drivers for these 18year-old speakers, refoaming was the obvious solution.

The project was easier than I had any right to expect. The kits from Simply Speakers included clear but comprehensive instructions. The cones and coils came out perfectly aligned, without the aid of shims, and the sonic performance is outstanding.

Speaker refoaming is not a "retreads vs. new tires" issue, as suggested by Glenn and Cathy Satin in October "Letters." It is the only way to restore the original performance of high-end speakers when the surrounds deteriorate and replacement drivers are unavailable. JOHN KELLAM Dallas, TX

#### Corrections

By an oversight, Julian Hirsch did not measure the sensitivity of the Klipsch Rebel speaker system he tested in October. Klipsch rates the sensitivity of the satellite speakers in the system as 93 dB sound-pressure level at 1 meter with 1 watt input, and we have no reason to suspect that Mr. Hirsch's measurement would have deviated significantly.

The October test report on the Energy C-2 speaker neglected to give the size of this model's woofer cone, which is  $6\frac{1}{2}$  inches.

The model number of Fisher's Studio 150 CD changer is DAC-1506, not DAC-1560 as in November "New Products."

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



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Close your eyes, open your ears and the speakers disappear. Become one with the deep, seamless soundstage throughout the entire listening area. No matter where you are, you're there.

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## NEW PRODUCTS



#### **A NAKAMICHI**

The CA-1 A/V preamplifier from Nakamichi has an advanced 24-bit Motorola DSP56009 chip for Dolby Digital and Pro Logic decoding. Features include 20-bit D/A converters for all six channels, a proprietary low-noise attenuator, and full-function and basic remote controls. To reduce potential interference, Dolby Digital RF signals from laserdisc players are preprocessed externally with the optional DE-1 demodulator. Price: \$2,300; demodulator, \$450. Nakamichi, Dept. SR, 955 Francisco St., Torrance, CA 90502. • Circle 120 on reader service card

#### KLIPSCH

Klipsch's architectural speakers include round in-ceiling (IC) and rectangular in-wall (IW) models. All are two-way systems, with 1inch horn tweeters in the IW's and 1-inch, swiveling silk-dome tweeters in the IC's; woofers are carbon-graphite/polypropylene. In-walls shown are the IW-250 (two 61/4-inch woofers, \$470), IW- 150 (6¼-inch woofer, \$300), and IW-50 (5¼-inch woofer, \$220), and in-ceiling models are the IC-800 (8-inch woofer, \$399), IC-650 (6½-inch woofer, \$280), and IC-525 (5¼-inch woofer, \$220); all prices per pair. Klipsch, Dept. SR, 8900 Keystone Crossing, Suite 1220, Indianapolis, IN 46240. • Circle 122 on reader service card



#### KENWOOD 🔻

Kenwood's KR-A5080 is the first stereo receiver to feature SRS 3D sound processing, which is said to create a wider panoramic soundstage from just two front speakers. Rated at 100 watts per channel, the KR-A5080 offers discrete power-output devices (with a speaker-impedance se-

lector to optimize the circuit for a 4- or 8-ohm load), a motorized volume control, six audio inputs (including phono), and a quartz-locked digital AM/FM tuner with forty presets. Price: \$180. Kenwood, Dept. SR, P.D. Box 22745, Long Beach, CA 90801. • Circle 121 on reader service card



#### TOSHIBA 🕨

The SST6200 speaker is the centerpiece of Toshiba's first-ever home-theater speaker suite, engineered by Toshiba and Linaeum. Designed for use in all four corners of a Dolby Digital system, the 32-inch two-way tower features Linaeum's 360° tweeter and a specially braced 61/2-inch polypropylene woofer in a tuned-port bass-reflex cabinet. Frequency response is given as 40 Hz to 20 kHz ±3 dB, sensitivity as 89 dB, and power handling as 100 watts. Price: \$750 a pair. Toshiba, Dept. SR, 82 Totowa Rd., Wayne, NJ 07470. Circle 123 on reader service card



## NEW PRODUCTS

#### JENSEN |

Jensen's RS 6525Cp two-way car component speaker system, in its high-performance Nitro series, features 61/2-inch polypropylene woofers with butyl foam surrounds and matching 1-inch dome tweeters that swivel in their mounting brackets to optimize soundstaging. Encased crossover



#### PANASONIC

Panasonic's TZ-DBS10 Digital Satellite System includes an 18-inch dish antenna with singleoutput LNB, a receiver, and a universal remote. The receiver has two sets of A/V outputs and one S-video output. Its on-screen program guide displays five channels per page; information changes as you scroll. A fourevent scheduler assists VCR recording. A step-up system, the TZ-DBS20, offers a dual-LNB dish, one-touch recording, and an advanced graphical interface. Prices: TZ-DBS10, \$650; TZ-DBS20, \$750. Panasonic, Dept. SR, One Panasonic Way, Secaucus, NJ 07094.

• Circle 127 on reader service card

modules and black metal grilles are supplied. Bandwidth is given as 35 Hz to 26 kHz, sensitivity as 91 dB, impedance as 4 ohms, and power handling as 60 watts. Price: \$160 a pair. Jensen, Dept. SR, 25 Tri-State Intl. Office Ctr., #400, Lincolnshire, IL 60069. • Circle 124 on reader service card

#### **V MARANTZ**

The Marantz RC-2000 universal A/V remote can control an A/V amp or receiver, a TV, and eight source components. The 81/2-inchtall, fifty-six-key infrared remote has an LCD screen that allows customized button labels for each component; up to thirty-two functions can be programmed. Macro keys execute up to twenty commands with one push. The RC-2000 comes programmed for Marantz A/V and Thomson DSS components but can be taught to operate other brands. Price: \$250. Marantz, Dept. SR, 440 Medinah Rd., Roselle, IL 60172. · Circle 125 on reader service card





AriMex CD wall cabinets hide your discs behind a hinged metal picture frame that swings out to reveal a particleboard cabinet finished in almond-colored melamine. Acrylic CD holders allow front-viewing of one disc and swing out for a side view of five more. The cabinet/frame

#### **WYRYAD**

Myryad's British-designed MI-120 integrated amplifier (top) delivers 60 watts per channel into 8 ohms. It has six line-level audio inputs, a proprietary high-current power amplifier said to be capable of 25ampere peaks, and a remote control. The volume control and the 1/4-inch-thick front panel are



protrudes 43/8 inches from the wall. Three sizes store forty-eight CD's (shown, \$300), seventy-two CD's (\$330), or ninety CD's (\$400). AriMex Productions, Dept. SR. 12235 S. 44th St., Phoenix, AZ 85044; phone, 1-888-205-6030; www.arimex.com. Circle 126 on reader service card

machined aluminum. The MA-120 power amp (bottom) is identical to the power amp in the MI-120, making it a suitable mate for biamping. Prices: MI-120, \$899; MA-120, \$799. Distributed by Audio Influx, Dept. SR, P.O. Box 381, Highland Lakes, NJ 07422. · Circle 128 on reader service card



## NEW PRODUCTS



#### LITTLEARTH 🕨

Littlearth's Rock-N-Road CD holder, like all of the company's products, is handcrafted from a variety of recycled materials such as street signs and tires. The wallet-style Rock-N-Road carries and protects twelve CD's and their program booklets by wrapping them in a recycled

#### V QUPIX

The Qupix QE-2400 car graphic equalizer has a removable, gooseneck-mounted control head that gets wired to a remotemounted black-box processor. Seven frequency bands at 63, 125, and 330 Hz and 1, 3.3, 6.3, and 15 kHz offer 10 dB of boost or cut. Other features include a large LCD (switchable green/amber), **MONITOR** 

Monitor's Reference 703PMC speaker has a proprietary 61/4inch woofer and a 1-inch tweeter made from an aluminummagnesium alloy that's said to improve midrange clarity by eliminating cone breakup. The 34-inch-tall bass-reflex tower is finished in wood veneer. Frequency response is rated as 30 Hz to 30 kHz ±3 dB. Price: \$1,999 a pair in black oak, \$2,299 in mahogany. Monitor Audio, distributed by Kevro, P.O. Box 1355, Buffalo, NY 14205; www.monitoraudio.com. Circle 129 on reader service card

license plate. The flap that holds it closed is recycled rubber, and the removable carrying strap is fashioned from the innertube of a truck tire. Price: \$42. Littlearth, Dept. SR, 2211 Fifth Ave., Pittsburgh, PA 15219; www.littlearth.com. • Circle 131 on reader service card

five spectrum-analyzer modes, six preset EQ curves, and a subwoofer low-pass line output. The control head measures 6 x 4½ x 1¾ inches. Price: black control head, \$269; woodgrain head, \$289. Qupix, Dept. SR, 116 County Courthouse Rd., Garden City Park, NY 11040. • Circle 132 on reader service card





#### 🔺 ARIZONA TUBE AUDIO

The NF-1 from Arizona Tube Audio is a solid-state notch filter for taming unwanted low-frequency room resonances. The notch frequency for each channel can be varied continuously from 40 to 120 Hz with attenuation of up to 12 dB. A bypass switch and goldplated RCA inputs and outputs are supplied, as are an anodized aluminum front panel (to protect the control settings) and a test CD. Power is provided by a wall transformer. Price: \$195. Arizona Tube Audio, Dept. SR, 688 W. First St., Suite 4, Tempe, AZ 85281; phone, 602-921-9961. • Circle 130 on reader service card



#### JAMO 🕨

Jamo has updated its Model 707 three-way speaker and rechristened it the Model 707i. The 403/4-inch-high tower uses two 8-inch woofers, two 5-inch midranges, and a 1-inch dome tweeter. The woofers are mounted inside the bass-reflex cabinet in a coupled push-pull configuration. Low-frequency limit is given as 35 Hz, impedance as 4 ohms. The 707i comes with a glass top and rounded side panels in either black or mahogany. Price: \$1,598 a pair. Jamo, Dept. SR, 1177 Corporate Grove Dr., Buffalo Grove, IL 60089. Circle 133 on reader service card



## NEW PRODUCTS



### A CAMBRIDGE

The MicroWorks powered multimedia speaker system from Cambridge SoundWorks combines two magnetically shielded 4-inch-cube satellites and a bass module containing a threechannel, 66-watt amplifier. The satellites, in charcoal or computer beige, each have a 3-inch longthrow driver. The bandpass bass enclosure measures 171/2 x 9 x 8 inches and houses a 6<sup>1</sup>/2inch driver. The amp's two stereo inputs mix together for simultaneous play, and a basslevel control is provided. Price: \$349. Cambridge SoundWorks, Dept. SR, 311 Needham St., Newton, MA 02164; phone, 1-800-367-4434: www.hifi.com. · Circle 134 on reader service card

#### TIM T

The Iconn connector system from MIT allows its MITerminator speaker cables to be easily fitted to most receivers, amplifiers, or speakers. Compatible MITerminator cables are terminated with a pin connector that mates with the spring-loaded terminals found on many receivers and small speakers. A threaded section on each pin accepts other Iconn connectors, including regular banana plugs and economy, regular, and large spade lugs. The gold-plated connectors are sold in packs of four. Price: \$9.95 to \$25. MIT, Dept. SR, 13620 Lincoln Way, Suite 320, Auburn, CA 95602. · Circle 135 on reader service card





#### A RCA

RCA's RV3798 A/V receiver has analog line-level inputs for a Dolby Digital 5.1-channel decoder; Dolby Pro Logic and Hall processing modes are on board. The receiver is rated for 40 watts each to front left, right, and center speakers and both surrounds. It has a thirty-preset AM/FM tuner,

#### MERIDIAN 🕨

The Meridian DSP5500 three-way speaker accepts only digital inputs. It contains digital signal processors for filtering and room equalization, as well as independent D/A converters and 75-watt amplifiers for each of its four drivers: a pair of 8-inch woofers, a 61/2-inch midrange, and a 1-inch dome tweeter. The 43<sup>1</sup>/<sub>3</sub>-inch-tall acoustic-reflex cabinet is built of MDF between steel plates that provide damping and magnetic shielding; wood veener bonded to the removable outer plates allows for a change of finish. Price: \$10,750 a pair. Meridian, Dept. SR, 3800 Camp Creek Pkwy., Bldg. 2400, Suite 112, Atlanta, GA 30331. · Circle 137 on reader service card

four audio inputs, three video inputs, and two line-level subwoofer outputs. Other features include an on-screen display and a universal remote. Price: \$599. RCA, Thomson Consumer Electronics, 10330 N. Meridian St., Indianapolis, IN 46290. • Circle 136 on reader service card





#### ALLSOP

Allsop's SideTracks wireless speaker system includes a 900-MHz transmitter said to send stereo signals within a range of 150 feet. The wedge-shaped speakers measure 81/4 x 6 x 51/2 inches and can be oriented horizontally or vertically. Each contains a 4-inch driver powered by a 5-watt amplifier with its own on/off switch and volume control. Bass boost is also provided. The speakers can run from either AC power or C-cell batteries; a recharger for Ni-Cd cells is built in. A Signa-Lock circuit is said to allow easier tuning and reduce drifting. Price: \$279. Allsop, Dept. SR, P.O. Box 23, Bellingham, WA 98227; www.allsop.com/info. • Circle 138 on reader service card



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

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

#### What Is MovieWorks?

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

#### Main Speakers.

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

#### The Center Speaker.

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

#### HOW DOES MovieWorks COMPARE TO THE COMPETITION?

	DIPOLE SURROUND SPEAKER?	WOOFER SIZE	SUBWOOFER POWER	PRICE			
CAMBRIDGE SOUNDWORKS	YES	12"	140 WATTS	\$1,299†			
POLK (M5, M3II, CS250S, PSW300)	NO	10"	125 WATTS	\$1,499			
BOSTON ACOUSTICS (Micro90, 90X, 90C)	NO	8"	75 WATTS	\$1,399			
KLIPSCH (KSS3, KSS2, KSS1)	NO	6.5"	50 WATTS	\$1,199			
Price includes \$100 Bonus Dollars good towards any product in the Cambridge SoundWorks catalog.							

#### The Surround Speakers.

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

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

Home Theater magazine-3/96

#### The Powered Subwoofer.

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

#### \$100 Bonus Dollars & Satisfaction Guaranteed.

At \$1,299, we think MovieWorks is the ideal home theater sound system for people who aren't willing to compromise on performance. As an introductory offer, MovieWorks comes with \$100 Bonus Dollars for use towards the purchase of anything in our catalog!"

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

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

Stereo Review-9/96

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## AUDIO Q & A

Salvaging Scratched CD's

Several of my CD's have scratches on their playing surfaces. Nothing happens when I play them at home, but some are prone to skipping or mistracking in my car player. Is there anything I can do to remove the scratches, or will the discs have to be replaced? PAUL DI GIANFRANCESCO Brunswick, GA

The skipping and mistracking may have nothing to do with the scratches. Some discs simply misbehave in some players. I've heard various explanations — the pitch of the track of pits is too fine, or the pits themselves have difficult shapes — but nothing seems to cover all cases. Replacing the disc may help if the replacement turns out to be from a different manufacturing batch.

On the other hand, the scratches you describe could indeed be causing the problem. If so, there are a number of proprietary treatments on the market designed to mitigate the effect of scratches, either by polishing them out or by filling in where polycarbonate has been lost. They're worth a try, but don't expect miracles.

#### **The Third Speaker**

The stereo system in my main listening room has the two speakers wired to the left and right amplifier channels in conventional fashion. I also have an extra speaker in another room that is driven by the second speaker outlet of one channel of my receiver. Is this arrangement likely to harm my receiver or anything else? A. OZOLS Sun City West, AZ

As long as the impedances of the speakers are high enough that they don't present a problem load to your amplifier, your hookup should work. If you play music in both rooms simultaneously, you may find that you have to tweak the balance control to equalize the levels of the speakers in your main room. Also, unless you switch the receiver to mono, you'll get only one channel's worth of information in the remote location. Mono operation is optimal in the room with one speaker, but you'll lose stereo in the main room, too. That might still be okay, however, if you listen in only one room at a time; you can always switch back to stereo when you listen to the main system.

#### **Economical Upgrade**

I would like to upgrade my stereo system for home-theater operation, but I don't want to give up my existing integrated amplifier and speakers for regular music listening. Instead, I plan to buy an inexpensive Dolby Pro Logic receiver that has full amplification for all channels but also line outputs for the front left and right. I will feed the existing amplifier from these outputs and use only the receiver's internal center- and surround-channel amplifiers to power those speakers. To listen to music, I'll need to turn on only the main system; for movies, I'll switch on both. Does this sound like a reasonable arrangement? KIM S. SZE Los Angeles, CA

A lt sounds like a sensible, economical plan to me. There are outboard processor/amplifier combinations that would do exactly what you want with no waste of am-



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Stereo Sound

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plifier channels, but they may be more expensive than the sort of receiver you plan to buy. The only caution I would make is that the center-channel amplifier in the receiver you buy should have a rated output somewhere close to that of your existing amplifier. And, as always, the speaker you choose for the center should be a good tonal match for your present main speakers.

#### **Confused About THX**

*I've seen a few recorded movies that display the THX logo, but I'm having a hard time understanding what THX is. These films sound pleasing on my Dolby Pro Logic receiver, so is THX part of Dolby Surround, or Dolby Digital (AC-3), or both? Do receivers bearing the THX logo contain Dolby Surround decoders?* JEFF LIESE Modesto, CA

A l realize it's hard to keep straight, but there are *two* separate consumer product areas to which Lucasfilm applies the THX designation. When a laserdisc or videotape exhibits the logo, it means that the film-to-disc or film-to-tape transfer of the movie meets a set of rigid technical standards developed by Lucasfilm. THX discs, in particular, carry premium prices, but they do offer the cleanest, sharpest picture quality available to consumers (at least until DVD really gets rolling). All such discs are encoded in Dolby Surround (THX is *not* a separate surround-encoding system), and more recent titles have Dolby Digital (AC-3) soundtracks as well.

When applied to hardware, THX signifies that a surround-sound component meets a certain set of performance standards designed to recreate in the home the kind of sound that movie producers hear in mixing soundtracks for playback in movie theaters. The system was built around Dolby Pro Logic decoding from the start, although THX's developers added some wrinkles not required by Dolby. There are now similar THX standards for Dolby Digital decoding and playback. For a true THX home theater, all the components in the chain, including the processor, amplifiers, and speakers, must be THX-certified.

#### **Ubiquitous Equalizing**

I use an equalizer to enhance the sound of my cassette deck, but I would like to use it to balance the sound of my other components as well — tuner, turntable, amplifier, and so forth. How do I wire the equalizer so that it will work with everything?

> DON L. DIROSA Morrisville, PA

Generally, the farther along in the audio chain you insert the equalizer, the more components it will affect. You didn't mention whether your amplifier is an integrated unit or whether you have a separate preamplifier and power amplifier, but if it's the latter, you need only insert the equalizer between those two components to be able to EQ the preamp output on its way to the power amp. This would allow you to tweak every source connected to the preamp. Similarly, if you own an integrated amplifier, it might have pre-out/main-in jacks into which the equalizer could be inserted (pre-out to EQ-in, EQ-out to main-in) or else a special processor loop you could use.

There are a number of other options, however. If the equalizer has its own tapemonitor jacks, you can connect it in your preamplifier's tape loop and connect your tape deck to the equalizer. Alternatively, if you have two tape-monitor loops on your preamp, you can attach the equalizer to the second loop; for non-tape sources, you switch in the second loop alone, as if you were "recording" to it and monitoring the output. For tape playing, you can use the preamp's switching to "dub" from the existing tape deck to the equalizer as though it were another tape deck; most preamps and receivers with two tape loops will allow you to do this. Chances are, one of these methods will work for you.

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

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#### INTRODUCING THE DIE-CAST ALUMINUM MICRO90 SYSTEM FROM BOSTON ACOUSTICS.

Regardless of your musical leanings, the new Boston Micro90 will alter your view of subwoofer/satellite systems. One reason: The satellites are die-cast from an aluminum alloy, creating a housing of incredible strength and rigidity. So all of the speaker's energy is projected as pure, clean acoustic output instead of being wasted as cabinet vibration. That's how a Micro90 satellite, which fits in the palm of your hand, can fill a room with astonishing sound. Its anodized aluminum tweeter with AMD handles lots of power, yet reproduces highs with virtually zero distortion. And its optional swivel-mount pedestals make for simple shelf or wall mounting. The Micro90's powered subwoofer, with its clean 75-watt amp and 8-inch DCD bass unit, produces enough bass to satisfy fans of both Ozzy and Offenbach. Best of all, the Micro90 is available in a complete home theater package, with a matching die-cast center channel and your choice of direct or diffuse-field surrounds. Hear the Micro90 at your Boston dealer.

This Micro90t Home Theater Package includes: Two die-cast satellites; a die-cast, sonically matched Micro90c center channel; a 75-watt powered subwoofer and a pair of VRS diffuse-field surrounds (available separately).



. 300 Jub lee Drive, Peabody, MA 01960 (508) 538-5000. www.bostonacoustics.com Dolby is a registered trademark of Dolby Laboratories, Inc. THX is a registered trademark of Lucasfilm Ltd.



SIGNALS KEN C. POHLMANN

## Escaping the Ivory Tower

ake no mistake about it. I count my blessings every day. As a tenured college professor at the University of Miami I have access to fabulous resources. My office has a test bench with sophisticated measuring equipment, my stereo system is well stocked with the latest offerings, on loan from the manufacturers. My multimedia computer system is plugged into the Internet via a fiber-ontic connection that's lightning fast. Just next door is a million-dollar recording studio with a mixing console the size of a pocket battleship, two twenty-four-track digital recorders, video and CD recorders, and sound chambers that are whisper quiet. Also next door is a recital hall that seats 150 as well as a concert hall that seats 600. At almost any time of the day I can step inside to listen to a rehearsal, or in the evening attend a concert, of music

All of that is really nice, and I sincerely appreciate it, but it makes me feel bad not for me, but for *you*, the reader. The problem is that as I've managed to accumulate knowledge and experience, I've also accumulated privilege. The knowledge and experience, I hope, have been beneficial for readers. They've enabled me to teach theory and applications, accurately review new products, describe ideas and trends, express skepticism, and generally give you an informed opinion about all things audio. Those activities can benefit from my many resources, and I can pass along a wider world-view.

Still, the privilege is a problem. When I started my career, I was in the same boat as everyone else. Nobody knew me. Nobody returned my calls. It was difficult to get information when researching a topic or a potential purchase. If I wanted a piece of gear, I had to go out and buy it.

#### It's too easy for me to forget how tough it is to look at four different A/V receivers and try to decide which one to buy — with my own hard-earned cash.

ranging from Miles to Mahler. Nearby is a library with two million volumes, as well as computer, engineering, and physics laboratories. All of that is perched on the edge of a blue-water lagoon surrounded by palm trees.

As a journalist, I get the red-carpet treatment. Every day my mailbox is filled with press releases describing all the latest technical breakthroughs. Consumerelectronics manufacturers are always eager to visit (particularly in the dead of winter) and drag me out to Miami Beach for dinner. If I'd like to try out a piece of audio equipment, all 1 have to do is pick up the phone and ask for a ninety-day loan. If I'm reviewing a piece of equipment and something isn't quite right, the FedEx carrier shows up the next day with a replacement. I use exotic vacuum-tube power amplifiers as door stops and car CD head units as paperweights, and 1 currently have no fewer than three satellite dishes on the roof, aimed at three different locations in the southern sky.

If the equipment proved to be defective, I had to go through hell to get it replaced or repaired. My dial-up network connection was slow. No studios, no concert halls, nothing. In other words, I was an average person.

As my career progressed, life got easier. That was partly a matter of luck, and it was partly because I worked hard to expedite things so that I could do my job better. All of the "luxuries" that I've accumulated are actually resources that help me do my work. Take the three satellite dishes, for example. Direct-broadcast providers are continually upgrading their MPEG-2 encoders, thus delivering continually improving pictures to their customers. If I review one dish one month and another dish sometime later, I have no basis for comparison, because the picture quality of the competition has already changed. With multiple dishes, I can perform direct comparisons and tell you, the reader, what I've seen. Similarly. the piles of equipment, the fast network connection, the access to live music, and everything else can be justified. Without them, in fact, I wouldn't be in these pages.

There's a tremendous potential downside, however. In the same way that a politician in a distant city can become disconnected from his constituency. I can become disconnected from my readers. It's too easy for me to forget how tough it is to look at four different A/V receivers and try to decide which one to buy - a decision made infinitely more difficult when it's your own hard-earned cash on the line. Moreover, it's a whole different deal when the equipment will be part of your life for the next decade, and not overnighted back after ninety days. It's easy for me to forget what it's like to lay down real money for a pair of loudspeakers and hope that they'll sound as good in my living room as they sounded in the dealer's showroom. In other words, it's entirely possible for me to forget all kinds of things that are essential to my true job as a journalist. Not because I try to ignore them, but because to a large degree they have been factored out of the way I experience audio technology.

I suppose that anyone who's successful runs the risk of becoming disconnected. A car-magazine writer who is accustomed to driving Ferraris may have a hard time relating to readers who must drive Dodge Colts. A chairman of an airline who always travels in first class may wonder why customers complain about cramped seating. In other words, precisely because of their position, it can be difficult for insiders to relate to outsiders. To address my particular problem, I have to seek a balance between the access that expedites and improves my work, and the privilege that disconnects me from the readers. Clearly, I could never afford to purchase all the equipment that passes through my hands. Nor can I ignore industry contacts. But I can spend a lot more time considering the serious needs of my readers and finding ways to deliver the information you really want.

value my relationship with readers above all others, including my associations with manufacturers and publishers. Thus, I am re-dedicating myself to serving you. When I say something, whether it sounds smart or stupid, you can believe that I have considered it from both inside and outside positions, and that I am giving you the highest fidelity that I'm capable of. Is that another phony platitude, like Bill Clinton saying, "I feel your pain," or is it something more? I sincerely hope it's something more. I hope that I can continue to deliver on my promise, because if I can't meet your needs then I'm not doing my job. Meanwhile, I promise that I'll be flying coach. I'll even take the middle seat.

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



Micro Reference Series Big theater sound from small, sculpted satellites.

Compact Reference Series Incredible sound from compact speakers.

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

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



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

#### **Boston**Acoustics

#### PERIPHERALS

PRODUCTS AND TRENDS THAT GO BEYOND MAINSTREAM AUDIO/VIDEO

## Surf-Bored? Catch a Page of A/V, Music on the Web

#### BY KEN RICHARDSON

ports, weather. politics. business, travel, health, reference, entertainment — been there, clicked that. And still, the World Wide Web beckons. But what's in it for *us*? We're audio buffs, music fans, home theater thrill-seekers, and after getting the latest from (here comes the plug!) STEREO REVIEW's America Online site (keyword: stereo), we'd like nothing more than to find a few A/V Web pages worth riding out.

Trouble is, it's not easy to find good A/V pages. Sure, there are plenty of

not-so-good ones. Some are permanently "under construction"; others, hopelessly stale, haven't been updated for six months or more. There are A/V pages that are terribly biased, claiming that any product under a certain price is junk. Meanwhile, redundancy is rampant. Some locations masquerading as full-fledged "sites" are nothing more than a small list of links to other sites — or a humble plea like *The "Help Me Fix My Stereo" Page.* And then there are promising sites, such as *The Gadget Guru Online*, that don't yet have very much A/V content but are worth keeping an eye on.

Good music-related sites seem more abundant. Then again, whether we're talking punk rock or pink noise, there are numerous Web pages that, for whatever cyber-reason, are simply untouchable. I'm sure you cannot believe / How often "Cannot Retrieve" / Pops up onscreen: / Those sites unseen!

My mission, therefore, was to find some good A/V and music pages on the Web. And not just good ones but - in the words of Thomas the Tank Engine (later appropriated by Andrew Lloyd Webber, an annoyed Web-ber pointed out) — some really useful ones. Said mission required so many hours of www's that I feared I would succumb to zzz's, and I began to hallucinate about other bad puns. (How about "miles to go before I http"? Or would you believe "the .com before the storm"?) But my mouse and I burrowed through the slashes, and here are the results.

#### The Consumer Electronics Cyberspace Companion

http://www.eia.org/cema/

One of the most obvious choices turns out to be one of the best. This is the Web site of the Consumer Elec-



## Dolby Digital really gives speakers a workout. Luckily, we've had time to train.

#### Boston Acoustics Home Theater Options

Micro Reference Series Big theater sound from small, sculpted satellites.

**Compact Reference Series** Incredible sound from compact speakers.

Lynnfield VR Series Audiophile sound with the full impact of Dolby\* Digital.

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#### INTRODUCING THE NEW DOLBY DIGITAL-READY HOME THEATER SYSTEM FROM BOSTON ACOUSTICS.

