

# Stereo Review®

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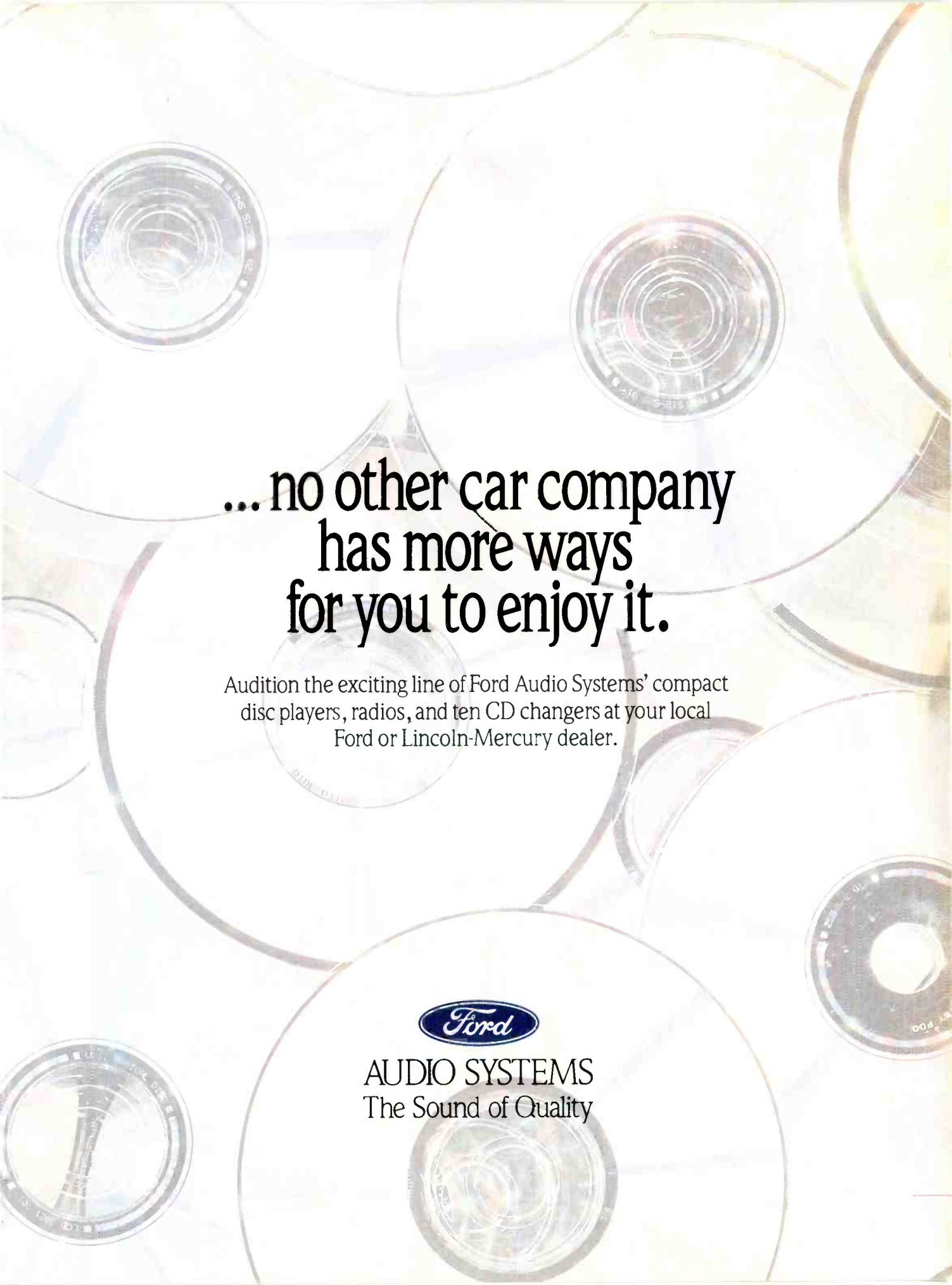


Compact Disc  
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Compact Disc  
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10 CD Changer



The background of the advertisement is a collage of overlapping compact disc (CD) discs. The discs are shown from various angles, some showing the reflective surface and others showing the center hole. The colors are soft and slightly desaturated, creating a sense of depth and texture.

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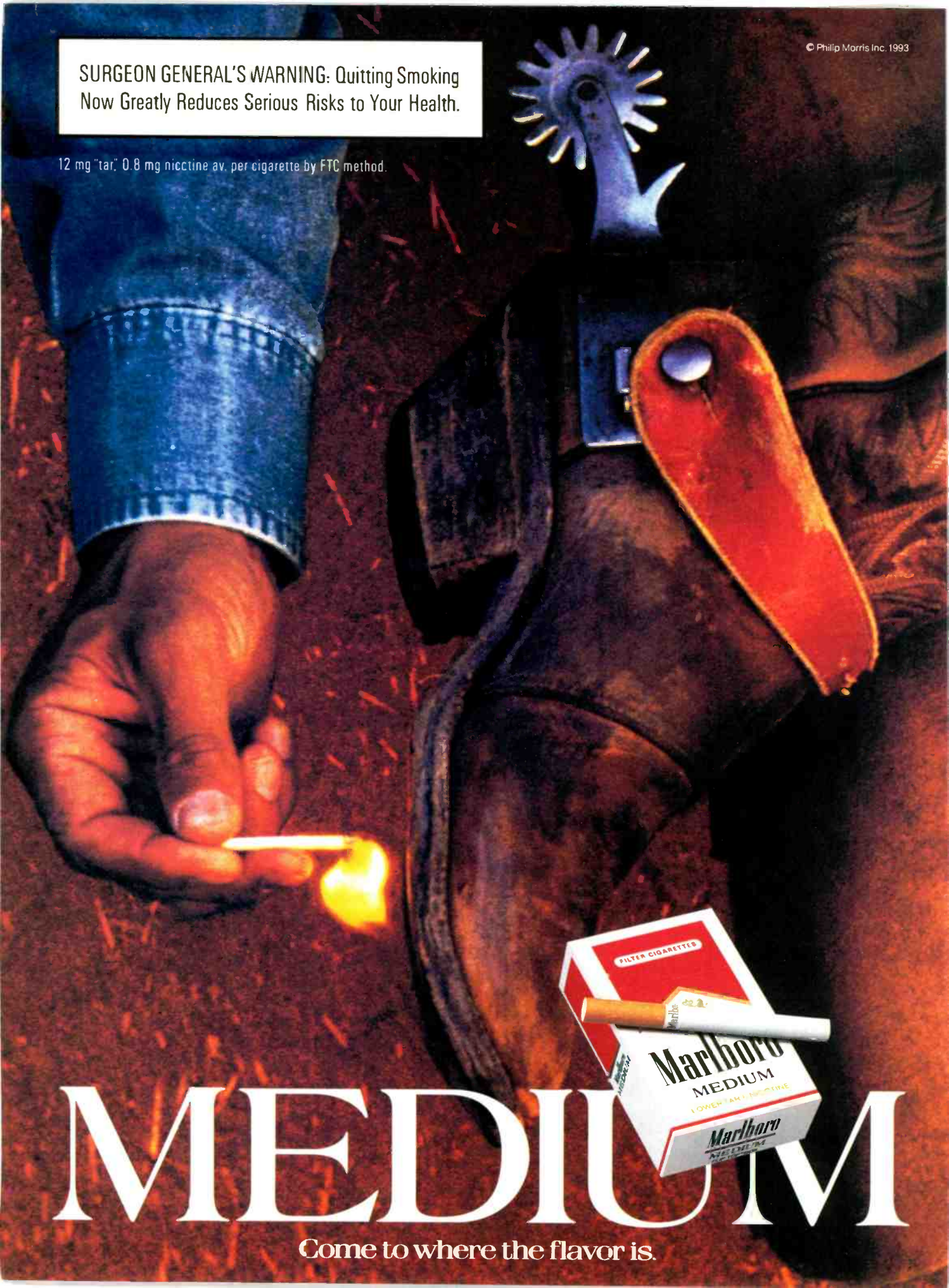
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# MEDIUM

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**Cover**

If you're looking for high performance in a midprice CD changer, see Ken Pohlmann's comparison tests of five carousel-type models beginning on page 54; among them is the Denon DCM-440 shown here.

Photograph by Dan Wagner

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# Stereo Review®

INCORPORATING HIGH FIDELITY®

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Every so often, a product is introduced that's so good, it serves as the benchmark for an entire industry. Yamaha's critically acclaimed DSP-A1000 is such a product.

And Yamaha's new DSP-A2070 is another.

Unquestionably, the most advanced digital sound field processor/amplifier you'll find on the market. Due in no small part to a Yamaha development that makes going to the movies actually pale by comparison.

**CINEMA™ DSP** We call it Cinema DSP. An awe-inspiring blend of technology that multiplies the effects of Digital Sound Field Processing and fully-digital Dolby Pro Logic.®

The net result is a home theater component that's a generation ahead of anything else on the market. Giving dialogue more definition. Music, more dynamic range. And sound effects, more graphic detail, superior placement and far greater realism.

And there's more. All told, there are 12 audio settings for your favorite music. Plus 11

Cinema DSP settings for video alone. Including four 70mm settings — Adventure, Spectacle, Musical and General — to give movies more spatial depth and impact in your home than you probably ever imagined.

All made possible by Yamaha's new LSI technology. A major accomplishment that creates sound fields three times more detailed than even our critically acclaimed DSP-A1000.

Other notable features include an on-screen display for sound field adjustment. Seven-channel amplification. Pre-amp outputs on all channels to permit additional amplification. Five audio and six video inputs. And split subwoofer outputs to accommodate two front subwoofers.

Yamaha's exceptional DSP-A2070. We think of it as the most sophisticated audio-video product on the market. Understandably, our competition tends to see it a bit differently. **YAMAHA™**



*One of the most sophisticated, yet simple to operate remotes ever designed.*

# What the competition will be using for target practice this year.



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# DEEP

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Powered Subwoofers**

**MX-100, MX-90,  
MX-80, & MX-70**

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Musical Articulation. Detail. Elusive qualities of superior sonic reproduction that are rarely found in even the most expensive subwoofers.

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#### **MX-100, MX-90, MX-80 & MX-70**

Four MX models, with internal amplifiers between 75 and 200 watts RMS, provide an ideal match for your system.

#### **Building On Excellence**

Seventeen years of M&K experience in Satellite-Subwoofer systems comes together *again* to create a new subwoofer performance standard. And with the 18" x 10" x 13.5" MX-70, M&K creates a new compact subwoofer standard.

#### **The Ideal Choice**

The unprecedented musical articulation and "ultra quick" sound of the MX subwoofers make them the perfect choice to complete any audio or audio/video system.



# LETTERS

## Less Than Less?

I desparingly disagree with Ken Pohlmann's defense of perceptual coding in April "Signals." Just when techniques for recovery and enhancement of marginal information are becoming more powerful, the Digital Compact Cassette and MiniDisc eliminate the information itself! Now what I can't hear I will never be able to hear, thanks to perceptual coding. No, Mr. Pohlmann, less is not just less, it's less than less. It's a conscious, avoidable destruction of music.

DENNIS BATHORY KITSZ  
Northfield, VT

*Ken Pohlmann replies: The work of perceptual-coding researchers has radically furthered the frontiers of psychoacoustics. It is my sincere opinion that future perceptual-coding formats will let listeners hear music with resolution not available in today's CD technology.*

## Sticky Disc Seals

Is it just me, or are other readers also irritated by those sticky hologram seals that Sony puts on all its CD and MD jewel boxes? You have to break them to get at the discs—they don't just peel off—and if you try to pick them off, they leave an unsightly, gooey residue that makes jewel boxes stick together. The more you try to rub them off, the more they smear around. They defy all common household solvents, including soap and water, rubbing alcohol, and ammonia. Fingernail-polish remover (acetone) takes them off, but it also eats into the plastic, making it milky looking.

JOHN BERG  
Deerfield, IL

*It's not just Sony that uses those "dog-bone" seals, as they're called in the industry, and you'll probably be seeing more and more of them. As of April 1, CD longboxes are no longer being produced, and the seals on the jewel cases are intended not only to assure consumers that they are buying brand-new discs but also to deter theft.*

*We agree that getting the sticky residue off is a pain—and so does Sony, which is testing other adhesives. Meanwhile, we've found two solvents that work without marring the plastic case: rubber-cement thinner (available in artist-supply stores) and Goo Gone from the Vermont Country Store (telephone 802-363-2400).*

## DAT Lives

Don't be so quick to write an obituary for the digital audio tape format. For those of us who wish to record our own tapes and have no interest in prerecorded software by shallow corporate rockers such as Michael Jackson, Michael Bolton, and Mariah Carey, it is obvious that DAT provides the best value and sound quality. DAT recorders can be bought for as little as \$600, vs. \$750 for MiniDisc and \$700 for DCC. DAT has a longer maximum recording time (120 minutes vs. 90 minutes for

DCC and 74 minutes for MD). And blank DAT's are much less costly (as low as \$7 for a 120-minute tape) than DCC or MD blanks. Most important, a DAT deck records 100 percent of the sound occurring at a given instant.

PHIL COHEN  
Bay Harbor, FL

Enough ranting and raving over the new MD and DCC formats! How about more on the superior DAT format?

JAMES YOHE  
Albion, MI

## Top 10

The real Steve Simels used to rave about Tonio K.'s albums as the greatest stuff he'd ever laid ears on. But there's not a mention of Tonio K. in S.S.'s list in the March issue of the ten best recordings of the last thirty-five years. Who made up that list? A pod person from the Planet Klipt who's assumed Steve's persona?

NOEL HAUSER  
Deposit, NY

*Steve Simels replies: Tonio K.'s "Life in the Foodchain" would have been No. 11.*

## The Greatest Jazz

My, my! What a tender nerve I apparently touched upon. Messieurs De Angelis, Koch, Jones, and Quinn have taken very emotional issue (March "Letters") with my assessment in an earlier letter of Louis Armstrong as a jazz performer. Taste, of course, is a matter of perception and background, and one cannot argue with it, but I think these gentlemen speak more of influence than of actual talent, and with that I would have to agree. The great god [Art] Tatum essentially influenced only musicians and was unknown to the general listening public; Armstrong is known even today to the younger generations.

If influence, which is a perverse result of the tasteless media, is the most important thing in life, then Bob Dylan, Barry Manilow, and Eric Clapton are far more important to our society than the greatest of jazz musicians. But when the twilight comes, please allow me to sit quietly in my room and listen to the magic of Tatum, Clifford, Dizz, and Bird, and allow me my opinions on jazz.

And say, ain't democracy somethin'?

DONALD J. MANGUS  
Chico, CA

## Space Phones

Under "20 Years Ago" in April's "Time Delay" appeared the note, "... another ad sang the praises of Koss's four-channel Quadraphones, puzzling some readers lacking ears in the front and back of the heads." I can explain this. Quadraphones were obviously designed for Vulcans, of whom Mr. Spock, first officer of the Enterprise, is perhaps the best known. Vulcans have a third ear on the

forehead, normally hidden under the hairline; unlike the fontanelle in humans, vestigial from our reptilian ancestors, the third ear developed quite late. It is, of course, known as the final front ear.

CYRIL FLEISHER  
Chester, PA

## Getting the Vapors

In a review of Rhino's "D.I.Y.: Punk, Power Pop, and New Wave" series (March), Steve Simels says that the Vapors' *Turning Japanese* is not on CD. I have it on an imported CEMA Special Markets CD titled "Eurobeat," a compilation of alternative titles by various artists.

DAVID HARLEY  
Charleston, SC

*Steve Simels replies: Thanks to Mr. Harley and others who pointed this out, but now there's no reason to look for an import. Turning Japanese and other alternative cuts are in EMI's new U.S. release, "Living in Oblivion: The 80's Greatest Hits, Volume 1."*

## Mad About Madonna

Enclosed is the cover of the April issue. It offends me to have the queen of porn, punk, and erotica in my home. I have been a subscriber to STEREO REVIEW for most of its thirty-five years, but what once was class is now rapidly becoming trash. Perhaps it's a sign of the times.

HAROLD R. HOFFERKAMP  
Jacksonville, NC

I came home from vacation to find Ron Givens's review of Madonna's "Erotica" (February). You need to go past the image and take a hard look at her work; it's more than "bubble-gum pop." As her No. 1 fan, I think she deserves praise for not being scared to deal with the issues.

CRYSTAL CICCONE  
Allentown, PA

## Corrections

The specifications for the Video Acoustics VA 1300 center-channel speaker given in April's "Center Field" article, page 57, contained a misprint. Its rated frequency response is 100 to 19,000 Hz  $\pm$  4 dB.

Our reply to a letter in April about acoustic albums by Bob Dylan said that he played piano in his third album; it was his fourth, "Another Side." In "35 Years of Music" in March, Parke Puterbaugh said that the guitarist Mike Bloomfield accompanied Dylan in "Blonde on Blonde"; it was in "Highway 61 Revisited." □

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



Actually, considering that we're aiming for the highest quality ever, it isn't hard to understand why we build the new Chevy Camaro Z28 the way we do. Each car has to pass the critical eyes of a series of laser cameras that

measure the exactness of the dimensions. A team of inspectors who examine the paint under a bank of hot lights for any defects. A sonic test that checks all windows and doors to detect any noise leaks.

And then there are things like a new welding device (called a robogate) that also ensures the dimensional integrity of the body. And a Dynamic Vehicle Test done on rollers at 65 mph to check that the engine, trans-



**Yes, We Are Talking  
Rocket Science Here.**



mission, air conditioning, electronics and cruise control all work properly. So much for the science part. Better strap yourself in for the rocket part. The Z28 is propelled by a 275 hp 5.7-liter V8. Harnessed to a 6-

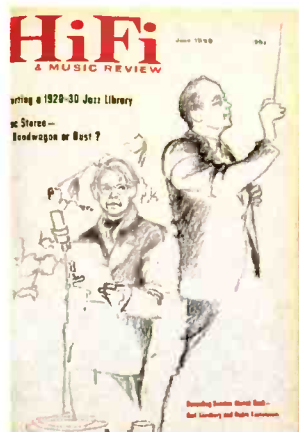
speed transmission. With a protection envelope that includes standard dual air bags\* and anti-lock brakes (unique in its class†), a 3-year/ 36,000-mile Bumper to Bumper Plus Warranty with no deductible,\*\* and a 24-hour

Roadside Assistance Program.†† The new Chevy Camaro Z28. What else would you expect from the country that invented Rock and Roll?™



**Chevy Camaro**

# TIME DELAY



## 35 years ago

In his column, "The Flip Side," in the June 1958 issue, Editor Oliver P. Ferrell reported the results of a survey of Canadian audiophiles that suggested high fidelity was not a passing fad. Noted Ferrell: "96% [of the respondents] thought it would be going strong—and they along with it—for another ten years."

HiFi findings: Equipment reviewed this month included the Shure Studio Dynetic tonearm and cartridge ("just about the quietest pickup around"), the Stephens Model 80FR speaker and 814 enclosure ("as the midrange speaker of a three-speaker system, it should be unbeatable"), and the Heath EA-2 amplifier kit, which was praised despite the lack of sturdiness of its aluminium cabinet. "Not that it has any detrimental effect on the electronic performance," the reviewer observed, "but sheet-metal screws and aluminum do not mix."

So there! Reviewing a Vox recording of Arnold Schoenberg's violin and piano concertos featuring Wolfgang Marschner and Alfred Brendel, critic Klaus George Roy declared that "the melodic substance" of these works "will not be whistled—as the composer naively hoped—as long as the human ear is built the way it is."

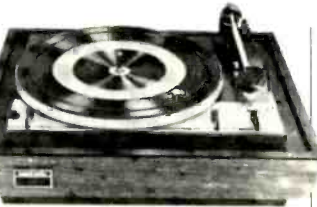
## 20 Years Ago

New products noted this month included the Concord DBA-9 noise-reduction unit, SAE's Mark XXX preamp and Mark XXXI power amp (\$200 each), and Dual's Model 1214 automatic turntable, which could play 78's. Equipment tested included the Connoisseur BDC/2 turntable, which couldn't, Sony's TC-377 stereo tape deck ("an excellent example of the present state of the art in medium-price, open-reel recorders"), and the Hitachi HS-350 speaker system, which sounded, according to Julian Hirsch, "as good as it looks."



Sony's TC-377 stereo tape deck

In the Best of the Month section, George Jellinek raved about the new Sutherland/Milnes/Pavarotti version of *Rigoletto* on London ("It may safely be ranked first among its modern competitors") despite his reservations about Sutherland's husband Richard Bonyge's conducting, Chris



Dual's Model 1214 turntable

Albertson declared a 1953 live set by Charlie Parker and Dizzy Gillespie reissued on Prestige to be "the greatest concert ever," and Steve Simels threatened to give up reviewing in favor of computer school if Procol Harum's "Grand Hotel" failed to sell in significant quantities. [It didn't, and he didn't.]

Elsewhere in the review section, Noel Coppage ventured that America's "Homecoming" had "the kind of superficial gloss for which we are all indebted to Lemon Pledge." Robert Offerfeld, reviewing conductor Gunther Schuller's revival on Angel of Scott Joplin's *The Red Back Book*, called the Joplin rags "probably the most contagious pieces of music in existence." And Eric Salzman, considering an Otto Klemperer record of two Haydn symphonies on Angel, marveled at the conductor's nineteenth-century-style approach to the works and then observed, "Nobody but Klemperer could get away with it. In fact, I really don't think *he* gets away with it either."

Caring means sharing: Joel Vance ended a critique of Angeleno avant-pop rockers Sparks's "A Woofer in Tweeter's Clothing" with the perhaps unnecessarily revealing comment, "I'm going to buy my best girl a brand-new rubber suit and buy myself a new paddle with silver studs."

## 10 Years Ago

Get a Life: In June's editorial, William Livingstone revealed that his record collection included four complete sets of Beethoven's symphonies and

eight different recordings of *Aida*. "Maybe one reason I sleep so well," he theorized, "is knowing that all those records on my shelves keep many options open."

The Thanks of a Grateful Nation: In classical News Briefs, readers were alerted to a recent live performance of Saint-Saëns's *Carnival of the Animals* conducted by Mstislav Rostropovich and narrated by First Lady Nancy Reagan. Fortunately, we noted, "there are no plans to record Mrs. Reagan in the work."



Done! In the Letters column, reader Don Richard Cox of Knoxville, Tennessee, reacted to an April article on the CD revolution by dismissing the new medium out of hand. "I will be very surprised if it succeeds," he wrote, "but if I am wrong, you can reprint my letter ten years from now and chuckle over it."

—Steve Simels



Reagan-Rostropovich summit





Can you spot the Mitsubishi 35" TV in this ad?  
(Hint: it's the one sitting behind our new 40")

It's 31% bigger than a 35", 119% bigger than a 27" and 1000% bigger than we could show you in this ad. It's the new Mitsubishi 40", the largest tube television you can buy. Once you've seen it, it's kind of hard to see anything else.

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CIRCLE NO. 39 ON READER SERVICE CARD



# NEW PRODUCTS



## ▲ ACURUS BY MONDIAL

The Acurus DIA 100 "direct input" amplifier provides a direct signal path between the source and output transistors by using a passive control section and a high-sensitivity design that eliminates the need for a preamp.

Rated power output is 100 watts per channel. Six inputs, two tape outputs, and volume and balance controls are provided. Price: \$995. Mondial, Dept. SR, 2 Elm St., Ardsley, NY 10502.

● Circle 120 on reader service card



## ◀ SCIENTIFIC FIDELITY

Scientific Fidelity's faceted Crown Joule features a 1-inch aluminum-dome tweeter and a 6½-inch woofer with a dual voice coil and an aluminum phase plug, which is said to improve midrange response and heat dissipation. The speaker is 14½ inches tall without the optional stand and is available finished in white, black, almond, or rosewood. Price: \$795 each; stands, \$400 a pair. Scientific Fidelity, Dept. SR, 6301 Riggs Pl., Los Angeles, CA 90045.

● Circle 122 on reader service card

## LEBO ▶

The Voyager MiniDisc carrying case from Lebo holds eight MD's, each in its own mesh pocket, and has a compartment for an MD player. The 8 x 8-inch padded case is made of LeatherTex and includes a shoulder strap. Price: \$30. Lebo, Dept. SR., P.O. Box 540, Armonk, NY 10504.

● Circle 123 on reader service card



## ▶ NILES

The Niles MS-2 MicroSensor is a miniature infrared receiver that can be used to extend the operation of any remote-controlled audio or video components to areas where secondary speakers or TV's are located. It relays signals, via three-conductor wire, from a hand-held remote to infrared

emitters (not included) attached to the components. Measuring ¾ inch in diameter and 2¼ inches deep, the sensor is ideal for flush mounting in a wall. A built-in green LED flashes when commands are received. Price: \$100. Niles, Dept. SR, 12331 S.W. 130 St., Miami, FL 33186.

● Circle 121 on reader service card



## ▲ ROCKFORD FOSGATE

Rockford Fosgate has revamped and expanded its popular Punch car amplifier series. Common features include removable endcaps to conceal wiring and extensive use of discrete surface-mount components, which is said to lower noise and distortion and increase reliability. The Punch 40 DSM (pictured, \$279) is rated to deliver 20 watts rms per channel into 4 ohms and can be bridged for 80 watts mono. The series also includes the 30-watt Punch 60 DSM (\$389), the 50-watt Punch 100 DSM (\$499), and the 100-watt Punch 200 DSM (\$579). Rockford Fosgate, Dept. SR, P.O. Box 1860, Tempe, AZ 85280.

● Circle 124 on reader service card

# NEW PRODUCTS

## ◀ OMNIMOUNT

The Model WB is one of dozens of speaker-mounting kits from OmniMount. It features a wall plate and a hollow steel-tube arm that conceals wiring and a pivoting ball joint. Versions designed to support speakers weighing from less than 1 pound up to 225 pounds are available for \$25 to \$599 each. OmniMount Systems, Dept. SR, 1501 W. 17th St., Tempe, AZ 85281-6225.

• Circle 125 on reader service card



## ▶ CWD

Custom Woodwork & Design's Woodstock Entertainment Center accommodates TV sets with a screen size of up to 35 inches, making it ideal for home theater systems. The cabinet boasts five adjustable shelves, two large storage drawers, and a second double-door compartment under the TV compartment. Handcrafted from solid birch, the Shaker-style cabinet is available in natural finish (shown) or in cherry, mahogany, spice, satin blue, or hunter green, all with satin black or cherry trim. Price: \$1,700. Custom Woodwork & Design, Dept. SR, 180 E. North St., Bradley, IL 60915.

• Circle 126 on reader service card



## ▲ POLK AUDIO

Polk Audio's new Mini Monitor can be used either as a main speaker or to reproduce surround-channel information in a home theater system. It has a 1/2-inch dome tweeter and a 5 1/4-inch woofer. Rated bandwidth is 42 to 25,000 Hz, recommended maximum power 100 watts. Dimensions are 6 1/2 x 10 1/2 x 7 inches, and the finish is black-ash vinyl. Price: \$75 each. Polk Audio, Dept. SR, 5601 Metro Dr., Baltimore, MD 21215.



## ◀ CARVER

Carver's SD/A-390t is the first CD changer to use vacuum tubes in its analog output stage. The five-disc carousel changer also features a Soft EQ circuit, which is said to restore missing ambience information and to

correct the tonal balance of CD's made from recordings mastered for release on LP. Volume settings for a hundred discs can be stored in memory. Price: \$650. Carver, Dept. SR, P.O. Box 1237, Lynnwood, WA 98046.





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# NEW PRODUCTS



## ◀ ADI

Car subwoofers in Audio Design Innovations' CX series feature dual compound-loaded woofers in vented fourth-order enclosures—a design that is said to deliver low bass from relatively small boxes. The 8-inch CX-800 is rated

down to 41 Hz (\$322), the 10-inch CX-1000 to 39 Hz (\$422), and the 12-inch CX-1200 to 40 Hz (shown, \$482). Nominal impedance is 2 ohms for all three. ADI, Dept. SR, P.O. Box 402, Osseo, MN 55369.

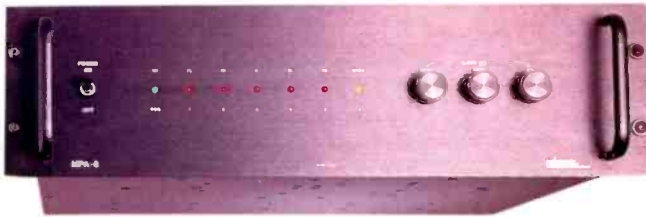
• Circle 127 on reader service card

## ▼ ADA

The MPA-6 power amplifier from Audio Design Associates is made to order for home theater. It boasts 100-watt channels for three front and two surround speakers as well as a bass channel that delivers 150 watts to

two subwoofers or 300 watts to one. A parametric bass equalizer covering 20 to 200 Hz is built in. Price: \$1,595. ADA, Dept. SR, 602-610 Mamaroneck Ave., White Plains, NY 10605.

• Circle 128 on reader service card



## ▲ KADO

Kado claims that you can hide its Signal Master FM antenna under a rug, where it will provide omnidirectional reception and never need to be repositioned. The antenna is a sheet of plastic on which conductors have been bonded in a "square spiral." If it's suspended vertically, as on a wall, gain is said to be greater than on the floor (about 4 dB), and the reception pattern is directional. Available by mail order for \$59.95, including shipping. Kado Engineering, Dept. SR, 6606 Carol Lee Dr., Saint Louis, MO 63134.

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## ▶ ADVENT

Advent's Home Theater speaker package lets you use an existing pair of main speakers when you upgrade to five channels. It comprises the 13-inch-wide Audio Focus center speaker, which has two magnetically shielded 4-inch drivers, and two 11-inch-tall Indoor/Outdoor Mini-Advents for the surround channels, each with a 1/2-inch tweeter and a 5 1/4-inch woofer. Power handling is specified as 70 watts for the Focus and 40 watts for the Mini-Advents. Price: \$299. Advent, Dept. SR, 25 Tri-State International Office Center, Suite 400, Lincolnshire, IL 60069.

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**Poison:** Native Tongue (Capitol) 01194

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# SIGNALS

BY KEN C. POHLMANN

## Swords into Plowshares

**T**HE Old Testament is quite adamant about it. In Isaiah 2:4, and again in Micah 4:3, nations are instructed to stop waging war and to beat their swords into plowshares. Only after war is abolished will we find divine truth.

Today, following the end of the Cold War, the transformation from war to peace is apparent almost everywhere in the U.S. The SALT II treaty dramatically reduces the number of nuclear weapons in our arsenals. Our military budget has been cut by 30 percent from its peak during the Reagan administration. Military contractors have shut down assembly lines. And, sadly, thousands of jobs have been lost.

This period of adjustment will be critical to the future well-being of the United States. Our success in transferring knowledge and manufacturing expertise from the military sector to the consumer sector will determine the state of our economy for many years to come. Can we switch from fighter planes to subway trains, from combat simulators to video games, from cockpit displays to high-definition television? We'd better.

Many audio manufacturers are anxious to incorporate sophisticated military technology for the very peaceful purpose of recording and reproducing music. The opportunities are considerable. Defense contractors have huge resources compared with those of audio companies, and they are generations ahead in technical development. Digital signal processing, in particular, offers the chance to build audio products that are every bit as smart as smart bombs. Snell Acoustics, for example, is one American company that is applying military technology to the chronic problems of loudspeaker performance. In particular, Snell has studied a speaker's interaction with a room's acoustics, and coined a new term—cyberacoustics—to describe how the automated control of acoustics can solve playback deficiencies.

Loudspeakers are far from perfect—their imperfections dwarf those of CD players, for example. The non-uniform frequency response, limited dynamic range, frequency-dependent directivity, and phase nonlinearity of speakers all degrade the audio signal. The listening room is an even bigger problem: Every room reinforces and cancels selected frequencies in different locations and contributes surface reflections, superimposing its own sonic signature on that of the recorded signal. In short, the final link in the audio chain is the weakest. With cyberacoustics, correction signals are applied to the audio signal before it reaches the speakers; because the correction signals are the opposite of the errors introduced by the speakers and the room, they theoretically cancel those errors.

Although that sounds easy, it certainly isn't. And that's why Snell borrows DSP hardware and signal-cancellation software from the military-industrial complex. Speakers are measured as they leave the assembly line, and problems such as nonuniform frequency response and phase nonlinearity are corrected by means of an outboard DSP unit supplied with them. Because small variations exist from one speaker to the next, the DSP program's coefficients are customized for each speaker. Moreover, certain speaker/room problems are addressed. For example, floor-standing speakers have predetermined relationships between their drivers, the cabinet, and the reflecting floor surface. The path-length differences between direct and reflected sounds create a comb-filtered response that can be corrected using DSP.

Other listening-room reflection problems can be addressed with DSP methods developed by contractors for a very special military application. Specifically, Snell's cyberacoustics borrows a page from Stealth fighter technology. An important component in Stealth technology is radar cancellation. A radar station transmits a signal and uses the reflection from an object to locate and identify it. To avoid detection, a radar-evading Stealth plane senses the incoming radar signal and generates its own radar signal

designed to cancel the reflection. The result is a blank radar screen.

When this approach is employed in an adaptive loudspeaker/room correction system, the loudspeaker generates audio signals to correct the unwanted signals reflected from the room. The Snell Digital CQ 10 processor performs this task using a unique integrated-circuit chip that contains four 50-MHz DSP devices. In fact, it employs two of these chips, laying claim to being the most powerful hardware ever used in a consumer audio application. In addition, sophisticated software coding methods, adapted from techniques used by the military, enable the CQ 10 to process adapting algorithms even for very low frequencies—where the computation demands are most severe, as are the problems of room modes.

**S**NELL loudspeakers employing this technology come equipped with powerful DSP computing engines and embedded software to control them. Low-frequency phase delay, amplitude and phase errors throughout the audio band, and floor reflections can all be compensated for with plug-in cards. Room-acoustics correction starts with room analysis, performed on-site by a Snell dealer. Using a test CD, the speaker/room characteristics are collected by an instrumentation microphone and processed by a program that generates room-specific coefficients, which are dumped to a plug-in card. The result is a smart loudspeaker that compensates for its own deficiencies as well as anomalies introduced by its placement in a particular room. Moreover, a customer's room measurements are archived so that as room-correction algorithms improve it will be possible to update a system's correction coefficients without having to remeasure.

Clearly, the world remains a very troubled place. The Cold War may be over, but many smaller hot ones are raging. Still, the use of advanced military research to increase the joy of listening to music is a very hopeful sign. Maybe our ongoing effort to clarify the sound of music, and to bring it to more people, is carrying us closer to divine truth. After all, the Lord works in mysterious ways. □



# AUDIO Q & A

BY IAN G. MASTERS

## Preamp Power

**Q** I have a powerful preamplifier that will put out 18 volts at 2.5 amps, or 45 watts. Would it be possible to run small speakers directly from the line outputs without going through a power amplifier?

SOI. HOFFMANN  
Beverly Hills, CA

**A** It's not a good idea. Although the preamplifier may be able to produce that power level, it would certainly be unhappy doing so for more than a very brief time. More to the point, a preamp is designed to feed a relatively high-impedance load—the input circuit of a power amplifier—so using it to feed the 4 to 8 ohms typical of a speaker system might well cause the preamp's innards to fry.

## Used CD's

**Q** As a student, I have been buying used CD's to save money. I clean them thoroughly before playing them and have had no problems. But I have also been told that a compact disc will lose sound quality with age. Am I taking a risk by buying discs that have already been played a number of times before I get them?