When we started working with the specs for Dolby Digital, the new digital home theater format from Dolby Labs, two things were apparent: One, Dolby Digital is nothing short of spectacular. And two, to fully realize its advantages, speakers must work a lot harder than before.

First, Dolby Digital's improved definition means if your front stage speakers aren't tonally matched, your ears will know it. That's why both our Lynnfield mains and center channel speakers use identical VR tweeters and matched midranges for uniform tonal balance and dispersion. So they easily reproduce the dialog clarity and stunning front soundstage effects that Dolby Digital promises.

Another consideration: Since all speakers may be fed bass extending to 80Hz, centers and surrounds must play low. Good thing our VR10 and VR12 center channels and new Lynnfield VRS Pro surrounds were built to handle this very spec. Finally, a subwoofer must cleanly reproduce five discrete bass channels, plus the thunderous LFE (low frequency effects) channel – something our new VR2000 350-watt powered subwoofer can do without breaking a sweat. Get the whole scoop on our new Dolby Digital-capable speaker system. Call 508 538-5000. Just remember to do some stretches before dialing.



300 Jubilee Drive, Peabody, MA 01960 (508) 538-5000. www.bostonacoustics.com Dolby is a registered trademark of Dolby Laboratories, Inc. THX is a registered trademark of Lucasfilm Ltd.



This Lynnfield VR system includes our award-winning VR40 mains and VR12 center channel, plus our new VRS Pro surrounds and VR2000 350-watt powered subwoofer. (This system reproduces 21–20,000Hz ±3dB and an astounding 105dB at normal listening position.)







The Theatersound isThe DSP-A3090 lets you choosesound isfrom 30 sound field modes. FromauditL.A.'s Roxy and New York's Cellar Club, toDSchurches and concert halls around the world.Seven-channel amplification sends 80 watts toeach of the main, center and rear speakers, plus 25watts to both front effects speakers. Analog, video andS-video, plus RF, coaxial and optical digital inputs linkyou to today's and tomorrow's Dolby Surround AC-3 components.

Raise the curtain on a conventional home theater and listen closely. What's missing? • The theater. • Until recently, the expansive acoustic environment that helps give a real movie palace its sense of grandeur just didn't seem possible from a sound system sandwiched between a sofa, a coffee table and a couple of ficus trees. • Decades of Yamaha experience in sound field measuring and processing, custom integrated circuit design and audio microchip fabrication changed all that. And now with the new DSP-A3090 Digital Sound Field Processor, we've introduced unique technology that creates the unmistakable sensation of a first-run theater's acoustic spaciousness, combined with the unparalleled accuracy and dynamic range of Dolby<sup>®</sup> Surround AC-3.<sup>M</sup>

### Now available in convenient take-home size.



Proprietary Yamaha processing techniques maintain the depth, openness and realism the director envisioned when mixing the original soundtrack for the big screen. While also preserving the directional relationships of every sound. So you hear each note – and every squeak, creak, rattle and roar – placed exactly where the director intended. • We call it Tri-Field Processing. And it's made possible by the latest generation of the Yamaha Cinema DSP technology that's kept us at the forefront of home theater for more than a decade. • For the dealer nearest you, call 1-800-4YAMAHA. Or visit us on the web at http://www.yamaha.com • Then listen to the DSP-A3090 and hear the micropresults for yourself. • You may take home a 1200-seat movie theater. But you'll still only have to vacuum under the couch.





at Cinema DSP possible is designed and produced exclusively by Yamaha. Our microprocessors apply the vast library of sound field data we've amassed creating products for audio professionals, both on the stage and in the studio. And they're manufactured with the advanced processes we've perfected through years of experience fabricating our own custom chips.

## Sounds Like A Million. Saves You \$100

Yamaha's flagship DSP-A3090 processor isn't the only way to experience the critically acclaimed realism of Dolby<sup>®</sup> Digital AC-3<sup>™</sup> Surround. Through 1/31/97, you can take home the same kind of excitement-plus big savings-when you add AC-3 to your new Yamaha home theater system. Just buy either of our RX-V2090 or RX-V990 AC-3-ready receiversadd the DDP-1 AC-3 Surround Processor-and get an instant \$100 cash discount. Not to mention a system that will change the way you listen to movies forever. For the dealer nearest you, call 1-800-4 YAMAHA or visit http://www.yamaha.com



## PERIPHERALS

tronics Manufacturers Association (CEMA), and it's loaded with practical information. The home page is divided into eleven departments, including "The News Source" (where I found nearly forty industry reports on topics ranging from home theater to digital radio), "CEMA: A to Z" (all member companies, with links to Web sites), "CES News" (previewing Consumer Electronics Shows internationally). "Product Information" (by overall category, such as audio, mobile electronics, and home theater/specialty audio), and "Policy Watch!" (covering federal legislation). The site is neatly organized and a breeze to navigate.

#### E/Town:

#### The Home Electronics Guide

http://www.e-town.com/

The scope here is wide, encompassing Nintendo and TAD's (that's telephone answering devices - hey, we're not the only industry with a plethora of abbreviations). But there's a lot of A/V stuff, including the hot button "DVD Central," filled with news reports, product previews, background, and "DVD and Its Discontents." The home page's "News" department also has columns and features, such as the informative "Now It's Dolby Digital." "Town Hall" is the place for classifieds, polls, and message boards. And "Library" enables you to search by manufacturer, product category, and article author, with various options for whittling down the field to topics like home audio, home theater, and multimedia.

#### General Home Theater Info/Advice

http://www.stwing.upenn.edu/~bjorn/ ht.shtml

This site, maintained by one Bjorn-Steven Lindgren, is just the ticket if you're wondering about getting started in home theater. Along with a casual but handy glossary and some setup tips, there's fun stuff like "The Bassiest Movie Scenes!" (suggestions welcome), from the submarine crash at the beginning of *The Abyss* to the storm at the end of *White Squall*.

#### **Bo-Ming Tong's Car Audio Page**

http://www.cs.arizona.edu/people/ bmtong/car.html

I know, I know, the title gives you pause: Is this some autophile locked

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away in his garage? Not at all. Tong is an outgoing fellow, and he shares with us his own car-stereo system both in great detail (complete with charts, graphs, and clickable diagrams) and in mostly clear language. He claims to focus on "some basics of crossover theory and practice," but his comments also run to car amps, cables, and other topics. A good page for inquisitive bassheads.

#### Audio-Related Internet, World Wide Web, and FTP Sites

http://www.gnx.com/~danh/info.html

I haven't listed any A/V-company Web sites - nor do I list any recordcompany sites below - because I prefer to stay away from any hint of the f-word (favoritism). But they're there for the browsing. Other than links included in the already recommended sites, how best to search for them all? Feed "audio," "consumer electronics," or "home theater" into AltaVista or WebCrawler, and you'll get zillions of things like Bird Sounds from the Australian National Botanic Gardens and Doing Business in the New Vietnam. Browsing with Yahoo! is usually better, as its home-page topics are more workable for narrowing down your search. Better still is Steve Ekblad of Northbrook, Illinois. The address at the top of this paragraph rewards you with his compilation of links to more than 800 A/V pages, the most comprehensive collection I've seen.

#### The Ultimate Band List

http://www.ubl.com/

This is *the* indispensable rock-music site. Formerly known as *The Web Wide World of Music* and recently snazed up, the *UBL* is a massive catalog of artists that enables you to search for specific acts or to scroll through each letter of the alphabet at leisure. Also provided are impressive listings of record labels, online and broadcast radio stations, clubs, stores, magazines, and e-zines.

#### Pollstar: The Concert Hotwire

http://www.pollstar.com/

There are other concert-related Web pages, but Pollstar's is the hands-down winner for tracking tour itineraries, both national and international. And you can search not only by artist but also by city (and nearby locales) and specific venue. Other features in-

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clude "Artist of the Week" and "Concert Tour Gossip."

#### **Addicted to Noise**

http://www.addict.com/ Stomp and Stammer

http://www.monsterbit.com/stammer/

Here we have, in effect, the Rolling Stone and the Spin of music e-zines. Addicted to Noise was founded by former RS writer Michael Goldberg, and lots of friends are aboard in the site's best section, "Columns." In a recent issue, Greil Marcus wrote on Patti Smith and the Georgia soundtrack in "The Beauty of Bad Singing," Billy Altman stared at The X-Files for the first time, David Was stung Sting in the hilarious "Yuppie Woodstock at Mr. Rainforest's Gig," and Dave Marsh entertained us with his latest epistle, "Tupac and the Fall on the Road to Calvary." Most articles include downloadable art and music samples.

Stomp and Stammer, launched by Long Play Records honcho Steve Pilon and some pals, is a hoot (if a little heavy on some other four-letter words). Recent issues of "The Internet's New-Music Magazine" have offered interviews with Steve Wynn, Nick Cave, and Sebadoh's Lou Barlow. There's a "Bargain Binge" of records for rediscovering ("Tuff Darts!," Tom Verlaine's "Dreamtime"), as well as Chuck Starsky's lively reviews of new discs. You even get cartoons: Maria Schneider's "Pathetic Geek Stories" depicts coming-of-rock-age embarrassments submitted by real guys (trying to impress with AC/DC in a boombox) and gals (shampooing with mayo before a Bryan Adams show).

#### **Classical Net Home Page**

http://www.classical.net/

Maintained by Dave Lampson, this classical-music site is handy for novices (a basic repertory, a CD buying guide, composer information) as well as devotees (a host of reviews and articles). There's a searchable index, and the page is handsomely designed.

here are, of course, many other kinds of music — and you're likely to find nearly all of them on the Web. But space limitations compel me to stop here. Except to say that when you need a laugh break, go find some site-splitting pages like *America's Favorite Classi*cal-Music Bloopers and Celebrating 20 Years of the VCR! And then, please, take a walk and get some fresh air.



 D.B. Keele, Jr., Audio Magazine on the Studio/100



 Andrew Marshall, Audio Ideas Guide on the Studio/80, CC-450, ADP-450

High praise for PARADIGM® REFERENCE SPEAKER SYSTEMS...dedicated to providing the highest standard of technological design excellence, and deliver breathtaking high-end sonic performance!

ith years of design expertise and a state-of-the-art in-house R&D facility, Paradigm engineers and acousticians set out to build the world's finest speakers, regardless of cost! The result is Paradigm Reference...electrifying and eminently satisfying high-end speaker systems that bring you closer than ever to the live event!

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### Inside Definitive's Revolutionary BP2000

Low frequency tuned column

25 mm pure aluminum dome, aperiodic transmission-line tweeter

Low diffraction driver baffle interface......

Complex Linkwitz Riley . crossover network

Front mimor-maged D'Appolito bipolaniamay in non-resonant chamber\_\_\_\_

Massive subwoofer magnes structure

E ectror ic crossover.

Accelerometer optimized cabinet braces

1" thick high density medite from baille\_

Sor opune™≞ben internal dannpening. or gloss cherry andcaps

1" thick rear medite baffle

High definition pure

Muti-layered dampening \_ pads line entre cabinet

17 cm mineral-lilled polymer high-definition bass/micranged ivers

Rear mirronimaged D'Appolito bipolar array in \_\_\_\_\_non-resonant chamber

15" higt-power long-throw pilaminate - colymer subwooter driver

Complete builtin bowered

Gold-plated low-level subvocofer \_\_\_\_\_\_\_nput (for optional use)

> Gold-plated tri-wirable \_\_\_\_\_speaker leve inputs

High-current 200 wat RMS subwooler ampifier

Toroidal transformer

1 1,74" thick high-density \_medite cabinet sidewall

"Definitive's new BP2000 absolutely kills most more-expensive speakers!"

-Brent Butt Tworth Hame Theater Technology

# Julian Hirsch Says, ... I Would Choose These Speakers for Myself.

BP2000 is "the first speaker I have been able to audition in my own familiar surroundings that has given me that special thrill that usually costs ten or more times its price..."

"This slammin' system will probably kill any other you've ever heard or seen." -Brent Butterworth, Home Theater

### **Speaker of the Decade**

The experts agree: Definitive's BP2000s are an amazing achievement! We have literally reinvented the loudspeaker and combined a six-driver dual D'Appolito bipolar array with a built-in (side-firing) 300watt powered 15" subwoofer. (Yes, a complete powered subwoofer built into each speaker!) The result is extraordinary sonic performance beyond anything you've ever heard.

Both music and movies are reproduced with unequalled purity, transparency and lifelike realism. And the astounding high resolution imaging and awesome bass impact totally envelop you in sonic ecstasy.



Definitive's complete AC3\* ready BP2000 Home Theater System is the perfect choice for ultimate music and movie performance. CIRCLE NO. 15 ON READER SERVICE CARD Sec our dealer list on page 44

The Ultimate Home Theater

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

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

## Definitive Technology .

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## Fisher Studio 150 150-Disc CD Changer

### DANIEL KUMIN

ame the next number in this sequence: 6, 10, 7, 12, 18, 5, 3, 24, 25, 50, 60, 100, 200. The answer is 150, the very latest in disc capacity for popularly priced CD changers. The genre started out with six- and ten-disc magazine changers, evolved through five and six-disc carousel machines, and is now blossoming with the latest craze, highcapacity changers that let music buffs store and play their CD collections in one and the same place. While Sony is probably the best-known proponent of this subgenre with its 100-disc changer, and now its 200-disc model, Fisher's original Studio series of 24-disc changers actually broke the high-capacity story about four years ago. Last year the company upped the ante with a Studio changer that holds 60 discs.

Now Fisher is back with the greatly expanded Studio 150 (DAC-1506) changer, which lines up 150 CD's in a vertical carousel that's only a couple of inches larger than the one used in the Studio 24 — an impressive feat of packaging efficiency. Presumably, Fisher's theory is that 150 discs is just right for folks who view 100-disc capacity as too limited and 200-disc capacity as excessive. The big Fisher is about  $7\frac{1}{2}$  inches tall and sports gold-on-black control lettering that's rather difficult to read — white would be better. Alas, Fisher is certainly not the only manufacturer to fall into this cosmetic trap. (In our photo the lettering looks like white-on-black, but it *is* gold. Trust me.)

Otherwise, the Studio 150 is more or less conventionally arrayed, with numerous pushbuttons grouped logically by function (although the discskip buttons are somewhat buried in a group of identically shaped keys). There's even a ten-button alphanumeric keypad on the front panel that provides direct access to discs and tracks, a feature that is often offered only on a CD player's remote control. The changer's blue-and-red display is also fairly standard, except for the large

DIMENSIONS: 7% inches high, 161/2 inches wide, 18 inches deep

WEIGHT: 171/2 pounds

PRICE: \$399

MANUFACTURER: Fisher, Dept. SR. 21350 Lassen St., Chatsworth, CA 91311-2329; telephone, 818-998-7322; World Wide Web, http://www.audvidfisher.com sixteen-character (in two lines) text area for CD title data (more on that later). There's also an electronic, compass-like disc-position indicator.

The Studio 150's most obviously unique feature is its disc-loading system. Instead of a conventional drawer or the kind of manual-load system used in most other high-capacity changers, the Fisher changer sports a vertical loading slot that works like an automotive CD player tilted on its side. Press the load/eject button, and a cylindrical dust shield rotates open to reveal the loading slot. Simply slide the disc into the slot about an inch, and the player gently pulls it in the rest of the way.

Inside, the auto-loading mechanism is a surprisingly simple arrangement of cams and levers. Though cost-saving measures are evident, the Studio 150's construction is quite solid. Most of the CD-player mechanics and electronics reside in a single compact module in the center of the jukeboxlike plastic carousel. On the changer's rear panel are analog line-level outputs and an optical digital port, which can be used to connect the changer to an outboard D/A converter or to a signal processor with digital inputs.

Fisher gives you lots of ways to manage your music. Each disc can be assigned three names: category, artist, and title. Category labels can be chosen from among fourteen factory-set choices like Classical, C/W, Mood, and Rock (there's R/B but no Blues shocking oversight!). or you can create your own sixteen-character categories.

# A Breakthrough! Definitive's New BP2002 Achieves An Impossible Dream."

-Peter Moncrieff, International Audio Review

At \$999 ea., the bipolar BP2002 with dual built-in 125-watt powered 12" subwoofers approaches the ultimate performance of Definitive's reference flagship BP2000.

### **Your Dream Comes True**

When Stereo Review's Julian Hirsch wrote of the BP2000, "...I would choose these speakers for myself," we were thrilled and honored by this highest of compliments. In fact, since its introduction last year, Definitive's top-of-the-line BP2000 has clearly established itself as the most award-winning and highly reviewed speaker of all time.

Now, our newest breakthrough, the BP2002, incorporates similar cuttingedge technologies in order to achieve mind-boggling sonic performance which closely approaches that of our flagship BP2000. And most importantly, the BP2002's significantly lower price and more compact size will allow many more lucky listeners like yourself to own speakers of this ultimate quality level.



Experience sonic ecstasy! Hear for yourself why top high-end guru Peter Moncrieff raved the "BP2002 achieves an impossible dream."

### **Music & Movie Perfection**

The extraordinary BP2002s incorporate bipolar technology, which turns your whole room into a sweet spot with three-dimensional depth and a huge sonic image ideal for music and movie perfection. Truly a unique combination of delicately detailed musicality and totally controlled brute force for your ultimate listening pleasure!

Whether incorporated in a super audiophile stereo music system or combined with matching CLR2002 center channel (\$499 ea.) and our bipolar rears for a truly remarkable AC-3\* ready home theater system, Definitive's magnificent BP2002 will achieve your impossible dream, too.

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Artist and title labels must all be homemade, of course — there are no preloaded entries.

Each time you create a label for a newly loaded disc, you can scroll through all of your previous artist and title entries, copying at liberty into the "file" you're creating. So if you bought a Studio 150 just to house your Mozart collection, say, you'd only have to key in M-O-Z-A-R-T once. Similarly, if your collection consists of 150 different bands' greatest-hits compilations, you could save time by entering "Best Of" just once. The player even automatically alphabetizes every label you've committed to memory, whether they're home-brewed or preset.

All these labor-saving tricks are doubly welcome when you realize that the Studio 150's "keyboard" is the tendigit alphanumeric keypad on its front panel (duplicated on the remote control). The small keys are labeled much like the buttons on a telephone: To enter a "K," for example, you must press the "4" key three times. The < and > keys are used to move the cursor to the next (or previous) letter. It's a tiresome process, though straightforward enough. It would be much easier if you could simply plug in a computer keyboard for data entry, a feature now offered on high-capacity CD changers from Kenwood, Technics, and Sony. But to be fair, with a little practice

### MEASUREMENTS

MAXIMUM OUTPUT 1.25 volts
FREQUENCY RESPONSE (20 Hz to 20 kHz)   pre-emphasis off +0.1, -0.5 dB   pre-emphasis on +0.3, -0.5 dB
CHANNEL SEPARATION   100 Hz 82.3 dB   1 kHz 85.4 dB   20 kHz 61.0 dB
NOISE LEVEL (A-wtd) de-emphasis off81.5 dB de-emphasis on80.8 dB
DISTORTION   at 0 dBFS .0.01%   at -20 dBFS .0.074%
LINEARITY (at -90 dBFS*)+7 dB
EXCESS NOISE (without/with signal) EN16 (16 bits) 14.5/13.5 dB EN20 (20 bits) 31.2/31.0 dB
DEFECT TRACKING (Pierre Verany disc)
IMPACT RESISTANCE (top and sides)B
CUEING TIME   adjacent discs 20 to 22 seconds   max (Disc 1 to Disc 75) 23 to 26 seconds
* decibels referred to digital full scale



I became reasonably proficient with Fisher's data-entry system. And after you've spent hours keying in labels for a batch of CD's, you'll be pleased to learn that Fisher includes a password scheme you can use to protect them.

Another clever feature: The artist/title/category labels assigned to each slot are kept sacrosanct until you use the memory and clear buttons to erase or overwrite them — even if you remove a disc temporarily and play another in its place. One oddity, however, is that you can create entries only when the changer is in stop mode. So if you want background music while you're loading CD's and punching in all those damned characters, you'll have to listen to the radio.

Once your discs are loaded and catalogued, the Studio 150 lets you access them in several ways. You can search the lists — assuming you've been diligent about data-entry — by category, artist, or title, you can use categories to restrict searches by artist. title, or both, and you can use both categories and artists to restrict searches by title. Once a subset of discs is defined, the changer's play, disc-skip, repeat, and random-play operations are confined to those CD's (and the disc-position indicator highlights their approximate locations — cool). And, unlike some of the other high-capacity changers on the market, the Studio 150 is "smart." That is, once its carousel has completed one full cycle, the changer "knows" which slots are empty and won't waste time stopping at them in response to disc-up/down commands.

Another nice touch is that you can

bulk-eject discs by category, artist, or title; in addition, the Studio 150 automatically finds the next empty slot when you hold the load/eject button down for 5 seconds. The shuffle-play mode will randomly select tracks from one or all discs (restricted to a category/title set if you have defined one). And there's a record-edit mode that arranges tracks from a disc or programmed sequence to squeeze as much music as possible onto a two-sided tape cassette. Speaking of programming, the Studio 150 lets you store in memory a sequence containing up to eighty tracks from any loaded discs.

The supplied remote control has a large jog wheel that lets you scroll through disc titles and skip from one disc to another when the changer is in play mode. The remote sports a sensible layout, with generous spacing between the major controls and a good variety of key sizes and shapes to ease tactile operation.

That's a whole lot of stuff for a \$399 CD changer, and if you get the idea that I liked the Fisher Studio 150 quite a bit, you're correct. The changer does have a soft underbelly, however: disc-changing time. Shifting up or down just one disc can take as long as 22 seconds, depending on where on the disc the pickup is located when you hit the disc up/down button. And in one instance going from Disc 1 to Disc 75 took me 26 seconds; 23 seconds was the shortest disc-change time 1 encountered for this transition. That is considerably longer than the maximum disc-change times I've experienced with several popular high-capacity changers from other manufacturers. But I suspect that this will not be a concern for most folks.

The fact of the matter is that the Fisher Studio 150 CD changer did its job gracefully and reliably. It performed with considerably less mechanical racket than most other 100plus-disc changers I've encountered. And its disc-cataloguing features strike a very nice balance between power and complexity by providing enough flexibility to be truly useful but not so much as to be intimidating.

And let me note that the Studio 150 sounded fine overall. It also displayed very good resistance to shock and vibration, and its ability to track disc defects was well above par. Fisher doesn't get a lot of respect from high-end audio types, but never mind. The Studio 150 is a good CD changer that delivers high capacity and high value.

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CIRCLE NO. 15 ON READER SERVICE CARD See our dealer list on page 44



# Sunfire True Subwoofer

### JULIAN HIRSCH · HIRSCH-HOUCK LABORATORIES

he True Subwoofer from Sunfire is the latest example of the unconventional audio equipment designs (and nomenclature) of Bob Carver, whose innovative Sunfire power amplifier was reviewed here in April 1995.

As its name implies, the latest Sunfire product is designed to extend the deep-bass coverage of a music or home-theater system all the way down to the limits of human hearing, and even beyond - that is, when a recording contains such information, rare in music but not in today's movie soundtracks. Audiophiles familiar with Bob Carver's previous component designs, most of them developed during his many years at the Carver Corporation (which he left in 1994), will not be surprised to find that the True Subwoofer incorporates some highly original concepts and technology.

The basic design principles of the True Subwoofer are discussed in a white paper available from the manufacturer (and well worth reading). Although I cannot go into all of its details here — the paper is much longer than this entire report - I will attempt a brief explanation of the operating principles of this unique product.

A subwoofer is a loudspeaker designed to reproduce deep bass, the frequencies that fall below the range of most ordinary woofers. Ideally, it

enclosure designed to complement the driver characteristics. Lower-priced "subwoofers" usually operate in vented enclosures and typically have a low-frequency limit of 30 to 40 Hz. In sharp contrast to conventional subs, Sunfire's True Subwoofer is a sealed cube measuring only 11 inches on a side, although it weighs close to 50 pounds. The enclosure contains two unusual flat-diaphragm drivers with huge magnets, which account for

most of the weight, and each of the drivers, mounted on opposite sides of the cubical box, has an effective cone diameter of 8 inches. They operate as

should operate as low as 20 Hz, usual-

ly considered to be the lower limit of

human hearing, with an upper limit

from 50 to 100 Hz or so. Reproducing

these frequencies at realistic levels re-

quires that the speaker move a lot of

air, which is commonly achieved by

using one or more large-cone drivers,

or several smaller ones, in a big, heavy

DIMENSIONS: 11 inches high, 11 inches wide, 11 inches deep

WEIGHT: 48 pounds

FINISH: black lacquer

PRICE: \$1,100

MANUFACTURER: Sunfire, Dept. SR, P.O. Box 1589, Snohomish, WA 98291; telephone, 206-335-4748

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Independence- Reference Audio: Sedalia-

McLelland TV: Hattiesburg-

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Our award-winning \$699 PF 15 subwoofer has a 15" woofer, 200-watt RMS amp and earth-shaking 17 Hz response that will supercharge your system.

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a bipolar system, with both diaphragms moving in and out simultaneously. There are no grilles covering the drivers; the flat, rigid surface of each diaphragm and the rubber edge supporting it are fully exposed.

The subwoofer's rear panel is a metal plate that contains all the connection terminals and controls and serves as a heat sink for the resident power amp. Instructions in the owner's manual note that the heat-sink plate can reach 65°C (149°F), which is uncomfortable to the touch but not unsafe. (The plate never became more than moderately warm during our testing and listening sessions.)

The control panel of the Sunfire True Subwoofer has smoothly operating knobs for adjusting the low-pass crossover frequency (40 to 120 Hz), volume (from zero to room-shaking levels), and phase (from 0 to 180 degrees).

The subwoofer offers both speakerlevel and line-level inputs for connection to a receiver or amplifier. Two pairs of insulated binding posts can be connected to the speaker-level output terminals of a system's main amplifier (this was the way we used them in our listening tests). Alternatively, two goldplated phono jacks can be connected to the line-level outputs of a receiver or an amplifier. There is also a pair of gold-plated phono jacks, identified as Hi-Pass Out, that carry line-level frequencies above 70 Hz to the amplifier powering the main speakers.

A miniature toggle switch marked Flat/Video Contour modifies the system's low-frequency response, reducing the output below 30 Hz when it's set to Video Contour, though the instruction manual recommends using the Flat setting for most audio and video applications. In any case, when setting up the Sunfire subwoofer in a music system it is a good idea to experiment with the controls to achieve a satisfactory result, since there will inevitably be some interaction between the volume and crossover-frequency controls, and to a much lesser degree the phase control. Adjusting the phase control during our evaluation produced no audibly significant result.

Another minor idiosyncrasy of the True Subwoofer (and possibly of other powered subwoofers) was its sensitivity to hum from power-line ground loops. The owner's manual details a simple procedure (reversing the AC plug from the power amp or the subwoofer in its wall socket) to minimize this effect. During our tests, we occasionally heard a faint hum close to the drivers in the absence of an audio signal, but it was never audible while the subwoofer was playing music.

The Sunfire subwoofer turns on automatically when a signal is detected, and it switches itself off after about 3 minutes of silence. The red LED power indicator on the control panel lights up when the unit is active and dims in the standby (off) mode. In our setup, however, the subwoofer did not automatically shut down, apparently because of the aforementioned ground loop, which I was unable to eliminate totally. At any rate, this anomaly never had any audible or measurable effect on system performance.

o, how are the True Subwoofer's small drivers able to move enough air to generate lowbass frequencies - more air then the large cones (or multiple smaller cones) used in most subwoofers? Unlike those cones, which generally have a very limited maximum (peak-to-peak) excursion, the Sunfire subwoofer's drivers have a maximum excursion of  $2^{1/2}$  inches, far more than the drivers in any conventional speaker. The catch, however, is that it takes a lot of power to drive them that distance, particularly because the efficiency of a woofer is proportional to the volume of its enclosure. The Sunfire sub's small enclosure makes it extremely inefficient, so it requires a huge power input to achieve output levels comparable to those of larger conventional subs.

It turned out that some 2,700 watts (that's not a misprint!) were needed to produce realistic acoustic levels into the True Subwoofer's 4-ohm load. Bob Carver's approach to the seemingly impossible requirement of building that much power capacity into a tiny space was to use an innovative circuit similar to the one in his Sunfire power amplifier. The incredibly small amp, which occupies a circuit board about the size of a large chocolate bar, delivers enough power to drive the 0.4-cubic-foot True Subwoofer to the same levels as would be generated by several larger woofers driven by a 200watt amplifier in a 10-cubic-foot box.

Suffice it to say that the Sunfire True Subwoofer lived up to its claimed performance in full measure. We measured the frequency response with two microphones, each positioned close to one of the speaker diaphragms. The combined response was a remarkable  $\pm 0.5$  dB from 85 Hz down to 20 Hz (and a very respectable  $\pm 3$  dB from 110 to 18 Hz, the sub's rated response range). At a typical (fairly high!) listening level, which produced a mild skin-tingling sensation, the distortion was only 3 to 5 percent over much of the range from 25 to 80 Hz.

In the white paper mentioned earlier, Bob Carver describes a comparison between the True Subwoofer and his previous favorite subwoofer (unnamed), a large, heavy, and expensive model whose enclosure is more than *ten times* the volume of the True Subwoofer. Carver says that the larger sub required considerably more amplifier power to reach its maximum output, while the Sunfire sub delivered twice as much acoustic output with substantially less input power (from the AC line). In other words, the Sunfire sub was considerably more efficient.

For our own listening tests, I used the Sunfire subwoofer in conjunction with a compact speaker system that was on hand for testing. The two-way speakers were placed atop a pair of large (and very good) three-way columnar speakers containing formidable built-in powered subwoofers, and the True Subwoofer was placed on the floor near the left column.

In A/B comparisons, I found surprisingly little difference between the large tower speakers with their own subs and the subwoofer/satellite system I assembled using the True Subwoofer with the compact two-ways. In fact, most of the time it was virtually impossible to tell which was playing without looking at the switch settings. since the two systems had generally similar colorations. But when it came to reproducing truly deep bass, below 30 Hz, the Sunfire subwoofer was the clear winner. It had the flattest and deepest bass response I have ever heard or measured, which is doubly impressive considering its size!

he point of this comparison was not to establish which speaker system was better that would be like arguing about the relative flavors of apples and oranges. What it did, to my satisfaction, was confirm that Sunfire's True Subwoofer is a clear contender for top honors among powered subwoofers of any size or price, in addition to being a real value for the money. And its compact size is a bonus that's especially desirable in dimensionally challenged installations.



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largest selection of powered subwoofers, plus several center-channel and surround speakers—including M&K's exclusive SS-150THX "Tripole."

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C PARASOUND T/DQ-1600 Breadcast Referrect Taner	
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PARASOUND HCA-2003 High Corrent Malei IIII	Amplifier
	0.1 0.2 0.3



## JVC RX-818VBK Audio/Video Receiver

### DAVID RANADA · TECHNICAL EDITOR

tanding at the top of JVC's A/V receiver line is the RX-818VBK, a rather fully featured unit incorporating digital Dolby Pro Logic decoding circuitry. In surround mode, the receiver is rated to deliver 100 watts per channel to the front left, center, and right speakers and 100 watts total to the surround speakers; power output in stereo mode is 120 watts per channel.

In addition to Dolby Pro Logic decoding, the receiver offers two theatersimulation ambience modes: Theater 1, for the "feeling of a small movie theater with a seating capacity of 100," and Theater 2, like one holding 1,000 people. There are also five music-oriented ambience modes: Dance Club, Live Club, Hall, Pavilion, and H Phones for "a spacious stereo effect when listening to headphones." All ambience enhancement operates by the generation of time-delayed artificial reflections that are sent out in various combinations of timings and levels to the front and surround speakers of a home-theater system, or through the front-panel headphone output in the H Phones mode.

The RX-818VBK also contains a version of JVC's trademark SEA (Sound Effect Amplifier) equalizer. In this case it has three bands whose settings are displayed graphically in the

front-panel fluorescent display and in the elaborate on-screen menu system. Five preset EQ contours are supplied (Rock, Musical, Movie, Country, and Jazz), and there's a front-panel centerspeaker tone-control knob intended to enhance soundtrack dialogue.

Settings of the equalizer, digital processer, and volume can be memorized and assigned to an input source or tuner preset for instant recall, a feature JVC calls Compu Link Source-Related Presetting (CSRP). Compu Link also lets the receiver's remote operate other JVC components when they are hooked to the rear-panel Compu Link jacks. When the receiver is connected to a JVC VCR, for example, inserting a tape into the VCR automatically turns on the receiver and selects the video input, then turns on the VCR and starts play.

All of the large knobs on the front panel rotate continuously, so their positions cannot be used as indicators of

DIMENSIONS: 17<sup>1</sup>/<sub>4</sub> inches wide, 6<sup>1</sup>/<sub>4</sub> inches high, 15<sup>5</sup>/<sub>8</sub> inches deep

WEIGHT: 243/4 pounds

PRICE: \$550

MANUFACTURER: JVC Company of America, Dept. SR, 41 Slater Dr., Elmwood Park, NJ 07407; telephone, 1-800-252-5722 their settings. Instead, the "position" of the central volume-control knob shows up as a bar-graph readout in the display, accompanied by an adjacent alphanumeric readout running from 0 to 79. While the numerical readout only appears as the volume is being changed, the bar graph is on continuously — a nice touch. The knob directly to the right of the volume control either changes the tuner frequency or chooses a preset station, depending on the tuning mode selected by a nearby button. Selected frequency shows up in an alphanumeric portion of the display, as does the input selected by the rightmost large knob.

ALPH MASULLC

Below the display is an area with a series of small buttons flanking a fourbutton keypad. These controls govern the SEA equalizer, select the surround or ambience processing mode, and set surround speaker balances. Accessible only from the remote are such controls as the surround-mode speaker-balance test tone and the sleep timer, which turns the RX-818VBK off after a userset period of 10 to 80 minutes (adjustable in 10-minute intervals).

The remote itself can operate quite differently from the front-panel controls because it commands the onscreen menu system via a set of cursor keys at the base of the handset. Fortunately, you don't *need* to use the menu system to perform most critical system functions, though you will see various readouts on your monitor screen if it's turned on. A set of multipurpose buttons at the top of the handset can be used to select the SEA mode directly, select and adjust the surround processing, and change the input source, among other things. These buttons are

## "... the ultimate home theater system" V.TV, April/May 1996

# "I was blown away...awesome." <u>Widescreen Review</u>, April 1996

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\*V.TV. April/May. 1996

\*\*Manufacturer's suggested retail price of "basic" home theater configuration

Matthew Polk, co-founder



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Dealer Locator Number



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WARNING: THIS SYSTEM IS CAPABLE OF EXTREME SOUND PRESSURE LEVELS. SRT SYSTEMS ARE SUPPLIED WITH A SOUND PRESSURE LEVEL METER TO HELP YOU ESTABLISH SAFE LISTENING LEVELS.

set into a phosphorescent panel that makes them, and the remote itself, easy to find in the dark. The multiple definitions and labeling of the buttons can create some confusion at first, but it is a small price to pay for being able to get some music going without having to turn on the TV.

Although more versatile than many other handsets, the remote is not "universal"; you cannot teach it "foreign" infrared commands used by other components, but it comes preloaded with the basic control codes of many manufacturers' VCR's, TV's, and cable boxes. The commands for a specific component can be activated by looking up the manufacturer in a set of tables and entering a code number on the remote's numerical keypad.

While the front panel has some interesting touches, the rear panel is utterly conventional. FM and AM antennas as well as speakers use snap connectors. There are provisions for two sets of front left/right speakers; the second set, switched on with a frontpanel button, is presumably for second-room stereo operation. The surround-speaker outputs are series-connected, which means that you must have two speakers hooked up for ei-



ther one to work and that for best results they should be identical. Audioonly connections are provided for a moving-magnet phono cartridge, a CD player, an audio recorder, and the audio output from a TV set. There are A/V connections (composite-video only) for one VCR, one rear-panel auxiliary input (Video 1), and one front-panel input (Video 2). There's also a single TV-monitor output, a

MEASUREMENTS

...101 watts

-75 dB

**OUTPUT AT CLIPPING (8-ohm loads)** 

NOISE (re | watt output, A-wtd)

#### OUTPUT AT CLIPPING (at 1 kHz)

AMPLIFIER SECTION

All figures for two-channel stereo operation.

8 ohms	138 watts
4 ohms	.141 watts
CLIPPING HEADROOM (re 120-watt i	rating)
8 ohms	
DYNAMIC POWER	
8 ohnis	184 watts
4 ohms	138 watts
DYNAMIC HEADROOM (re 110-watt	rating)
8 ohms	1.91 dB
DISTORTION AT RATED POWER	0.024%
SENSITIVITY (for a 1-watt output into	8 ohme)
CD input	
phono input	0.23 mV
NOISE (re 1-watt output into 8 ohms,	A
CD input	
phono input	79.8 dB
RIAA PHONO EQUALIZATION ERRO	P
20 Hz to 20 kHz+0.	3, -0.32 dB
FREQUENCY RESPONSE (EQ off)	
20 Hz to 20 kHz +0 d	B _0.42 dB
20 112 10 20 KH2	D, 0.42 0D
DOLBY PRO LOGIC PERFO	RMANCE
TREALEY RECOOLER	

#### FREQUENCY RESPONSE

left, right	
center	28 Hz to 20 kHz +0, -3 dB
surround	

ts	La Galactaria	
ts	left, right	

surround.

center	67 dB
surround	
DISTORTION (THD+N,   kHz,   watt o	
left, right	
center	
surround	0.08%
CHANNEL-BALANCE TRACKING (0-dB	volume =
1 watt into 8 ohms = setting of "60")	
+5-dB volume	0.17 dB
0-dB volume	0.11 dB
-5-dB volume	0.30 dB
-10-dB volume	0.37 dB
SURROUND-DECODER INPUT-OVERLO	DAD
left, right (re 2-volt input)	+2.0 dB
center (re 1.4-volt input)	+2.2 dB
surround (re 1.4-volt input)	+2.2 dB
SURROUND-CHANNEL NOISE-REDUC	

### re Dolby spec (247.5 mV) .....+1 dB

CHANNEL SEPARATION (100 Hz to 7 k	Hz)
left output, right driven	>54 dB
left output, center driven	>51 dB
left output, surround driven	>34 dB
center output, left driven	>37 dB
center output, surround driven	>57 dB
surround output, left driven	>36 dB
surround output, center driven	>62 dB

wideband, mono line-level subwoofer jack, and two switched AC convenience outlets.

At least in our lab tests, the receiver's performance was also conventional. Let me hasten to add that "conventional" for a top-of-the-line receiver like the RX-818VBK means good to excellent depending on the circuit you're talking about. The tuner was merely good (with, however, typically rotten AM frequency response). The power-amp behavior was very good, with unusually high dynamic headroom for a receiver.

In Dolby Pro Logic operation, the receiver again proved to be powerful. It was also quiet, with very good noise and distortion levels from the surround channel, resulting, no doubt, from the use of digital signal processing. During listening tests, the RX-818VBK sounded every bit as powerful, quiet, and clean as it measured in both stereo and Dolby Pro Logic operation.

As usual, I found the soundtrack ambience-enhancement modes wearying after a while, since the added reflections tended to decrease the intelligibility of dialogue. The music modes suffered from the very common inability to turn off or separately turn down

#### TUNER SECTION

All figures for FM only except frequence	ey 🛛
response.	
SENSITIVITY (50-dB quieting)	
mono	
stereo	
NOISE (at 65 dBf)	
mono	
stereo	<b>-0</b> / dB
DISTORTION (THD+N at 65 dBf)	0.050
mono. stereo (including pilot leakage)	
CAPTURE RATIO (at 65 dBf)	1.75 dB
AM REJECTION	
SELECTIVITY	
alternate-channel	63 dB
adjacent-channel	9 dB
PILOT-CARRIER LEAKAGE	
19-kHz	
38-kHz	–52 dB
ним	80 dB
CHANNEL SEPARATION	
100 Hz	36 dB
1 kHz	
10 kHz	29 dB
FREQUENCY RESPONSE	
FM	

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the artificial reflections from the front speakers, where they can severely color the sound. And since the surround speakers are series-driven in mono, the spaciousness they could have produced during ambience enhancement was reduced by some in-the-head imaging of their artificial reflections.

None of the music-enhancement modes produced artificial reverberation. That's good, since uncolored reverb is very difficult to produce, and it's better not to have any than to have it done poorly. The headphone mode was surprisingly good at expanding the image beyond the back of the head, but the added reflections "of a typical room" sometimes gave a decidedly boxy quality to the sound.

Measurements of the graphic equalizer showed that it produced boosts and cuts of approximately 9 dB at center frequencies of 120 Hz, 1 kHz, and 10 kHz. This capability can provide useful frequency tailoring of many recordings, but it is less useful than, say, a seven-band (or more) dedicated equalizer for correcting speaker frequency response.

The five preprogrammed EQ settings should be used with caution. Most produced exaggerated results through an overall level boost of 2 to 3 dB in addition to the 3 to 4 dB of response adjustments across the frequency range. And do take those preset names with a grain of salt. I can understand why the Rock setting has a 6-dB boost in the bass and a 5-dB boost in the treble, but why should Country have a 2-dB *cut* in the bass and a 2-dB *boost* in the treble? Since when does Dolly Parton's top end need boosting?

Ergonomically, the receiver has both good and bad points, as usual. Although I am normally a fan of continuously turning knobs — they're more fun to use than conventional stopped controls — those for the tuner and input selector are too sensitive. It takes only a small nudge to change the tuned frequency or the selected input. The individual input-selector buttons on the handset are easier to use. The remote's set of slanted external-component controls and its cursor controls are also very easy on the fingers.

On the whole, JVC has done a very good job with the RX-818VBK. It is relatively easy to set up and use, and it has a host of features (though of varying utility), a good (if terse) manual, and solid sonic performance at quite a reasonable price.



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## Cambridge Soundworks Tower II Speaker

### JULIAN HIRSCH . HIRSCH-HOUCK LABORATORIES

ambridge SoundWorks (CSW) has earned a solid reputation for the quality and value of its loudspeakers during the eight years of the company's existence. This reflects the technical expertise and quality standards of its co-founder, Henry Kloss, who has been responsible for many advances in consumer audio products, especially speakers, over the past four decades. He was also founder or co-founder of several

**DIMENSIONS:** 35 inches high, 9<sup>1</sup>/<sub>4</sub> inches wide, 15<sup>3</sup>/<sub>8</sub> inches deep (with grille)

WEIGHT: 50 pounds

FINISH: walnut or black ash vinyl veneer

PRICE: \$1,000 a pair

MANUFACTURER: Cambridge SoundWorks, Dept. SR. 311 Needham St., Newtor, MA 02164: telephone, 1-800-367-4434; e-mail. info@hifi.com: World Wide Web. http://www.hifi.com other companies noted for significant advances in consumer electronics, including Acoustic Research (AR), Advent, and Kloss Video.

For most of its existence, CSW has been known primarily as a manufacturer of compact and inexpensive loudspeakers and music systems sold by mail order. A couple of years ago, however, the company began opening retail stores and now has a chain of outlets in New England and California.

CSW recently introduced its first floor-standing speakers, which are described as being equally suitable for music and home-theater applications. There are currently three models in the new Tower series: the Tower (\$1,500 a pair), a three-way bipolar system; the Tower II (\$1,000 a pair), the front-firing three-way system reviewed here; and the Tower III (\$600 a pair), a front-firing two-way system.

The Tower II is a columnar speaker whose drivers are vertically aligned on the front panel. At the top is a 1-inch soft-dome tweeter, and under it is a 5<sup>1</sup>/4-inch polypropylene midrange driver operating in a sealed subenclosure. Below that are two 8-inch polypropylene cone woofers operating in a vented enclosure whose port is near the bottom of the back panel. The four drivers are concealed by a removable black cloth grille that matches a small cloth-covered section at the bottom of the front panel, which is 1 inch thick. The cabinet has <sup>3</sup>/<sub>4</sub>-inch-thick side and back panels and internal cross-bracing. The two sets of gold-plated binding posts on the back, which are linked together by removable jumpers, accept wires, lugs, and banana plugs (single or dual). If the jumpers are removed, the system can be operated in a biamplified or biwired mode.

The cabinet is finished in an attractive walnut-grain vinyl veneer; it is also available in black ash. The Tower II comes with removable floor spikes whose use is recommended by the manufacturer. Because spikes make it difficult to move speakers around on the carpeted floor of our listening room, however, we do *not* use them.

Although the instruction booklet contains all the information needed to set up the Tower II speakers, it provides none of the usual performance ratings and internal specifications, just the statement that the speakers can benefit from being driven by amplifiers capable of delivering 100 watts per channel or more. In addition, the serial-number label on the back panel

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### **TEST REPORTS**

states that system impedance is 8 ohms and that the speaker is magnetically shielded to prevent picture distortion if it's placed close to a TV in a home-theater system.

We found, however, that the measured impedance of the system was less than 8 ohms over most of the audio range. It was between 3 and 4 ohms from 90 Hz to 1.5 kHz, and except at the bass resonance frequency of 50 Hz, where the impedance hit 15 ohms, it did not reach 8 ohms at any frequency. Although, technically speaking, the Tower II should be considered a 4-ohm speaker from the standpoint of amplifier compatibility, most amplifiers will be able to drive it without a problem given its relatively high sensitivity (more on that later).

The room response of the system, smoothed and averaged for the left and right speakers, was similiar to that of Output level with a 2.83-volt input (the standard signal voltage for speaker sensitivity measurements) was 90 dB sound-pressure level (SPL) at 1 meter. Distortion at that level ranged between 1 and 2 percent from 2 kHz down to 70 Hz, increasing to 10 percent at 35 Hz and 20 percent at 25 Hz. Although those numbers might seem large by the standards applied to CD players, power amplifiers, and other electronic audio components, they are not out of the ordinary for speakers, especially in the low bass range where large cone excursions are common.

A requirement unique to A/V speaker systems is a low external magnetic field. Ordinary speaker magnets can seriously distort the images on a nearby TV. We scanned the external surfaces of the Tower II with a gaussmeter and found a field strength of less than 0.5 gauss over almost the en-

The Cambridge SoundWorks Tower II proved to be a muscular, rugged speaker that easily handled the highest levels our ears could tolerate.

comparable speakers we've tested recently. The response variation in our room was  $\pm 5$  dB from 20 Hz to 18 kHz. The horizontal directivity over a  $\pm 45$ -degree angle was also typical of 1-inch tweeters, with a -5-dB response variation up to 13 kHz and an increase to -10 dB at 15 kHz.

Our MLS quasi-anechoic frequency-response measurements at distances of 1, 2, and 3 meters were very similar: Except for a sharp dip of about 8 dB at 3 kHz, response between 300 Hz and 20 kHz varied only ±3 dB. The manufacturer provided no information on the system's crossover, but the 3-kHz notch appeared to be a crossover artifact between the tweeter and midrange driver and, as is often the case with such effects, was not audible with music. A similar effect also appeared in the impedance curve and the room-response curve (where the notch was insignificant, being comparable to the normal level variations of that measurement).

We measured the bass response of the system separately at the woofers and the port, combining the two signals for one reading. The results were excellent, within about  $\pm 2$  dB from 20 to 120 Hz and rolling off at higher frequencies to about -6 dB at 150 Hz.

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tire cabinet. The field strength inched up to only 1 gauss near the bottom of the cabinet, where the woofers are located. In other words, you don't have to worry about picture distortion with these speakers.

The nearly 3-foot-tall Tower II is actually one of the more compact and lightweight floor-standing A/V speakers we have tested in recent months. A speaker designed for use in a good home-theater system is expected to reproduce high signal levels without damage or obvious distortion. Obviously, these qualities are also desirable for listening to music, though they may be somewhat less important. The Tower II proved to be a muscular, rugged speaker that easily handled the highest levels our ears could tolerate. While we did not use it to audition movie soundtracks in a home-theater system, it was obviously loafing along at any levels we cared to use.

Clearly, Henry Kloss has not lost his touch. Though small enough to fit into any room, the Cambridge Sound-Works Tower II can generate the gutwrenching bass that seems to be a part of so many film soundtracks these days (including a palpable 30 Hz) and still do justice to a first-rate music system. To top it off, the price is right!

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CIRCLE NO. 67 ON READER SERVICE CARD



# Marantz DP-870 Dolby Digital Decoder

### DAVID RANADA · TECHNICAL EDITOR

Ithough primarily intended as an outboard companion piece to add Dolby Digital (AC-3) decoding capability to the Marantz SR-96 receiver we reviewed favorably in August, the Marantz DP-870 has facilities that enable it to be used with other Marantz components — and even, if you are *really* clever in setting it up, components from other manufacturers as well.

You can connect the DP-870 to an existing A/V system in two ways, which we'll call "upstream" and "downstream." The more desirable upstream connection utilizes only the DP-870's six line-level RCA analog outputs (left/right front and surround, center, and subwoofer), feeding the decoded AC-3 signals into the system at a point "upstream" of the main volume control, presumably in an A/V amplifier of some kind. Any A/V component with six-channel line-level inputs, such as Marantz's SR-96 and the nearly identical Harman Kardon AVR-80 receiver, is suitable.

Ironically, the less desirable "downstream" connection option is more versatile, since it inserts the DP-870 after the main system volume control but before the system power amplifiers, a more accessible connection point in many systems. In this case, the DP-870's set of six rear-panel linelevel *inputs* are connected to the main system's six line-level outputs (five main channels and subwoofer). When the main system is being used for, say, Dolby Pro Logic or stereo playback (the DP-870 does *not* have a Pro Logic mode), you press the DP-870's front-panel bypass button, which connects its six-channel inputs directly to its six-channel outputs.

Downstream connection suits separate-component home-theater systems (with an A/V preamp and separate power amps) as well as the few integrated A/V amplifiers with six-channel pre-out/main-in connections. If you have any doubt as to which connection best suits your system, *check before you buy*.

In addition to deciding between upstream and downstream hookup, you must also decide on the settings of the DP-870's rear-panel "speaker-type" slide switches: front large/small, surround large/none/small, center large/ none/small, and subwoofer on/off. Marantz recommends that the "large" positions be used when the speakers concerned are "capable of handling sounds below 100 Hz." The "small" switch positions will redirect sounds

DIMENSIONS: 17<sup>1</sup>/<sub>4</sub> inches wide, 3<sup>1</sup>/<sub>2</sub> inches high, 12 inches deep

WEIGHT: 101/2 pounds

PRICE: \$700

MANUFACTURER: Marantz America, Inc., Dept. SR. 440 Medinah Rd., Roselle, IL 60172-2330; telephone, 1-630-307-3100 below that frequency away from the chosen speaker(s) either to the front left/right speakers, if they are "large," or to the subwoofer, provided the subwoofer switch is on.

The manual doesn't mention that changes in the speaker-type switch settings do not take effect while the unit is on. You have to switch it off and then on again for changes to take effect. The manual also doesn't tell you that for the best chance of getting an accurate bass response, you have to set the subwoofer's own internal crossover as high as it will go or switch it out altogether. Otherwise you'll probably get a double dose of crossover filtering, one from the DP-870 and another from the subwoofer's crossover, that is likely to degrade bass performance. Also not covered in the manual are possible problems in bass response - which, in the two worst cases, will leave you either with far too much bass or with none at all caused by interactions among the connection method, any pre-existing system bass redirection and crossover filtering, the DP-870's speaker-type settings, and various playback modes (Dolby Digital from the DP-870 and Dolby Pro Logic, stereo, and others from the main system). You'd probably need a textbook on complexity theory to figure this out anyway.

If you have a typical six-speaker home-theater system (including three fronts, a center, two surrounds, and a subwoofer), the simplest recommendation we can make to avoid hookup problems is to start with the front, center, and surround speaker switches all set to "small" and the subwoofer turned on for both your main system (if possible) and the DP-870.

The manual also doesn't tell you that the DP-870 has just enough versa-

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tility to operate as a basic system preamplifier all by itself - provided all your signal sources have digital (S/PDIF) outputs. On its rear panel the DP-870 has three Dolby Digital inputs: an RCA jack for an RF AC-3 bitstream from an appropriately equipped laserdisc player, another RCA jack for a coaxial S/PDIF digital audio signal, and a Toslink optical connector for an optical S/PDIF signal. Front-panel pushbuttons select among these inputs. Receipt of a Dolby Digital signal at any of them will automatically switch the DP-870's AC-3 decoder circuitry on. Receipt of a plain stereo S/PDIF signal at the coaxial or optical connectors, however, will turn the DP-870 into the functional equivalent of an outboard stereo digital-to-analog converter (DAC) with volume control. So while Marantz intends the DP-870's optical and coaxial digital audio connections for future Dolby Digital sources like a DVD player or a cable/ satellite decoder, in the meantime you can use it as an outboard DAC.

Although the manual specifically warns against connecting "standard audio outputs" to the digital input jacks, we encountered no problems with standard digital S/PDIF signals. In fact, the DP-870 behaved quite well as an outboard DAC: Its performance was equivalent to that of a better-thanaverage CD player.

Use of the stereo-DAC mode also enabled us to accurately determine the characteristics of the filters activated by the speaker-type switches. All of them turned out to have a -3-dBcrossover point at 100 Hz, with the subwoofer low-pass filter rolling off at 24 dB per octave above that frequency and the main-channel high-pass filters (activated with "small" speaker settings) rolling off at 12 dB per octave below that point. These filter traits make the DP-870 suitable for use with higher-quality home-theater speaker systems. But since the decoder was intended for use with the SR-96, which contains bass-management filtering at the standard THX crossover point of 80 Hz, Marantz should have given the DP-870 the same crossover frequency.

Our Dolby Digital measurements also came out very well, particularly in the noise and distortion tests. The high end of the frequency-response measurements was limited by the interaction of our test equipment with the test disc's signals and does not accurately reflect the DP-870's multichannel frequency responses, which probably extend right up to 20 kHz.

The lack of suitable signals on the Dolby Labs test disc prevented us from determining what precisely the DP-870's front-panel Delay Time button does. We had good results when we listened with DP-870 settings of 0 and 5 milliseconds while our main system's Dolby Pro Logic delay was set at 15 to 20 milliseconds.

The channel-balance tracking fig-

### MEASUREMENTS

#### DOLBY DIGITAL OPERATION

OUTPUT LEVEL (all controls at 12 o'clock) main outputs 1.24 to 1.29 V subwoofer output 3.8 V

The following measurements were obtained with channel-balance controls set at 12 o'clock and main volume set to produce 200mV main-channel outputs with a -20 dBFS<sup>®</sup> signal (approximately 2 o'clock).

#### MAXIMUM SUBWOOFER OUTPUT

worst case (all speakers set to small. 0-dl	BFS*
signals in all six channels)	.84 V

#### FREQUENCY RESPONSE

(all "large" spea	ker settings;	see text)
main channels	20 Hz to >18	kHz +0, -0.35 dB
subwoofer	<20 Hz to	100 Hz +03 dB

#### CHANNEL-BALANCE TRACKING

(0-dB volume setting = main volume knob at 2 o'clock )

+3-dB volume setting				0.38	dB
0-dB volume setting				0.36	dB
-5-dB volume setting				0.60	dB
-10-dB volume setting				 0.81	dB
		_			

NOISE (A-wtd)
worst case (center)
SEPARATION (0-dBFS* signals)
worst case (left out, right fed) 77.4 dB
STEREO OPERATION
Measurements obtained with the main volume knob set to produce a 2-volt output with a 0- dBFS* signal (approximately 2 o'clock).
FREQUENCY RESPONSE (20 to 20 kHz)
normal
de-emphasis on
EXCESS NOISE (without/with signal)
EN16+1.9/+1.8 dB
EN20
DISTORTION (THD+N, 1 kHz)
0-dBFS* input
-20-dBFS* input
LINEARITY (-90 dBFS*)0.2 dB
NOISE (A-wtd, re 2-volt output)
normal
de-emphasis on
* decibels referred to digital full scale

ures in the table indicate the DP-870's ability to maintain inter-speaker balances as the overall level was changed using its large volume control knob. It did very well in this regard, and we heard no anomalies due to shifting channel balances. We actually never heard *any* anomalies with the DP-870. Although it is not marketed as one, the DP-870 does as well as many outboard DAC's costing far more. Dolby Digital playback was as spectacular as always, showing that the DP-870 is fully capable of decoding anything an AC-3 soundtrack can dish out.

Our principal complaints about the DP-870 concern its facilities for hookup and setup. The most important technical deficiency is that the speaker-balancing test tone does not include the subwoofer output. Instead, we are given only the sage advice to "adjust the subwoofer output to the appropriate level." Unfortunately, if you use the DP-870 in its "downstream" mode, you have no other subwoofer-balancing options.

But the "upstream" mode provides a way out. If you are using the DP-870 with any receiver or amplifier that has a six-channel direct input *and* its own speaker-balancing facilities, *and* if those facilities are located in the signal-flow sequence *after* the six-channel input, you are in luck. Simply set the DP-870's six level-balancing knobs to their 12 o'clock detents, *completely ignore the decoder's test tone and balancing procedure*, and set speaker balances, including the subwoofer, using the facilities in the system receiver or amplifier.