JASON M. CLAY  
Roswell, GA

**A** CD sound quality will not deteriorate from age alone, though it is possible for a disc to become damaged in ways that will interrupt playback. Certainly the more times a disc has been played the greater the chance that it has been mishandled, but most problems are detectable by eye. If there are scratches on the label side (where the disc's protective plastic coating is thinner), it is possible that air could eventually reach the aluminum layer, causing it to oxidize and lose reflectivity. A close examination should reveal that sort of damage. Problems on the playing side are of much less concern—damage there has to be fairly severe before it will seriously interfere with most players' ability to read the disc.

## Speaker Stuffing

**Q** My speakers are ported but appear to have no internal insulation or bracing. Would I get better performance if I stuffed and reinforced them?

JIM VONDELL  
Williston, ND

**A** Probably not. Designers for the major audio companies tend to know what they're doing (although there are certainly exceptions), so unless your speakers are secondhand and you suspect that a former owner has tampered with them, you can usually assume that the way the manufacturer chose to construct them will yield the best sound. By all means experiment, but don't expect dramatic improvements.

## Head Wear

**Q** I hesitate to make copies of my recordings because I have heard that the recording process causes more head wear than simple playback. Is that true?

MICHAEL ZHOU  
Long Island City, NY

**A** I confess that, in forty-odd years of fairly enthusiastic tape recording, I have never heard that one before! Wear is caused by the tape grinding against the surfaces of the heads, a purely physical process that has nothing whatever to do with electrical functions, such as recording or playback. So hesitate no longer—relax, hit that little red button, and tape your heart out.

## Double-Sided CD's

**Q** A friend asked me why CD's are recorded on only one side, while laserdiscs use both. I tried to convince him that double-sided CD's would be impractical, but then became curious about it myself. Is there any good reason for the absence of double-sided compact discs?

MICHAEL TAYLOR  
Pleasant Hill, OR

**A** Technically, no. In fact, a laserdisc is simply two one-sided discs stuck together, back to back. But there are some practical considerations with the compact disc—above all, where would you put the label? And how many times do you really need more than 70-some minutes of music? In addition, players are set up for skinny single-sided discs; double CD's wouldn't fit in many machines.

## Power Matching

**Q** My amplifier puts out 250 watts a channel, while my speakers are rated at only 200 watts. The level control is graduated from 0 to 30; how far can I safely advance it before risking damage to my speakers?

KALYAN BANERJEE  
Calcutta, India

**A** It's very unlikely that your speakers are vulnerable. A 250-watt amplifier has a lot of reserve power to handle momentary peaks without distortion, and that's good, but most of the time the system will be loafing along at 2 or 3 watts. Speaker power-handling ratings are notoriously capricious, but 200 watts—however vague that might be in reality—should be plenty for your amplifier. With numbers like those, any level that threatens to be damaging to your equipment will be well beyond excruciating to your ears.

As for your calibrated volume control, it should be pointed out that the numbers are entirely arbitrary. The knob can be used to compensate for unduly low (or high) signal sources, or to suit your mood, but it has

nothing to do with the output power. Half rotation—"15" in your case, but "12 o'clock" might express the same thing—does not mean that you are feeding 125 out of a total of 250 watts to the speakers, but rather that you have adjusted the combination of signal level, amplifier gain, speaker sensitivity, and a number of other factors for the most comfortable listening.

## Boombox Batteries

**Q** On a recent camping trip, the batteries in my cassette/CD boombox began to expire. I had no replacements at hand but still wanted music for as long as possible. Should I have played my CD's or my tapes? Which system uses more power?

RICK MANNING  
Tempe, AZ

**A** Miss Manners is happy that she was not in the next tent during this investigation. But a serious inquiry deserves a serious answer, so we resorted to science and asked around. Although few of our sources had direct experience with boomboxes, the consensus was that most belt-hanging CD portables can play a couple of discs on a single charge, or a bit more at most, while tape units can usually last at least twice as long. Since the actual amplifier drain would be the same in either case, we conclude that tape is the more efficient medium. But we're willing to accept new evidence.

## Center-Channel Phase

**Q** My Dolby Pro Logic receiver provides only a line-level output for the center channel. I am using a mono amplifier for that speaker, but I'm not sure it is in phase with the rest of the system. In two-channel stereo, checking phase by ear using a mono source is easy. Is there a similar simple test that will reveal phase reversal in the center channel?

DEREK G. WHITEHEAD  
Gwynedd, Wales

**A** It's not a simple problem, I agree. Even if your receiver did provide center-channel amplification, there's no guarantee that what appears to be correct wiring is so: Center and main speakers are often different models or brands, and while the red and black color-coding might mean the same on all three sets of terminals, they equally well might not. Adding an amplifier complicates things, because the output phase might be the same as the input, or it might be inverted, so how you wire the speaker tells you nothing.

With conventional stereo, the easiest way to check phase is to put the speakers close together, play a mono signal through them, and stick your head in between. If the sound appears to come from the middle of your brain, the phase is correct; if not, the leads to



one speaker should be reversed. With Dolby Pro Logic, however, it's difficult to coax an identical signal from the center channel and one (or both) of the main channels. A mono signal will be removed from the main channels and played only by the center speaker. Switching to "phantom" mode will restore the signal to both the main channels but shut down the center.

Fortunately, if your receiver has line outputs for the main channels, as well as for the center, there is a solution. Temporarily unhook one of the main speakers. Then disconnect the center-channel amplifier from its usual jack and plug it instead into the line output for whichever main channel you have silenced. Then, with the Dolby Pro Logic decoder in phantom mode, feed a mono signal through the system. The center channel and the functioning main speaker in this configuration should act as a stereo pair, and you should be able to check phase normally.

If your receiver lacks line outputs for the main channels, about the only thing you can do is switch the Pro Logic decoder to the "wide" mode, which feeds full bass to all three front speakers, place the center speaker next to one of the main speakers (it may help to disconnect the other), and switch the wiring at the terminals of the center speaker back and forth while something with lots of low-frequency content is playing. If there's a noticeable loss of bass with the speaker wired one way compared to the other, it's out of phase.

The effects may be quite subtle, however, particularly as the speakers may not be well matched, so prepare to spend quite a bit of time on this test.

### Bugs in the System

**Q** *When I opened my CD player to insert a disc, a small spider ran from behind a pile of discs and disappeared into the machine. I left the tray open for a few hours, but I don't know whether or not it ever got out. Is it possible that it could stay inside the player? And could it cause any harm?*

DANIEL COTTER  
Buffalo, NY

**A** Second question first: Unless your inky dinky decides to joyride on the laser mechanism and gum up the works—a long shot—there's very little damage it could do. As for taking up residence, it's unlikely that it would find enough to eat in a piece of hi-fi gear to tempt it for long. But lest you decide to leave the CD tray open permanently just in case, it's far more likely that it would escape through the ventilation openings than the grand entrance.

### Extending Reception

**Q** *I live in a rural area, where most of the FM stations I listen to are 25 to 50 miles away. There are some that I would like to receive that are as much as 100 miles distant, and*

*sometimes these come in fine. But sometimes all I get is static. Could I extend my range by some sort of signal booster or by adding a rotor to my rooftop FM antenna?*

MATTHEW K. DAVIS  
Lynn, AR

**A** A hundred miles might be pushing it a bit, but it may be a reasonable range—depending on the terrain between you and the transmitters. Don't put too much faith in electronic antenna boosters unless you're already receiving a pretty clean signal; if not, the booster would probably serve only to amplify the noise. A rotor is definitely a good idea if the signals come from different directions, as they probably do, but what you need most for distances that great is height. FM signals travel in straight lines from the transmitting antenna to your roof; if the curvature of the earth gets in the way, it blocks the signal, so the higher you can mount your antenna, the better. With that as a start, however, you might be well advised to add the rotor as well—and perhaps even the booster—to make the most of whatever signals are within reach.

If you have a question about hi-fi, 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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# TECHNICAL TALK

BY JULIAN HIRSCH

## Pitfalls of Speaker Selection

REGULARLY read the loudspeaker reviews in other publications. Sometimes a speaker's sound is described in non-sonic terms ("woolly," "dark," etc.) that are not easily correlated with other listeners' reactions. Outside of a few of the obvious terms, such as "bright" or "soft," I really have no idea what the reviewer is trying to say. Often, when I have reviewed the speaker myself, I still cannot relate my own experience to someone else's.

Another idiosyncrasy of many speaker reviews is the exhaustive listing of every piece of equipment used in the listening installations. Some description of the setup is certainly valid and perhaps necessary—the dimensions of the room, its acoustic treatment, placement of the speakers and listeners, etc.—but the details of the wires and cables used, for example, have nothing to do with the reality of the listening experience. I cannot see much justification for involving the reader in such extreme, not to say trivial, subtleties. Even if they do have some effect on the perceived sound, it is probably unique to the particular reviewer and not detectable by other listeners in different environments.

I also have reservations about the emphasis sometimes given to specific recordings (and even specific passages from them) that show up certain properties of the speaker. That information might be useful to someone who wishes to duplicate the reviewer's experience, and perhaps deserves mention in a footnote or appendix, but if you're interested in getting speakers for listening to music of your own choice, what is the point of wading through several paragraphs about how a speaker reproduces music of a reviewer's choice? Is such information useful to you in evaluating the quality of a speaker?

All of this is leading me to the real point of this discussion—what should we really expect from a loudspeaker?

Apart from the qualities imparted by

the speaker itself, what anyone hears (or measures) from a loudspeaker is determined almost exclusively by the following factors: the specific program material, the listening room and its acoustic character or treatment, the placement of the speakers and listeners in the room, and, though to a far smaller degree than many would have you believe, the system's other components, including the program source (tuner, record player, CD player, tape deck) and amplifiers.

What this means, first of all, is that regardless of what anyone hears from a particular music system, it is virtually impossible to duplicate that exact effect in a different location, such as your own home. You may, with luck and perseverance, come close enough to such a duplication to satisfy yourself, but that is not very likely.

I base this conclusion on more than forty years of attending audio shows, during which I have heard more hundreds of different speakers than I care to think about demonstrated in the manufacturers' exhibit rooms, with the benefit of their skill in setting up the system for optimum results. I have also had the opportunity to personally test some six hundred loudspeakers, including many that I had previously heard demonstrated at audio shows or elsewhere and a far greater number that I had never heard before, in familiar surroundings that were not modified in any significant way in order to accommodate them. In other words, the speakers were installed much as they might be in your home, in the best locations that were possible without seriously disrupting other normal activities.

From this experience I have learned that a speaker so installed will *almost never* sound the same as it would in a carefully designed room in which normal family activities would not be practical. It may not necessarily sound worse, mind you, but it will certainly sound different! That is true even if you go to the bother of acquiring the same discs or tapes that were used in the manufacturer's demonstration.

This doesn't mean that you shouldn't attend audio demonstrations—just that you should be careful what conclusions you draw from

them. I have heard demos that caused me to flee the room in a few moments, yet have later tested the same speakers and found them to be perfectly satisfactory. Not all manufacturers are as competent at conducting demonstrations as they are at building loudspeakers.

Aside from such obvious considerations as a speaker's size, price, and appearance, which can have a profound effect on your choice, I suggest that you listen for *balance* in the sound quality with recordings of conventional acoustic instruments. A good speaker will not unduly emphasize or diminish any part of the audio frequency range. It should not scream or sizzle at you, nor should it have a muddy or tubby quality. Surprisingly, there are many inexpensive speakers that are free of these effects, and there are a few at much higher prices that can drive you out of the room.

WHEN I test a speaker, the measurements merely give a rough indication of its capabilities. The proof is in the listening. I do not have a library of esoteric recordings that are used only for speaker testing. I listen to FM radio and CD's, which can disclose quite a lot about a speaker's assets and weaknesses. A good speaker sounds good with these sources, and a bad one sounds bad. It really doesn't take unusual recordings to evaluate a speaker. To me, it makes more sense to use my everyday program sources for that purpose.

If you want to live dangerously, attend a live concert, as I have been doing regularly for at least the past thirty years or so. When you get home, turn on your stereo system and listen (if you have a good recording of one of the works played at the concert, so much the better). I do this occasionally, but if you do, be prepared for disappointment. No matter whether your system cost \$2,000 or \$20,000, it won't match the sound of live music. This does not mean that hi-fi is no good or that you can't derive great enjoyment from your audio system—only that exact replication of a live acoustic event is more than we can reasonably expect from the current state of the loudspeaker art. □



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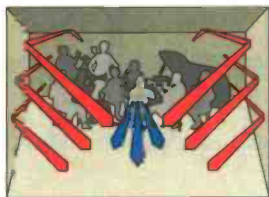
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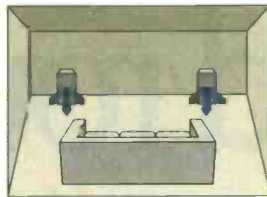
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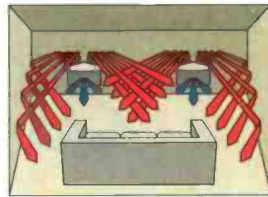
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\*Peter W. Mitchell, *Stereophile*, Vol. 12 No. 6, June 1989

\*\* *Stereo Review*, 1989

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## NHT VT-1 Home Theater Speaker System

BY DAVID RANADA

**S**EVEN components make up NHT's complete VT-1 home theater speaker system. They are sold separately as the VT-1 front speakers (\$650 a pair), the VT-1C center-channel speaker (\$300), the HDP-1 surround speakers (\$350 a pair), and a special version of NHT's SW2 subwoofer, the SW2P, that comes with its own MA-1 mono amplifier (\$650 for the combination). Each of these units has an interesting design twist, some of which go against widespread beliefs about how home theater speaker systems should behave.

At the very least, the magnetically shielded VT-1 front speakers look unusual, being 5½-inch-square, 40-inch-tall columns resting on screw-mounted 10-inch-square bases. A de-

tachable grille cloth covers each speaker's three drivers: two 4½-inch woofers stacked beneath a 1-inch fluid-cooled dome tweeter. NHT says the crossover between the woofers and the tweeter is at approximately 2,800 Hz, although with considerably more overlap between their operating ranges than is usual. The two woofers operate in a proprietary mode called Tuned Column Loading, which is said to combine the efficiency of a vented speaker with the extended response of an acoustic-suspension design.

The magnetically shielded VT-1C center-channel speaker has the same driver complement as the other front speakers, but with the woofers flanking the centrally mounted tweeter in an acoustic-suspension enclosure.

The VT-1C can be placed vertically or horizontally; lying down, it measures 5½ inches high, 22 inches wide, and 9 inches deep. It weighs 16 pounds.

All three front speakers have a rated sensitivity of 90-dB sound-pressure level (SPL) at 1 meter with a 2.83-volt input; impedance is nominally 8 ohms, with a minimum of 5 ohms. Maximum power handling is given as 120 watts. These speakers all have multiway binding-post connectors.

Push-type connectors are used on the HDP-1 surround speakers, which are designed to be mounted on the walls to the sides of the listening position (most "rear" speakers in home theaters *should* be installed to the sides). The manual for the HDP-1's suggests placing them at least 6½ feet from the floor "to provide proper head clearance."

Each HDP-1 contains three drivers operating in an unusual configuration, with none of them facing the listener when the speakers are properly placed. The two 3-inch tweeters, facing forward and backward, are driven out of phase in quasi-dipole fashion to increase sound diffusion and make the speaker harder to localize. (Many speakers designed specifically for surround-channel use, most notably Home THX models, take this approach to insure that listeners get a genuine surround sensation, as opposed to a discrete "rear-channel" effect.) The HDP-1 surrounds are labeled left and right so that the tweeters in each speaker are in phase with those of the speaker across the room. Frequencies below the 450-Hz crossover point are radiated by a single 4½-inch acoustic-suspension woofer mounted on the inner surface of the small cabinet, facing the wall. The supplied mounting brackets hold the woofer side of each 7-pound speaker away from the wall by about 2 inches.

Rated impedance of the HDP-1 surrounds is nominally 8 ohms, with a 4.4-ohm minimum. Sensitivity is given as 86 dB SPL, maximum power handling as 100 watts. Each HDP-1 measures 9¼ x 5¾ x 5¼ inches.

Except for the fact that the SW2P comes with its own amplifier, which is separate from the speaker, not built-in, the subwoofer is altogether more conventional. It is a vented system with a 10-inch woofer operating in a 16-inch cubical enclosure. Impedance is nominally 8 ohms, 6.2 ohms minimum. Sensitivity is rated as 89 dB and



WHAT MAKES A MOMENT



A MEMORY



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maximum power handling as 200 watts. These numbers are not very important, however, since the MA-1 amplifier is designed specifically for the purpose of driving an SW2.

The MA-1 is a single-channel power amplifier with a front-panel level control and an internal crossover filter that can be set to remove frequencies above 50, 100, or 200 Hz, or you can set it to bypass, which turns the MA-1 into a conventional full-range amplifier. It is rated to deliver 80 watts into 8 ohms, or 120 watts into 4 ohms on short peaks. Given the subwoofer's impedance and sensitivity specifications, that means a single SW2P can produce levels exceeding 108 dB SPL, plenty loud for domestic reproduction of the soundtrack from any action/adventure movie.

Because the MA-1 and SW2 are available separately, the MA-1's manual covers three hookup options: as a subwoofer amplifier in a surround-sound system, as a subwoofer amplifier in a standard audio system, and as a wide-band center-channel amplifier in a surround system. Using the MA-1 as a center-channel amplifier is straightforward: Just connect it to a surround decoder's center-channel output and set its crossover switch to the bypass position. In an audio system that lacks a suitable volume-controlled line-level output to feed the MA-1, you can feed it instead with speaker-level signals via a pair of push connectors. The system's main speakers would then be hooked up to another set of back-panel push connectors. The instructions give directions for setting the crossover frequency appropriately for the speakers being used.

The last hookup option—employing the MA-1 as a surround-system subwoofer amplifier—is the one I used. It involves running a standard audio cable from the surround processor's subwoofer or mono output to the MA-1 and a speaker cable from the amplifier's multiway binding-post outputs to the SW2 subwoofer, which takes the 100-Hz crossover setting.

Connecting the rest of the VT-1 system was equally simple. The Yamaha DSP-A2070 A/V amplifier I used has a handy subwoofer test-tone feature that I employed to balance the subwoofer's output with the rest of the system's. Neither of the pamphlet-like manuals for the MA-1 and the SW2 discusses setting subwoofer levels much beyond the standard adjust-to-your-taste clichés—an approach that

leads to excessive subwoofer levels in many cases. In the STEREO REVIEW listening room, the MA-1's volume control never went past the three o'clock position.

When all the system's levels were properly adjusted for Dolby Pro Logic reproduction, I found that the VT-1 system sounded distinctly different from other home theater speaker systems I have heard. The imaging, while preserving very well the various shades of front/center/surround directionality that Pro Logic decoding provides, was less precise than usual. The various sound sources were slightly more blurred—less like pinpoint sources—than I've heard with other systems.

A phone conversation with the VT-1's designer, NHT co-founder Ken Kantor, confirmed that this effect was deliberate. Because a typical home theater system's speakers are spaced much farther apart than the TV screen's width, he feels that extremely precise stereo imaging can localize sound sources at positions that conflict with the visual impression, a disparity that can distract from the home viewing experience, which he believes should be screen-oriented. Consequently, Kantor wanted as much localization blur as was compatible with good frequency balance. The VT-1's deliberate blurring of the stereo image (obtained by designing for a very wide sound dispersion and by the crossover overlaps mentioned earlier) is intended, Kantor says, to create less "cognitive dissonance" between sonic and visual images.

This design approach is radically different from the most highly touted alternative, which aims to approximate the sound on a movie-studio dubbing stage as closely as possible, even though most home theater systems have screens that are much smaller than the ones on such stages. I have long thought that the consequences of a size mismatch between sonic and visual images have not been considered thoroughly enough in some circles. If you can afford a front-projection monitor, a wall-filling, sonically transparent projection screen, and a device called a line doubler to reduce the visibility of scan lines on that screen, then Kantor's objections probably don't apply, and you can go for broke with a studio-like sound system, too. But using a 25-inch monitor, I was never troubled by the deliberate blurriness of the frontal imaging.



If you agree with Kantor, or aren't too concerned with the apparent size of reproduced sound sources, the VT-1 system has a great deal more to offer. Qualities I noticed during my listening included:

- A very close sonic match between the center speaker and the front left and right speakers. In fact, when placed vertically the VT-1C sounded practically identical to the VT-1 front speakers, even when playing pink noise—an extremely difficult test—and they still matched unusually well when the VT-1C was placed horizontally (at close to ear level).

- A good diffusion of the sound from the surrounds without the "phasy" hole-in-the-head effects that many other speakers designed for the surround channel can create. This quality probably stems from their monopolar radiation at low frequencies in combination with the narrow dispersion of the wide-diameter dipole tweeters at high frequencies.

- Very well-balanced sound with a wide variety of popular and classical music as well as movie soundtracks. Voices sounded especially natural, exhibiting neither low-frequency heaviness nor midrange stridency and forwardness.

- An ability to play loud enough to bring knocks on the sound-room door from people in neighboring offices.

My principal complaint about the VT-1 system, and it is a minor one, is with what computer types call "documentation." The manuals for the individual components are okay as speaker-hookup instructions go, but they say nothing about how to approach the various options available from surround decoders. In particular, I had to ask the system's designer whether to use the normal or wide-band center-channel setting on the amplifier's surround decoder. He recommended the wide-band position, as I would for any surround system having significant low-frequency (below 100 Hz) capability in the center speaker.

While one might quibble over the owner's manuals or quarrel with the design philosophy behind the VT-1 system, you can't argue with its overall sonic excellence. It is a well-thought-through and well-executed alternative to the standard surround-sound party line. □

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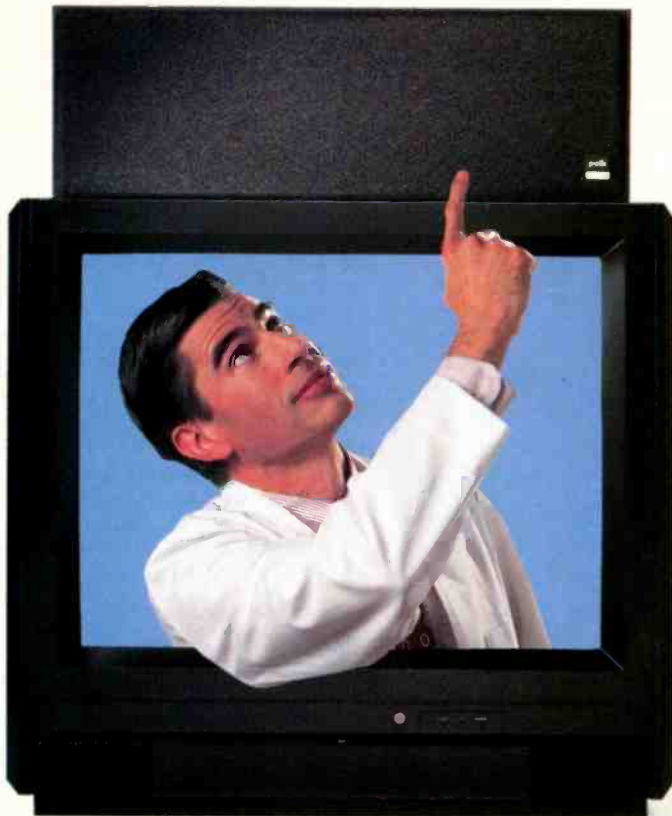
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# TEST REPORTS



## Fosgate Audionics Model Four Audio/Video Preamp

JULIAN HIRSCH  
HIRSCH-HOUCK LABORATORIES

**T**HE Fosgate Audionics Model Four is a control center and surround processor for both audio and video sources. It has six selectable audio and video inputs and six line-level outputs for driving left, center, and right front speakers, left and right surround (rear) speakers, and a subwoofer.

The Model Four provides two movie surround modes: Dolby Pro Logic and Fosgate's proprietary 70mm Motion Picture Surround, an enhanced version of Pro Logic with faster steering-logic time constants. In addition, it has several surround modes designed to enhance various types of music. Labeled Rock, Popular, Jazz, and Classical, they differ principally in their degree of front-to-rear separation and soundstage width.

Fosgate says that the proprietary Digital Servo Logic circuitry incorporated into the Model Four is the only surround technology that accurately recovers directional and spatial information from conventional stereo sources such as CD's, LP's, tapes, and stereo TV broadcasts without creating unnatural sound effects. The company claims that the Model Four gives the same level of performance

#### Dimensions

17 inches wide, 3 3/4 inches high,  
12 inches deep

Price  
\$999

#### Manufacturer

Fosgate Audionics, Dept. SR,  
P.O. Box 70, Heber City, UT 84032

with both movies and recorded music.

Digital Servo Logic is said to operate ten to a hundred times faster than the steering logic of any other surround processor, generating corrective directional steering signals within 5 milliseconds. The actual audio signal path is entirely analog, however, with wide bandwidth.

The Model Four, like most other high-quality surround processors, has an autobalance circuit that automatically adjusts the channel balance of any input signal for maximum separation. To simplify setting up the system, it has a noise sequencer that sends a random-noise test signal sequentially to each of the speakers while the user adjusts the output level in each channel.

In addition to its signal-processing capabilities, the Model Four has all the basic features of a conventional preamp, and then some. You can select any of its six audio or video input sources for listening or viewing, or independently select any of them for recording, viewing, or listening in another room. The sources, which have both video and stereo audio input

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## TEST REPORTS

jacks, are labeled S-VID 1 and 2, VCR, LV (Laservision), and AUX 1 and 2.

Unlike most preamplifiers, the Fosgate Model Four has no knobs on its front panel. In addition to the power button, there are rectangular light-touch buttons that operate the Mode Select, Source Select, Record Select, and Noise Sequencer functions. A wide, center-pivoted volume button adjusts the output level of all channels simultaneously. The only other controls are six finger-operated level-trim adjustments on the rear apron for setting the levels of the output channels. Normally, however, the Model Four is operated from its wireless remote control, which duplicates all of the front-panel functions and provides several others in addition.

The most prominent feature of the front panel is its display window. Two vertical rows of lights show the selected program (listening) and recording sources. A Time Delay display shows the amount of delay between the front and the surround channels, which is adjustable (via the remote control) from 15 to 30 milliseconds (ms) for the Dolby Pro Logic mode and up to 45 ms in the 70mm and Classical modes. Delay is not used in the Rock, Popular, and Jazz modes. A Steering Logic Display in the center of the window shows the relative levels of the five directional channels of the Model Four. Five red LED's are at the corners of a pentagon, with the center front at top, left and right front on



either side, and the two surround outputs at the bottom.

The remote control has buttons for switching the power, selecting the input source and surround mode, and adjusting the master volume and surround levels. Other buttons provide up/down adjustment of delay, switch the center channel on or off, control various equalization functions, and bypass all signal-processing functions. The selected surround mode (Classical, Pop, etc.) and equalization functions are indicated in the display window. The EQ functions include Bass EQ to boost low-frequency response up to 12 dB (in 4-dB steps), center-channel boost of 4 dB, high-frequency equalization (rolloffs to tame over-bright soundtracks), and a sibilant filter to reduce dialogue “splatter” from the front into the surround channels.

As with most signal-processing accessories, the dynamic characteristics of the Fosgate Model Four are not readily measurable through the normal signal input and output connectors, nor would they be particularly informative to the user if they were known. Fosgate does include a number of externally measurable characteristics in the product specifications, which we confirmed in our tests.

The left and right front-channel frequency response (with the surround circuits bypassed) was essentially perfectly flat from 70 to 20,000 Hz and down a barely measurable 0.25 dB at 20 Hz. The Bass EQ circuit primarily affected frequencies below 100 Hz, boosting the response by a maximum of 11 dB at 30 Hz. The HF EQ circuit gave the response a gentle downward slope above 1,000 Hz, reaching a maximum cut of 5 dB at 20,000 Hz.

### MEASUREMENTS

Output at clipping	8.5 volts
Distortion (THD + N at 0.5-volt output, 20 to 20,000 Hz)	0.03%
Frequency response (left and right front)	20 to 20,000 Hz +0, -0.35 dB
Channel separation	
20 to 1,000 Hz	60 dB
20,000 Hz	35 dB
Center-channel response	
1,000 to 20,000 Hz	flat
250 Hz	-3 dB
100 Hz	-10 dB
Subwoofer output response	
10 to 45 Hz	+0, -1 dB
65 Hz	-3 dB
110 Hz	-10 dB
Bass EQ (maximum)	+11 dB at 32 Hz
HFEQ	-4 dB at 10,000 Hz



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# TEST REPORTS

The center-channel frequency response was flat from about 600 to 20,000 Hz, rolling off at low frequencies to -3 dB at 250 Hz, -10 dB at 100 Hz, and -35 dB at 20 Hz. The subwoofer channel's output varied about 1 dB overall from 10 to 45 Hz, rolling off to -3 dB at 65 Hz and -9 dB at 100 Hz, then continuing downward at a 12-dB-per-octave rate above 100 Hz.

The Model Four's noise spectrum, measured at the front outputs in the Classical mode, was very low. Its major peak in the audio range was the 60-Hz hum, a totally inaudible -118 dB referred to a 0.5-volt output. Other noise components ranged from -122 dB at 20,000 Hz to about -135 dB at 1,000 Hz and below.

The Model Four's rated maximum

output is a rather high 7 volts, and its distortion is specified as less than 0.05 percent at half that level. At its maximum volume setting, the Model Four clipped between 8 and 9 volts, although at the EIA-standard unity-gain setting (0.5 volt out for 0.5 volt in) it clipped at 1.2 volts. The distortion just below clipping was about 0.015 percent. The distortion was a constant 0.03 percent from 20 to 20,000 Hz at outputs of 0.5 and 3.5 volts.

For listening tests, we installed the Model Four in a five-channel music system, using compact, high-quality speakers for the main front and surround channels, a columnar system for the center channel, and a pair of Hsu Research subwoofers. The program material consisted of FM broad-

casts, cassettes, and CD's, and we experimented with most of the Model Four's operating modes.

As with any surround-sound system, a considerable amount of experimenting was required to obtain the best results. Being restricted in the possible locations of the speakers (normally an important variable), we were limited to varying the Model Four's operating-mode and internal parameters, as well as the program material and our listening position.

It soon became apparent that the Fosgate Audionics Model Four is *not* an environment synthesizer, like some of the advanced digital signal processing (DSP) devices that attempt to mimic the acoustics of specific music halls and auditoriums. (The manufacturer

## SECOND OPINION

**T**HE Fosgate Model Four is unlike most other surround-sound decoders, whether stand-alone or built into another component (such as a receiver). Although it performs a version of Dolby Pro Logic decoding, it does so neither by means of digital signal processing (DSP) nor with one of the single-chip analog Pro Logic circuits now being built into many TV's and most A/V receivers. As a glance inside the unit will tell you, Fosgate does it the old-fashioned way: lots of discrete analog components (resistors, capacitors, diodes, op amps, solid-state switches, etc.). The result, however, is a surround decoder of unusual merit—one that provides significant enhancement to ordinary popular music in addition to excellent decoding of Dolby Surround movie and television soundtracks.

There is digital circuitry in the Model Four, justifying the front-panel label of "Digital Servo Logic Surround Processor." But most of it is used in the decoder's delay line, which itself is unusual in that it incorporates Dolby Laboratories' Time Link delta-modulation analog-to-digital technique. Unlike most other surround-sound decoders, however, the Model Four does not use the delay line in any of its music-enhancement modes except the one labeled Classical.

Besides the unusual aspects of the Model Four's sound processing (about which more later), there are also some peculiarities regarding its setup and use. For example, our sample seemed to be much more sensitive to static electricity than other pieces of equipment. I learned by experience that a spark to the Model Four's chassis, such as from my hand on a dry day, could make it behave in an

unpredictable and undesirable fashion. At the very least, such an electrostatic discharge can instantly change the overall volume setting. A couple of times the volume happened to go down, but it could just as easily go up, perhaps all the way, possibly causing serious damage to your domestic tranquility. Consequently, you might want to discharge yourself, so to speak, before touching the Model Four's front-panel controls.

This problem—which would be significant only under conditions of low humidity—is exacerbated by what I consider the processor's most serious ergonomic flaw. Unlike any other preamp/surround-sound decoder (indeed, unlike any other surround-sound decoder I know of), the Model Four has no indicators for the setting of the overall volume or of the surround-channel level—no rotating knobs, no strings of LED's, no numerical readouts, no meters, nothing. You don't realize how much you need such indications until they are missing. It is a serious omission for a surround-sound component (in which interchannel balances are crucial to the effect) that is also promoted as an A/V preamp.

Several less serious annoyances cropped up during setup. The remote has no on/off button for the internal noise generator used to balance the speaker levels. That lack, coupled with the back-panel placement of the six individual channel-level controls, means that at least two people (or one person with a sound-level meter) are needed during setup, one to push the front-panel noise-sequencer switch and turn the controls, the other to check the effect at the listening position. And setup would also be easier if the six

level controls were reduced to four, with one for the two main front speakers and another for the two surround speakers. The noise generator itself doesn't switch instantly between the right front and the surround speakers, and the lag is difficult to compensate for if you are setting levels by ear (the manual does recommend use of a sound meter).

Exploiting the Model Four's full potential will require that you pay close attention to associated equipment, especially the power amplifiers and speakers. Unlike other surround-sound processors we have used, it delivers full bandwidth to the surround-channel outputs in its music-enhancement modes, with essentially flat frequency response from 20 to 20,000 Hz. Accordingly, for best results in those modes the surround speakers should have a suitably wide frequency range (which will depend in part on whether you use a subwoofer). Ideally, they would be identical to the left and right front speakers. And though the surround channels do have high- and low-frequency rolloffs in the Model Four's Dolby Pro Logic and 70mm soundtrack-decoding modes, their bandwidth is still wider than normal for Pro Logic decoders, with no hint of the rather steep 12-dB-per-octave rolloff above 7,000 Hz required in standard Dolby Pro Logic units. In this case, however, the wider bandwidth shouldn't cause decoding errors since Dolby Surround encoders roll off the surround channel above 7,000 Hz anyway.

The center channel is often given short shrift in home theater systems, usually on the assumption that its output will be primarily movie dialogue with a rather



# TEST REPORTS

does not claim that it is.) On the other hand, it is much more than the Dolby Pro Logic decoders that are showing up in even modestly priced receivers these days.

Also, although it is a preamplifier, most of what it has in common with familiar preamplifiers has to do merely with the multiple selectable inputs and the separate selection of recording sources. Although it does have frequency-response adjustments, they are not at all like ordinary tone controls, but rather are designed to compensate for certain characteristics of motion-picture soundtracks. In other words, the Fosgate Audionics Model Four is designed to control the sound of an *audio/video* system, to give the user a fine degree of control over that

## The Fosgate Audionics

**Model Four is much more than just a Dolby Pro Logic decoder.**

sound and its relationship to the picture, and to do these things better than other, more conventional products.

Lacking audio/video facilities, we could only guess what it would add to such a system (but see David Ranada's "Second Opinion" below). Based on what we heard, however, the Model

Four should be an ideal choice for serious A/V listening and viewing. It does a fine job of creating the sense of space (and immediacy, when required) so important to that type of program material. In fact, used with a center speaker, it provides a totally different listening effect from that of conventional two-channel stereo. The left and right speakers disappear, and one experiences a seamless, well-defined wall of sound across the front of the room.