Since the SR-96 receiver memorizes channel balance settings for its sixchannel inputs separately from those for other modes, set the channel balances with the receiver *in Dolby Pro Logic mode*; then transfer the settings to the six-channel direct-input mode. With other receivers or amps that allow upstream connection, set channel balances using the system's Dolby Pro Logic mode, a test disc (such as Delos DE-3179, which includes subwoofersetup tones), and a sound meter.

So, despite all my cavils at the manual, if you are able to connect the DP-870 to your system in the upstream configuration it will prove to be an easy way of obtaining state-of-the-art Dolby Digital performance. It is an ideal companion to the SR-96 — really. But get out those books on complexity theory if you need to use the downstream connection!



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### No Mumbo Jumbo.

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What we offer instead are very carefully fine-tuned designs. These designs are based

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"Selling direct allows Cambridge SoundWorks to price speakers hundreds of dollars below the competition." Inc. magazine

The result is somewhat unusual - speakers that combine the dynamic presence normally associated with high-efficiency studio monitors, and the precise musical accuracy and pinpoint imaging of low-efficiency "reference" speakers.

With our Tower speakers, you get goose bumps and precise musical accuracy.

### Tower III by Henry Kloss™

Tower III is a two-way design using a widedispersion tweeter and a single 8" woofer very similar to those used in Tower and Tower II. Like the more expensive models in the Tower series, it combines high sensitivity and outstanding dynamic range with the natural, wide-range sound (including extended deep bass) that results from a generously-proportioned cabinet. It has been meticulously "voiced" by Henry Kloss for superb octave-tooctave tonal balance and precise stereo imaging. Its comparatively high sensitivity makes it ideal for use with moderately powered amplifiers and receivers, while its robust construction makes it suitable for use with the most powerful amplifiers designed for home use. These benefits have been realized at significantly lower cost than other, superficially similar models through a combination of

Henry Kloss' unique speaker design expertise, plus Cambridge SoundWorks' highly efficient direct-to-the-consumer sales policy. Tower III is the most affordable high-performance tower speaker we know of.

Like other models in the series. Tower III features removable black grilles and fullyfinished cabinets (front and rear), to permit operation without grilles in place. It also in-

cludes gold-plated binding posts. Magnetically shielded, Tower III is ideal for use in the best home theater systems. Finished in black ash vinvl. Factory-direct price: \$599 pr.

### Tower II by Henry Kloss

Tower II is a three-way system that is substantially larger than Tower III. It features two 8" woofers, a 5 1/4" midrange driver, and a 1" soft-dome fabric tweeter.







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The flagship of our new series is a three-way, bipolar model named Tower by Henry Kloss. The bipolar dispersion pattern helps eliminate the usual "point source" effect of directradiator speakers - and ensures a proper stereo effect at the widest variety of listening positions

Tower features two forward-facing 8" woofers: a forward-facing 5 1/4" midrange driver: a 1" soft-dome fabric tweeter; and separate rearward-facing midrange and tweeter units identical to those used in front.

> Because it has even more cone area. Tower's feeling of "presence" is, if anything, stronger than that of Tower 11. That presence, when combined with the three-dimensional

sound of Tower's bipolar design,

and its smooth octave-to-octave tonal balance. results in sound that's nothing short of incredible. It's spectacularly realistic. Available in lacquered walnut or black ash veneers, we believe that Tower is one of the finest speakers ever offered. It is bi-wire/bi-amp capable and features gold-plated binding posts. Factory-direct price: \$1,499 pr.

### CenterStage by Henry Kloss

Complementing the new *Tower* models is CenterStage. a two-way, three-clriver center channel speaker for use in home theater

systems. With its two 5 1/4"

bass/midrange drivers and 1" soft dome tweeter. CenterStage perfectly matches the tonal balance

of all three Tower models. Bass reach of the system is significantly greater than most center channel speakers, thanks to its dual-vent enclosure. The dynamic range of the drivers is enough to handle the most demanding of video soundtracks, while their dispersion is broad enough to include all listening positions. It is finished in black vinyl. Factory-direct price: \$349.

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The Surround

The Surround is an ideal choice for Dolby Pro Logic' or Dolby Digital surround sound systems. Available in black or white. Factory-direct price: \$399 pr.

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The large cone area of Tower II's multiple drivers contributes to an "effortless" sound quality, giving music a strong feeling of dynamic "presence" that is easier to hear than to describe. That high-impact presence, together with Tower II's smooth, musical octave-tooctave tonal balance and precise stereo imaging, produces what we think is the finest speaker system ever offered for under \$1,000.

Tower II is finished in vinvl that simulates black ash or Vermont walnut. It is bi-wire/biamp capable and features gold-plated binding posts. Factory-direct price: \$999 pr.







hopping for a CD player isn't so hard. All you've got to do is decide whether you want a portable or a home unit, a single-disc player or a multidisc changer, and perhaps choose between an audioonly player and an audio/video combiplayer that also spins laserdiscs. Oh, yeah — if you go the multidisc route you'll also have to settle on disc capacity and changer type: Do you want a player with a rotating platter that holds three, five, or six discs? A sevendisc player with an internal "stocker"? A jukebox-like changer that holds between 24 and 200 CD's? Or maybe you'd prefer a changer that accepts a removable six- or ten-disc magazine? And once you get a handle on what kind of player you want, you really should probe its features. Does it offer useful programming routines, a sensible remote control, and helpful recording features? Then again, you might want to jettison the whole conventional CD concept in favor of a high-end, two-piece CD player with an outboard digital-to-analog (D/A) converter.

But aside from those few points and the ten or twenty I've skipped over — choosing CD hardware really is easy ... isn't it? After all, all play-

ers sound alike . con't they? Ah yes, the \$64,000 question that audiophiles have detated since the CD's inception nearly fifteen years ago. Let's put that question right at the top of the list. All I'll say is that, for my money, sonic differences between CD players do exist --- but the zudible difference between, say, the best \$5,000 single-disc player and the best \$250 cne is probably not drarnatic to most listeners. Nor do I claim to be able to hear such differences reliably in casual demos. I usually have to retreat to my studio and my own familiar speakers, power

amps, and heacphones to flush them out. The point here is that you have to make up your cwn mind. If you hear differences that matter to you, take them into account in deciding what to buy. If you don't, concentrate on differences you *can* perceive.

What, then, is the single most important CD feature or technology? To me, it's the fee of quality. I'd rather own three Snap-On screwdrivers than a twenty-one-piece set from the bargain bin. Similarly, I like hi-fi gear that makes me smile whenever I dust it — even without listening to it. This doesn't mean you have to drop a bundle on CD hardware. There are plenty of players in the under-\$500 price range that evince thoughtful design and careful assembly.

Running a close second in my ledger of importance is ergonomic effectiveness, or ease of use. Intuitive controls, displays you can read from across the room without squinting, and uncluttered ren otes that are easy to grasp (in both senses) are traits well worth seeking. They may seem insignificant on the showroom floor, but in six months' time I guarantee they'll overshadow any techno-babble engineering points and gee-whiz features that may have enticed you initially. Make an effort to spend some extra hands-on time with your final prospects to get a feeling for what it's like to use them. Be a tough critic, and don't settle for confusing layouts or unrecessarily complex operating features.

#### The **Big Picture**

Selecting the type of CD player that test suits your needs is actually fair y easy. If your lifestyle demands a carryalong player, and buying separate tome and portable players is not an cption, then there's no reason why you can't buy a portable player and use it toth on the go and in your living room. Today's pocket CD players all sport ine-level outputs for quick and easy connection to your home and o system, usually via a receiver's or power amp's auxiliary inputs. Some portables even include a miniature remote control that can be a godserd when the player is used in a stationary setting.

Multidisc CD changers continue o cutsel single-disc players by a wide margin as buyers vote for converience, storage, and ever-increasing cise capacity with undiminished fervor. In just the past couple of years, manufacturers have all but removed the price penalty of owning a basic changer: Most of today's five- and sixcisc models cost the same as last year's single-disc players. Hardware makers have also introduced a new breed of remarkably space-efficient Figh-capacity changers at prices stanting as low as \$300 or \$400 for models that hold 24, 50, or even 100 CD's (more cn those later).

But if you're the type of person who evoids unnecessary complication at d you are perfectly content with the old-fashioned" ritual of pulling dises from a shelf and playing them one at time, then a single-disc player is your cestiny. Simplicity, both mechanical and electrical, can be a good thing. Many audiophiles believe that simplizity in design can pay sonic dividends, especially in the case of CD players. Yet there is no inherent reason why a changer cannot sound every bit as good as a similarly engineered singlacisc player. What is beyond dispute is

Tips that will help you find the perfect player, or changer, or ...



The California Audio Labs CL-10 five-disc CD changer (\$1,795) features an HDCD decoder, two digital outputs, and a computer I/O port for software upgrades.



Audio Alchemy's DDS Pro CD transport (\$1,595) has a separate power supply (right) and requires an outboard D/A converter. It offers four types of digital outputs.



Mitsubishi's M-V6027 combi-player (\$649) plays CD's and laserdiscs. A special RF output delivers six channels of digital output from Dolby Digital-encoded laserdiscs.



JVC's XL-M418BK CD changer (\$280) has a six-disc magazine and a single-disc tray for flexibility. The front-panel jog dial makes it easier to enter disc titles into memory.

that one-disc models cost less to manufacture — at least on paper. So at any given price, the manufacturer has the option of spending more on parts that can improve sound quality, like the digital-to-analog (D/A) conversion circuitry. (Of course, the manufacturer may also opt to take the cost difference in extra profit, or to spend it on a multicolored display or an auto-eject chime....)

Expensive two-piece CD players have been a fixture on the high-end audio scene since the early days of CD. Instead of putting everything in one box, two boxes are used to separate the mechanical/optical CD transport from the digital and analog audio circuitry in an effort to improve performance. If you're interested in the very best CD players that high-end audio companies have to offer, this is where you'll find them. Just be prepared to pay four figures and up.

Then there's the CD/laserdisc combi-player option. For \$100 or so more than the price of a mid-line single-disc CD player, you can buy a combi-player that plays both CD's and 12-inch laserdiscs, which offer audio and video quality appreciably better than that of a standard VHS videotape. For another \$100 or so, you can get a combi that automatically flips the disc over (you have to turn the disc over manually with lesser-grade players). If you're assembling a home theater, you owe it to yourself at least to consider a combi-player, particularly one with an AC-3 output that can deliver the discrete six-channel Dolby Digital soundtracks now offered on more than a hundred laserdisc movies.

#### The Multidisc Route

Now, back to the multidisc changers. If you like the idea of a changer that holds anywhere from 3 to 200 discs, you have plenty of options to choose from. Carousel changers, which typically accommodate five or six discs on a rotating platter, provide long-play convenience for those who don't want to load discs in a changer and leave them there. The platter is affixed to a motorized drawer so that you can place the changer in a component rack as you would a single-play unit. Two key benefits of a carousel changer are that you can change some or all of the remaining discs while one is playing, and you can find out which discs are loaded by simply opening the drawer and rotating the platter.

Magazine-type changers that store six or ten CD's in a removable cartridge — or eighteen in the case of a Pioneer model that accepts three sixdisc cartridges — are not as popular as they once were but still find favor among owners of car CD changers who want to swap magazines between home and car. (Just make sure both changers accept the same magazine they are not universal.) Magazine changers also appeal to music lovers who like the idea of cataloguing and storing their CD's in small groups. One potential drawback to the magazine approach is that without some sort of labeling system it's not immediately apparent which discs are loaded in a given magazine. Another is that some magazines are a hassle to load and unload. Again, try before you buy.

egachangers, models that stockpile fifty or more CD's, are the big buzz on the changer scene at the moment. At least a half-dozen manufacturers now offer changers that pack 100 or more discs in a more or less conventional front-loading component. Discs are typically loaded vertically into a jukebox-like carousel or some sort of lateral storage mechanism with thin slots.

In addition to providing hands-off access to an entire music collection (or a specific part of one), high-capacity changers bring super-extended play to the CD party. The latest 200-disc model from Sony, for example, could in theory provide more than ten days of unattended, no-repeat music. Some models can even be daisy-chained to additional same-brand changers (or slave modules), allowing you to double, triple, or even quadruple disc capacity. While this may seem impractical, it provides a potential storage solution for enthusiasts who own several hundred discs and like the idea of being able to play CD's without having to handle jewel boxes.

But, as with any component type, there are a few potential drawbacks to consider. First, many megachangers cannot gracefully handle single-disc "on-the-fly" playback, so it can be a bit frustrating if you want to pop in a new CD for a quick audition. Second, loading and unloading discs can be a fussy process because spacing be-

tween discs is typically tight. Third, disc-to-disc access time can be considerably slower than in, say, a typical fivedisc carousel changer. And, finally, big-count changers tend to make a bit more mechanical racket when switching between discs than their lower-capacity counterparts.

As you move up in capacity, the ability to catalog discs becomes increasingly important. Nearly all megachangers come with a numbered binder to hold CD booklets so that you



You can change three discs while one is playing in Onkyo's DX-C530 six-CD carousel changer (\$350). Highlights include a peak-search mode for setting recording levels.



Pioneer's PD-F605 (\$280) holds twenty-five discs in a vertical rack and has a memory that lets you group discs by music genre, title, artist, and other categories.

can track which disc is in which slot — an effective but rather bulky and embarrassingly low-tech solution. Fortunately, most CD jukeboxes also have enough smarts to keep track of discs electronically, although the degree of intelligence varies from one player to another.

Generally speaking, electronic cataloguing is a two-part process. First, you "type" disc titles, artist names, or both into the player's memory, which is usually an excruciatingly laborious routine that involves using cursor buttons (on the remote control or the changer's front panel) to scroll through lists of characters. A few machines deploy a jog/shuttle wheel to ease data entry, and at least three companies (Kenwood, Sony, and Technics) now offer megachangers with an input for a standard PC keyboard, which goes a long way toward streamlining the process. The second part consists of grouping discs by musical genre or some other subset. Category labels may be preset (Rock, Jazz, Classical, and so on) or user-definable, depending on the changer. Once categories are selected and the labels are keyed in, you

A PC keyboard port in Kenwood's 100-disc DP-J2070 (\$600) expedites disc-title entry. A unique buffer memory shorters disc-change times.



have several ways to locate discs.

An on-screen display system can be a valuable feature if you plan to integrate a megachanger into an A/V system. If nothing else, being able to display disc titles and other information on a TV screen will reduce evestrain. Some changers even provide an onscreen graphical user interface, which in addition to simplifying data entry can be used in managing the entire system via remote control (provided a compatible



Sony's 200-disc CDP-CX270 (\$1,000) has a graphical interface for scrolling through disc titles and tracks on a TV. Any PC keyboard can be used to enter disc data.



You can change four discs while one is playing in Yamaha's CDC-845 five-disc carousel CD changer (\$499), which has a favorite-track memory for up to 100 discs.



The Technics SL-MC400 (\$300) packs 110 discs into a A/V-receiver-size component. It has a separate slot for single-disc play and lets you group CD's by music category.

A/V receiver or preamp commands the component chain).

#### **Featuring Features**

Once a disc is loaded and spinning, the highest-capacity changer and the lowliest one-disc design operate essentially the same - they also share many features. In addition to the usual transport controls (play, pause, etc.), other universal features include audible fast-search (some models offer two speeds) and shuffle play, a mode that randomizes the track playback order (some changers pull tracks from all loaded discs, others move from disc to disc, shuffling only the tracks on the current disc, and many others offer both modes). Track and disc repeat are common; some players even let you

define a continuous "A-B" segment for repeat, which can be useful to aspiring musicians for copying licks or studying a composition or performance.

imple track-number and time displays may seem unimportant, but they can be central to CD use depending on your listening habits. In addition to putting a player's controls through their paces, run through its displays to make sure they're intuitive and easy to read. Does the machine offer remainingtime displays for both the currently playing disc *and* the current track? Such displays, which are not universal, can be priceless if you do a lot of home recording. Other handy visual aids include a "music-calendar" grid showing the tracks to be played and, in the case of big changers, some sort of graphic that tells you which disc is currently playing.

Most home CD players and changers have a feature known as randomaccess programming that lets you create a play list of songs, usually at least a couple of dozen, that can be stored in memory — a potentially useful feature as long as you don't mind going through what can be a monotonous button-pressing routine. A related feature is "favorite-track memory," which lets you program play lists for each disc so that your preferred track sequence is automatically recalled whenever that disc is inserted.

A far more valuable feature — one I call the *Revolution* 9 feature — is "delete programming." This lets you specify one or more tracks to skip on a particular disc, letting the remainder play in the usual order (or a customentered one, if you must). In some changers, deletions for a particular disc can be stored in memory and reactivated even if the disc has been removed and reinserted. Thus, every time you load "The White Album," Disc 2 (even if it's been out of circulation for months), the player will skip Revolution 9 — ta da! Machines from at least one manufacturer go a step further, also allowing you to store a disc's title and other information in a custom "file" that is automatically activated whenever the CD is inserted into the player.

One very basic feature offered by most — but not all — players is a remote control. Several budget CD players omit the handset for an obvious cost savings yet provide remote-control ability when they're connected to a same-brand receiver. But most CD players include a dedicated remote; those that provide a volume control will prove their worth to owners of older, non-remote-controllable receivers or amplifiers. Most remote handsets include numeric keypads for direct track access; those that don't tend to frustrate inveterate track skippers.

Integrated-remote capability is actually a good reason to consider a CD player from the same maker as your receiver, integrated amp, or A/V preamp. Linking a central-control component and a CD player (via a rear-panel cable) can yield a powerful, one-remote system that limits coffee-table clutter and provides such nifty features as one-touch operation. Pressing the CD play button, for example, might

# TECHNOLOGY ON PARADE

player manufacturers regularly claim improved performance from one or another digital-audio refinement. While most claims are technically legitimate, few translate directly into appreciably audible gains.

The most universally hyped technological factor is digital-to-analog (D/A) conversion. Multibit D/A conversion is the original method used to decode the 16-bit data contained on a CD. Today, 18-bit and even 20-bit devices are often employed. While they theoretically offer somewhat greater accuracy in converting digital audio data into analog waveforms, a carefully engineered, precisely calibrated, plain-vanilla 16-bit device can be every bit as accurate.

But "1-bit" converters like Philips's Bitstream and Technics/Panasonic's MASH chips dominate the field these days. Instead of using complex resistor networks to model each of CD audio's 65,000-odd possible values, such low-bit converters use very fast, very accurate clocking circuits, which subsequently convert from time to amplitude quantities using simple 2- or 3-bit numbers. (If you *must* have more detail, see "Digital Audio 101: Back to Basics" in the November issue. Otherwise, don't worry about it.) At lower price levels, I feel, 1-bit technology does deliver slightly better accuracy per dollar; among more expensive, audiophileoriented players, tweaked-up multibit

systems are about as common, and the performance balance is even. At any price level, it's doubtful that even the most colden-eared audiophile could identify an inherent, audible difference between 1-bit and multibit converters, so making a purchase based on techno-marketing hype is unwise. The same holds true for oversampling, another digital-audio wrinkle. Virtually every player today exploits oversampling as an integral element of digital low-pass filtering; four-times, eight-times, and higher oversampling rates are common among multibit models. By definition, 1-bit players employ high resampling rates that are more or less the same thing. The upshot: Don't expect this number, either, to predict sonic (or technical) quality - it can't.

HDCD (High-Definition Compatible Digital), a technical refinement conceived by a company called Pacific Microsonics and licensed to a number of CD hardware makers, involves a fully backwardscompatible encode/decode process. In other words, special HDCD-encoded discs (the catalog numbers several dozen and is growing) can still be played on ordinary players, and, in turn, HDCD players also play ordinary CD's. Essentially, the HDCD system encodes instructional data within the 16-bit bitstream that is supposed to help HDCD- equipped players decode very low-level signals more accurately. The result is said to be greater transparency, spatial nuance, and dynamic detail, but that is a matter of considerable debate. Judge for yourself. But keep in mind that this is a proprietary process, requiring a specialized and relatively expensive digital device and licensing fees, which is why HDCD players cost more than otherwise comparable CD machines.

Taken as a whole, printed CD specs are singularly unhelpful. Virtually flat frequency response, 0.01 percent or less distortion, and 90-dB and higher signal-to-noise ratios are commonplace among even low-cost players. Dynamic range *may* offer a useful though highly generalized yardstick of overall audio quality: A player rated for 98 dB dynamic range seems clearly superior (on paper, anyway) to one rated at 88 dB. But even here comparisons are awfully difficult, because variations in measurement techniques and tools could well yield numbers varying by 6 dB or so from identical players tested by different labs.

In short, my advice is to put little faith in specs, relying instead on your own handson and listening experience. Does one particular player sound better to you? Then, by definition, it *does* sound better, even if the difference exists only in your mind. After all, that's where the aural experience actually takes place — hearing, like all the senses, is subjective; deal with it. Perhaps more important, does this great-sounding player also seem well made, thoughtfully designed, and sensibly arranged? If so, that's the one for you. Buy it! — D.K.

turn on both the receiver and CD player, with the CD player cueing up the disc while the receiver selects CD mode and reverts to your preprogrammed volume, tone, and surround-sound settings for that mode.

Of even greater interest to recording buffs will be inter-component communication as it relates to dubbing tapes from CD's. Linking a CD player with a compatible cassette deck offering a CD-synchro feature opens the door to truly automated, one-touch recording. Pressing the record button will automatically start and stop the recording process; in some cases the system will even pause both the CD and tape deck so that you can flip the tape. Another useful feature is tape-edit (or recordedit), a mode that rearranges the playback order of CD tracks to fit as much music as possible onto a two-sided cassette. You can usually select one of several standard tape lengths or manually key in another length. A less common taping feature is automatic peaksearch, which quickly scans a CD to locate the loudest passage, which is then looped so that you can set the proper recording levels.

To sum up the experience of shopping for a CD player in the Nineties, 1

would say be prepared to encounter tremendous value. The technology has matured to the point where today's \$179 player outperforms the \$1,000 machine of a decade ago by just about every measure. Better still, the last time I looked there were well over 300 models of CD players and changers to choose from, at prices ranging from under \$100 for portable players and single-disc models to more than \$10,000 for ultra-high-end two-piece systems. If you can't find a player that suits you to a T, maybe you should think about taking up another interest. Roller-blading, maybe?

## **REAL HIGH CURRENT DRIVE**

In many ways, the power supply of a home theater receiver is like the engine of an automobile. And you can compare performance in much the same way.

In automotive terms, it's the difference between getting creamed by a semi as you pull onto the highway or leaving it in the dust, and it's called torque. In audio terms, it's a receiver's ability to deliver high power levels into low impedance loads, and it's called High Current Drive. And Onkyo has it to spare.

Pop the hood, er, take the cover off an Onkyo receiver and you'll see why. Oversized power transformers specially designed to minimize flux leakage. Heavy duty capacitors with incredible reserves. An industry first Non Negative Feedback Circuit that uses inverted Darlingtons to reduce IM Distortion to unheard of levels. Discrete Output Stages with hand-selected resistors and transistors. Massive heat sinks more commonly found on only the most exotic amplifiers.

Take the cover off a competitive receiver and you'll have to hunt to find the transformer and capacitors. You'll see less circuitry because they'll use cheaper IC's instead of Onkyo's costlier discrete elements.

## ONKYO & MOTOROLA DESIGNED DSP FOR A PERFORMANCE THAT'S UNREAL

When it comes to designing a receiver to recreate the ambience of a theater (or any acoustic) environment, you stop thinking Hz and think MIPS (Millions of Instructions Per Second). It's the microprocessor and software parameters that determine the realism of a receiver's Digital Signal Processing—DSP.

Some audio manufacturers don't want to talk about where their DSP chips come from. Others limit themselves by making their own. But Onkyo seeks out the best global partners, then teams with them to evolve new solutions. And in microprocessors, that partner is Motorola.

All of Onkyo's new home theater receivers utilize a DSP section that's Powered By Motorola<sup>™</sup> and programmed by Onkyo...Models incorporating Dolby Pro Logic use the 24-bit Motorola 56004 DSP chip, while those that also include THX and Dolby Digital AC-3 use the new 24-bit Motorola 56009 DSP chip as well. And their heat sink: look as though they're made out of tin foil. Which is why they measure their receiver power into wimpy 8 ohm loads.

And why Onkyo isn't afraid to measure our receivers

What this means to your ears is equally distinguishable. High power and high current into low impedance is the ability to effortlessly handle the most strenuous sonic demands. That's why movie soundtracks heard through an Onkyo receiver have a depth, presence and impact that's missing on other brands. And if you listen, you can hear it, especially on

**POWERED BY** 

MOTOROLA

those cinematic passages that explode into your room, like T-Rex's first thunderous bellow in Jurassic Park.

What you're hearing is Real High Curren Drive. And only Onkyo makes the ride worthwhile.

# The Onkyc and Motorola design delivers up to 100% more processing capacity than competitive home theater products. The 50MHz 56004 can execute 25 MIPS using three separate buses to access commands and data simultaneously. The 56009 runs at an even faster 80MHz, with even greater processing capabilities.

The result is the most three-dimensional soundfield you've ever experienced. Forceful dynamics, clear reflections, accurate reverberations—all the key sonic nuances that define how REAL something sounds. At the same time, you can confroit more of the factors exclusive to your home theater—room size, ambience, equalization, time delay, etc.—thousands and thousands of parameters under your control.

All of which is extremely important when aliens decide to invade your living room. Or a runaway bus races across your den.

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## A REAL THEATER EXPERIENCE

The future of home theater is here and it's called Dolby Digital AC-3. You'll find it in Onkyo's ED-901 Processor and on our new TX-DS939 and TX-DS838 Integra receivers. You'll also find it in an increasing number of competitive products. The same holds true for THX, the George Lucas inspired performance parameters designed to re-create the ambience of a THX movie theater.

So what makes Onkyo's approach to Dolby Digital AC-3 and THX better? Well, you can start with everything we've told you up to now. Onkyo's Real



High Current Drive means that the power and torque are there to handle the demands of Dolby Digital, especially that rear surround signal which is now two separate, power hung y stereo channels. And Onkyo power is more than up to the task of not only meeting

THX requirements, but

exceeding the n.

AC-3 D I G I T A L



Dolby Digital AC-3 also contains much more sonic information than its Pro Logic predecessor. Information that has to come together flawlessly in your room for the experience to be fully realized. And with Onkyo's greater

microprocessing capability, which home theater receivers do you think will do a better job making movies come to life?

From the very first AV receiver we built over ten years ago, Onkyo has set the industry standard in home theater performance. And as the Digital Video Disc ushers in a new era of technology, Onkyo again takes its position at the forefront.

To our competitors who create technical buzzwords instead of technical break throughs, we say "Get Real". To those who want to own the finest home theater components, we say "Get Onkyo".

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## Clearly better.

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When one of the best loudspealer ergineering team, in the world advances its state-of-the-art technology, you'd expect the result to outper orm the competition

It does.

KEF's new O Series, with its distinctive clear cone Uni-Q crevers, delivers a more

piecise stereo image, over a wider listening lares, than lany conventional lonespeaker can. Tais latest advarce in KEF's paterned technology delivers even smoother midrange response and clarity that's simply srunning.

Fr.m bo-shelf to 3-way floorstander, the encire range is magnetically shielded for Home "neatre use. And because aesthetic: and integral to good design, the two largest models incorporate KEF's rew 'racetrack' bass unit. With the performance of an 8 inch driver in

> the space of a 6 inch, it preserves the slim elegant Q Series design.

With the new Q Series, the competition have been decisively outclassed. The difference is clear. CIRCLE NO. 34 ON READER SERVICE CARD





MODELS SHOWN ARE THE Q SERIES COMPRISING THE 015, 035, 055, 065, 075 AND 095C. KEF AND UNI-Q ARE REGISTERED TRADEMARKS. UNI-Q IS PROTECTED UNDER GB PATENT 2 236929 U.S. PAT. NO. 5,548,657. WORLDWIDE PATENTS PENDING: KEF ELECTRDNICS OF AMERICA, INC. 89 DOUG BROWN WAY, HOLLISTON, MA. 01746. TELEPHONE: (508) 429 3600

Whether you get your kicks from transistors, tubes, or champagne, there's no audio system too audacious or video system too vivid to benefit from a tweak or a technological treat. To help improve your visions of sugarplums and the sound of sleigh bells in the snow, we scoured the landscape for electronic goodies that would make neat holiday gifts to give or to receive. More than mere baubles, but far less than capital expenditures, the toys we found can all be hung on your mantel for \$200 or less. Now go grab your shopping list, check it twice, and get ready to take some notes.