The Model Four is not exactly inexpensive, nor is it particularly easy to operate (unless you have already weaned yourself from turning knobs), but it delivers what it promises—and then some. Altogether, it is a very interesting and rewarding product. □

restricted frequency range. In fact, the center channel in a Dolby Surround soundtrack normally carries music and sound effects as well, and the Fosgate Model Four makes use of the center speaker even in its music-enhancement modes. You can switch on the center speaker from the remote in any of the processor's six operating modes, and in my tests that often increased the precision and stability of the front stereo image. If you want to hear the Model Four at its best, you should make every effort to use a center speaker whose sound at middle and high frequencies closely matches that of your front left and right speakers, even to the extent of putting three identical speakers across the front. I would, however, prefer more extended low-frequency response out of the center channel, which the Model Four rolls off below about 300 Hz, an octave and a half above the standard Dolby Pro Logic "bass splitting" frequency. It almost forces you to use a subwoofer.

The Model Four's tendency to direct considerable amounts of signal to the center and surround outputs in its music-enhancement modes also suggests that you may want to make more power available for those speakers than is typical in home theater systems. With this processor, you could profitably use equal amounts of power for all channels.

Paying attention to at least some of these considerations will yield significant sonic benefits: Except with some types of simply recorded classical, jazz, and folk material, the Fosgate Model Four's music-enhancement modes are among the best I have ever heard, recalling the best demonstrations of quadraphonic sound I

heard twenty years ago. The primary effect of the Rock, Popular, and Jazz modes is to distribute sound sources all around the listening area, but without the increased sense of distance or spaciousness imposed by most DSP-based sound processors. The most obvious sonic difference between these modes was the Model Four's decreased "willingness" to put information in the surround channels when I moved from Rock to Jazz. I never heard any volume pumping or improper movement of a source caused by other sources in the mix. True, the precise effect obtained is neither predictable nor likely to be what the record producer intended. But it can be exciting, and it is far better than the thrill-sapping addition of spaciousness where none is needed or welcome.

**W**here it is welcome, such as with recordings of classical music performed in a large concert hall, the Model Four was less successful. It makes no attempt to simulate multiple hall reflections or reverberation, and in the Classical mode the delay line is used to provide only a single delayed signal. Although one delay is better than none, a good DSP unit can generate a better sense of envelopment by a hall. On the other hand, turning on the center speaker in the Classical mode can help to firmly anchor the front image of an otherwise nebulous-sounding solo instrument, something DSP units often are not particularly good at.

The two movie modes sounded excellent. Both seemed to decode Dolby Surround soundtracks well, though the Pro Logic setting is probably more accurate for this purpose. In neither

mode, however, did I notice any grossly untoward behavior with normal movie soundtracks. The faster-than-Dolby sound steering said to occur in the Fosgate's 70mm mode was really evident only with special test tones that jump directly from center to the surrounds: these flipped faster with the 70mm processing than with standard Pro Logic processing, though not instantaneously, either. The 70mm mode also seemed to make the surrounds louder than in the Pro Logic mode and to make the processor more willing to move ambient sounds and music to them. These effects can, as the manual puts it, provide "a heightened sense of spaciousness with software which has little or no encoded surround information." You might also want to experiment with the 70mm mode on music, but be forewarned that high-level high-frequency signals directed to the surround outputs may be distorted by slew-rate limiting of the delta modulators in the delay line, which was otherwise well behaved.

The Fosgate Model Four's success with both surround-encoded movies and unencoded music should stand as a model for other manufacturers who seek to add meaningful sound-enhancement capabilities to their equipment. The typical use of DSP to simulate reflection patterns is not appropriate for all types of music. DSP can also be used to obtain Fosgate-like effects, but it isn't as easy as just generating reflections, so the music-enhancement modes of DSP-based products usually don't. You don't have to wait around for DSP engineers to catch up, though, when Fosgate's wonderful analog technology is available today in the Model Four. —David Ranada

# TEST REPORTS



## Acoustic Research M.5 Loudspeaker System

JULIAN HIRSCH  
HIRSCH-HOUCK LABORATORIES

**T**HE Acoustic Research Holographic Imaging (H.I.) series of loudspeaker systems was designed, as the name implies, to provide a broad, natural soundstage with accurate imaging. With the addition of the new M.5, the H.I. series now comprises nine models, in a wide range of prices and sizes, that share the same spatial properties in their sound. The M.5, near the low end of the series, is a small two-way speaker whose 5½-inch polypropylene-cone woofer operates in a vented enclosure. At 6,000 Hz, there is a crossover to a liquid-cooled ½-inch polypropylene-dome tweeter.

The M.5's enclosure resembles the upper sections of the larger H.I. systems. Both the front and rear panels slope backward at an angle of about 12 degrees. The woofer occupies the upper portion of the front panel, and the tweeter is located near the bottom, offset toward one side. The woofer's port is on the rear panel below the recessed spring-clip input terminals. The M.5 speaker comes in mirror-image pairs, designed to be installed with the tweeters toward the outside.

The M.5's nominal impedance is 6 ohms, and its sensitivity is rated as

88 dB sound-pressure level (SPL) at 1 meter with a 2.83-volt drive level. Response is given as 68 to 23,000 Hz at the -3-dB points.

We placed the speakers on 39-inch pedestals, which put their tweeters close to ear level for a seated listener. They were about 6 feet apart, 4 feet from the side walls, and 2½ feet from the wall behind them.

The averaged room-response curve from the two speakers was impressively uniform, within ±2.5 dB from 100 to 2,500 Hz and remaining strong down to 60 Hz. The averaged output dipped about 5 dB at higher frequencies but climbed back to its lower-midrange level in the range of 15,000 to 20,000 Hz.

The close-miked woofer response,

### Dimensions

6¼ inches wide, 8½ inches high,  
7¼ inches deep.

### Finish

Black woodgrain veneer

### Price

\$219 a pair

### Manufacturer

Acoustic Research, Dept. SR,  
330 Turnpike St., Canton, MA 02021

combining the separately measured cone and port contributions, reached its maximum between 60 and 110 Hz and dropped off smoothly above that, to -5 dB at 1,500 Hz; the measurement was no longer valid at higher frequencies. This curve spliced smoothly to the room-response curve above 1,000 Hz, resulting in a composite frequency-response variation of ±2.5 dB from 42 to 2,300 Hz, ±2 dB from 2,000 to 12,000 Hz, and ±2.5 dB from 12,000 to 20,000 Hz.

Nonetheless, the effective lower limit of the speaker's response was actually in the vicinity of 65 to 70 Hz, as rated. Although some audible fundamentals were present at 50 Hz and lower, the distortion and fluttering as the cone approached its excursion limits rendered the system ineffective at those frequencies.

The on-axis frequency response at 1 meter, measured with swept one-third-octave pink noise, was generally similar to the room measurements, without their extended bass response. It varied ±2 dB from about 150 to 3,000 Hz, dipping another 2 dB between 4,000 and 9,000 Hz. The high-frequency dip was strongly affected by the position of our test microphone, apparently being caused by interference between the outputs of the tweeter and woofer.

A similar measurement, smoothed and repeated at 45 degrees off-axis, indicated good high-frequency dispersion from the M.5's tweeter. Starting to diverge slightly above 1,000 Hz, the off-axis response (on the side near the tweeter) was down by a fairly constant 3 dB all the way to 10,000 Hz and down only 6 dB at 20,000 Hz. When we measured with the microphone offset in the opposite direction, the curve was identical to the first up to 4,000 Hz, with an off-axis loss of almost 5 dB at 10,000 Hz and almost 10 dB at 20,000 Hz. Either way, the horizontal dispersion of the M.5's tweeter was better than that of most speakers we have measured.

The system's quasi-anechoic MLS frequency response exhibited the usual slight irregularities, on the order of ±2 dB, between 300 and 5,000 Hz. Measurements at different angles and distances confirmed that a response peak or null at about 8,000 Hz was truly an interference effect, changing widely with slight changes in test conditions.





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## TEST REPORTS

The tuning of the system's enclosure and port was close to ideal, as evidenced by its nearly identical bass impedance peaks of 12 and 13 ohms at 40 and 110 Hz. The impedance reached lows of 4 ohms at 60 to 70 Hz and 3.6 ohms at 300 Hz.

Sensitivity at 1 meter, with a 2.83-volt input of pink noise, was 90 dB on the axis of the woofer and 88 dB on the tweeter's axis. When we drove the speaker with single-cycle tone bursts at 1,000 and 10,000 Hz, our amplifier clipped in the range of 1,200 to 1,500 watts without damage to the speaker or audible distortion. At 100 Hz, the woofer cone reached its physical limits with alarming rasping sounds at an input of 74 watts into its 9.5-ohm impedance, though the distortion had already become unpleasantly audible (and visible on an oscilloscope) with as little as 27 watts input.

With 2.83 volts input, the woofer's distortion was between 0.5 and 2 percent over the range of 42 to 2,000 Hz. The effective crossover to the port output occurred at about 120 Hz, however, and its distortion at that frequency was about 5 percent, rising to about 15 percent at the speaker's rated lower limit of 68 Hz.

Although the shape of the M.5's response curve might suggest that it

would sound muted or distant, the actual sound was quite the opposite—smooth, crisp, and well defined. Its bass extension was sufficient to prevent most music from sounding thin, and the absence of artificial emphasis in the upper bass was notable. Best of all, it shared the outstanding imaging qualities of its larger (and costlier) siblings in the H.I. line.

Few speakers of comparable size and weight can deliver as balanced and musical a sound as the M.5. It could benefit from the addition of a sub-woofer, but if that level of performance is desired it would seem more sensible to get one of the larger AR H.I. speakers in the first place.

Perhaps the M.5's chief limitation (though for most people it should not pose any problems) is its power-handling ability at frequencies below 100 Hz. This speaker leaves no doubt in the listener's mind when the woofer cone (whose actual effective diameter is only about 4 inches) has reached its limits, and almost any amplifier or receiver has more than enough power to make that happen from time to time. For listening to music below lease-breaking levels, however, the Acoustic Research M.5 is a truly fine-sounding speaker, and a notable value at its price. □

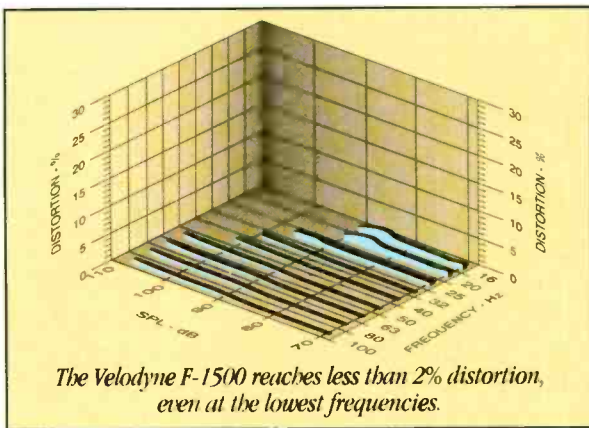


"That's what I hate about working in a high-end store—seeing poor guys like that."



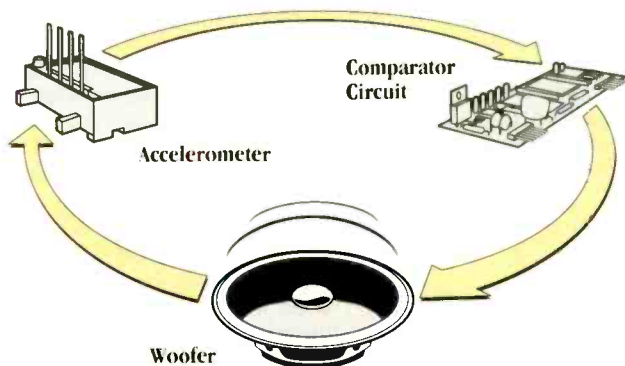
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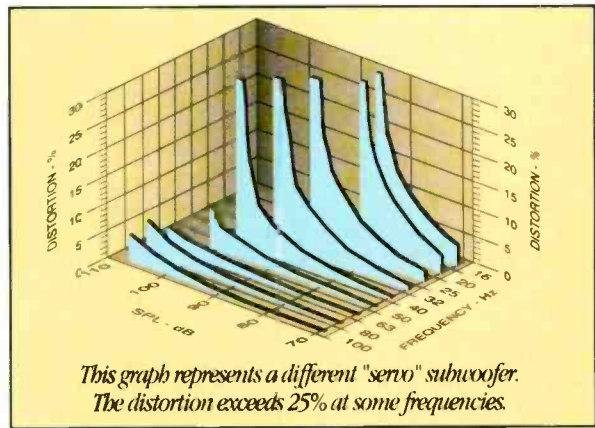
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\* Graphs & quotes reproduced from "THUNDER IN THE LISTENING ROOM" by D.B. Keele, Jr. – *Audio Magazine*, Nov. 1992

# TEST REPORTS



## Quad 66FM Tuner

JULIAN HIRSCH  
HIRSCH-HOUCK LABORATORIES

**T**HE Quad 66FM tuner is a recent addition to the company's line of deluxe audio components, which includes the Model 66 preamplifier and the Model 66CD player. Each of the components is designed for complete compatibility with the others, and all are controlled from a single remote unit, which is supplied with the preamplifier (tested for the August 1990 issue).

Consistent with its place in an integrally designed and operated system, the Quad 66FM has no controls other than a barely visible power button. On the assumption that it will usually be used with the Quad 66 preamplifier, no remote control is supplied with the tuner, although it can be purchased separately. If you want to use the tuner without the preamp, you might also prevail upon your dealer to program a learning remote with the necessary commands from the big Quad integrated remote.

The tuner matches the preamplifier

in size and external appearance. Its principal front-panel feature is a status display. At the right of the panel, the current preset channel number (nineteen are available) and its frequency appear in large amber numerals. To their left is a wider window with a row of numbers from 1 to 19 across its top. A long arrow points to the currently selected channel number, which is also enclosed in a small box, and there is a slanted row of illuminated squares whose length is proportional to the received signal strength. The word mono or stereo appears in the window as required.

#### Dimensions

12 $\frac{3}{4}$  inches wide, 10 inches deep, 3 $\frac{1}{8}$  inches high

#### Price

\$1,050; remote control, \$250

#### Manufacturer

Quad U.S.A., Dept. SR,  
111 South Dr., Barrington, IL 60010

On the tuner's rear apron are the AC power-cord socket, an unswitched AC convenience outlet, the audio output phono jacks, and a coaxial connector for a 75-ohm antenna feed.

The remote control is as unconventional as the components it was designed to operate. Several times as large as typical infrared remotes, it weighs about 2 pounds and matches the other Quad components in finish (a distinctive brownish-gray satin). Most of its controls, both buttons and knobs, are dedicated to operating the preamp and CD player, but among them is a button for selecting the tuner and pairs of search and track buttons that also control the CD player. Pressing the RADIO button turns on the tuner and switches the preamplifier input to it. The track and search buttons can then be used to select a desired preset number or to tune up or down the band. The STORE button is used to assign a tuned frequency to a selected preset. The track buttons step the tuning sequentially through the preset channels. The Quad 66FM, unlike most FM tuners, changes its tuning in 25-kHz increments, although it normally displays only the usual 50-kHz intervals. The manual, which is quite



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# TEST REPORTS



complete, describes how to tune stations on intermediate channel frequencies (unlikely to be required in the United States, but possibly needed in other parts of the world).

In our lab tests, the tuner's frequency response was very flat,  $\pm 0.2$  dB from 20 to 10,000 Hz and down only 0.7 dB at 15,000 Hz. Stereo channel separation was 40 to 45 dB in the midrange, narrowing to 25 dB at 30 and 15,000 Hz. Capture ratio, AM rejection, and image rejection were all well above average. Sensitivity and selectivity were adequate, though not outstanding, and the power-line hum in the tuner's output was absolutely undetectable. The Quad 66FM has no

noise muting in the usual sense; its output is blanked out while tuning between stations, but not if the strength of a received signal drops to a very low level. The effective stereo threshold was 10 dBf, although the signal was too noisy to be useful at that level. The lowest signal-strength indicator segment came on about 20 dBf, and the next six segments illuminated at intervals of about 10 dB.

Once we had become familiar with the Quad 66FM's somewhat unconventional controls, using it became easy and natural. In general, it sounded better (under less than ideal conditions, with indoor dipole antennas) than most FM tuners we have used, by virtue of being essentially immune to extraneous noise radiated from nearby personal computers or compact disc players, which can inject considerable garbage into the spectrum at certain FM frequencies.

The remote control, despite its apparent clumsiness, weight, and size, proved to be one of the handiest we have used. It radiates a stronger infrared signal than most, enabling it to be placed on a table at a convenient location and pointed in any direction. It is *not* necessary, in most cases, to point it toward the controlled component, unlike most conventional remote controls. If all the major system components are Quad 66 series units, the Quad remote becomes a literal extension of the system controls.

The Quad 66 components, including the 66FM tuner, are not inexpensive, but I would judge that their value to a user easily justifies the investment. Considered either as a system or as individual components, their design is very user-friendly, and the audible results are thoroughly satisfying. □

## MEASUREMENTS

Usable sensitivity (mono)	14.2 dBf
50-dB quieting sensitivity	
mono	19 dBf
stereo	40 dBf
Signal-to-noise ratio (at 65 dBf)	
mono	75.5 dB
stereo	70.5 dB
Distortion (THD + N at 65 dBf)	
mono	0.096%
stereo	0.24%
Capture ratio (at 65 dBf)	0.9 dB
AM rejection	70 dB
Selectivity	
alternate-channel	57 dB
adjacent-channel	6 dB
Pilot-carrier leakage (19-kHz)	-65 dB
Hum	less than -90 dB
Channel separation	
100 Hz	35 dB
1,000 Hz	41 dB
10,000 Hz	29 dB
Frequency response	
30 to 15,000 Hz +0.2, -0.7 dB	

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 GA-Audio Warehouse: Savannah • Stereo Shop: Marietta • Stereo Video Systems: Marietta (Atlanta).  
 HI-Maui Audio Center: Kahului.  
 IA-Audio Logic: Des Moines • Custom A/V: Cedar Rapids • Hawkeye A/V: Iowa City.  
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 MA-O'Coins: Worcester • (Boston: see Nashua, NH).  
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 ME-Cookin': Portland.  
 MI-Future Sound: Ypsilanti • Listening Room: Midland, Saginaw • Pecar's: Detroit, Troy.  
 MN-Audio Perfection: Minneapolis.  
 MO-Independence Audio Video: Independence (K.C.) • Sound Central: St. Louis.  
 NC-Audio Video Systems: Charlotte • Stereo Sound: Durham, Greensboro, Raleigh, Winston Salem.  
 ND-Pacific Sound: Bismarck.  
 NE-Custom Electronics: Omaha, Lincoln.  
 NH-Cookin': Nashua, Manchester, Newington, Salem, S. Nashua.  
 NJ-Sound Waves: Northfield • Sassafras: Cherry Hill • Woodbridge Stereo: W. Caldwell, W. Longbranch, Woodbridge.  
 NM-West Coast Sound: Albuquerque, Las Cruces, Sta. Fe  
 NV-Upper Ear: Las Vegas.  
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 OK-K Labs Premium Audio: Tulsa.  
 OH-Audio Craft: Akron, Cleveland, Findlay, Mayfield Hts., Westlake, Toledo • Audio Etc.: Fairborn (Dayton).  
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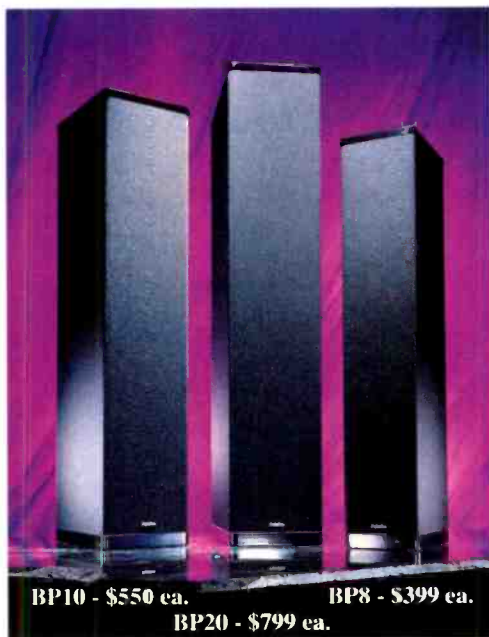
— Julian Hirsch, *Stereo Review*

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# TEST REPORTS



## Martin-Logan Aeries Loudspeaker System

JULIAN HIRSCH  
HIRSCH-HOUCK LABORATORIES

**M**ARTIN-LOGAN is well known to serious audiophiles as a manufacturer of high-quality electrostatic loudspeakers. Wide-range electrostatic speakers are typically large and expensive—until the recent introduction of the Aeries, Martin-Logan speakers ranged in price from \$3,000 to \$60,000 and in weight from 85 pounds to almost a ton. The Aeries makes the unique qualities of an electrostatic

**Dimensions**  
55½ inches high, 10½ inches wide,  
13½ inches deep

**Finish**  
Matte black, oak rails optional

**Price**  
\$1,995 a pair, \$2,295 in oak;  
add \$200 for biwiring

**Manufacturer**  
Martin-Logan, Ltd., Dept. SR,  
P.O. Box 707, 2001 Delaware St.,  
Lawrence, KS 66044

speaker practical and affordable for a larger number of audio enthusiasts.

Unlike conventional dynamic loudspeakers, electrostatic speakers do not use a cone or similar element, driven by a voice coil, to create a pressure wave in the air. Instead, a thin plastic sheet, treated during manufacture to give it an electrically conductive coating, is mounted between two perforated metal surfaces supported by a rigid frame. A high-level audio voltage is connected between the perforated plates, creating a strong, variable electrostatic field that acts uniformly on the entire surface of the plastic diaphragm, which carries a fixed electrostatic charge. Changes in the audio signal cause the diaphragm to move accordingly, creating a sound wave in the air.

It is possible for an electrostatic speaker to generate all audio frequencies from the low bass to the highest treble. Among other problems, however, such full-range speakers tend to be very large and costly. A more practical solution, found in most of the Martin-Logan systems, is to use a conventional dynamic woofer for the bass and cross over to the electrostatic diaphragm at the lowest frequency consistent with its dimensions.

The Aeries's 9-inch-wide electrostatic element is curved to form a 30-degree section of the surface of an imaginary cylinder about a yard in diameter, giving the speaker a 30-degree horizontal dispersion. The transparent diaphragm, sandwiched between two perforated plates, is a dipole radiator, generating equal (and opposite-phase) outputs to the front and rear. It also provides a fair view of the area behind the speaker.

The electrostatic element, operating from 500 to 20,000 Hz, is about 3 feet high and occupies the upper two-thirds of the Aeries. Below it is a forward-facing 8-inch cone woofer, in a sealed enclosure, that handles the frequencies below 500 Hz. The crossover network has 12-dB-per-octave slopes. The woofer's response is rated as  $\pm 3$  dB down to 40 Hz.

The woofer's enclosure serves as a base for the electrostatic radiator. It also contains the crossover network and the power supply for the electrostatic diaphragm, which uses only a few watts and is normally left energized at all times. A perforated metal grille covers the front of the speaker.

PHOTO: JOOK P. LEUNG



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# TEST REPORTS

Specifications for the Aeries include a system frequency response of 40 to 20,000 Hz  $\pm 3$  dB, nominal impedance of 4 ohms (with a minimum greater than 2 ohms at 20,000 Hz), and sensitivity of 89 dB sound-pressure level (SPL) at 1 meter with a 2.83-volt driving signal. The speaker is recommended for use with amplifiers delivering from 60 to 200 watts per channel.

Our test samples were biwirable, with separate binding posts for the bass and electrostatic portions, normally connected in parallel by jumpers. The speaker is also available with a single pair of binding posts for a conventional single-cable connection to the amplifier. The insulated multi-way posts accept bare wires, lugs, or banana plugs.

The averaged room response of the Martin-Logan Aeries was very flat, within 3.5 dB overall from 70 to 20,000 Hz except for a dip of about 4 dB at about 10,000 Hz. The close-miked woofer response was flat within  $\pm 1$  dB from 50 to 150 Hz, falling at 12 dB per octave below that range and with a gentle drop-off from 150 to 500 Hz, where the crossover began cutting off its response.

Splicing the woofer response to the room measurement produced a composite frequency response that correlated very well with what we heard from the Aeries. Except for the high-frequency dip (which appeared to some degree in virtually every response measurement we made), the system response was flat within  $\pm 2.5$  dB from 45 to 20,000 Hz and fell off at 12 dB per octave below 45 Hz.

The directivity of the electrostatic element was rather unusual. Although the response curves measured on-axis and 45 degrees off-axis began to diverge above 1,000 Hz, the difference between them varied only slightly from 1,500 to 10,000 Hz, remaining between 4 and 6 dB over that range. At higher frequencies the gap between the two response curves opened to a maximum of only 7 dB at 20,000 Hz. In other words, although the *level* of the midrange and treble was reduced somewhat at moderately off-axis listening angles, their relative *balance* was affected only minimally.

Quasi-anechoic MLS frequency-response measurements showed typical variations of several decibels between 300 and 10,000 Hz, as well as a slightly reduced output between 9,000 and

12,000 Hz. These effects were generally similar to the variations observed in room response.

Impedance was an almost constant 6 ohms from 80 to 500 Hz. The woofer resonated at 43 Hz, where the impedance rose to 20 ohms, and there was another 20-ohm maximum at about 1,200 Hz, above which the impedance fell off smoothly to a minimum of 2.4 ohms at 20,000 Hz.

The Aeries's measured sensitivity, 85.5 dB SPL at 1 meter with a 2.83-volt input, was slightly lower than rated (the manufacturer makes this measurement at a 3-meter distance, which was impractical in our situation), but it was within the normal range for most

**The most surprising  
quality of the Martin-  
Logan Aeries was its  
bass performance.**

home speakers. The woofer distortion at a 4.73-volt level (equivalent to a 90-dB SPL) was surprisingly low, remaining between 0.6 and 1.2 percent from 500 Hz down to below 50 Hz and rising to 3 percent at 40 Hz, 6.5 percent at 30 Hz, and only 10 percent at 20 Hz.

The Aeries also showed that its small woofer can play in the big leagues when it comes to power-handling ability. Unlike most cone speakers, whose voice-coil movement often limits their low-bass performance, this one was undisturbed by an 1,100-watt single-cycle burst at 100 Hz, which was the clipping point of our amplifier into the speaker's 5.7-ohm impedance at that frequency. The electrostatic radiator also took everything the amplifier could deliver, including a 2,100-watt burst of 10,000 Hz into 2.7 ohms, without damage or undue distress.

As always, the proof of a speaker's performance is in the listening, and here the Martin-Logan Aeries acquitted itself handsomely. We placed the speakers as recommended, about 4 feet from the side walls, 4 feet from the wall behind them, and 7 feet apart, angled slightly inward. As our measurements would suggest, the frequency response was audibly smooth and

extended. Like any large-area radiator, the electrostatic element generated sound that could be enjoyed at almost any distance.

The stereo image was accurate and stable, and the bidirectional pattern of the output produced a startling effect as we walked toward the plane of the speakers and on behind them. From the front, the soundstage extended across the room somewhere behind the speakers. When we reached the plane of the speakers, the apparent sound source suddenly shifted to a greater distance behind them, typically well beyond the wall only a few feet away. The back radiation of a dipole can easily be reflected from the wall behind it, normally reaching listeners in front of the speakers after a delay of 8 to 10 milliseconds. This delay can add an element of spaciousness to the overall sound that I find one of the most appealing qualities of a dipole radiator. A sound-absorbent wall surface can reduce or eliminate this effect if desired, however.

To me, the Aeries's most surprising quality was its bass performance. The bass enclosure is all but invisible behind the slim front panel, but the 8-inch woofer delivered a clean, deep bass output with very solid fundamental content at 40 Hz and even a perceptible fundamental at 30 Hz. Although the Aeries, like almost any full-range speaker, can benefit at times from a true subwoofer, you don't really need one with this system unless you are a bass freak.

Summing up, the Aeries is a very successful combination of an 8-inch acoustic-suspension woofer and a moderate-size electrostatic element, with the best qualities of each type of driver. It won't visually dominate even a small room, yet it should easily fill any home listening room with first-class sound. And it won't overtax the budget of almost anyone who is serious about good sound.

Finally, although this has nothing to do with the speaker's sound, the user's manual is unique in my experience. Not only does it tell you all you have to know about installing and using the Aeries, but it explains in reasonable (and not-too-technical) detail how and why the speaker works. I also found its two-page "History of Loud-speaker Development" to be both objective and good reading. Consider it a bonus with this fine speaker. □



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# A Little Travelin' Music

**Car stereo—twelfth in a series  
on the practical business of buying  
audio equipment**

**BY IAN G. MASTERS**

**A** CAR without some sort of sound system is as unthinkable these days as one without rear-view mirrors. For most of us, music is an indispensable accompaniment to driving, and there are many audio companies more than willing to satisfy this need. Picking your way through the maze of options is not easy, though.

Or maybe it is. One thing that has changed in the last few years is the nature of the stereo gear that comes with the car, factory installed. Faced with the audio community's predilection for ditching the supplied radio and buying elsewhere, car makers have upgraded the components they use; some have even formed alliances with the JBLs and Boses of the world to provide systems engineered for specific vehicles. So perhaps you can avoid the angst and take what comes.

Probably not, however. After-market car stereo provides a much wider range of options in terms of function and quality, and it still tends to be the choice of discriminating listeners. Also, as is the case in home audio, car stereo equipment is fun to shop for and to play with. Shopping for it can also be frustrating, of course, because there is so much stuff out there, but knowing what to look for will simplify the process.

## WHAT MATTERS

In many ways, it's far harder to achieve a high level of audio performance in a car than anywhere else. The very environment militates against it, so in a sense practically everything about the equipment you choose is important. Some things, however, should be given priority.



- **SQUEEZING IT IN.** It should be obvious (but often isn't) that the best piece of gear made will be a dud if you can't fit it into your car. So before you consider buying anything, do a physical survey of your vehicle to determine what it can and can't accommodate. Does the dash have only a three-hole cutout, or will it accept a flat-face DIN head unit? Is there any room in the doors for speakers? Are there speaker cutouts in the rear deck? What size are they? Where else can you mount speakers? Is there room for extra power amplifiers, a subwoofer, or a CD changer in the trunk or hatch? How about under the seats? Getting a handle on these things before you go shopping will narrow the field considerably.

- **USING IT.** You will inevitably spend some time searching for a radio station or cueing up favorite songs while doing 65 on the Interstate, so the head unit you choose had better be simple and intuitive to use. Fiddle with its controls in the store—if they seem awkward, illogical, or just plain difficult, pick something else. Also check out the head's shock tolerance: The last thing you need is a CD player that skips or a tape deck that makes wobbly noises when you drive over railroad tracks (a couple of firm raps—vertical, sideways, and front-to-back—should tell you what you need to know). If cassette is your medium, look for automatic shutoff, which disengages the tape mechanism when the ignition is turned off, to protect the

ILLUSTRATIONS BY MARK FALLS



# Why The Critics Love Ensemble And Ensemble II.



**“Ensemble may be the best value in the world.”** *Audio*

Ensemble and Ensemble II are subwoofer-satellite speaker systems designed by Audio Hall of Fame member Henry Kloss (founder of AR, KLH and Advent). Cambridge SoundWorks makes and sells Ensemble and Ensemble II (and a number of other audio components) factory-direct, with no expensive middle-men, so you can save hundreds of dollars. All purchases are backed by a 30-day money-back satisfaction guarantee, so there's no risk.



*The extra subwoofer in our Ensemble system provides maximum placement flexibility.*

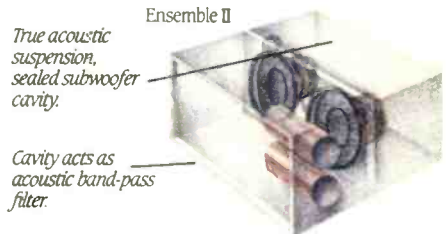
performance tweeter and a 4" woofer. Small and unobtrusive, they'll fit into the decor of any room. Available in scratch-resistant gunmetal grey Nextel, or primed so you can paint them any color you wish.

Ensemble and Ensemble II subwoofers use heavy-duty woofers in true acoustic suspension enclosures. Robust construction is used throughout, including solid MDF cabinets and solid metal grilles. Individual crossovers are built into each cabinet for maximum wiring flexibility.

audition our speakers the right way—in your own home, with your music, with no hovering salesman.

If you're not completely satisfied, return the system within 30 days for a full refund. We even reimburse the original UPS ground shipping charges (in continental U.S.)

The dual-subwoofer Ensemble system with handsome black-laminate subwoofers is \$599. The same system with black vinyl-clad subwoofers is \$499. Ensemble II is priced at \$399.



*True acoustic suspension, sealed subwoofer cavity.*

*Cavity acts as acoustic band-pass filter.*

**“Can be compared only with much larger speakers at substantially higher prices.”**

*Stereo Review*

Ensemble and Ensemble II are constructed with the very best materials and no-compromise workmanship. Both systems use satellite speakers that are virtually identical.\* Unlike many competing systems, they are true two-way speaker systems, each containing a high perfor-



*Ensemble satellite speakers are available primed for painting, so they can match your decor exactly.*

**“What's the difference between Ensemble and Ensemble II?”**

In many rooms, Ensemble II sounds virtually the same as Ensemble, especially when Ensemble's two subwoofers are placed right next to each other. But the Ensemble system's two ultra-slim subwoofers (4 1/2") give you more placement flexibility than any speaker system we know of (including Ensemble II). Ensemble is most likely to provide the performance you want in the real world of your listening room.

**“You get a month to play with the speakers before you have to either return them or keep them. But you'll keep them.”**

*Esquire*

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CIRCLE NO. 6 ON READER SERVICE CARD

## The Lingo

**C**ar stereo is mostly straightforward audio and uses the same vocabulary, but the need to fit components into a novel—and sometimes hostile—environment requires some distinctive terminology.

**GETTING A HEAD.** The electronic heart of a car stereo system is its *head unit*. Few head units are mere radios anymore. Instead, the term *receiver* refers to a component that contains an AM/FM tuner, an amplifier, and another sound source. One that contains a cassette deck is a *cassette receiver*; one with a CD player is a *CD receiver*. If it lacks an amplifier section but does include the AM/FM facility, it's a *cassette (or CD) tuner*. If it has no radio at all, it's a *cassette or CD player*, whether or not it contains an amplifier. Add-on CD players have largely given way to CD tuners and receivers or *CD controllers*—cassette receivers or tuners with the added capability of being able to control a *CD changer*, which is usually mounted in the trunk. Advanced systems often have one or more separate *power amplifiers* (also usually in the trunk) fed by the in-dash head unit; a growing number of heads provide *line-level (or preamp) outputs*, and often inputs.

How head units are mounted in the car also varies to some extent: Nearly all cars provide for in-dash installation of at least one head unit, but it may be a *three-hole* mounting configuration (a pair of knob holes on either side of a small rectangular cutout for the display/tape area) or a *DIN-mount* configuration (a 2 x 7-inch rectangular slot that will take the whole component). In some cases, *underdash* bracket mounting may be

required. Unless you're prepared to pay the price for extravagant rebuilding of the dash, add-on components can also be mounted under it; some equalizers and signal processors use *mini-chassis* or *half-DIN* cases to make things easier.

**SPEAK TO ME.** Achieving something akin to hi-fi in the interior of a car (or truck or van) is a tall order, which is why autostereo speakers come in such a mind-boggling variety. Perhaps the most common is the *flush-mount* speaker, which drops into a hole cut in the rear deck or a door, venting its back wave into the door or the trunk. A *surface-mount* speaker has its own enclosure, usually fixed by a bracket of some sort. Large enclosed speakers, sometimes called *truck boxes*, are designed for pickup trucks, vans, hatchbacks, and other vehicles in which conventional approaches don't work; these can be full-range systems or bass-only units. Hybrid *plate speakers* usually contain more than one driver; while they require a surface area larger than the standard cutout, the woofer's cone and magnet can fit into the standard hole.