#### CABLE CLOAK

Every stereo and home-theater system sprouts a Medusa's hairdo that at first glance can turn at least one half of a domestic relationship to stone. Get Organized tames the serpents with its Cord Control Kit by domesticating the mess behind your components or computer system and then concealing it. Each kit contains a rainbow of colored labels that you apply to cable ends so that you'll know which is which. Then you place a matching colored dot next to the equipment jack where each cable goes. Once they're identified, you bind the wires into a bundle with the supplied beaded ties and insert it into a length of SuperFlex tubing, which is

slit along its entire length so that you can get the wires in without a fuss.

Get Organized offers kits in 6-, 8-, 10-, and 12-foot lengths in black, white, red, and light gray; prices range from \$13 to \$19. The company has other wire-management gadgets, including floor-wire ducts and self-adhesive mounts for running SuperFlex tubes along flat surfaces. On the other hand, if you spent big bucks on esoteric cables, you may wish to leave them exposed with a spotlight shining on them. *Get Organized, Dept. SR*, 328

Canham Rd., Scotts Valley, CA 95066; telephone, 408-438-0259

#### TURN IT DOWN!

*Ring.* Fumble for the remote. *Ring.* Find the mute button. *Ring.* Hello? Hello? And it's worse if you don't have a remote control and have to charge across the room for the volume knob, then lunge for the phone. Aztec Audio's Silencer, a little black box sprouting four RCA cables and a telephone wire. restores sanity by automatically muting your sound system

> when you pick up the phone. (The Silencer can be wired to mute the volume either 20 or 30 dB.) When you hang up — shazam! — the music returns.

Installation is a snap: Patch the Silencer in your receiver's tape loop, or put it between your preamp and power amp (or the preamp-out/main-in jacks on a receiver or integrated amp) and run the 6-foot telephone cord to a telephone jack (the company supplies

### by Rich Warren

standard RJ-11 and RJ-14 connectors). If there isn't a phone connection near your stereo system, you can use a wireless phone jack that transmits phone signals through a home's existing electrical wiring. The Silencer even works with two-line phone sys-



Aztec Audio's Silencer muting device

tems. Aztec promises minimal sonic degradation, with a rated frequency response of 0 to 20 kHz +0, -0.3 dB. Price: \$50.

Aztec Audio, Dept. SR, 13236 N. 7th St., #4-252, Phoenix, AZ 85022; telephone, 602-993-9663

#### THE SOUND (LEVEL) OF MUSIC

Some people still depend on their reighbors to determine the maximum acceptable volume of their sound system. They simply turn the volume knob clockwise until the guy next door starts pounding on the wall, and then they roll it back a bit. Radio Shack offers a more precise and friendly way to measure sound-pressure level (SPL) with its Model 33-







2050 analog sound-level meter. A longtime favorite of audio professionals, this \$35 bargain fits comfortably in your hand yet can measure sound levels in seven ranges up to an ear-splitting 126 dB with A- or C-weighting. Besides being essential for properly calibrating a home-theater system where level imbalances of just 1 dB



Radio Shack No. 33-2050 sound meter

can degrade surround-sound performance — a good sound-level meter can help you keep the peace in your neighborhood.

Radio Shack, Dept. SR, 1400 One Tandy Center, Fort Worth, TX 76102; telephone, 817-390-3011

#### **TUBE TAPPER**

With the vacuum-tube renaissance comes a tool for obtaining the most from those romantic amber night lights. Dynaclear's Tube Tapper — a long pencil terminating in a "T" with dual erasers — harks back to the golden age of tubes when audio repairmen used such a tool to diagnose faulty

tubes. By tapping a suspect tube with this miniature rubbertipped mallet, you can tell if it's gone microphonic (if it makes a "wow" sound, it's ready for the tube yard). Tube tapping can also extend the life of some tubes by dislodging oxidation, which collects on filaments and other internal elements. Using the mini mallet keeps finger oil off tubes, too, and minimizes the chance of burns and shocks. No tube gear? The Tapper makes an excellent pencil, with twice the eraser power of ordinary pencils. Price: \$2.50 each.

Dynaclear Audio Technologies, Dept. SR, P.O. Box 215, Oradell, N.I 07649; telephone 718-921-1537

#### GET READY TO POWER UP!

Are you outgrowing your first surround-sound receiver the way you outgrew that two-cup coffeemaker you bought when you were single? The re-

ceiver's tuner and front end still please you, and the Dolby Pro Logic decoding works fine, but the amp section lacks oomph, especially with the new set of speakers? Or perhaps you own a TV with a built-in Pro Logic decoder and want to step up to real home theater.

Carver's Z-5 Impedance Matching Power Expander (\$85) offers an ecologically sound alternative to sending your receiver or TV to the landfill. Spring-loaded clip connectors on one end of this pocket-phone-size device accept up to five speaker outputs from your receiver, integrated amp, or TV and transform them into impedance-matched line-level

outputs. Then all you have to do is connect an outboard power amp to the Z-5's gold-plated RCA jacks and crank it up. Carver adds to the functionality by providing a passive level control for each channel. The company also sells a two-channel adaptor, the Z-1, for \$50.

Carver Corp., Dept. SR, P.O. Box 1237, Lynnwood, WA 98046-1237; telephone, 206-775-1202

#### **BIG SOUND FROM TINY PORTABLES**

The original Sony Walkman promoted music sharing by offering two headphone jacks. Since those early days of



Carver Z-5 speaker-level to line-level converter



**Dynaclear Tube Tapper** 



Bowman's Boostaroo headphone amplifier

"personal stereo," precious few models have included more than one jack. Sure, you can buy a dual-jack adaptor, but most CD and cassette portables lack the juice to power two headphones without annoying distortion some even have trouble driving a single set of good replacement phones.

Bowman's Boostaroo to the rescue. About the size of a medium candy bar, the Boostaroo contains a miniature stereo amplifier powered by a pair of AA batteries, which are said to last about 10 hours. You plug your headphones into the Boostaroo, slip its miniplug into your portable, and hit

> the play button. The result: more volume with less distortion, better bass, greater dynamic range, and extended battery life because your player is operating at lower levels. To top things off, you can plug *three* sets of headphones into one Boostaroo. What else can you buy for \$25 that encourages such togetherness? *Bowman, Dept. SR*,

1810E Industrial Dr., Grand Haven, MI 49417; telephone. 1-800-345-2966





Sony MDR-NC10 noise-canceling earbuds

#### SILENCE IS GOLDEN

Sony offers another way to increase your enjoyment of music on the go. The MDR-NC10 noise-canceling earbuds deliver the music without the ambient noise. Though not the first headphone system to incorporate noisecanceling circuitry, at 1.6 ounces for the works the MDR-NC10 is certainly the smallest and lightest. Sony squeezes the circuitry into a bulge in the cord about the size of your pinkie; power is supplied by a single AAA battery, which seems to last forever (an alkaline AAA is said to last about 60 hours). Plug the MDR-NC10's minijack into your portable player, slide the soft rubber tips into your ears, and you're off.

The MDR-NC10's noise-canceling circuit is said to reduce noise by up to 10 dB (mostly in the "critical" 100- to 400-Hz range), turning an airplane cabin into a library. Sure, the noise-busting circuitry generates some white



#### Magnavox GC2010G imageLock video ghost buster

noise, and the sound isn't quite as smooth as what you'd get from a good set of full-size phones, but \$200 isn't much for some real peace and quiet. *Sony, Dept. SR, 1 Sony Dr., Park Ridge, NJ 07656; telephone, 1-800-222-7669* 

#### SMART BATTERIES

If you own a video camera or a cellular phone, then you probably already know that rechargeable Ni-Cd (nickelcadmium) batteries are as temperamental as an opera diva. Unless a Ni-Cd battery is fully discharged, it won't accept a full charge — a phenomenon

known as the "memory effect" that can turn a 90-minute battery into one that lasts for 15 minutes after just a few charge cycles. Enter Ni-MH (nickel-metal hydride) batteries. which store a greater amount of energy for a given size and retain the specified voltage longer than Ni-Cd's. Even better, you can recharge a Ni-MH battery without worrying about whether it's fully discharged.

Toshiba claims to be the first company to offer Ni-MH batteries in standard AA, C, and D sizes for powering all kinds of portable

electronic devices. These batteries should come wearing a halo, because when it's time for their final discharge they don't poison the environment

with toxic cadmium. Toshiba sells a four-cell charger with a pair of AA Ni-MH batteries for \$40, C and D sets for somewhat more. Although costlier than alkaline or Ni-Cd batteries, Toshiba promises that in the long run Ni-MH's cost less because you can get more than fifty charges per battery.

*Toshiba, Dept. SR, 82 Totowa Rd., Wayne, NJ 07470; telephone, 201-628-8000* 

#### WHO'S AFRAID OF GHOSTS?

Ghostbusters Bill Murray and Dan Aykroyd may have to seek new employment now that the Magnavox GC2010G imageLock system has hit the market. This stylish little black box, which connects between your VCR and your TV using either the RF antenna inputs/ outputs or video jacks, exorcises ghosts in your TV set without your having to spray gooey foam all over the screen. The imageLock system receives a Ghost Cancellation Reference (GCR) signal transmitted by most, but not all, TV stations that enables the VCR's tuner to lock onto the primary signal and ignore multipath reflections, or "ghosts," which create headacheproducing double images. It works on



Toshiba's new Ni-MH battery charger with two batteries

Philips Consumer Electronics. Dept. SR, P.O. Box 14810, Knoxville, TN 37914-1810; telephone. 1-800-446-7860, ext. 103



**RCA's Digital Satellite System** 

re multipath reflections, hich create headacheble images. It works on both broadcast and cable TV transmissions and improves the quality of tapes recorded from either. If you need convincing, a button in back places the imageLock in demo mode, splitting your TV screen between the untreated picture and the imageLock picture. Considering that TV

has been around for

half a century now,

this \$199 box is a big-

ger miracle than the one on 34th St. (Call

the number below be-

fore December 25, and

you can purchase im-

ageLock for \$149.70

plus \$7.95 handling

and U.S. shipping.)





StarSight's CB1500 decoder box (inset) and on-screen menu

#### **CUT-RATE SATELLITE TV**

The Digital Satellite System (DSS) gift comes without ghosts, but not without strings. A year ago a DSS receiver cost about \$700. For the holidays, RCA is offering its basic DS3130 DSS hardware package for \$199 after a \$200 rebate from DirecTV or USSB, the companies that supply DSS programming. These guys learned from Gillette to price the razors low and make their money selling the blades. In this case, however, there is a catch: The blades cost about \$300 a year (or \$25 a month), the price of the programming package you must buy to get the rebate. Hey, you'd have bought the programming anyway — without it the receiver makes a lousy bookend. Access to fifty-plus channels featuring high-quality audio and video costs \$200 less this Christmas than you'd have paid for the hardware alone a year ago. Give the angel or star a rest this year: Mount an 18-inch DSS dish atop your Christmas tree.

RCA/Thomson Consumer Electronics, Dept. SR, 10330 N. Meridian St., Indianapolis. IN 46290-1024; telephone, 1-800-336-1900

#### **CHANNEL SURFER'S DREAM**

Yes, Virginia, StarSight proves that there is a Santa Claus. It's largely patented technology from StarSight Telecast that makes DSS's on-screen program guides so inviting and easy to use. StarSight brings similar eyepleasing screens with warp-speed program selection and one-touch VCR recording to ordinary TV's and VCR's. And it provides program guides that are customized for the area in which you live (broadcast or cable TV), groups the programs by type, and includes synopses for most shows.

Buy a StarSight-equipped TV or VCR (available from a number of major companies) or a stand-alone CB1500 set-top decoder (\$100) from StarSight before the end of the year, and you'll get six months of free service (the usual monthly fee is about \$4). It's rumored that Santa uses Star-Sight to keep track of who's been bad or good. Better watch out. StarSight Telecast, Inc., Dept. SR, 39650 Liberty St., Fremont, CA 94538; telephone, 1-800-643-7827

#### A/V ANYWHERE

While you can't beam yourself up using StarSight, you can beam audio and video signals anywhere in the house with the breakthrough Wavecom Jr. from RF-Link Technology. Wavecom Jr. is said to be the first wireless audio/video transmission system to utilize the new 2.4-GHz band. The wide bandwidth available in this uncrowded part of the broadcast spectrum permits full-fidelity transmission with virtually no interference from other RF devices in the home.

The \$200 system includes two compact transmitter/receiver modules, each with a fold-up paddle antenna, and cables for connecting the devices to A/V components. Each module offers four selectable channels, so you could operate up to four Wavecom Jr. systems in your home simultaneously without interference. RF-Link claims a 300foot operating range, depending on building construction. The Wavecom Sr., which costs \$50 more, relays your infrared remote-control commands along with the A/V signals. RF-Link Technology, Dept. SR. 411 Amapola Ave., Torrance, CA 90501; telephone, 310-787-2328

ombine these nifty items and you can view DSS or cable TV anywhere in the house, easily choosing what to view, without ghosts or visible wiring, in blissful silence sharing three pairs of noise-canceling headphones each linked to a miniature amplifier powered by Ni-MH batteries, the amp driven from speakers whose sound mutes automatically whenever you pick up the telephone. You'll appreciate the headphones even more after measuring the ambient noise. And the Tube Tapper makes a great conversation piece.



RF-Link's Wavecom Jr. wireless A/V transmission system

## A bullet-proof argument for the new B&W 600 Series.

KEVLAB® IS USED IN BULLET-PROOF VESTS AND HIGH-END **B&W LOUDSPEAKERS LIKE THE** LEGENEARY B&W MATRIX 801 AND CELEBRATED SILVER SIGNATERE, LES MAGIC LIES IN ITS ABILITY TO ELIMINATE THE EFFECTS OF RESONANCE AND STANDING WAVES. ESPECIALLY IN CRECICAL MID-BANGE FRE-OUENCEES. SO ALL YOU HEAR IS PURE, UNCOLORED MUSIC.

The use of our patented Kevlar® cones is reason enough to choose the new B&W 600 Series. After all, Keylar has always been the standard

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 Our metal dome tweeters - borrowed from the Matrix 801s-provide nearperfect response to well beyond audibility. Beveled cabinet edges and solidly braced enclosures minimize box resonance and the effects of diffraction for truly transparent sound.

 Gold-plated speaker terminals allow for biwiring to reduce component cross-talk. You can choose from a full line of speakers ranging from bookshelf to floor standing, center channel to surround sound, even an active subwoofer.

• Prices start at just \$400 a pair. End of argument. Any questions? Fire away. Call 1-800-370-3740.



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## I REMEMBER WHEN CELLULAR PHONES FIRST became popular. For about

six months I got a lot of calls from people telling me they were in their cars. They had nothing else to say, just that. But they were thrilled at the notion of communicating through thin air. Admittedly, the idea has a lot of appeal. We're such a restless people,

and yet so committed to staying in touch, that the explosion of wireless services comes as no surprise.

Similarly, the growing popularity of wireless headphones in the audio world seems just as logical. Headphones offer tremendous advantages, such as good sound quality at a low price, isolation from the outside world, and peace and quiet for those around us. But nobody likes headphone cords; straight or curled, long or short, they always seem to get in the way.

To lift this curse, wireless headphone manufacturers have taken two different approaches. One uses infrared (IR) technology with the same transmission principle as most handheld remote controls — that is, the signal is conveyed via a beam of infrared light. IR transmission can work well, especially if it's combined with advanced technologies like digital encoding (see "Wireless Goes Digital," page 84). The key drawback to IR systems, however, is that they require a direct line of sight to the transmitter.

Some manufacturers, on the other hand, have begun offering headphones with low-cost radio transmitters and receivers operating in the 900-MHz radio-frequency (RF) range. Just as many cordless telephones have migrated from the old 49-MHz band to 900 MHz, newer wireless headphones have also moved up to take advantage of the 900-MHz band's better sound quality, longer range, and relative freedom from interference. Best of all, 900-MHz signals can pass through walls and other obstructions to offer a wider range of movement. If you want to do some gardening while listening to Mozart, clean the garage while listening to the football game, or snuggle in with the *Late*, *Late Show*, 900-MHz phones may be ideal.

READY TO CUT THE CORD? WE TRY OUT A TRIO OF WIRELESS HEADPHONES FOR COMFORT, RANGE, AND SOUND QUALITY Of course, eliminating the cord from a headphone increases its price and raises performance issues. Is the extra cost worth the benefit? Can these headphones provide sound quality suitable for serious music listening? Do the transmitters and receivers introduce unacceptable audible artifacts?

To answer those questions, we lined up three new 900-MHz wireless headphones, from Koss. Sennheiser, and Sony. The Koss JR/900, available since June, costs \$400. The Sennheiser RS8 and Sony MDR-RF940RK, priced at \$350 and \$150, respectively, are the first 900-MHz phones offered in the U.S. by these manufacturers and were scheduled for release in late fall; both units we tested were preproduction samples said to perform similarly to the finished products. Together, the trio represents some of the latest thinking in wireless audio.

All three systems transmit a frequency-modulated (FM) stereo audio signal at around 900 MHz. Very generally, their operation is similar to that of stereo FM radio or stereo television audio (also an FM signal). Thus, these headphones can be prone to the same noise and transmission artifacts that affect all wireless FM reception, such as background hiss, popping noises, tuning drift, and interference from other RF-generating devices.



I conducted listening tests using high-quality CD's as source material, with an eye toward evaluating sound quality, signal stability, resistance to spurious RF artifacts, and reception range. Range tests were done in a variety of environments and through different types of walls, including woodstud/sheetrock construction, hollowcore concrete block, and glass. Each headphone set was subjected to the same tests to allow a valid comparison. It should be noted, however, that radio transmission is always subject to local conditions and that performance may differ in your home.

#### Koss JR/900

Right away, there's one feature of the Koss JR/900 system that's a standout — or at least a stand. Specifically, the transmitter/battery charger's upright, sculpted plastic body acts as a mounting post for the phones. Besides providing a convenient place to put the headphones when they're being recharged or not in use, the two pieces make quite an attractive set.

Controls on the transmitter include a pushbutton on/off switch, a rotary volume knob, and three small DIP switches to select one of five different



transmitting frequencies, from 906.4 to 924.8 MHz. You set the DIP switches to a frequency that doesn't interfere with other 900-MHz devices in your home, then forget them.

Stereo phono jacks accept the audio input. There's also a 24-volt DC power-input jack and a jack for recharging the headphones' Ni-Cd battery pack through a short jumper cord. The battery pack is said to operate 5 to 10 hours depending on playback volume and battery condition; recharging time is given as 14 to 16 hours. Koss supplies an AC adaptor and various audio cables and adaptors.

The JR/900 headphones themselves also sport a number of controls. A slide switch turns power on or off, and another selects stereo or mono reception; as with other FM receivers, the mono setting can be used to reduce noise on weak signals. A dual-thumbwheel rotary control adjusts volume for the left and right ears, either independently or together.

A prominent pushbutton labeled "selector" is evident on one earcup. When the button is pushed, the headphones scan the available frequencies and automatically lock onto the transmitted signal. Thereafter they return to the same frequency each time you power up. In homes with more than one JR/900 transmitter operating, the selector button is used to hop among up to five sources. The transmitter and headphone receiver both feature crystal oscillators — similar in principle to those used in quartz watches - to lock in their frequencies for a stable, drift-free signal. Maximum transmission range is said to be 150 feet.

I found the JR/900 headphones quite comfortable during my listening tests. The upper headband can be adjusted easily, and the closed earcups fit entirely around my outer ears so that nothing pressed against the pinna itself. Moreover, the closed design provided good bass response and isolation from outside noise.

Since volume controls are provided on both the transmitter and receiver, some care must be taken to find a setting on the transmitter that will broadcast a strong audio signal without overloading the receiver's front end. Too high a level can cause significant distortion; too low a level unnecessarily decreases signal-to-noise ratio (S/N), thus increasing noise at the receiver. Once the transmitter is properly adjusted, the volume control at the headphone can be set to the desired listening level — and there's plenty of level.

The JR/900 was pretty good from a fidelity standpoint. Neodymium-ironboron magnet structures are employed in the headphone elements, along with 16-micron-thick Mylar diaphragms. Frequency response was reasonably extended. I found the system's dynamic range somewhat lacking, however, and some hiss became audible during soft music.

The JR/900 was also pretty good from a reception standpoint. One of the two samples we received was plagued by reception artifacts, but the other sample performed considerably better. The signal stayed intact as I walked around my large test room. with only occasional artifacts, and it was always possible to find a strong reception point where the signal was clean. When I moved outside my test room, I felt that the JR/900's received signal quality was generally satisfactory for distances up to 35 feet or so, with transmissions passing through one exterior wall. But after that, reception steadily deteriorated until it failed completely at a distance of about 120 feet. The usable range is probably adequate for most purposes, but it was a bit less than that of the other phones in this test

#### Sennheiser RS8

European products often seem to have a certain countoured look that American and Japanese products tend to lack, Koss's stylish JR/900 notwithstanding. The sculpted design of the German-made Sennheiser RS8 is a case in point. The system consists of a transmitter/charging station housed in an arched, black plastic cabinet and a pair of sleek headphones.

The transmitter runs on 12 volts DC from a supplied AC adaptor, but there's no power switch: It turns on automatically when an audio signal is applied, and off again after 10 minutes without a signal. The transmitter broadcasts on any of three frequencies from 902 to 928 MHz, selectable via a bank of DIP switches. A short antenna wire is routed through a 3-inch length of plastic tubing and clipped onto the back of the transmitter to hold it upright. A maximum transmission range was not given for our sample.

A three-pin socket accepts an audio input cable that terminates in a miniplug (adaptors are supplied to increase your connection options). There are also ports for the two tiny battery packs supplied for the headphones,



which can be slipped into the base for charging when they're not being used. Playing time is said to be about  $3\frac{1}{2}$ hours per battery pack.

The RS8 transmitter and headphone receiver are each equipped with Sennheiser's HiDyn Plus noise-reduction system, patterned after circuits used in its professional wireless systems for TV and live-sound applications. Like other analog noise-reduction systems, such as Dolby NR, HiDyn Plus increases the audio dynamic range by first compressing the signal prior to transmission, then expanding it in a complementary fashion after reception. In the RS8, HiDyn Plus is said to deliver a minimum S/N of 75 to 80 dB.

The dynamic headphones use a supra-aural earcup that fits flat against the pinna and an adjustable inner headband. A slot on one earcup accepts either of the two battery packs; once inserted, the pack fits flush with the headphone's outer body and can be easily removed with a fingernail. The thumbwheel volume control clicks off at one of its extremes to shut the phones down.

Another thumbwheel is used to tune the receiver to the selected transmitting frequency; a red LED lights when the stereo signal is locked, so it's possible to tune the phones without putting them on your head. The presence of a manual tuning control made me wary at first about possible signal drift, but the thumbwheel actually tunes a crystal-controlled oscillator in the headphone to a similiar oscillator in the transmitter. Once tuned, the headphones stayed locked.

The RS8 provided very solid reception. I could move anywhere in my test room and hear only minor reception artifacts. This was quite remarkable and placed the RS8 above the other test units. I also liked the RS8 from a fidelity standpoint. The headphone amplifiers supplied plenty of power, driving them to loud levels without distorting. Sound quality was quite good, with wide frequency response, extended dynamic range, a fairly low (though still detectable) noise floor, and low distortion.

In my long-distance tests, however, the system faltered a bit. I found that once I went outside my test room I could roam as far as 140 feet from the transmitter before losing the signal. But as I moved out to that distance, reception deteriorated quickly and noticeably; there were many dead spots where the sound was either muted or simply unlistenable because of artifacts. On the other hand, by varying my location and turning my head at a certain angle, I could maintain reasonably good reception with subjectively acceptable artifacts at distances of 40 feet or so.

#### Sony MDR-RF940RK

The Sony MDR-RF940RK system is somewhat curious. The headphones have beautiful high-tech styling, but the disc-like transmitter is as plain as a hockey puck. In any event, this duo is the most flexible of the bunch in that it is the only system in which both transmitter and phones can be powered by batteries. You can take the system to the beach along with a portable CD player and enjoy a completely detached listening experience.

The transmitter has a power switch and an audio input cable, hard-wired to the case, that terminates in a miniplug connector (Sony supplies a phono-jack adaptor cable). It can be powered by the supplied AC adaptor, as noted above, or by batteries, which you have to supply yourself. Four AA alkaline batteries are said to last an estimated 40 hours. The headphones are said to operate up to 40 hours on a pair of AA alkalines. The use of crystal oscillators in both the transmitter and receiver is said to eliminate signal drift; small switches on each device lock them on either of two channels, 913.5 or 914.5 MHz.

The transmitter's modulation format is also said to be unusual. While most RF wireless systems employ the same audio-frequency-modulation (AFM) methods used to broadcast stereo FM radio, the MDR-RF940RK uses FM-FM modulation, the same technology used in Japan for stereo TV broadcasting. It is said to provide wider dynamic range and frequency response than conventional FM transmission.



- . Two switchable frequencies
- · 1-inch polyethylene driver elements
- EM-EM modulation
- · Self-adjusting headband

MANUFACTURER'S SPECIFICATIONS:

- · Frequency response: 18 Hz to 22 kHz
- Range: 130 feet · Headphone weight: 15 ounces (with
- batteries)

#### PRICE: \$150

MANUFACTURER: Sony Electronics, Dept. SR, Sony Drive, Park Ridge, NJ 07656; telephone, 1-800-222-7669: World Wide Web, www.sony.com

The dynamic headphones have a microswitch that turns power on automatically when you place the phones on your head and cuts the power when you take them off. This is a useful feature that extends battery life and prevents you from accidentally running down the batteries.

The headphones have a self-adjusting band and angled earcups that naturally conform to the head and ears. They use large, 1-inch-diameter polyethylene drivers. A small thumbwheel adjusts volume for both drivers simultaneously, but it's hard to reach.



The Sennheiser IS 850 wireless headphone system, unlike RF wireless phones, employs an infrared (IR) beam to convey the audio signal — the same method used in most remote controls. But this is no low-end product: The IS-850 carries the healthy price tag of \$1,395. The reason is that, while other wireless headphone systems transmit analog stereo signals, the IS-850 transmits digitally encoded PCM audio to the headphones.

In fact, the transmitting tower has analog, coaxial digital, and Toslink optical digital inputs. It can automatically handle digital signals using sampling frequencies of 32, 44.1, or 48 kHz, and analog inputs are digitized with a sixty-four-times-oversampling sigmadelta analog-to-digital (A/D) converter before transmission. Analog input sensitivity is adjustable from 300 millivolts to 3 volts. The front of the transmitter tower is impressively fitted with three columns of IR sources, thirtysix in all, to insure a wide coverage area; range is said to be about 20 to 35 feet. An AC adaptor delivers 12-volt DC power.

Although the Sony phones look a little odd, they fit my head and felt great. My ears are very sensitive to headphones, but these were so comfortable I almost forgot I was wearing them. I was also impressed with the sound quality. Under conditions of ideal radio reception, the fidelity was quite good, with extended frequency response, wide dynamics, and low distortion and noise.

Signal reception was pretty good, too. Although I was sometimes bothered by small chirping artifacts, the phones were mainly very reliable as I moved freely through my large test room. As I moved outside the walls of my test room, reception steadily deteriorated, failing completely at 140 feet. As with the Sennheiser, I was able to get about 40 feet of good reception range from this system.

#### Conclusions

If my experience with these three headphones is any indication, RF wireless systems are as varied in performance, The headphones are truly astro-looking with their overhead circuitry pods, battery pods, and four IR sensors at the crown. There is a thumbwheel volume control, a power switch, a left/right balance control, and room for two AA batteries. Charging time is said to



Sennheiser's IS 850

be about 14 hours and playing time about 4 hours, depending on playback volume and battery quality.

The headphone elements are top-of-theline, and the IR receiver and digital-to-analog (D/A) converters do nothing to diminish their

feature content, and pricing as any other audio category. Consequently, what you purchase will depend on your personal needs and preferences, as well as your budget.

I found the Sennheiser RS8 to be a very good wireless system. Fidelity was quite good, adequate even for sustained and serious music listening, though I would have liked the ambient noise floor to be lower still than the special noise-reduction circuitry was able to deliver. The phones were very comfortable, the nifty rechargeable batteries were a great convenience, and the range was very good. But the best quality of this system was its reliable radio reception, which, along with the noise reduction, provided the best overall listening experience of the three systems I tested. If you can't abide pops you should use corded headphones, but the RS8 came reasonably close to that kind of trouble-free connection. Therefore, budget constraints aside, I would choose the Sennheiser over the others.

sound quality. Frequency response is said to be 10 Hz to 20 kHz with a 44.1-kHz sampling rate; S/N is rated at 101 dB with a digital input. Subjectively, I found the sound quality absolutely excellent. These are superb phones, with flat and extended frequency response, wide dynamic range, fast transient response, and ultra-smooth sound quality.