The simplest speakers are *full-range* devices using a single driver to reproduce all sound, from bass to treble. To assist with high-frequency dispersion, a smaller diaphragm—sometimes called a *whizzer*—is often attached to the center of the main cone, making it a *dual-concentric* speaker. This is different from a true *two-way (or three-way)* speaker that uses separate drivers to reproduce various parts of the audio spectrum, which is divided up by a *crossover network*. A two-way might have the

tweeter mounted in front of the woofer so that the two will fit in the same hole, in which case it's a *coaxial* speaker (a *triaxial* is a somewhat misnamed device that has a tweeter and a midrange driver mounted side by side in front of the woofer). Multiple speaker arrays are often *biamplified*—separate amplifiers for each driver—in which case an *electronic or active crossover* is inserted before the amps.

**OFF THE AIR.** Whereas most source components in cars are similar to their homebound counterparts, autostereo tuners face distinctive problems caused by corrupt or changing signals. Pulling in weak stations is a matter of tuner sensitivity, but a tuner that's good at low-level signals should have a *local/distant* sensitivity switch to prevent overload when transmitters are nearby. A *mono/stereo* switch can make noisy signals listenable, as can *high-blend* or *auto-blend* circuits, which reduce separation, mainly in the treble, when necessary. *Station presets* let you program a number of favorite frequencies, to be selected at the touch of a button, and many tuners let you *scan* the spectrum to find what you want without taking your eyes off the road. In unfamiliar territory, *best-station memory (or auto memory)* automatically stores a handful of strong signals in a preset bank for quick access.

Car tuners can suffer from a distinctive type of fluctuating multipath distortion called *picket-fencing*. Good tuner design will minimize this effect, but in a *diversity-tuning* setup the cleanest signal from two or more antennas is automatically fed to the input.

deck's pinch-roller and minimize flutter. If you think that someday you might want to plug an external CD player or some other component into your head unit, or plug it into something else (a powered subwoofer or a second set of power amps), make sure it has RCA-type (phono-jack) line inputs and outputs. And if you think you'll be using a portable Discman-type CD player in the car, go with a head unit that has a front-panel input.

• **THE USUAL VIRTUES.** Car stereo is (or can be, at least) a form of hi-fi, so whatever else a car system does, it should sound good. Unfortunately, it's very difficult to predict how a piece of equipment will perform until it's been installed, but there are a few things you can do to lower the risk of problems. Provided you stay with name-brand components, tape and CD players are unlikely to have a significant effect on your system's overall

sound quality, but you should still put them through their paces and check for things like speed stability in the case of tape decks and access time in the case of CD players and changers. A spin around town with the head unit temporarily hooked up will give you some idea of FM performance and provide an opportunity to gain firsthand experience operating it. If it's a receiver with on-board power, your test drive will also shed some light on



# The Surround Sound Components That Have The Audio & Video Press Jumping Out Of Their Seats.

At the press event where we introduced our new surround sound speakers and systems, we had startled members of the audio and video press literally "jumping out of their seats." These Henry Kloss products are startling not only because of their performance and quality, but also because of their affordable, factory-direct prices.

## Center Channel & Center Channel Plus.

We offer two high performance, magnetically shielded center channel speakers. The *Center Channel* is acoustically identical to a satellite from our Ensemble® system, and ideal for use in a Dolby Pro Logic system. \$149 factory-direct. *Center Channel Plus* is a larger speaker for the most sophisticated home theater systems. It has four 3" woofers and a tweeter that matches the acoustics of our Ensemble system. Because of its wide, low profile, *Center Channel Plus* is ideal for placement on top or, with an optional support unit, beneath your TV. \$219 factory-direct.



Powered Subwoofer

Slave Subwoofer

## The Surround & The Surround II.

Both *The Surround* (\$399 pr.) and *The Surround II* (\$249 pr.) speakers use dipole radiator technology to recreate surround sound effects the way they were meant to be heard. Out-of-phase drivers face to the front and rear of the listening room, for best-possible ambient sound reproduction.

The combination of the two speakers can reproduce a 30 Hz signal cleanly to a sound pressure level of over 100 dB! That's enough clean, deep bass for the largest home theaters, and the most demanding listeners.

## Slave Subwoofer,

which uses the amplifier and controls built into the *Powered Subwoofer*. Amplifier output jumps from 140 to 200 watts when it's connected.

The factory-direct price of the *Slave Subwoofer* is \$299.

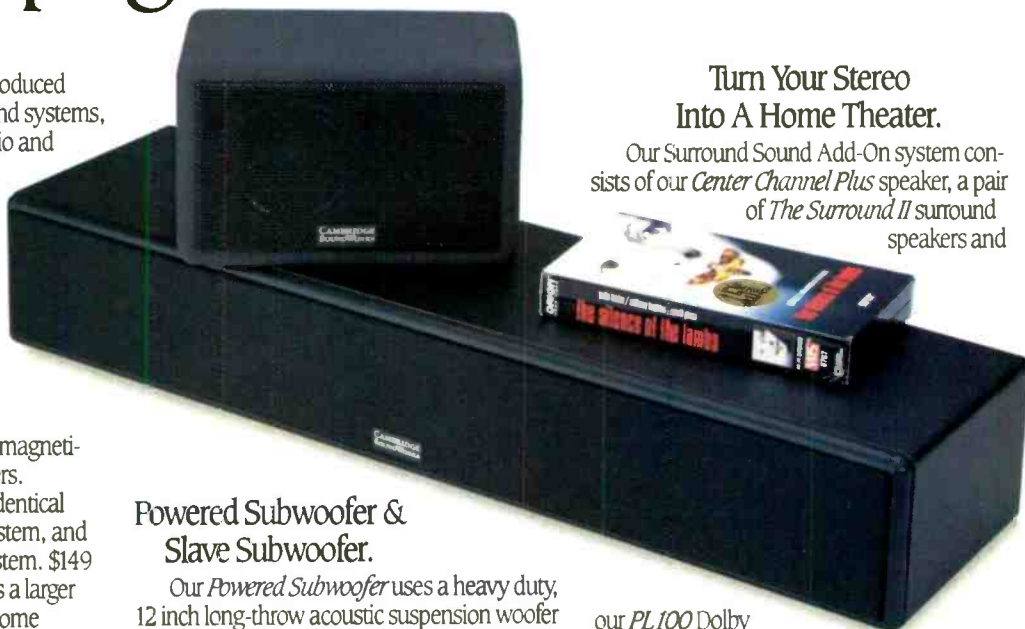


The Surround II

The Surround

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Our Surround Sound Add-On system consists of our *Center Channel Plus* speaker, a pair of *The Surround II* surround speakers and



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Our new *PL100* Dolby Pro Logic decoder with 3-channel amplifier; low profile *Center Channel Plus* speaker; *The Surround II* dipole radiating surround speakers. Factory-direct price, \$867.

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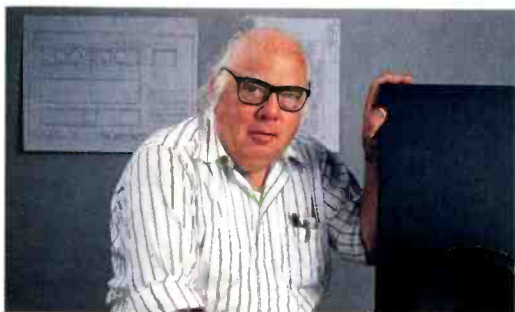
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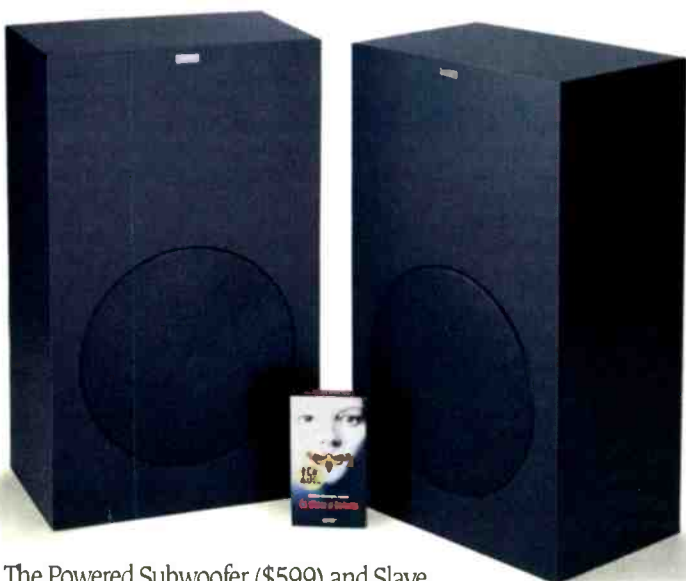
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# No Other Loudspeaker Co



Henry Kloss, creator of the dominant speakers of the '50s (Acoustic Research), '60s (KLH) and '70s (Advent), brings you Cambridge SoundWorks, a new *kind* of audio company with factory-direct savings.

Our Center Channel speaker (\$149) and our Center Channel Plus speaker (\$219) are perfect for Dolby Surround Pro Logic systems. They offer very high performance, and are magnetically shielded. Center Channel Plus can fit *under* your TV.



The Powered Subwoofer (\$599) and Slave Subwoofer (\$299) by Henry Kloss provide room-shaking bass (over 100 dB at 30 Hz!). Great for pipe organs and effects in movie soundtracks. Built-in 200w amplifier. 15½" x 26½" x 10¼" (each model)

Our surround speakers, The Surround (\$399 pr.) and The Surround II (\$249 pr.) use dipole radiator technology to reproduce surround effects the way they were meant to be heard. Non-directional ambient sound literally surrounds you.



**NEW!** The Cambridge SoundWorks Model Six continues a 40 year tradition of high performance, high value two-way acoustic suspension loudspeakers by Henry Kloss. The Model Six with its 8" woofer, delivers very natural, accurate, wide-range sound—for only \$119 each, factory-direct. Your choice of three beautiful cabinet finishes.



Ambiance™ In-Wall speakers (\$329 pr.) offer an unbeatable combination of performance, value and ease of installation.





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Everything you need to change your great stereo into a great home theater. \$867.



The dual-subwoofer Ensemble® speaker system gives you ultimate room-placement flexibility for best real world performance.

*Audic* magazine says it "may be the best value in the world." With black-laminate subwoofers (\$599), or black vinyl-clad subwoofers (\$499).



Our catalog includes components from CSW, Pioneer, Philips, Sony and more.

The Ensemble II subwoofer-satellite speaker system by Henry Kloss is one of the best values in the country. We think it's better than speakers costing twice as much. Because we sell it factory-direct, it's only \$399. *Stereo Review* says it "performs far beyond its price and size."



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Cambridge SoundWorks is a new *kind* of audio company, with factory-direct savings, and much, much more...



**Audio Hall of Fame member Henry Kloss.**  
Cambridge SoundWorks products are designed by our co-founder, Henry Kloss, who created the dominant speakers of the '50s (AR), '60s (KLH) and '70s (Advent).



**We eliminated the expensive middle-men.**  
By selling factory-direct to the public, we eliminate huge distribution expenses. Don't be fooled by our reasonable prices. Our products are *very* well designed and made.



**30-Day Total Satisfaction Guarantee.**  
Try our speakers in your own home, with your music, for 30 days. If you're not satisfied, return them for a refund. We even refund original ground shipping charges.



**Audio experts on call 365 days a year.**  
Our knowledgeable audio experts (not clerks) are on duty for advice, hook-up information, or orders, 8AM-midnight every day, including Sundays and holidays.



**Five year limited parts and labor speaker warranty.**  
All of our speakers are backed by a five year parts and labor warranty. In some cases, we'll even send you a replacement speaker before we've received your defective unit.



**The best values in Dolby Surround Sound.**  
We believe The Surround and The Surround II are the country's best values in surround speakers. Complete Dolby Surround Sound systems start at under \$1,000.



**Ambiance ultra-compact speaker system.**  
We think Ambiance is the best "mini" speaker available, regardless of price. Bass and high-frequency dispersion are unmatched in its category. \$175-\$200 each.



**NEW: Model Eleven A transportable component system.**  
The same high performance of the original, in a smaller package. Carrying case doubles as system subwoofer. Works on 110, 220 & 12 volts. Introductory price \$699.

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whether external amplification will be necessary—it usually is if you want to be able to play the system at moderate listening levels *without* distortion.

Alas, there is no easy way to tell in advance how what you want to buy will actually sound, which is determined mostly by your speakers, where they're placed, and how they interact with the interior of your vehicle. A similar system in another car might give you a clue, and temporarily parking speaker prospects in your car (if they're surface-mount models) will approximate the final sound. In the end, the safest bet is to make sure your dealer/installer will exchange speakers that sound bad and work with you to correct matters.

- **KEEPING IT.** Somebody out there wants your equipment as much as you do, and he won't be shy about trying to get it. There is a vast range of antitheft options on the market, from detachable-face and pull-out head units, to security codes that disable the head if anybody but you tries to use it, to cheap-looking false faceplates, to stand-alone security systems that hurl verbal abuse at anyone who approaches your car. What you'll need depends on your circumstances, but chances are you'll need *some* sort of protection, so you should include security in your budget from the start.

- **DROP THAT SCREWDRIVER!** Installing a car stereo system is one of the most finicky and frustrating things in audio, and one that you can screw up with incredible ease. So do yourself a big favor: Pay the money and have your system installed by a pro who can show you examples of his work.

### WHAT DOESN'T

For the most part, the miniaturization necessary in car audio reduces the risk of unnecessary features. Still, there are a number of things that can largely be ignored.

- **NUMBERS GAMES 1.** Autosound companies, like other audio manufacturers, tend to sprinkle their literature liberally with specifications, but many are of little value. Unless you plan on spending lots of time listening to the system while your car is parked—in which case you had better have a very healthy battery—specs like signal-to-noise ratio (S/N) and channel separa-





**Installing a car stereo system is finicky, frustrating, and very easy to screw up, so do yourself a big favor: Pay the money and have your system installed by a pro who can show you some samples of his work.**

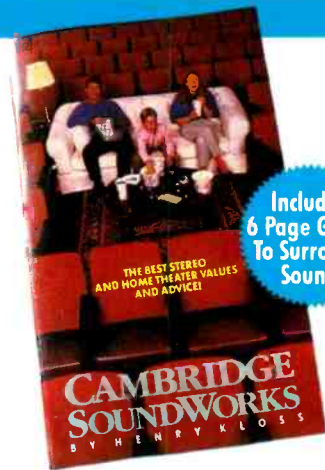
tion tend to be consistently better than necessary given the ambient noise that washes over you even in a quiet moving vehicle. On the other hand, so many companies inflate their numbers (by using extremely high distortion figures and other strategies to pump up wattage specs, for example) that the results are useless either as a basis of comparison or as an indication of performance in general.

• **NUMBERS GAMES 2.** Big numbers do not necessarily mean great sound. Sure, 2,000 watts of amplifier power and twenty-four separate speakers may impress the dude in the next car, and may even get you high marks at the local sound-off contest (although not necessarily), but such overkill will really only make the sound loud—louder, probably, than you can stand. Some of the best-sounding systems use only six or so drivers and a few hundred watts of power (or less). By the same token, you'll never need thirty FM presets in your tuner. If they add only minimally to the cost, fine, but if you have to pay extra for more than about a dozen, forget it. How many favorite radio stations can one person possibly have?

• **EQUALIZERS.** It's tempting to think of a graphic equalizer as a magic cure-all for any audio ill that might arise. It isn't, and you can cause more harm than good to the sound with one if you're not careful. Parametric equalizers can be useful for correcting basic sonic maladies caused by the vehicle's interior, but they are tricky to adjust and, therefore, are best left in the hands of a competent installer.

**GET WITH IT**

One absolute must is something to hold your tapes or CD's so they don't rattle around your car. There's a wide variety available, from padded CD holders to small suitcase-like boxes with handles. Several companies manufacture car caddies—containers designed to keep food or drinks cold (or hot) on long trips—and they are also ideal for storing CD's, tapes, and small accessories like tape-head cleaners. Since these containers don't look like audio gear, they might not be as attractive to thieves, and their insulation may help protect your recordings from temperature extremes. □



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

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## COMPARISON TESTS

**B**ACK in the old days, record changers carried a heavy burden of social stigma among audio mavens, and with some justification. The convoluted mechanical methods used to change records almost invariably affected the player's basic job of spinning the disc, if only slightly in the best models, and careless disc stacking could lead to record damage. Eventually, most people turned a deaf ear to record changers in favor of single-play turntables.

Times change, though. Compact discs have replaced phonograph records, and today's CD changers can deliver all the fidelity of single-disc players. Once a disc is loaded and clamped to the spindle of the drive-motor shaft, it is fully independent of the loading platter. Servo loops are used to maintain rotational accuracy within CD standards, and data read from the disc are relocked inside the player to insure a precise, stable bit stream to the digital decoding circuitry. Indeed, any variation in data rate outside the CD standard would cause a player to mute. Downstream circuitry is completely independent of the disc-loading mechanism and can be built to deliver all the fidelity of high-end single-disc players. Simply put, the disc-selection mechanism in a well-engineered CD changer does not affect the precision of disc rotation or the fidelity of the output signal.

Along with great sound and uninterrupted playback of multiple discs, CD changers typically offer such benefits as the ability to play only a few tracks selected from several discs without having to reload the player and to play a random or programmed sequence of many tracks on several discs. Because of these advantages, CD changers now outsell single-disc players.

CD changers come in two flavors: cartridge and carousel. Although some cartridge models offer compatibility with trunk-mounted car changers, most people seem to favor carousel models because of their greater convenience. You don't have to fumble with cartridge loading, and most contemporary carousels let you listen to one disc while you change the others, something cartridge models do not permit. With this in mind, we rounded up five recent-vintage five-disc carousel changers—the Denon DCM-440, Harman Kardon TL8500, Philips CDC-935, Sony CDP-C601ES, and Yamaha CDC-735, all in the \$300 to \$500 price range—and set their platters spinning.