The digital IR system does a fabulous job of conveying data to the phones. There were no audible artifacts as I moved through my listening room, even to the far corner, some 25 feet from the transmitting tower. Moreover, I could turn in any direction, and at least one of the four IR sensors picked up a clean signal. Of course, unlike RF, IR is a line-of-sight system, and although some reflected light might find its way outside your room, the system will ultimately mute as you leave. But if you want a cordless experience that is truly hi-fi, and are content to stay in one room, the IS 850 will deliver in spades. Now all you need is a big tax refund or a visit from Santa. — K.P.

On the other hand, if comfort, convenience, or monetary constraints were of primary concern, I would prefer the Sony MDR-RF940RK. The phones were comfortable on my head, and the automatic power on/off feature was terrific. I was also impressed with the fidelity, which I judged to be superior to that of the other two models. The noise floor was quite low, and the reception range was good as well. On the downside, these headphones hiccupped with a few too many reception pops for my liking. But at its price. some \$200 less than the Sennheiser headphones. Sony deserves kudos for bang-for-the-buck value and the long playing time.

The Koss JR/900 was also pretty good overall, but it fell short in some key respects. Having the rechargeable battery pack integrated with the headphones is a nice idea, though having to plug in a charging cord adds to clutter. Fidelity was good, but 1 preferred that of the other two systems; the Koss sounded "harder" to my ears. My big-

## To everyone who fell in love with the Optimus PRO LX5,



## it's time you met the rest of the family.



PRO LX10

33" 2-way tower



PRO LX7 19" bookshelf



PRO CS5 center channel



PRO LX8 18" bookshelf



PRO X77 mini speaker

Audio experts gushed about our affordable Optimus<sup>®</sup> PRO LX5. "... the best-sounding \$300 pair of loudspeakers I have ever heard." — *Video*, March 1995. "... an astonishing hi-fi bargain if there ever was one." — *Audio*, April 1995. They fell in love with the dramatic sound dispersion, smooth bass, soaring highs and seamless crossovers that come from the LX5's innovative design. That same Linaeum<sup>®</sup> technology is now used in a whole family of speakers exclusively from RadioShack.

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For many of us, wireless audio technology is a lifestyle thing. Don't get me wrong — great sound is nirvana. But wireless audio, especially 900-MHz wireless, can be just as much about *freedom*, whether it's another family member's freedom to sleep while you rock out or your freedom to walk into the kitchen for a snack without missing a second of play-by-play on *Monday Night Football*.

That's where Recoton's W200 wireless headphone system comes in. The W200 is a three-piece package with a 900-MHz transmitter, a compact receiver module, and



Recoton's W200

conventional corded headphones that plug into the module. This configuration adds yet another dimension of flexibility and freedom not found in two-piece systems, and it does so at the bargain price of \$130.

Recoton, of course, can be credited with bringing wireless audio to the masses. The company holds several 900-MHz patents and licenses its technology to other manufacturers as well as offering its own line of wireless headphones, speakers, and microphones. Its goal has never been to deliver audiophile sound to critical listeners,

gest problem with the unit was this hard sound quality. Also, while radio reception was good within proximity of the transmitter, the JR/900 did have slightly less usable range than the other two headphones I tested.

In conclusion, none of these wireless headphones was perfect. The task but rather to offer problem-solving components with respectable performance to ordinary consumers at an affordable price.

The W200 does just that. The transmitter has a 4<sup>3</sup>/4-inch-square footprint and an AWACS-style omnidirectional antenna. On the rear panel are a jack to supply 18 volts DC from an AC adaptor and stereo RCA audio inputs. Two thumbwheels adjust output level and transmission frequency, which can be varied to avoid interfering with other 900-MHz devices. Operating range is given as 150 feet.

The receiver module measures 43/4 x 21/2 x 7/e inches — a bit taller and narrower than an audio cassette storage box. It has a pair of thumbwheels to adjust volume and to tune the receiver, with stereo audio output through a mini-jack. On the module's back side are a handy belt clip and space for three AA batteries. Additional receivers are available separately (W206B, \$50 each).

Supplied cables and adaptors facilitate hookup. In my case, it took only a couple of minutes to connect my stereo receiver's ¼inch headphone jack to the transmitter's RCA inputs. Audio bandwidth for the system's receiver module is given as 50 Hz to 15 kHz, S/N as 60 dB, and channel separation as 30 dB. These specs approximate those of a typical stereo FM tuner, making the W200 suitable for noncritical listening.

The system's real beauty, however, lies in its flexibility. For example, the W200 comes with a pair of lightweight portable headphones that I found well suited for listening to music while exercising. For serious music or TV listening, however, it was easy to exchange the Recoton phones for my reference headphones. The receiver

of building both a radio station and a radio, as well as an amplifier and headphones, all for one low price, is a huge challenge. Radio reception at the low transmitted power levels mandated for these systems will introduce artifacts no matter how hard engineers try to avoid them. module had no trouble driving them to sufficient volume, and I got the benefits of deeper bass, extended highs, and cleaner sound.

For mowing the lawn, in contrast, I loaded up my CD carousel and plugged a pair of earbud phones into the receiver module. The tight-fitting buds helped block out mower noise, and the music enhanced an otherwise dull chore. Later that day, I connected the receiver module to a pair of battery-powered multimedia speakers and set them up on our backyard picnic table for entertaining quests.

In each instance, the W200 system did a solid job and delivered acceptable sound for the application at hand. In fact, overall sound quality on my wide-bandwidth reference phones was actually pretty good, although the W200's inherent noise floor was more readily exposed as additional hiss. This really wasn't much of an issue in my other applications - where the headphones or speakers proved to be limiting factors along with ambient background noise. Radio reception was typically clean when I was stationary, though I did experience crackling and other artifacts while moving around that became distracting at distances beyond 40 or 50 feet.

Admittedly, the W200 didn't deliver ultimate sound quality. But it allowed me to enjoy my favorite CD's anywhere around the house with minimal hassle, and it even brought peace to my marriage by letting me sleep while my wife watches late-night TV all for less than a hundred bucks after retail discounts. In my book, that's a lot cheaper than a minisystem in every room. Or a marriage counselor. — Rob Sabin

On the other hand, wireless systems do provide the great asset of freedom. And the best way to appreciate their convenience is to try a pair. If you've lost patience with the tangled cords and knocked-over objects that go with conventional headphones, unplugged listening may be a revelation.



About the legendary gold dot dial: Nathan George Horwitt, the artist, conceived of a watch without numbers as an experiment in pure, functional and "uncluttered" design.

#### ■ THE ART OF PERFORMANCE: THE MAKING OF A LEGENDARY CLASSIC.

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# SECRETS OF YOUTH

## How to keep your CD's spinning for a lifetime BY ROB SABIN

**B** ack in the days when vinyl records ruled the land, there was a kinder, gentler approach to handling a music collection. Then came the CD, bringing with it the promise of "perfect sound forever." Some of us took that promise literally, and we got careless. We threw the

silvery little discs into our pockets with the house keys, tossed 'em around on the beach, roasted 'em and froze 'em in our cars, and, in other clever ways, abused 'em.

Well, let's get real. We've learned a bit since the early Eighties, mostly by sour experience. Yes, you *can* destroy CD's, and yes, you *do* occasionally have to wipe the sand and fingerprints off of them. But even though they're not indestructible, by developing some good habits (beyond sitting up straight when you listen) you can insure continued enjoyment of your CD's well into the next millennium.

The most vulnerable part of a CD is the thin lacquer coating on the label side that protects the disc's delicate aluminum reflective layer. Breach the lacquer's integrity and you open a path for air that can oxidize the aluminum over time and render part or all of the disc unplayable. In the short term, any scratch that's deep enough to compromise the aluminum can cause spot data losses that even your CD player's sophisticated error-correction system may be unable to rectify. Therefore, Rule No. 1 is: Show some respect. Don't stack unprotected CD's, and please, don't use them as coasters during those wild soirces.





You may have done it a thousand times, but when it comes to removing a CD from its jewel box, there's actually a right way and a wrong way. Whether you use the three-finger method or the two-finger method, always depress the center locking hub fully before lifting to avoid flexing the disc and possibly damaging its lacquer coating.



A CD player's laser can focus quite easily through a fingerprint, but excessive dirt or deep scratches can cause skipping and other audible glitches during playback. While there's a much greater margin of error than with a vinyl LP, it just makes sense to keep your oily fingers off the playing surface (as well as the label side) by holding your CD's firmly at the rim as shown, or with your thumb or index finger anchored in the center.

A CD is not a beer: Foam is a no-no. If you have multidisc sets in your collection dating back several years, open the jewel boxes and remove any foam sheets, which can deteriorate over time and stick to the discs. Fortunately, record companies have abandoned this dubious packing method but that won't protect the albums you already own, so get in there and start peeling.

.....





Its virtues in your kitchen notwithstanding, a steel-wool pad just won't do for cleaning smudges off CD's. Use a soft cloth that won't make microscopic scratches in the disc or leave lint that could end up on your player's lens. And avoid chemical cleaners; mild soap and water or one of the commercial solutions is fine. When cleaning, wipe gently from the center of the disc out to the rim, rather than in a circular motion. A scratch that runs perpendicular to the spiral data track is more easily corrected by your player's electronics.



Okay, you've managed to negotiate a CD from jewel box to player without destroying it, and it's time to return the disc to its rightful place in your storage rack. Don't blow it now. When replacing a CD in its jewel box, be certain to snap it into place so the center locking hub can do its thing. And if the hub has broken fingers and fails to hold the disc securely, spring for a new box, Case closed, so to speak.



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## BEST OF THE MONTH

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



## Iris DeMent: Third Time's the Charm

nyone coming to Iris DeMent's new album expecting a quiet collection of meditations along the lines of "Infamous Angel" or "My Life" is in for an ear-opener: "The Way I Should" is a departure in almost every way from its predecessors, with a fuller sound (by new producer Randy Scruggs), a broader musical scope (including a romping country-blues duet with Delbert McClinton), and a program that highlights DeMent's social and political views as much as it does her devastating personal songs.

Credit the overall change to DeMent's childhood idol, Merle Haggard, who called her up after she'd appeared on a Haggard tribute album. The upshot was a meeting, a musical collaboration included here (*This Kind of Happy*, a glorious wedding of their styles), and a sort of creative dawning. Haggard, known for his social observations in songs like *Okie* from Muskogee, not only freed up De-Ment vocally but gave her the courage to write Quality Time, a condemnation of the upwardly mobile middle class, and Wasteland of the Free, where she comes down hard on preachers, politicians, and overpaid CEO's. He also inspired her to record the searing There's a Wall in Washington, in which a mother, a father, and a child visit the Vietnam War memorial.

If those songs are filled with attitude and anger, DeMent steps back for a charming, old-fashioned country shuffle with *I'll Take My Sorrow Straight*, in which a sensitive woman puts up a strong front in the face of romantic rejection. And DeMent positively lets loose in *Trouble*, the duet with McClinton, writing carefree lyrics ("Let's buy a watermelon / Swallow all the seeds / Forget what Mama told us / Do everythang we please") and going at the vocal with the abandon of a sailor on shore leave.

Yet, as before, DeMent aims straight for the marrow with her songs of desolation and despair. The hymnlike When My Mornin' Comes Around reveals a lost soul on the path to finding herself ("For once I won't be thinking that there's something wrong with me"). Letter to Mom unburdens a 10-year-old of a terrible secret that forced her to become a woman ("He left me wishing I was dead"). And Walkin' Home, about a stroll that takes place only in the mind, evokes a powerful sort of Death of a Salesman flashback to a childhood long since gone.

"The Way I Should" is the most mature album that DeMent has made. While some may argue that the political nature of certain songs weakens the album's personal connection, others will find that these songs come from a more intimate space than her confessionals. DeMent is fond of saying that she doesn't "write" songs — she waits for them to visit. Odds are, you'll find them compelling guests of your own. Alanna Nash

#### IRIS DEMENT: The Way I Should.

When My Mornin' Comes Around: There's a Wall in Washington: Wasteland of the Free: I'll Tuke My Sorraw Straight; This Kind of Happy; The Way I Should: Letter to Mon: Keep Me God; Quality Time; Walkin' Home; Trouble. WARNER BROS, 46188 (51 min).

Nagano's Stylish "Rake's Progress"

alifornia-born conductor Kent Nagano has turned Lyons, France, into a major opera center with a Franco-American accent. The unlikely success of the Lyons Opera's recent recording of Carlisle Floyd's *Susannah* with an American cast was no fluke, as is very well demonstrated by the company's excellent new recording of Stravinsky's *The Rake's Progress*, again with American principal singers.

The Rake's Progress is, surprisingly, Stravinsky's largest work in size and scope. Distantly (but only distantly) inspired by the famous Hogarth engravings carrying that title, the opera is a twentieth-century morality play in Mozartean guise; a philosopher might call it a "metaopera," that is, an opera *about* opera. The libretto, by W. H. Auden and Chester

## BEST OF THE MONTH

Kallman, is almost unbearably arch, and the music is much the same; the characters are, quite intentionally, two-dimensional stereotypes. Finished in 1951, the *Rake* was Stravinsky's last Neoclassical work, a kind of *opera buffa* gone mad.

No major work of modern times has been more criticized, and yet it has continued to be performed over the years and has even influenced later work (notably, John Corigliano and William Hoffman's *The Ghosts of Versailles*). It certainly holds its own in this buoyant, strongly cast performance.

Samuel Ramey is an obvious choice for the role of Nick Shadow; it is almost as though Stravinsky conceived the part for this superb bass known for his portrayals of Mephistopheles. Dawn Upshaw is a wonderful Anne, with her soprano vocally right on target and a mix of artless sincerity and knowing sophistication that is quite Stravinskian.

Will there ever be a tenor who can make something equally interesting out of Tom Rakewell? Jerry Hadley is vocally strong but dramatically and intellectually artless. a combination that has the curious effect of making the sad fate of foolish, wimpy Tom surprisingly unaffecting, a sort of Forrest Gump in reverse: Instead of a pure fool who can do no wrong, he is a foolish fop who can do nothing right. Like Auden and Stravinsky themselves, Ramey and Upshaw (and Nagano) know only too well how to be arch and witty, being simultaneously inside their characters and on the outside looking in. By contrast, Hadley is always dogged and serious, which makes him either impossibly naïve or else perfect for the part. or possibly both.

The smaller roles are not as successfully cast. Grace Bumbry does not have the arch imperiousness that Baba the Turk requires, and Sellem the auctioneer is too soft-sell for Auden's breathless Brechtian anti-capitalist satire. On the other hand, Nagano repeats his astonishing success in *Susannah* of getting a French chorus to sound idiomatic in English, and the orchestral performance is high-spirited, colorful, and rhythmically spot-on.

In short, this is not a highly dramatic conception of the piece but a lively musical one that transforms the apparently backward-looking *Rake* into a particularly ingenious, vastly amusing, and occasionally moving piece of post-modernism.

I can't resist mentioning that Erato has packaged the set in a little hinged cardboard box, each disc in its own little envelope, together with a fat, four-language libretto. This seems to me a simple, practical alternative to the awkward, breakable, and badly misnamed "jewel box" that has become the industry standard. *Eric Salzman* 

#### STRAVINSKY: The Rake's Progress.

Dawn Upshaw (Anne), Jerry Hadley (Tom Rakewell), Samuel Ramey (Nick Shadow), Grace Bumbry (Baba the Turk), others; Chorus and Orchestra of the Lyons Opera, Kent Nagano cond. ERATO 12715 (two CD's, 137 min).



**Conductor Kent Nagano** 



Sonia Rutstein of Disappear Fear

sophisticated production, but never a sound as smart and snappy as that provided here by E Street Band keyboardist Roy Bittan. And she has campaigned for rights political and sexual, but never as pointedly as in lyrics like "I think the old men who wrote the Bible / Were in a sad solid state of denial / In their footsteps you put me on trial / Your true feelings concealed with a smile." Those lines are from *Laws of Nature*, teased by a circular guitar figure and carried by the very essence of a melodic hook.

In fact, Rutstein has tapped a new source of rich songwriting, from the funky little number Skin to the grandnew-party plea B.Y.O.G. (Bring Your Own God), from the pop/rock winner Michelangelo (Paint the World) to the closing Love Don't Die, a power ballad without bathos. Her band is sparkling, especially multi-instrumentalist Brian Michael Simms (who delights on harmonica in Skin), and her deft rhythm-guitar work is complemented by guest lead guitarist Doug Pettibone's organic solos, which grow impressively from the churning Why and the touching Laura. Frank appears as well on several tracks, lending background vocals for some trademark sisterly harmonies.

I hear echoes of Rosanne Cash, often in voice and always in commitment. But where Cash sometimes seems lost in despair, Rutstein strives to overcome it. The phrase "Disappear Fear" was originally her unused name for a rape crisis center, and it's fitting here. To battle some of the

## Disappear Fear: Courage in Profile

isappear Fear has long been a group to watch. Now, with the release of "Seed in the Sahara," Sonia Rutstein and crew redeem all that watching. Rutstein and her younger sister, Cindy Frank, started out in Baltimore as a folk duo ten years ago. Three self-released records and an active touring schedule led to their debut on Rounder's Philo imprint in 1994, which found the sisters working comfortably in a band setting. But Rutstein was looking to rock out more, and Frank, the folkier of the two (her son's name is Dylan), was tiring of the road, so Cindy withdrew as a permanent member, encouraging Sonia to take Disappear Fear to the next level. Which she has.

Rutstein has spun pleasant tunes before, but never ones as engaging as those on "Seed in the Sahara." She has courted

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## BEST OF THE MONTH

worst injustices in life, to take back both the night and the day, Sonia Rutstein works for "true community" the best way she knows how — by singing.

Ken Richardson

#### **DISAPPEAR FEAR:** Seed in the Sahara.

Laws of Nature; B.Y.O.G. (Bring Your Own God); Today Is Better; Why: Seed in the Sahara; Millions of Rope; Skin; Laura; Michelangelo (Paint the World); Boxers; Love Don't Die. PHILO/ ROUNDER 1180 (45 min).

### Brendel Scales Beethoven's "Hammerklavier"

t is no wonder that Alfred Brendel, at age 65, observed that his third recording of Beethoven's titanic Piano Sonata No. 29, in B-flat Major, the "Hammerklavier," would be his last. The Everest of piano sonatas, the 42-minute work displays sharply contrasting aspects. The first two movements are celebratory and mercurial in turn, but with the nearly 18-minute slow movement we enter Beethoven's "dark night of the soul." Only the utmost concentration of thought and feeling on the part of the interpreter can sustain its line and expressive depth. And the finale, with its amazing fugue, represents the composer's ultimate challenge to the player's virtuosity and endurance.

The applause that greets Brendet's entrance and his conclusion of the work on the new Philips CD, recorded at a 1995 concert in Vienna's Musikverein, bespeaks a sense of occasion. The interpretation is in the grand Central European tradition, splendidly proclamatory in the opening bars but with precisely enough flexibility in the phrasing of the lyrical matter to imbue the whole reading with warm hu-

manity. The scherzo is aptly nimble in execution, and the knuckle-busting finale will stand up to the best of the numerous current versions as well as Brendel's own earlier ones.

The CD is filled out with the Sonata No. 26, in E-flat Major, the so-called "Les Adieux," a truncated form of the French translation of Beethoven's own title, *Das Lebewohl*, *Abwesenheit*, *und Wiedersehn*, or "Farewell, Absence, and Reunion." Recording this time in a studio session, Brendel takes us through the sequence with a fine mix of sentiment and vitality. His playing is measured in the opening

NOW ON CD



**Pianist Alfred Brendel** 

pages, meticulously articulated in the slow movement, and infectiously exuberant in the last movement, marked vivacissimamente, or "very fast and lively." Sonics are bright and clear in "Les Adieux" and just a mite too distant in the "Hammerklavier" — understandable given the size of the hall and the live recording. David Hall

BEETHOVEN: Piano Sonatas No. 29, Op. 106 ("Hammerklavier"), and No. 26, Op. 81a ("Les Adieux"). Alfred Brendel (piano). PHILIPS 446 093 (62 min)

#### POPULAR

#### PETER BLEGVAD: Downtime.

ESD 81192. The 1989 album by the cult-fave singer/guitarist — with Pere Ubu's Tony Maintone and the Waitresses' Chris Cutler in support — is reissued with a twenty-page booklet of notes and photos.

#### NANCY SINATRA: Movin' with Nancy.

SUNDAZED 6057. Soundtrack to the 1967 TV special, originally on Reprise, including a duet with Lee Hazlewood on *Some Velvet Morning*.

#### SLAVE.

RHINO 72564. Classic mid-Seventies funk (spun off from the Ohio Players), including the hit single *Slide*.

#### JAMES TAYLOR AND THE ORIGINAL FLYING MACHINE, 1967.

GADFLY 219. The earliest studio recordings by the superstar singer/songwriter,



originally released in 1970 and now fleshed out with bonus tracks.

#### CLASSICAL

#### BOYCE: Symphonies Nos. 1-8.

I Solisti di Zagreb, Antonio Janigro cond. VANGUARD SVC-46. "Highly recommended" (July 1965).

#### LISZT: A Faust Symphony; Hamlet; Hérïode Funébre; Hungaria; other tone poems.

Klaus König (tenor); Leipzig Radio Men's Chorus; Gewandhaus Orchestra, Kurt Masur cond. EMI 68595 (two CD's). Masur's Leipzig orchestra was steeped in this music, recorded in 1981.

#### TCHAIKOVSKY: Symphony No. 4; Serenade for Strings.

U.S.S.R. Symphony Orchestra, Evgeny Svetlanov cond. BMG/MELODIYA 37878. "... an almost operatic abandon in [Svetlanov's] underlining of the drama" (June 1968).

#### **VERDI:** Rigoletto.

Sherrill Milnes, Beverly Sills, Alfredo Kraus, others; Ambrosian Opera Chorus; Philharmonia Orchestra, Julius Rudel cond. EMI 66037 (two CD's). "... rich and expressive, filled with dramatic vitality" ("Best of the Month," February 1980).

#### THE VOICES OF LIVING STEREO, VOL. 2: Songs.

Mario Lanza, Marian Anderson, Leontyne Price, Birgit Nilsson, Shirley Verrett, others. RCA VICTOR 68167. Great singers from RCA's formidable roster of the late 1950's and early 1960's with orchestral or piano accompaniment.



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## POPULAR MUSIC

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

#### MARY CHAPIN CARPENTER:

A Place in the World. COLUMBIA 67501 (45 min). Performance: Lovely, but ... Recording: Excellent

A ary Chapin Carpenter can always be counted on to deliver contemporaryfolk and acoustic-country music that is literate, thought-provoking, and sonically beautiful, and her sixth album. "A Place in the World," is no exception. Paired again with producer/guitarist John Jennings, she finds a way to get her smoky passion and thrilling though hushed alto on disc in undeniably able fashion, even if some of the songs seem as thin in spots as a favorite pair of corduroys.

In the twelve cuts here, Carpenter plays connect-the-dots with theme (the search for place and identity) and pacing (mostly midtempo), while serving up at least four radio-friendly singles: the country-rock lop-



Donovan: oh so mellow

er Keeping the Faith, the jangly guitardriven I Want to Be Your Girlfriend, the ersatz-R&B Let Me into Your Heart, and the romantic Naked to the Eye. As usual, she also offers quiet, poetic songs, including Ideas Are Like Stars and Sudden Gift of Fate, which should help cement her reputation as a Songwriter Who Matters. There's also a delicious study of a troubled lover who longs for escape and salvation through civilized sensuality (What If We Went to Italy). And That's Real sticks in the mind as a seductive confession of unending ache and insatiable emotional craving.

Yet the album doesn't have a big, careerbuilding song that would lift the singer to another level in commercial country or folk. In that sense, "A Place in the World" is oddly unsatisfying; if there's such a thing as Carpenter Lite, this is it. You could debate that all day long, but in the meantime, watch the record create a scramble at the checkout lanes. A.N.

#### MARSHALL CHAPMAN: Love Slave, MARGARITAVILLE 524 288 (42 min). Performance: Delightful Recording: Good

The trouble with Marshall Chapman is that she doesn't put out albums often enough. Okay, her last record, "It's about time ...," taped live at the Tennessee State Women's Prison, came out in 1995. But that still isn't enough Marshall. In fact, anyone who combines smart music with laughout-loud wit and heart-tugging poignancy should have a radio station that plays all Marshall, all the time.

The title song of her new album is a boisterous send-up that promises, "I'm gonna love you like a love slave should," but the record opens and closes with songs of desperation. The first, *Leaving Loachapoka*, set to almost military drumming and a palpable sense of mission, finds a young woman "Going 90 miles an hour with her hair on fire / Running on a tank full of buming desire." She's leaving small-town Ala-

bama for Music City — escaping, as it were. And in *Somebody Like You*, another woman (probably Chapman herself) issues an impassioned plea to what sounds like an old friend or a once estranged parent, asking for soul-searching conversation.

In between, Chapman advises a friend to leave a poisonous woman (the sad, snaky R&B-ish *Better to Let Her Go*), serves up some tasty neo-rockabilly (*If 1 Can't Have You*), and offers a smidgen of torch-style blues/jazz in *Just to Torture Myself*, a song that might have started out as a play on words but evolved into a very funny, frank study of obsessive love. There's also a better-than-average song of social outrage (*Guns R Us*) and a spiritual meditation (*In the Fullness of Time*), all delivered with a soft Carolina accent to the urgent beat of a rockin' heart.

So what if some of the songs go on too long, or if *Better to Let Her Go* cries out for a sax in the break? We're all slaves to something. Might as well be Marshall, *A.N.* 

#### DONOVAN: Sutras. AMERICAN 43075 (48 min). Performance: Minstrel . . . Recording: . . . in the gallery

Donovan's first studio album in 13 years has much to recommend it. *Please Don't Bend* recalls the singer/songwriter's earliest work in its heartfelt simplicity. *Everlasting Sea* nicely conjures a dreamy ebb and flow. And *The Clear-Browed One* meditates on the utter purity of its melody. Producer Rick Rubin, fresh from his Tom Petty and Johnny Cash triumphs, focuses on a resonant acoustic guitar and that deep, rich voice, still intact after all these years.

"Sutras," however, is ultraserious for a guy who once wrote *Rikki Taki*, *Tavi*, *TLove My Shirt*, and, on the second disc of "A Gift from a Flower to a Garden." some wonderful songs for children. The spartan settings here are atmospheric, but I wish that guests like Dave Navarro, Jonny Polonsky, Benmont Tench, and Steve Ferrone had been given more to do. Only a few songs rock a little. One of these, *The Way*, is perky but long overdue on Track 7, and another, *Universe Am I*. closes the album by attempting to elicit an *Atlantis*-like singalong but ultimately falls short.

Nonetheless, this is real flesh-and-blood Donovan, not some withered pop has-been. The faithful should buy. The curious should invite the music in if their tastes run to troubadours. *K.R.* 

#### THE HEADS: No Talking Just Head, MCA 11504 (55 min). Performance: Need a leader Recording: Crisp

Three Heads are better than none, but not as good as four — especially when the missing member is Talking Heads' founder and main man, David Byrne. The others' solution to the post T-Heads doldrums is to revive their old moniker (well, half of it) and carry on with a lot of help from their friends. An impressive cast of enlistees has signed on to support bassist Tina Weymouth, drummer Chris Frantz, and guitar-



Lemonhead Dando: dandy

ist/keyboardist Jerry Harrison. "No Talking Just Head" is a veritable New Wave Caravan of Stars, with cameos from the likes of Debbie Harry of Blondie, Gordon Gano of Violent Femmes, Andy Partridge of XTC. Michael Hutchence of INXS, and Richard Hell of Voidoids fame. The resulting music, however, is little more than cold, disconnected dance tracks with lyrics keyed to gender wars and downtown decadence. It's a clever ploy to keep the name alive, but the threesome sound like guests on their own record. Without Byrne providing content and context, they're like a band with their, uh, head cut off. PP

#### THE LEMONHEADS: car button cloth. TAG/ATLANTIC 92726 (42 min). Performance: Quantum leap Recording: Textured

Frankly, I wasn't sure the Lemonheads' Evan Dando had an album like "car button cloth" in him. Beginning with 1992's hit "It's a Shame About Ray," the head Lemon had settled into a career as an alterna-rock pinup and purveyer of high-quality pop fluff. More recently he seemed destined for the "Where Are They Now?" file — but that has changed with "car button cloth." Not only does it have more depth and diversity than anything Dando (here fronting a new lineup) has done in the past, its hooks are far catchier.

The opening It's All True and If I Could Talk I'd Tell You are enough to show that he means business: They're in the same hardpop mold as the best songs on "Ray" but with more convincing lyrics and more imaginative arrangements (the addition of keyboards and extra guitars was the right idea). Much of the album takes on a dark tone: Break Me, Hospital, and Losing Your Mind all hint at strange experiences with relationships and/or drugs. Whether or not they're autobiographical, they feature some of Dando's first really haunting tunes and, in the last, a Crazy Horse-style guitar demolition. The acoustic track C'mon Daddy, apparently about Liv Tyler and her famous dad, is a nicely ambiguous song about reconciliation.

You may have heard that *Purple Parallelogram*, a song Dando based on a riff by Noel Gallagher of Oasis, got yanked from the album after Gallagher objected. A fun rocker with sly druggie lyrics, it wasn't bad, but there's enough variety here without it, from the traditional-sounding *Knoxville*  *Girl* (the latest and best of Dando's Gram Parsons homages) to the Metallica-ish instrumental *Secular Rockulidge*, with an odd vocal sound in the background that could well be Evan having the last laugh. *B.M.* 

#### KATHY MATTEA: Love Travels. MERCURY 532 899 (43 min). Performance: Lovely and low-key Recording: Nice

wo years ago, Kathy Mattea made "Walking Away a Winner," a Josh Leoproduced album designed to get her back on the charts and perhaps to cross her over to Linda Ronstadt-style popularity. Only mildly successful, it was a country-pop record Mattea could have done in her sleep. She's done some soul-searching since then, and on "Love Travels," which she co-produced with Ben Wisch (who is known for his work with pop singer Mark Cohn), she returns with material that reflects her own eclectic tastes.

In some ways, the new album harks back to 1991's "Time Passes By," with nods to Celtic influences on the title track and with an emphasis on inner resolve, faith, and the healing power of love. But Mattea stretches out a bit as well, introducing Caribbeanstyled timbales and New Orleans-flavored funk. She also puts R&B touches on Tom Kimmel and Jim Pittman's The Bridge and Lionel Cartwright's If That's What You Call Love, an affirming song that attempts to instill self-respect in a human doormat. If Mattea brings little to two Gillian Welch songs, she gives a fetching throatiness to Jim Lauderdale's sly country-rocker l'm on Your Side and nails Cheryl Wheeler's lament Further and Further Away. The record closes strongly with Don Henry's paean to martyred leaders of peace, Beautiful Fool.

Overall, the pacing could be livelier without destroying the mood, but strictly on substance, "Love Travels" is something to sink your teeth into. A.N.

#### KATE AND ANNA McGARRIGLE: Matapedia.

HANNIBAL/RYKODISC 1394 (45 min). Performance: Austere Recording: Very good

K ate and Anna McGarrigle — masters of mood, austere scene, and Acadian rhythm — have come up with their first album in six years, "Matapedia." A record that reflects their Canadian locale in literal and metaphysical terms, it takes a chilly look at the soft emotions that bump up against the fierce North American landscape in a hardscrabble economy.

In the title track, one of Kate's former lovers stumbles upon her daughter — and for a moment believes the daughter to be the woman he knew long ago. The story then flashes back to "two kids in love in a car," racing the river Matapedia for a boat to go home. (Cryptic? A whole novel could be built around these lyrics.) Emmylou Harris fans will recognize Goin' Back to Harlan from her "Wrecking Ball" album, but perhaps just barely; this version is less sad, less tense (and less affecting). The following I Don't Know is even more matterof-fact in detailing life's starkest lessons, especially the crushing cruelty of love.

Where the sisters do bow to homesickness and the heart-wrenching passions of life is in Song for Gaby, a depressing if oddly beautiful story of the death of a mother, and in Jacques et Gilles, a song that gets at the heart of a different kind of tumbling as it tells the saga of migrant Québecois mill workers traveling across the border to cut lumber. Much of "Matapedia," in fact, traces the theme of work and reward - and the general unfairness of it all, underscored by Why Must We Die ("We are men of constant sorrow / We'll have trouble all our days"). Throughout, Kate and Anna combine their voices with china-like fragility, forming a wondrous and unsettling sound. It is something like the voices I

about their most profound business. It's also as close as I want to get to the afterlife anytime soon. If heaven is as harsh as the McGarrigles' corner of Canada, we'll need a heavy coat up there indeed. A.N.

imagine the angels must raise in going

#### JOHN MELLENCAMP:

Mr. Happy-Go-Lucky. MERCURY 532 896 (48 min). Performance: Inventive Recording: Surprise-filled

For a guy with a down-to-earth, rootsrocker image, John Mellencamp has pulled off some strange career turns. If you heard the album "Big Daddy" or saw his

## CHRISTMAS CAROLS

Away with the Hagar Beck, the Mall Ding-Dong Macarena, Die Garth! the Wal-Mart Sales Ring Get Lost, Noel (and Liam, we pray) God Rest Ye Jerry, Grateful Dead Me One Prince of Formerly Art Mumbles We Have Heard from Stipe O Little Cash for R.E.M. Once in David's Suffragette City









#### POPULAR MUSIC

film Falling from Grace, then you've already figured out that his imagination has a dark, surreal side that doesn't come out in his more straightforward albums. "Mr. Happy-Go-Lucky" is Mellencamp's most adventurous work yet: If it's less immediately satisfying than his last few, harder-rocking discs, it has an otherworldly quality that draws you back.

Apparently the album was inspired by the near-fatal heart attack Mellencamp suffered recently, but give him credit for not writing a single explicit song about it. Instead, he builds the record on a Fellini-ish circus theme, which extends to both the odd lyrical imagery and the dense, effect-filled arrangements and production. Opening with



two minutes' worth of haunting strings, the songs take a left turn from Mellencamp's familiar heartland themes and introduce less savory characters in *Jerry* and *Just Another Day*. In the album's more personal moments, it confronts both mortality (*Life Is Hard*) and the Apocalypse (*This May Not Be the End of the World*). The most uplifting song, *The Full Catastrophe*, announces, "I've enjoyed each day of the full catastrophe of life"; the song's mandolins and slide guitars make that sound more reassuring than it does on paper.

There's a lot going on musically, perhaps too much: Drum loops are used instead of live rhythm tracks (though ace drummer Kenny Aronoff is still credited), and while a couple of tunes (notably the lengthy ballad *Circling Around the Moon*) could have benefited from a more organic approach, the swirl of programmed drums, plucked and bowed strings, and circus effects create a unique atmosphere. It's not very often that you hear roots, psychedelia, and a midlife crisis on the same album, especially one this good. *B.M.* 

#### GRAHAM PARKER: Acid Bubblegum, Razor & Tie 2826 (54 min). Performance: Nasty again

Recording: Ditto

• n recent albums, Graham Parker's been doing his best to come off as a crank. So I'm not complaining that his new album comes off as a calculated throwback to his days with the Rumour, replacing his acoustic sound of late with the punchy pubrock of old. He's got solid studio backup (with alumni of the Rumour, Blondie, and Joe Jackson's last good band), and the songs have more rock/soul kick than anything he's done in years. Sharpening Axes and Get Over It and Move On, in particular, could have fit comfortably on "Heat Treatment" or "Squeezing Out Sparks." If the sound of "Acid Bubblegum" is familiar, the subject matter is right up-to-date, and Parker's viewpoint is deliciously nasty throughout. Obsessed with Aretha looks at the commercialization of classic soul music, throwing a few darts at Ms. Franklin's recent output. Beancounter takes on the computer age, puncturing the myth of cyber-glamour. They Got It Wrong (As Usual) shows support for Kurt Cobain while attacking the star system he got trapped in. And Turn It Into Hate is a politically righteous protest song with attitude.

Parker's latter-day sensitivity still rears its head occasionally, and that's no shame; *She Never Let Me Down* and *Girl at the End of the Pier* both have lovely, folkish tunes and a tenderness that didn't turn up on his earlier albums. The only real glitch is his lead guitar work, which still isn't up there with his singing or writing. Where's old bandmate Brinsley Schwarz when you need him? *B.M.* 

BERNADETTE PETERS: I'll Be Your Baby Tonight. ANGEL 54699 (45 min).

Performance: Nice try Recording: Fine

ld-time musical-comedy stars like Ethel Merman and Judy Garland weren't so much great singers as amazing audio presences: They could move you without a visual complement. Bernadette Peters has a sweet voice but nothing like her predecessors' commanding persona. (So far, her most convincing "vocal" may well be the soundless Babahu she delivers so lustily in Mel Brooks's Silent Movie.) On "I'll Be Your Baby Tonight" she flits from genre to genre - with songs by Leonard Bernstein, Lyle Lovett, Rodgers and Hammerstein, Billy Joel, Lennon and McCartney, Sam Cooke, Stephen Sondheim, and Bob Dylan as if she's trying to substitute eclecticism for authority. She would have been better advised to stick to the musical-comedy stuff she's most comfortable with, like the best item here, the joyously campy Twenties torcher Woman Be Wise. Peters may never make it as a great romantic chanteuse, but when she has fun with a number, her audience does, too. WF

#### **R.E.M.:** New Adventures in Hi-Fi. WARNER BROS. 46320 (66 min). Performance: Another brilliant stroke Recording: Hi-Fi indeed

ike U2 in the wake of the Zoo TV Tour, R.E.M. has harnessed its tour momentum and hammered out a fast one. Much of the material was written on the road, and some of it was recorded there — at soundchecks, during concerts, and, in the case of the instrumental *Zither*, in a backstage dressing room. Overall, "New Adventures in Hi-Fi" combines the wistful, circumspect sensibility of "Automatic for the People" with the raw energy of "Monster." One can only marvel that R.E.M. continues to find ways to keep going and growing.

The album's strongest tunes have both melody and might, such as the instant classic *The Wake-Up Bomb*. Michael Stipe's

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half-sung, half-slurred vocal carries this mock-Seventies glam-rocker, whose pouty outpouring dissolves in some sort of revelation (that is, the wake-up bomb). Religion seems to be on his mind these days, as he mulls over its pros and cons (mostly the cons) in New Test Leper and Undertow. The first of these songs is a brisk folk-rock tune with a catchy guitar hook that's played through a Leslie cabinet (which gives it an organ-like timbre), while Undertow is acidetched and cantankerous. Another adjacent pair of numbers that share a theme are Leave and Departure. With its haunting refrain "leave it all behind," the first is a feedback-filled dirge given a sense of urgency by the rhythmic wail of a synthesized siren. By contrast, Departure is a kind of fast-moving travelogue/monologue that surveys the landscape with an upbeat gait. "Go! Go! Go! Yeah!" chants Stipe as the song churns like the engine of a plane or bus headed on its indomitable way to the next destination.

If any criticism can be leveled at the album, it's that Stipe's obsessive first-person narratives sometimes make one yearn for the tantalizing abstractions of R.E.M.'s earlier work. But when band and singer are solidly in synch — which is most of the time — "New Adventures in Hi-Fi" swings from mood to mood in the way that a tour careens from city to city. The adrenaline is almost manic, with R.E.M. creatively stoked and caught in the fiery immediacy of the moment. P.P.

#### SEX! AMERICA! CHEAP TRICK!

Now that we've got your attention, here's our nominee for the boxed set we'd most like to see under the Christmas tree this year: the four-CD extravaganza titled (as if you couldn't guess) "Sex America



Cheap Trick" (Epic/Legacy 64938). Since their 1977 debut, these four wiseguys have defined intelligent, radio-friendly, and guitar-centric pop/ rock, and this new collection — with unreleased tracks galore, Including early live versions of two Velvet Underground songs

- showcases their formidable body of work in exemplary fashion. True, Disc 4 bogs down with some substandard late-Eightles stuff, but so what? Most of the set is heaven tonight. S.S.

#### RENT (original Broadway-cast recording). DREAMWORKS 50003 (two CD's, 127 min). Performance: Exuberant Recording: Good

I onathan Larson, who died last January just as his musical *Rent* was about to take the theatrical world by storm, had four artistic fathers: Gerome Ragni, James Rado, Galt MacDermot, and Stephen Sondheim. The first three made Broadway rock albeit in a way that was safe for the Fifth Dimension — when they co-wrote *Hair*. The fourth became a well-certified genius by warping and woofing the musical-theater conventions of structure and content (an operatic tribute to a murderous barber?).

Rent takes a number of cues from the world of pop, just as Hair did. Bits of poprock, pop-R&B, and pop-Latin scoot through the score, making the affair by turns peppy, sweet, and tart. And there is a sentimental optimism in this depiction of New York City squatters with artistic pretensions, linking it less to La Bohème, the fatalistic opera it remakes, than to Carousel, Rodgers and Hammerstein's fable of redemption. There may be anger here, but it isn't the anger of punk. There may be dysfunction here, but it isn't the dysfunction of grunge. You leave the theater humming, not scowling.

So maybe Larson's notion of the East Village is a little too digestible, but you can't deny the energy of his creation. That's where the Sondheim influence comes to bear. There are very few songs here in the traditional Broadway sense; the somewhat fragmented music combines and recombines to create a mood, to reveal a character, to propel the story forward. Many of the numbers that have specific titles actually are mini-suites. Another Day, for example, starts with a squabble between the leading lovers, Roger and Mimi, that resembles, in its tone and change of pace. Meat Loaf's Paradise by the Dashboard Light. Then it evolves into a live-for-today paean whose rhythmic percolations recall the Police's Don't Stand So Close to Me. Here, as elsewhere, the musical shifts are combustible, and the effect is even sharper on disc than onstage. Album producer Arif Mardin vividly brings out details - a crunchy guitar riff, a pleading melisma - that got lost in the stalwart but unshaded performances I saw in New York's Nederlander Theater.

Larson's story and lyrics could have been more refined; his bohemian characters seem to lack any real purpose, since they aren't so much artists with a burning need to create as they are rebellious adolescents with an alarming taste for hard drugs. But the musical's charms, as well as its limitations, are youthful. The great tragedy of *Rent* is that its creator, who died at 35, never had the chance to see his talents mature. *R.G.* 

#### RUSH: Test for Echo. ATLANTIC 82925 (54 min). Performance: All is forgiven Recording: La Villa Guitarissimo

t's about time. Before the release of "Test for Echo," Rush had been in a rut for so long that — well, it was as if those priests of *The Temples of Syrinx* had in fact taken



**Rush: back in the limelight** 

away Alex Lifeson's guitar. But the band recently took a long vacation, giving Lifeson the chance to vent in the nasty (if overthe-top) side project "Victor." Coming back refreshed and definitely with guitar strings attached, Rush has surprised even its most diehard fans with what is unquestionably its hardest-rocking album since 1981's "Moving Pictures."

The title track has gotten the early airplay, but it's actually a medium grind compared with some of the other material here. Mean licks dart around *Driven*, tough riffs anchor *Virtuality*, and layers of acoustic and electric guitar sweep through *Half the World*. Lifeson is truly leading the band, and the trio's co-producer, Peter Collins, has finally figured out how to simulate the thunder of Terry Brown. It's all quite exhilarating, from the grand stage of *Resist* (when was the last time "grand" applied to Rush?) right down to the short solo that Lifeson scratches into *Totem*.

Granted, the instrumental *Limbo* is nothing we haven't heard before. And I'd like to hear Lifeson slow down occasionally for some memorable, linear figures of old. But take it from this long-suffering fan: "Test for Echo" is Rush like it oughta be. *K.R.* 

#### THE RUTLES: Archaeology.

VIRGIN 42200 (51 min). Performance: Historical Recording: Hysterical

Finally. After nearly two decades of anticipation, the Prefab Four — Dirk, Nasty, Stig, and Barry — have patched up their differences and reunited, due to a combination of musical possibility, grown-up maturity, and financial necessity. Western civilization can now pick up where it left off in 1978....

For those not in on the joke, the Rutles were a grand Beatles parody cooked up by Monty Python's Eric Idle and the Bonzo Dog Band's Neil Innes. It was Innes who wrote, produced, and primarily performed

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#### TABANDAS BACKBEAT





## **Progressive Rock Redux**

ed Zeppelin, once maligned by critics, is enshrined by them in the Rock and Roll Hall of Fame. The Eagles, once despised for their SoCal bloat, are cited for their influence on new country and folk. Even the return of the original Kiss is greeted as a rollicking good time. But in this ongoing rehabilitation of the Seventies, will we ever see justice for the beginning of . . . Genesis? Or Yes? Or (dare I speak their name?) Emerson, Lake, and Palmer?

Maybe. But if the Seventies were formerly thought to be a hollow branch of the rock family tree, progressive rock is still seen as an outbreak of Dutch elm disease. Twenty-five years after its heyday, the genre remains ostracized by critics. To which this critic replies: Why stop there? Let's summarily dismiss fusion, metal, *opera*. And what was that about Disco Sucking? . . . Enough. It's incredible that at this late date there's a need to say something that should go without saying: In any form of music, there's good and there's bad. Just pick and choose.

A retrospective boxed set from Rhino offers much for picking and choosing. "Supernatural Fairy Tales: The Progressive Rock Era" (72451) spans five CD's and the years 1967 to 1976. Listening to the fifty-three tracks, it's clear that most of the artists were in fact dwarfed by Genesis (*The Musical Box*), Yes (*Perpetual Change*), and, yes, ELP (*Knife-Edge*). There are many other fine tracks (Can's Oh Yeah, Caravan's In the Land of Grey and Pink) and some nice discoveries (Ange's Fils de Lumiere, Clearlight's Without Words). And, as with any set this size, there's good (Argent, Procol Harum), there's bad (Ash Ra Tempel, Lard Free), and there's downright ugly (Arthur Brown's Kingdom Come, Savage Rose).

I'm grateful that Rhino is blazing yet another reissue trail, but for a project touted as having been three years in the making, "Supernatural Fairy Tales" has a disconcerting number of gaffes. The second track of Disc 4, we are told, is Yes's Siberian Khatru, but instead it's And You and I, and it cuts off 40 seconds too early. Steve Hochman's essay, "I Was a Teenage Prog-Rock Geek," is too cynical to qualify as an "appreciation," and Archie Patterson's notes have the occasional error (Peter Banks, not Steve Howe, is credited as the guitarist on Perpetual Change), more than occasional repetition (seven uses of the word "unique"), and some silly lines ("a dramatic sound that will have you playing air guitar hot and heavy").

As for which bands are here and which ones aren't, co-compiler Patterson's background as the founder of Eurock, which distributes European progressive rock in the U.S., has obviously given rise to the set's Eurocentrism. Nearly a third of the tracks (and all of the "Musicians' Comments") are from relatively obscure non-British bands. Holland's Golden Earring is not only represented by the inappropriate Radar Love but shown in three photos, more than any other artist. There's no early Kansas or Utopia, and the lineup of Renaissance that scored in the U.S. is neglected in favor of Keith Relf's brief original group. The only Yank is Frank Zappa, which is stretching things a bit. Patterson does say the set intends to show "just how broad" progressive rock was, but if he's going to stretch as far as Roxy Music and

several Euro fusioneers, it's difficult to understand the omission of more representative artists like Flash. Gryphon, Refugee. Triumvirat, and Mike Oldfield, not to mention early Jethro Tull and Rush.

You can find Tull and Rush honored in two of the five progressive-rock tributes from Magna Carta (208 E. 51st St., #1820, New York, NY 10022). "To Cry You a Song: A Collection of Tull Tales" (9009) is notable for the presence of original members Mick Abrahams, Clive Bunker, and Glenn Cornick, and the Rush collection, "Working Man" (9010), has a solid mix by original producer Terry Brown. All of the Rush homages, however, are too faithful, including a chaotic Anthem by Mark Slaughter and George Lynch; only Steve Morse's solo in La Villa Strangiato offers something new. The Tull disc is better, with eccentric Roy Harper doing Up the 'Pool and Keith Emerson doing an instrumental take on Living in the Past. Of the other tributes. "The Moon Revisited: Another Perspective on the Dark Side of the Moon" (9002) is a mere carbon of the Pink Floyd classic. A nod to Yes, "Tales from Yesterday: A View from the South Side of the Sky" (9003), features a hot Peter Banks in Astral Traveler and Steve Howe and Annie Haslam in a nice Turn of the Century. Haslam also does Ripples for a Genesis salute, "Supper's Ready: Another Serving from the Musical Box" (9004), which has an interesting Back in N.Y.C. by the late Kevin Gilbert and a bold Watcher of the Skies by GTR's Robert Berry, with flamenco and hard-rock touches.

Magna Carta compromises the tributes by including many of its own neoprogressive acts at the expense of more accomplished artists. Then again, just as Rhino deserves credit for dealing with the genre's past, Magna Carta gets points for seeking new bands, such as Cairo, Magellan, Shadow Gallery, and World Trade. Still, the labels' shortcomings here make me feel a little like Charlie Brown this Christmas: "Isn't there anyone who knows what progressive rock is all about?"

On the first CD of "The Awakening -Chronicles," onetime Pete Townshend collaborator and Renaissance keyboardist Raphael Rudd tells us, vividly, what it's about. Ten tracks Rudd recorded in the late Seventies with Townshend, Annie Haslam, and Phil Collins have been augmented by a CD of seven new pieces and released by Wedge Music (80322; 130 W. 57th St., New York, NY 10019). Most of the new stuff treads too close to John Tesh territory, but the first disc is brimming with excellent music, including the aggressive cuts Homage (to Dave Brubeck and Keith Emerson) and Travels. Both tracks will remind you not only how dazzling Collins's drumming could be, but also how vital progressive rock can be.

-Ken Richardson



# CLASSICAL

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

#### **BEETHOVEN:** Piano Concerto No. 5 ("Emperor"); Fantasy for Piano, Chorus, and Orchestra.

Robert Levin (fortepiano); Monteverdi Choir; Orchestre Revolutionnaire et Romantique. John Eliot Gardiner cond. DEUTSCHE

GRAMMOPHON ARCHIV 447 771 (60 min). Performance: Fetching Fantasy, but . . . Recording: Just fine

John Eliot Gardiner and his cumbersomely named Orchestre Revolutionnaire et Romantique have given us stimulating accounts of the Beethoven symphonies, and he and Robert Levin have collaborated in some choice Mozart. Their performance here of the "Emperor" Concerto, though, is curiously faceless, and it's hard to say just why. The tempos are well chosen, the phrasing is natural and unfussy, the interplay between soloist and orchestra is smooth; and yet .... Perhaps the fortepiano itself, although roughly contemporaneous with the work, now seems out of place in such forward-looking music — music that even today seems to ignore or actively defy limitations set on its performance.

## A Quiet Christmas

f you like your Christmas carols on a grand operatic scale, this year you can add a trio recording by soprano Kiri Te Kanawa, tenor Roberto Alagna, and baritone Thomas Hampson to your collection. The rest of the new CD's that have come our way this season sound divine despite the absence of divas.

#### ANONYMOUS 4: A Star in the East.

HARMONIA MUNDI 907139. For a break from the familiar carols, some rare medieval Hungarian Christmas chant and polyphony from this renowned female *a cappella* quartet.

#### CAROLS FROM TRINITY.

Choir of Trinity College, Cambridge, Richard Marlow dir. CONIFER/BMG 51754 (two CD's). A very generous compilation (fifty-three tracks!) of familiar and unfamiliar carols.

#### GLAD TIDINGS!

Wesley Parrott (organ); Chestnut Brass Company; Ama Deus Ensemble, Valentin Ruth cond. SONY SFK 62768. Two dozen favorite carols for chorus,



brass, and organ; for a karaoke Christmas, eight are repeated without voices, and song sheets are supplied.

#### KIRI TE KANAWA, ROBERTO ALAGNA, THOMAS HAMPSON:

Our Christmas Songs for You. London Voices; orchestra, Jonathan Tunick arr. and cond. EMI 56176. Solos, duets, and trios by three of the opera world's brightest stars.

The Choral Fantasy, on the other hand, is utterly persuasive in every respect, one of the most fetching recordings of this unusual work since the one Julius Katchen made nearly thirty years ago with Pierino Gamba conducting (recently reissued by London). It comes with an unexpected bonus; Following the performance (and DG has been thoughtful enough to leave a full-minute pause) are two keyboard improvisations by Levin, each on a separate track, that can be programmed in place of the standard opening cadenza (also on a track of its own) that Beethoven himself improvised at the work's première and only later set down. The recorded sound is just fine. R.F.



**DIAMOND:** Rounds for String Orchestra; Symphony No. 11, Adagio; Concert Piece for Orchestra; Elegy in Memory of Maurice Ravel; Concert Piece for Flute and Harp.

Glorian Duo: Seattle Symphony, Gerard Schwarz cond. DELOS 3189 (62 min).

Performance: Very good Recording: Excellent

A fine new version of David Diamond's *Rounds* for string orchestra (1944), deservedly his most popular work, is the high point of this latest Delos CD of his music. The outer movements have lots of zing in this performance, and the central adagio displays his lyrical eloquence at its best. The 1939 Concert Piece for Orchestra, like Copland's Outdoor Overture from the previous year, was composed for New York City's High School of Music and Art and has much of the same gutsy Americanist spirit of the period.

The rest of the CD is a mixed bag of reissues and a disappointing fragment, the adagio movement from the Eleventh Symphony, commissioned for the New York Philharmonic's 150th anniversary in 1991. Grand in scale and restlessly lyrical, with lots of passing dissonance, it's perhaps a bit long for its content, but it might make a better impression in the context of the complete symphony. The fiercely poignant and powerful Elegy in Memory of Maurice Ravel (1937), for winds and percussion, was originally issued by Delos as an appendix to Gerard Schwarz's complete recording of Ravel's Daphnis et Chloé. The Concert Piece for Flute and Harp (1989) comes from Delos's "Sounds of the Seine" CD, also featuring the Glorian Duo of Donna Milanovich and Wendy Kerner Lucas. "Bittersweet Parisian" might be an apt description of this work

The CD is worth acquiring, though, just for *Rounds*. You won't find a better performance or recording. *D.H.*
MESSIAEN: Réveil des Oiseaux; Trois Petites Liturgies de la Présence Divine. Yvonne Loriod (piano): Jeanne Loriod (ondes Martenot): Luc Héry (violin); Michel Sendrez (celesta); Marie Griffet (soprano); Maitrise de Radio France; Orchestre National de France. Kent Nagano cond. ERATO 12702 (56 min). Performance: Dazzling Oiseaux! Recording: Stunning

N hen it comes to musical evocation of the avian world, Olivier Messaien's 1943 tour de force Réveil des Oiseaux ("Birds' Awakening") says pretty much the last word on the subject. Composers from Jannequin and Rameau to Stravinsky and Janacek have had their innings, but Messaien - drawing on the utterances of no fewer than thirty-eight different songbirds (they're listed in the program notes) - puts them all in the shade. The resulting work is a 22-minute concerto for piano, winds, strings, and percussion of dazzling rhythmic complexity and color, which at its peak can best be described as a gorgeous racket. Yvonne Loriod, who was associated with Messaien for most of his creative life (they married in 1961), plays the daredevil solopiano part with crackling verve and virtuosity. Kent Nagano and the Orchestre National de France handle their formidable duties with consummate élan. And the recording is preternaturally vivid.

With Trois Petites Liturgies de la Présence Divine, we go back some eight years. Here is Messaien the Catholic mystic writing a work for percussion - chiefly metal - a small string body, women's chorus, solo piano, and, in a prominent role, the electronic ondes Martenot. The chorus sings in unison much of the time, but the instrumental textures are meant, in the composer's words, to produce "blues, reds, blues striped with red, mauves and grevs dotted with orange, blues studded with green and circled with gold, purple, hyacinth, violet, and the sparkle of precious stones: ruby, sapphire, emerald, amethyst - all in draperies, rippling, swirling, and spiraling, their movements intermingled" - shades of Scriabin! For all the merits of the performance, I am more impressed by some of the spectacular later "mystical" works such as Chrono-chromie and Et exspecto resurrectionem mortuorum. Younger listeners may find the uncanny sounds of the ondes Martenot more redolent of a sci-fi movie than of the divine presence. But by all means acquire this CD for Réveil des Oiseaux. D.H.

#### **PÄRT:** Litany; Psalom; Trisagion.

Hilliard Ensemble: Estonian Philharmonic Chamber Choir: Tallinn Chamber Orchestra, Tonu Kaljuste cond.; Lithuanian Chamber Orchestra, Saulius Sondeckis cond. ECM 21592 (41 min).

#### Performance: Devoted Recording: Very good

A rvo Pärt's *Litany*, commissioned in 1994 by the Oregon Bach Festival on the occasion of its 25th anniversary, sets English translations of twenty-four prayers by St. John Chrysostom, the fourth-century Patriarch of Constantinople, one for each hour of the day. As in most of the mature

# BERNSTEIN, EARLY AND LATE

wo new CD's of music by Leonard Bernstein are a study in contrasts. with the Nonesuch CD presenting early works for the Broadway nusical theater and the DG disc mostly late compositions. Curiously enough, none of the works began life as symphonic concert music, and all of them have been arranged by and with collaborators.

The 1988 song set Arias and Barcarolles, originally for voices and piano, and the failed 1983 opera A Quiet Place, from which we hear an orchestral suite, represent a good part of Bernstein's

late creative output and the obsessive preoccupation with the psychic trials and tribulations of family life that dominated his later years. Along with the earlier, more extroverted Symphonic Dances from *West Side Story* (1957), the song set and suite show the jazz-tinged, symphonic side of his musical character.

Arias and Barcarolles, heard in a very effective (and quite Bernsteinish) orchestration that Bruce Coughlin produced under the composer's supervision, is neatly sung by Frederica Von Stade and Thomas Hampson. The music from A Quiet Place is much more successful as an instrumental suite than it ever was on the stage. The increasingly popular suite is always a rouser, and Michael Tilson Thomas, a perpetual Wunderkind in the Bernstein tradition, is its perfect conductor. All three performances are serious, sincere, and animated, and the London Symphony Orchestra, while suitably and symphoniously classical-sounding, has no trouble with the required American vernacular.

"Bernstein's New York" is an unabashed show-music album, with pieces from On the Town, Fancy Free, Wonderful Town, West Side Story, and On the Waterfront. A couple of operatically trained singers — Dawn Upshaw and Audra McDonald — mix it up with Richard Muenz's theatrical lyric baritone, some wonderful crooning by Mandy

works by this "holy minimalist," music here is reduced to the essentials: Every note and phrase counts, beginning with the attenuated string sonority that sets the tone of awe in the presence of the Almighty. The voices of the Hilliard Ensemble, solo and ensemble, are juxtaposed with the choir in invocation and response, while evocative orchestral sonorities range from triple-*piano* bassdrum rolls to outbursts from the brass, woodwinds, and metal percussion to chimPatinkin, and the theatrical soprano-withbelt of Judy Blazer and Donna Murphy. The contradictions here are not necessarily resolved, but they are a major source of energy (contradictions were Bernstein's creative bread and butter). Eric Stem, who leads the Orchestra of St. Luke's, is a music-theater music director with real conductor chops, and the arrangements — mostly the originals but with new versions of a few songs and of the excerpt from *On the Waterfront* — are full of the vitality and originality that the young Bernstein brought to his

show music. Notable contributions are the fresh version of *Lonely Town*, with Upshaw replacing the lonely sailor of the original (and some new introductory lyrics added to smooth the gender change). Mandy Patinkin's cockeyed *Wrong Nore Blues*, and a couple of lively

dance instrumentals. The cast, musicians, and veteran producer Tommy Krasker walk a fine line between the ragtime-andold-show-tunes-are-really-Americanclassical-music approach that Nonesuch pioneered and a more contemporary kind of serious-musical-theater sound.

Eric Salzman

#### **BERNSTEIN:** Arias and Barcarolles; A Quiet Place, Suite; West Side Story, Symphonic Dances.

Frederica Von Stade (mezzo-soprano), Thomas Hampson (baritone); London Symphony, Michael Tilson Thomas cond. DEUTSCHE GRAMMOPHON 439 926 (78 min)

## LEONARD BERNSTEIN'S NEW YORK: Music from "On the Town," "Fancy Free," "Wonderful Town," "West Side Story," and "On the Waterfront."

Dawn Upshaw, Mandy Patinkin, Donna Murphy, Audra McDonald, Judy Blazer, Richard Muenz; Orchestra of St. Luke's, Eric Stern cond. NONESUCH 79400 (55 min)

ing bell strokes. The first cycle of twelve prayers builds up from chant, the second out of a quietly propulsive drum rhythm. Each cycle reaches an imposing otherworldly climax, and the whole series concludes with an "Amen" that indeed conveys a peace beyond understanding.

The CD is filled out with two relatively brief works for string orchestra, *Psalom*, inspired by "Praise ye the Lord, O ye servants of the Lord" from Psalm 113, and *Trisa*-







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gion, which takes its name from the threefold "Holy, Holy, Holy" invocation of the Greek and Russian Orthodox liturgy. Meaningful silences play a major role in Psalom. and unexpected dramatic irruptions highlight Trisagion.

The performances come across with a sense of intense conviction. The stringorchestra pieces were expertly recorded in Stuttgart, and the acoustic surround of the Niguliste Church in Tallinn, Estonia, provides the ideal atmosphere for Litany. D.H.

#### SATIE: Gnossiennes; Gymnopédies; Ogives; Petite Ouverture à Danser; Sarabandes.

Reinbert de Leeuw (piano). PHILIPS 446 672 (67 min).

# Performance: Delicious

**Recording: Atmospheric** 

he word "quirky" could have been invented for Erik Satie. He got his start as the pianist and composer for a mystical cult that claimed to have ties to ancient Babylo-



nia; once, although desperately poor, he turned down a commission because the fee was too high! Yet his compositions for solo piano are imbued with a deep, exquisite sense of melancholy. The challenge for the performer is somehow to accommodate these apparently conflicting emotions, to be at once nostalgic and playful.

In this well-chosen, atmospherically recorded compilation of some of the bestknown ones, the Dutch pianist Reinbert de Leeuw succeeds better than most. He is daring in his tempos. The Gnossiennes, for instance - the absurd title was invented by the composer to suggest the mysticism of the Gnostics, but it has no actual meaning in French - are meant to be played as slowly as possible while still retaining a musical line. De Leeuw, skillfully employing the pedal, manages to spin out these mournful little whimsies to the fine texture of cotton candy. 11

## SCHUBERT: Piano Sonatas in G Major (D. 894), C Major (D. 613/612), E-flat Major (D. 568), A Major (D. 664), F Minor (D. 625/505), and B-flat Major (D. 960).

Marta Deyanova (piano). NIMBUS 1779 (three CD's, 221 min). Performance: Mixed bag

# **Recording: Very big**

he Bulgarian pianist Marta Devanova evidently sees these six Schubert sonatas as works that cry out for demonstrative underscoring of both the drama and the intimacy so strongly implicit in them. For the most part, her approach works reason-

ably well, manifested generally in slightly broadened tempos, in dynamic emphases a little (or sometimes more than a little) beyond the norm, and in taking all repeats. The A Major Sonata really is music of considerable pathos, despite its bright home key, and of a rather defiant strength as well. It is well suited to the tough, assertive reading it receives here, and more than a few listeners are bound to feel it gains from it.

Indeed, while spontaneity may not be this pianist's long suit, the Sonata in E-flat Major and two other middle-period works here made similarly positive impressions on me. Textual questions have been dealt with in ways that are more than supportable, even if not the only way to go. It is in the two later sonatas that problems arise. The already big G Major is spun out to a full hour, and the listener cannot help being uncomfortably aware of the spinning-out. Deyanova not only takes the first-movement repeat but is reluctant to let a note pass without a lingering embrace, in some instances maddeningly disrupting the formation of a melody. Her bloated tempo for the famous menuetto drains the very blood from its veins and imparts a surely unintended grotesquerie. The charm of the concluding allegretto has been eradicated. The valedictory B-flat Major Sonata, curiously. escapes with relatively minimal inflation in its opening movement and a bit of heavyhandedness in the scherzo and finale, but it, too, is more likely to be distressing than merely provocative. The piano sound itself is big, and a little on the plummy side. R.F.

# R. STRAUSS: Don Quixote; Death and Transfiguration.

Jerry Grossman (cello): MET Orchestra, James Levine cond. DEUTSCHE GRAMMOPHON 447 762 (69 min).

#### Performance: Outstanding **Recording: Splendid**

t's hardly news by now that James Levine has turned the Metropolitan Opera Orchestra into one of the world's finest concert ensembles, but nothing they have recorded together has been quite as stunning as this. Jerry Grossman, the orchestra's principal cellist for the last ten years, doesn't miss a trick; every phrase from him, in whatever context, has an underlying elegance that reminds us that Don Quixote was, after all, a gentleman. The principal violist, Michael Ouzounian, and the orchestra's long-time concertmaster, Raymond Gniewek, bring similar illumination to their portrayals of Sancho Panza and Dulcinea, respectively, Whether in terms of characterization or simply of superb chamber music within the orchestral frame, you could hardly ask for more consistently persuasive protagonists. Moreover, they function as parts of an exceptional team, which covers itself with glory.

Death and Transfiguration gets a marginally less stunning performance, hinting at uncertainty or indulgence in the first half but transcendently ennobled in the second, with a confident (if somewhat deliberate) sweep to affirmation and resolution. But both performances are rich in the kind of

pleasure that comes from exceptional playing. And both benefit from an internal balance, opulence, and all-round realism that add up to exceptionally fine recorded orchestral sound. RF

## SVIRIDOV: Russia Cast Adrift. RACHMANINOFF: Nine Songs.

Dmitri Hvorostovsky (baritone): Mikhail Arkadiev (piano). PHILIPS 446 666 (55 min). Performance: Haunting **Recording: Resonant** 

n his recordings, Dmitri Hvorostovsky has devoted the melting gold of his voice almost entirely to melancholy Russian song. He has made something of a crusade of the complex, often difficult songs of the littleknown Russian composer Georgii Sviridov (born 1915). On the back of this debut recording of Sviridov's cycle Russia Cast Adrift, the singer calls him "the last of the

# REVISITING BEETHOVEN

rom Bach cantatas to Monteverdi operas, conductor Nikolaus Harnoncourt's recordings of early works on Teldec have earned him a solid reputation for historically informed performances. His set of the Beethoven symphonies with the Chamber Orchestra of Europe brought him to



the attention of a wider audience, however (the cycle is even recommended in STEREO REVIEW's "Basic Repertory on CD" guide alongside those of Karajan and Szell).

Harnoncourt will perform in the U.S. for the first time in twenty-five years when he leads the same youthful orchestra in all nine symphonies at Carnegie Hall on November 16-23. In honor of that occasion, Teldec has released a CD called "Storming the Heavens," which features highlights from their symphonies set, and their new recording of Beethoven overtures.



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# ORPHEUS IN THE OPERA WORLD

The story of Orpheus, the mythical father of music and song who goes down to Hades to rescue his lady love Eurydice, has always exerted a strong pull on the imaginations of opera composers, from Monteverdi, whose Orfeo was the medium's first great work, to Philip Glass. The most influential Orpheus opera, and perhaps the most movingly beautiful, is Gluck's Orphée et Eurydice. For the first time all the dialogue was accompanied by the orchestra, and arias were free-flowing, no longer governed by the restrictive conventions of Baroque music. Ornhée et Eurydice has been called the "birth of modern opera."



Jennifer Larmore: a passionate Orphée

A fine new Teldec recording, made at George Lucas's Skywalker Ranch, uses a version orchestrated by Hector Berlioz. Though it is played on modern instruments, by the San Francisco Opera led by the Scottish conductor Donald Runnicles, the sound has much of the vigor and vivid color of a performance on old instruments, yet with the modern advantage of heightened elasticity. The French text is exquisitely sung by mezzo-soprano Jennifer Larmore and soprano Dawn Upshaw in the title roles. Larmore brings a Berliozian power and passion to Orphée's music, and her interpretation of the opera's best-known

great Russian composers in the line of Prokofiev and Shostakovich." Shostakovich, who was Sviridov's teacher, is the more pertinent point of reference. The dark, jagged tonalities of the cycle, composed in 1977, are reminiscent in both mood and musical methodology of Shostakovich's gloomy, magnificent *From Jewish Folk Poetry*, Op. 79. The poetry in this case, how William Christie, the King Midas of French Baroque opera, has discovered yet another opera on the Orpheus theme, Charpentier's La Descente d'Orphée aux Enfers (Orpheus's Descent into Hades). The anonymous librettist followed Ovid closely but apparently truncated the story at the point when the lovers are reunited in Hades, conveniently omitting the legend's tragic denouement.

Not a lavish spectacle for the royal court but a modest chamber piece, the little opera runs just under an hour in Christie's Erato recording. The first act opens joyously with the wedding of Orpheus and Eurydice; after the bride is bitten by a serpent. Orpheus retunes his lyre to a minor key of lament. In the second act, he relieves the suffering of the damned with his melodies and beseeches Pluto, god of the underworld, to release his beloved. The god relents but warns him not to look back on his way out of Hades. Orpheus's final, prophetic line, "Ah! How tender Orpheus must fear himself!" suggests that there may have been a third act, now lost, with the original unhappy conclusion.

Christie leads Les Arts Florissants and a fine cast of singers with his usual verve, captured in an intense, reverberant recording. The debate between Orpheus and Pluto is sung in fiery fashion by tenor Paul Agnew and bass-baritone Fernand Bernadi, with some lively interjections by soprano Monique Zanetti as Proserpine. Soprano Sophie Daneman sings Eurydice's lone aria with lovely clarity. *Lamie James* 

#### GLUCK: Orphée et Eurydice.

Dawn Upshaw (Eurydice), Jennifer Larmore (Orphée), Alison Hagley (Amor); Orchestra and Chorus of San Francisco Opera. Donald Runnicles cond. TELDEC 98418 (two CD's, 109 min).

#### CHARPENTIER: La Descente d'Orphée aux Enfers.

Sophie Daneman (Eurydice), Monique Zanetti (Proserpine), Paul Agnew (Orphée), Fernand Bernadi (Pluton), others; Les Arts Florissants, William Christie cond. ERATO 11913 (56 min).

ever. is anything but folkish: The religious allegories of Sergei Esenin, written around the time of the Revolution, are highly sophisticated and luminously beautiful.

Sviridov couldn't have hoped for a more accomplished and committed champion than Hvorostovsky, who is accompanied with fire and polish by his usual recital partner, pianist Mikhail Arkadiev. The disc is filled up with a brooding performance of nine early songs by Rachmaninoff. J.J.

#### SZYMANOWSKI: Violin Concertos Nos. 1 and 2; Three Paganini Caprices; Romance.

Thomas Zehetmair (violin); Silke Avenhaus (piano); City of Birmingham Symphony, Simon Rattle cond. EMI 55607 (65 min). Performance: Eloquent

# Recording: First-rate

iolinist Thomas Zehetmair and conductor Simon Rattle, without the slightest exaggeration, very effectively point up the contrasting character of Szymanowski's two one-movement concertos. No. 1, from the early 1920's, is roughly contemporaneous with the composer's opera King Roger and breathes the mysticism and exoticism that so intrigued him at that time. The somewhat less familiar No. 2, actually the very last large-scale work he lived to complete, is from the period of his ballet Harnasie and reflects the nationalist tendencies operative then. The kind of advocacy both concertos receive here - at once thoughtful and probing and charged with a high level of brilliance - may be just what is needed to boost these beautiful works into the general repertory at last.

Unlike Fritz Kreisler, who provided piano accompaniment for some of the Paganini caprices, Szymanowski dealt with three of them (Nos. 20, 21, and, inevitably, 24) by leaving the violin writing more or less unaltered and creating wholly original piano commentary, generally in a directly contrasting vein. The voluptuously appealing Romance. Op. 23, the earliest piece on the disc, is by no means a trifle — at least not as set forth here, with instinctive elegance as well as full, ripe tone. Silke Avenhaus is as sympathetic a partner at the keyboard as Rattle is on the podium, and the sound is first-rate throughout. RF.

# TCHAIKOVSKY: 1812 Overture (arr. Buketoff); The Voyevoda; The Sleeping Beauty (excerpts); Moscow Cantata.

Svetlana Furdul (mezzo-soprano); Vassily Gerello (baritone): Dallas Symphony Chorus and Orchestra, Andrew Litton cond. DELOS 3196 (78 min).

# Performance: Spirited

Recording: Chorus way back

While there have been more than a few recordings of the 1812 Overture with a chorus brought in — some in the Igor Buketoff arrangement used here, others saving the chorus till the very end — 1 remain stubbornly unpersuaded that it's a good idea, even by performances as spirited as this one led by Andrew Litton. Opening the 1812 with a chorus is far less imaginative and evocative than the wordless cellos Tchaikovsky called for. In this recording, though, once past that introductory section the sonic focus places the chorus so far out of range that it isn't much of an intrusion.

That generally backward placement of the chorus works to the pronounced disadvantage of the cantata *Moscow*, however. This rarely heard work, composed for the coronation of Tsar Alexander III in 1883, is





# BRAHMS: String Sextets Nos. 1 and 2.

L'Archibudelli. Sony 68252 (70 min). If you're expecting a lush treatment of these ever-appealing Brahms string sextets from the Netherlands-based chamber group that



calls itself L'Archibudelli — comparable to that in the excellent 1991 Sony CD by Isaac Stern, Cho-Liang Lin, Yo-Yo Ma, and others — something of a surprise is in store. The players use gut strings, as in Brahms's own time, and keep the vibrato chaste. The resulting lean yet thoroughly vital musicmaking may not be for every taste. Sonics are ideally intimate yet warm. D.H.

# MOZART: Piano Concertos No. 17 and No. 21.

Maria João Pires (piano); Chamber Orchestra of Europe, Claudio Abbado, cond. Deutsche Grammophon 439 941 (58 min).

The only available partnering of two of Mozart's most well-loved piano concertos, in suave, burnished performances, brightly recorded at a concert in Ferrara. Maria João Pires plays with taste and assurance, using Rudolph Serkin's cadenzas in No. 21 (yes, the "Elvira Madigan" concerto in all those CD collections hawked on TV). J.J.

# TURINA: Piano Trios Nos. 1 and 2. MARTINU: Bergerettes.

Philadelphia Trio. ČENTAUR 2259 (58 min). The expressive intensity that Jascha Heifetz, Gregor Piatigorsky, and Leonard Pennario brought to their recording of the earlier and more familiar of Turina's two trios is not evident in the Philadelphia Trio's more dreamlike approach, but there is no lack of commitment or refinement in any of the three performances here. The downright enchanting one of Martinu's *Bergerettes* reveals a many-faceted work that ought to be far more widely known. *R.F.* 

#### SERGEI NAKARIAKOV: Baroque Trumpet Concertos.

Sergei Nakariakov (trumpet, flugelhorn); Saint

Paul Chamber Orchestra, Hugh Wolff cond. TELDEC 10788 (59 min).

Not exactly "Baroque Trumpet Concertos," this CD consists of Baroque oboe concertos by Vivaldi, Telemann, and Marcello, a rather charming early Classical horn concerto by Johann Neruda, and the Agnus Dei from Bach's Mass in B Minor, all arranged for modern keyed brass (small trumpet, big trumpet, and flugelhorn, respectively) and played with gusto and modern style by an erstwhile Russian trumpet prodigy. Sergei Nakariakov is growing up fast, but neither his looks nor his playing has lost its boyish grin, and the music has a freshness that makes up for the lack of period style. The gem is Alessandro Marcello's lively and inventive Concerto in C Minor. ES

## PEPE ROMERO: Opera Fantasy for Guitar.

Philips 446 090 (67 min)

Pepe Romero demonstrates his love of opera and mastery of his instrument with ravishing performances of eight littleknown nineteenth-century operatic paraphrases. The flamboyant variations on familiar tunes from such works as *Don Giovanni*, *Rigoletto*, and *La Traviata* will make the CD a delight for opera fans. And it is a must for devotees of classical guitar.

William Livingstone



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not without interest, but the chorus, which after all has a major role, seems to be singing much of it under a blanket, making the words largely unintelligible. Delos has otherwise taken great pains with the production, providing not only a transliterated Russian text and an English translation, but also an enormously welcome explication of various references in the text that might be lost on most Westerners.

The *Sleeping Beauty* sequence, arranged by Litton himself, adds up to a curious half-

hour. Neither the Lilac Fairy nor Carabosse puts in an appearance, and except for the famous Act 1 waltz and the Rose Adagio, none of the familiar pieces with the really striking tunes and instrumental colors turn up. The one winner on this disc is the "symphonic ballad" after Adam Mickiewicz's narrative poem *The Voyevoda*. But while it's seldom heard in concert halls, it isn't that rare in recordings any more, and in this case it is simply 11 pleasant minutes on an otherwise not very competitive disc. *R.F.* 



# VIVALDI: Concertos for Multiple Instruments in D Major (RV 562a), G Minor (RV 576), D Minor (RV 566), and F Major (RV 538 and 569).

Modo Antiquo, Federico Maria Sardelli cond. TACTUS/QUALITON IMPORTS 672206 (53 min). Performance: Delightful

# Recording: Vivid

iolin, oboes, and horns are the solo instruments in the first work here, apparently the only concerto in which Vivaldi used drums. The real-skin heads of those in this Italian performance have an almost tactile impact, without being thrust into unnatural prominence. The conductor, Federico Maria Sardelli, suggests in his notes that drums would be justifiable in other Vivaldi concertos with trumpets or horns, specifically including RV 569 in F Major, which is also on this disc; but they are not used here in that work and are not missed. While the drums help to define the majestically celebratory character of RV 562a, they would have been gratuitously ornamental in RV 569, whose more pastoral level of exuberance is conveyed with hunting horns and the addition of a bassoon.

Two of the other works here showcase violin, oboes, recorders, and bassoon: RV 576, one of the concertos for the King of Saxony, and RV 566, a little less dark in its coloring and nuch more modestly proportioned. The one relatively familiar item on the disc is the F Major concerto for two horns. RV 538, with a lovely cello solo in its middle movement. Familiar or not, all five works shine with the freshness of new discovery. And the verve, the polish, the delight in the music on the part of every player are conveyed in a vivid, impeccably balanced recording. More, please! *R.F.* 

# Collections

#### KATHLEEN BATTLE: French Opera Arias.

Kathleen Battle (soprano): Chorus and Orchestra of the Bastille Opera, Myung-Whun Chung cond. DEUTSCHE GRAMMOPHON 447 114 (63 min).

#### Performance: Brilliant Recording: Excellent

Kathleen Battle makes a triumphant return here to the world of opera. Her well-chosen program involves characters ideally tailored to her vocal personality (Donizetti's Regimental Daughter, Thomas's Philine, Gounod's Juliette) as well as roles she has not yet theatrically tested (Manon, Ophélie, Berlioz's Héro from *Béatrice et Bónédict*) or that are probably outside her reach (Louise). In any case, she delivers all ten arias here with painstaking care, accuracy, and refinement.

Her Manon Gavotte sparkles with youthful elation; at the opposite end of the emotional scale, the lengthy Mad Scene from *Hamlet* is full of nicely observed nuances. Myung-Whun Chung's comfortable tempo for "*Je suis Titania*" (*Mignon*) allows her to highlight accuracy over virtuosity, and she makes the most of an obscure Offenbach trifle. Elsewhere there are limpid runs and





accurate trills in abundance, as well as effortless flights into the stratosphere (up to an E-natural). G.J.

# JERRY HADLEY: A Song of Naples.

Jerry Hadley (tenor); Dominic Cortese (accordion); instrumental accompaniment. RCA VICTOR 68350 (66 min).

# Performance: Idiomatic but untidy Recording: Good

**S** ome of the best songs from the rich vocal treasury of Naples have been embraced by the whole world. Italian tenors like Enrico Caruso, Beniamino Gigli, Tito Schipa, and Giuseppe Di Stefano interpreted them in a classic style worthy of the concert stage. Jerry Hadley — partly of Italian descent — captures here the homey aura of a café or tavern in pop-style treatments assisted by a small combo led by Dominic Cortese's expert accordion. The nineteen songs range from familiar classics (A Vucchella, Torna a Surriento, Core Ingrato) to less familiar variants of Neapolitan passion and melancholia.

Fans of this music will enjoy all of this CD, while others may find it too much of a (reasonably) good thing. When in a tender mood, Hadley caresses the melodies with idiomatic flair and artistic discipline, but when the *marinara* gets heavy and the lyric sound overflows with passion, his vocalism becomes untidy. The accompaniments are neat and subtle; guitarist Jay Berliner's tasteful arrangement of O Sole Mio is infinitely preferable to the travesty committed by the Three Tenors. G.J.

# GIL SHAHAM: Romances for Violin and Orchestra.

Gil Shaham (violin); Orpheus Chamber Orchestra. DEUTSCHE GRAMMOPHON 449 923 (58 min).

#### Performance: A joy! Recording: Top-drawer

One of the marks of a great performing artist is the knack for transforming pieces of music worn out from overexposure - chestnuts, if you will - into fresh listening experiences. Gil Shaham does just that in this cannily chosen program covering the violin repertoire from Beethoven to Fritz Kreisler. The Beethoven Romances Nos. 1 and 2, in G Major and F Major, don't drag as they usually do but assume a truly Classical poise, with a consequent gain in vitality. The readings of Elgar's Salut d'Amour and Kreisler's Liebesfreud may seem a bit straight for some ears, but in the latter's Schön Rosmarin and Liebesleid Shaham conjures up a delicious lilt and even some exquisite nuance.

Shaham brings charm to the Svendsen Romance in G Major, though Sarasate's *Romanza Andaluza* could stand perhaps a touch more Iberian passion. Tchaikovsky's *Sérénade Mélancolique* is made more than usually pleasurable because the sentiment is wistful rather than lachrymose. The Dvorak Romance in F Minor is as utterly beguiling as ever. Shaham is in top form throughout, and he is given elegant support by the Orpehus Chamber Orchestra and the recording's flawless sonics. *D.H.* 



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# **30** YEARS AGO

There was a whole lotta music coverage in the December 1966 issue, leading with "Martin Luther, Musician," a look at the theologian's career as performer, composer, and critic. Richard Freed offered "Making Real Music with Three-Year-Olds," covering a research project at the Eastman School of Music. And harpsichordist/critic Igor Kipnis weighed in with the overview "Music of the Baroque," complete with a glossary (fun fact: appoggiatura derives from the Italian verb "to lean").



# Scott FM tuner, 1966

New products included Scott's Model 312C solid-state FM tuner (\$275) with oscilloscopeoutput jacks for correction of multipath distortion. Hirsch-Houck Laboratories tested the Empire Grenadier 9000 (\$275), a three-way, cylindrical speaker that "could profit by a slightly brighter high end to balance the very strong lowbass response."

Agreed! Reviewing "Children of the Morning" by the Kingston Trio, Joe Goldberg noted it was the folkies? "twentyfifth album, but I don't think it's a major cultural event."

# **20** YEARS AGO

Holiday bells rang in the December 1976 issue, as Julian Hirsch provided tips on how to "Give Yourself a Receiver for Christmas" and Ralph Hodges



### Sennheiser headphones, 1976

followed with "Audio Accessories: The Well-Filled Christmas Stocking." Among new products was Teac's highend Model 860 three-head cassette deck (\$1,600) with dbx II noise reduction in addition to Dolby B. And in test reports, Hirsch-Houck Labs reviewed Sennheiser's HD 224X headphones (\$100), the company's first circumaural model, described as having "a definition and clarity reminiscent of some of the best speakers we have heard."

In Best of the Month, Noel Coppage voted for "The Best of the Band," and George Jellinek stumped for a new

# **Stereo Review**



version of Bizet's *Carmen* on London starring Tatiana Troyanos and Placido Domingo. Elsewhere, in a profile of Bernard Haitink, the conductor declared, "I refuse to be anything but a normal human being in a very odd profession." And in an interview with Helen Reddy, the singer said that her producer hated her big hit *I Am Woman* because "he thought it was butch."

Ditto! Of Michael Dinner's "Tom Thumb the Dreamer," Peter Reilly wrote, "If you like tapioca swimming in creme de menthe, you're gonna love this album. Yecccch!"

# 10 YEARS AGO

The big news in the December 1986 issue was Julian Hirsch's special test of the Carver Amazing Loudspeaker (\$1,536 a pair), whose planar radiators could be either electrostatic or electromagnetic in operation. Hirsch also tested Dual's three-speed CS 5000 turntable (\$400), concluding that "Phonophiles, especially those



with large collections of 78-rpm discs, should find it an answer to their prayers." Meanwhile, a new product was the "Car's the Star Diving Cadillac" (\$10,000) by 50's Auto Parts, an A/V cabinet made from the tail fin of a '59 Caddy.

Richard Freed chose pianist Vladimir Horowitz's "The Studio Recordings" from Deutsche Grammophon as Best of the Month, while Steve Simels endorsed Paul



"Diving Caddy" cabinet, 1986

Simon's left-field comeback smash "Graceland." In video reviews, Louis Meredith was charmed by Paul McCartney's animated children's musical *Rupert and the Frog Song*. And Alanna Nash profiled



The Eurythmics, 1986

country mother-daughter act the Judds, the eldest of whom observed, "Somebody said our story was better than a Judith Krantz novel."

Sweet dreams (are *not* made of this): The Eurythmics' *Missionary Man* failed to impress Mark Peel without its accompanying video, and the rest of the group's "Revenge" album went "from bad to boring to unlistenable." — Steve Simels





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