To check their sound quality, I listened to each changer over a high-end system consisting of a Conrad-

# CLASSY

Five mid-line  
CD changers  
prove that high  
performance  
doesn't have  
to mean  
a high price.

PHOTOS BY DAN WAGNER

**BY KEN C. POHLMANN**





# CAROUSELS



## DENON DCM-440 (\$400)



Johnson Motif MC 10 preamp and MS 2001 power amplifier and B&W Matrix 801 Series 3 loudspeakers. As usual, I was careful to match the output levels of the changers being compared; if you don't do this, it's easy to mistake small level differences for quality differences that aren't really there. To *measure* their audio performance, I fired up my trusty Audio Precision System One test set and subjected each changer to a battery of tough tests, ranging from frequency response to low-level digital-to-analog (D/A) conversion linearity. And to evaluate their features, I simply lived with them for two weeks, attempting to uncover any idiosyncrasies. Features are great, but if you have to make frequent trips to the owner's manual to figure out how to use them, you'll probably just give up after awhile and ignore most of them, which means that whatever you spent for those features will have been wasted.

Given the closeness of their prices, we weren't surprised to find that these five changers had much in common. For example, all five feature direct disc and track access, wireless remote control, and the ability to continue playing a disc while the other four are being changed, all but one have headphone jacks and level controls, and all but one have digital outputs. A digital output is necessary if you want to connect a changer to a digital preamplifier or an external D/A converter, or if you want to make direct digital copies of CD's to DAT, DCC, or MD (just be sure the changer has the right kind of digital output—coaxial or optical—for the equipment that you'll be connecting it to).

## DENON DCM-440

The Denon DCM-440 can be programmed in the usual way to play as many as twenty individual tracks from five CD's, but it also has a track-memory feature that can store as many as six tracks per disc (for up to a hundred discs) that you *don't* want to hear, on the plausible theory that there will normally be more tracks on a disc that you *do* want to hear than ones that you *don't*. For most people, this approach should be easier and more efficient than selecting all the tracks to be played each time, and the information is saved even if AC power is disrupted. The player also has three random-playback modes (from all discs, from sequential discs, and of programmed tracks) and five repeat modes (single

track, single disc, all discs, stored program, or random playback).

On the DCM-440's backside you'll find a coaxial digital output, fixed and variable analog outputs, and a synchro jack for synchronizing its operation with that of other components in a Denon system. The DCM-440 employs an eight-times-oversampling 20-bit digital filter with noise shaping and two of Denon's 18-bit Super Linear Converters, making it the only changer in the group to use multibit D/A conversion. Although four disc positions are available when the drawer is opened, two are partially covered, requiring a little care when slipping discs in and out, and if you play just a single disc, it may or may not be accessible when you reopen the drawer. Any disc position can quickly be rotated into the open with the Disc Skip button, however.

I thought the DCM-440 was one of the best-looking changers in the group. Its shiny black aluminum front panel is striking, and overall fit and finish were excellent. Its drawer was less substantial than some of the others, however, and had a number of sharp edges on its top surface that could conceivably scratch discs as you load them. The mechanism was moderately noisy when swapping discs. On a more positive note, the DCM-440 sported the brightest, most legible display in the group.

The Denon performed adequately on the test bench, but not spectacularly. It did not place above the other changers in any of our twelve measurements and placed last in three: frequency response, channel separation at 1,000 Hz, and disc-change time.

## HARMAN KARDON TL8500 (\$479)





## HARMAN KARDON TL8500

The costliest changer in the group by a slight margin, the Harman Kardon TL8500 is also by far the most interesting to look at. Instead of a front-opening drawer, it sports a top-loading platter under a transparent plastic cover. In addition, the buttons on the plastic front panel are all large and curvaceously contoured. All in all, not only is this changer charmingly reminiscent of LP turntables of yore, it's also just plain better looking than the others.

Although its front panel is refreshingly clean, the TL8500 does not lack features. A repeat button lets you replay discs, tracks, or segments, and a random button sets the player to select tracks on a disc in random order. The remote control provides amenities such as index search, track intro scan, A-B repeat, thirty-track programming, and automatic insertion of 4-second pauses between tracks for tape recording. All operating modes are indicated on a very comprehensive and legible front-panel display, which you can turn off if you like.

The TL8500 exposes four disc wells at a time, and the fifth disc can be rotated into loading position with the Disc Skip button. One peculiarity is that when you've finished playing a single disc, the changer doesn't automatically rotate it out: You have to hit the Disc Skip button to retrieve it. In addition, there are several sharp edges inside the tray area that might scratch discs. The TL8500's disc-transport and changer mechanism are protected during shipping with a transport screw and clamping button, and it was fairly quiet when changing discs.

The TL8500 was the only changer in this group without a digital output, headphone jack, or level control. The back panel provides fixed-level analog outputs and remote-control in/out minijacks for connection to other Harman Kardon components. Like all but one of the other changers, the TL8500 uses low-bit D/A conversion. The Harman Kardon best out the other changers in channel separation at both 1,000 and 20,000 Hz.

## PHILIPS CDC-935

Although it is the least expensive changer in the group, the Philips CDC-935 includes some features the others lack. For example, its Personal Presets system enables you to customize the player with your preferred modes

LABORATORY MEASUREMENTS					
	DENON DCM-440 (\$400)	HARMAN KARDON TL8500 (\$479)	PHILIPS CDC-935 (\$300)	SONY CDP-C601ES (\$420)	YAMAHA CDC-735 (\$429)
<b>Dimensions</b> (inches, W x H x D)	17 x 4½ x 15¼	17½ x 4 x 16	17 x 4¾ x 14¾	17 x 4¾ x 15	17 x 4¼ x 15¼
<b>Line output</b> (maximum)	1.93 volts	1.98 volts	2.16 volts	2.05 volts	2.14 volts
<b>Frequency response</b> (20 to 20,000 Hz)	+0, -0.88 dB	+0.01, -0.19 dB	+0.5, -0.1 dB	±0.01 dB	+0.08, -0.27 dB
<b>De-emphasis error</b> (at 16,000 Hz)	-0.68 dB	+0.6 dB	+1.3 dB	-0.08 dB	-0.21 dB
<b>Channel separation</b> at 1,000 Hz at 20,000 Hz	98.9 dB 80 dB	118.2 dB 98.1 dB	104.9 dB 79.2 dB	117.7 dB 94.2 dB	102.1 dB 61.5 dB
<b>Signal-to-noise ratio</b> (A-weighted)	104.9 dB	106.7 dB	93.9 dB	124.9 dB	110.7 dB
<b>Dynamic range</b> (A-weighted)	98.6 dB	98.8 dB	103.6 dB	99.6 dB	96.7 dB
<b>Distortion</b> (THD + N, 1,000 Hz) at 0 dB at -20 dB	0.0051% 0.04%	0.0036% 0.026%	0.019% 0.043%	0.0016% 0.0013%	0.0017% 0.014%
<b>Linearity error</b> (at -90 dB)	-0.8 dB	+0.29 dB	+2.0 dB	-0.1 dB	+0.2 dB
<b>Interchannel phase shift</b> (at 20,000 Hz)	1.3°	1.3°	1.7°	1.4°	1.1°
<b>Defect tracking</b> (Pierre Verany #2 test disc)	2,400 µm	1,500 µm	1,250 µm	2,500 µm	1,250 µm
<b>Disc-change time</b>	10 seconds	8 seconds	8 seconds	9 seconds	6 seconds

of operation: Settings for such things as playback mode (continuous, random, programmed), pause time between tracks, and track-audition scan time can be stored. Personal presets remain active even when the player is turned off. An edit function enables the changer to automatically play a series of tracks that will fit onto a tape of a length you specify, either sequentially or in a programmed order; taping becomes a one-button operation when you connect the CDC-935 to a Philips recorder (such as a DCC deck) that supports the Philips ESI bus. And Philips's Favorite Track Selection (FTS) system can memorize a track sequence for a disc and automatically recall it whenever you play that disc.

Other perks include thirty-track program memory, audition scanning of the first 10 seconds (programmable up to 30 seconds) of each track, single-disc and all-disc random playback, single-disc and all-disc repeat, and autospacer to insert a 4-second pause between tracks. Conveniently, one disc-platter position is labeled the Preferred Position. When you load that position and press the Quick Play button, the changer simply plays that disc, without searching the other disc locations: In other words, the CDC-935 operates as though it were a single-disc player. This is a great feature, though the "preferred" disc is not always accessible when the drawer is opened after playing—you may have

### PHILIPS CDC-935 (\$300)



to hit the load button to retrieve it. Three disc positions are accessible when the drawer is opened; the other two can be spun into position with the load button.

The CDC-935's back panel holds a coaxial digital output, fixed analog outputs, ESI bus connectors for the Philips multicomponent remote-control system, and an on/off switch for the infrared sensor. The styling of its plastic front panel matches other Philips components and is an interesting departure from the norm for audio equipment, though one that may not please everyone.

The CDC-935's disc tray was relatively solid compared with those of the others in the group, but it was moderately noisy when changing discs. I thought its owner's manual was unnecessarily confusing. It had the best dynamic-range measurement in the group but placed last in noise, distortion, low-level D/A linearity, inter-channel phase error, and de-emphasis error, and it tied for last place in defect tracking.

### SONY CDP-C601ES

The Sony CDP-C601ES is probably the best-built of the five changers I tested. Like other Sony ES components, it has a copper-clad frame and very sturdy internal construction, and its front panel is made from aluminum plate. It also has plenty of features, including thirty-two-track multidisc programming, disc and carousel repeat, disc and carousel random playback, and direct-access track selection. Home recordists will appreciate the peak-search function, for level-

setting assistance when recording CD's from the analog outputs, and the tape-length sequencing function with programmable-speed fader.

On the back panel you'll find an optical digital output (a coaxial output is used on the other three changers with digital outputs) and fixed and variable analog outputs. Under the hood are a number of high-tech touches, such as newly designed anti-jitter circuitry and a digital filter that dithers its 45-bit internal data down to 20-bit data for digestion by the changer's HDLC low-bit D/A converters with third-order noise shaping.

The disc drawer barely emerges from the cabinet, so you have to load and unload discs one at a time. It is an easy matter to rotate the platter to the next disc position with the Disc Skip

button, however. Even better, the drawer always opens to the last-played disc. That's especially handy when playing a single disc: The changer essentially ignores the other four platter positions and becomes a single-disc machine. The CDP-C601ES's transport mechanism is protected against shipping damage with a transport screw. Its disc drawer seemed the most solid in the group—its stability enhanced by its limited opening distance—and the mechanism was fairly quiet when changing discs.

The Sony changer was the test-bench king. It placed first in frequency response, de-emphasis accuracy, signal-to-noise ratio (S/N), distortion, low-level D/A linearity, and defect tracking, which are among the most important of measured benchmarks.

### YAMAHA CDC-735

Yamaha's entry won the quick-draw competition, thanks in part to its on-board table-of-contents (TOC) memory. Normally, each time a disc is loaded into playing position, a player must read the table of contents at its beginning to get track numbers, locations, times, and so forth. The CDC-735, however, reads this information once and saves it until the disc drawer is opened again or power is shut off, enabling it to maintain a brisker pace when reloading discs. Because of this TOC memory and its fast-moving mechanics, the CDC-735 was the fastest in the group at changing discs, doing the job within 6 seconds. Unfortunately, it was also among the noisiest.

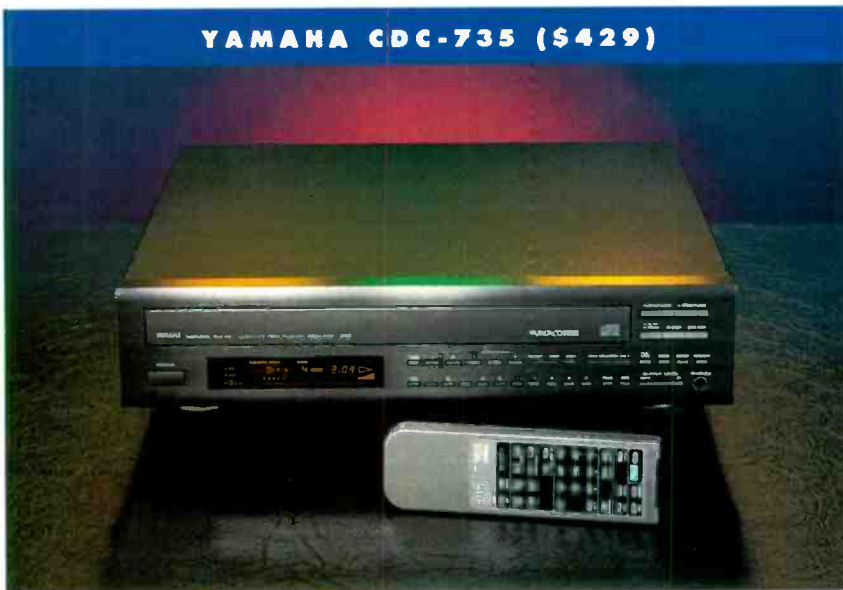
For home recordists, the CDC-735 provides a nice edit feature: You can

### SONY CDP-C601ES (\$420)





## YAMAHA CDC-735 (\$429)



program a tape length and select tracks from as many as five discs, and the system will automatically arrange your selections to fit onto the two sides of the tape. The CDC-735 can also store track-sequence programs for as many as a hundred discs, which it will use automatically whenever any of those discs is played. Other features include forty-track programmability; single-track, single-disc, and all-discs repeat; single-disc and all-discs random playback; and index search from the remote control.

Four disc positions are fully accessible when the drawer is open, and the fifth position can be rotated into the open with the Disc Skip button. If you are playing a single disc, it will always be accessible when the drawer is open. The front panel is made of aluminum, and because Yamaha feels that front-panel displays can generate a small amount of audio interference, the CDC-735's can be turned off (or dimmed) during playback. The CDC-735 has a variable-level headphone output, variable-level line outputs, and a coaxial digital output with an on/off switch. Curiously, the headphone output is muted if the digital output is switched on. D/A conversion is handled by Yamaha's S-Bit Plus low-bit system with second-order noise shaping and a time-base corrector to reduce jitter.

The CDC-735's disc drawer seemed somewhat less substantial than some of the others, and the frequently used Play/Pause, Stop, and Disc Skip buttons are the same size as other, less important buttons. I also thought its amber display was the least attractive and least legible of the group, though it does show lots of useful information, such as output-level attenuation. The Yamaha placed first in phase error and disc-change time and last in dynamic range and channel separation at 20,000 Hz; it tied for last in defect tracking.

**S**IMILARLY priced audio components from good manufacturers are typically pretty evenly matched in performance and value, and that was certainly the case with these five CD changers. I don't think anyone who buys one of them will be disappointed. Extended listening comparisons failed to turn up any significant (or repeatable) differences in sound quality. With levels matched, these changers were all competitive, and quite good, in terms of sound quality, as they were in measured performance. Moreover,

both listening and measurement confirmed that the convenience of multi-disc playback need not entail any sacrifice in performance.

There are, however, small differences in performance and more substantial ones in features that might sway you one way or the other, depending on how you weight them. The Sony CDP-601ES was the clear leader on the test bench, placing first in seven of our twelve measurements (seven of the most important, at that) and last in none. Indeed, one would be hard pressed to find a CD player—single-disc or changer—at any price that would significantly outperform it. Throw in the solid ES series construction, and you've got a very safe bet. Sony invented the carousel changer format, and the CDP-C601ES does honor to the tradition.

The Harman Kardon TL8500 is attractive in several respects. First, its bold look breaks from the relatively derivative styling of the other four changers. If you're tired of square black boxes, this is your changer. Although the front panel is simple, the remote control provides access to a generous array of convenience features—an arrangement I like. I was disappointed, however, at the absence of a headphone jack and a digital output, especially at this player's slightly higher price.

If yours is an impatient nature, the Yamaha CDC-735 will not keep you waiting. Its TOC memory and jack-rabbit mechanical design enable it to swap discs faster than the other changers, albeit with somewhat more racket. And if you're into home recording, its tape-edit feature will make life

easy. On the other hand, if your eyesight is failing, its dim amber display may make you squint, and so may its one-size-fits-all approach to control buttons.

The Denon DCM-440 is probably the best-looking of the conventionally styled changers, with great fit and finish. And its deletion-based hundred-disc track memory is both convenient and a pleasure to use. If you have some tracks that you hate to hear, this player will let you quickly banish them forever. You'll also like the various repeat and random playback modes and the sharply legible blue display. Finally, if you believe that good old multibit conversion is still superior to the new low-bit methods, this is the only changer among the five that fits the bill.

Despite its relatively low price (\$100 below that of any of the other changers in the group), the Philips CDC-935 offers a really great feature lineup. I particularly liked the Personal Preset system—it's kind of like one of those automatic power seats that nestles up to you every time you sit down in the car. I also liked its tape-edit features, which make home recording a snap. And though its bench measurements weren't quite up to those of the other changers in most categories, the CDC-935 had the best score in dynamic range—one of the most important.

No matter how you look at it—features, sound quality, measured performance—these five CD players bury that old LP-era stigma against changers. When your snobby friends brag about their \$12,000 single-disc players, have yourself a good chuckle, with my blessing. □

# Hi-Fi On The High Seas

**J**AZZ is a way of life for Larry Rosen. When he's not in New York running GRP Records, the jazz label he and the pianist Dave Grusin co-founded ten years ago, there's a good chance he's off sailing to some exotic land on his 100-foot Broward yacht, fittingly named *Jazz*. As you might expect from a musician/producer turned record-company exec, the sleek \$3.5 million cabin-cruiser boasts an elaborate audio/video network, custom-installed by Sound Advice of Fort Lauderdale, Florida.

Working with Mark Evans, the project coordinator and a design engineer at Sound Advice, Rosen played a key role in selecting components, especially for the main system in the boat's salon. "Larry had a very specific set of priorities," Evans recalls. "He wanted to be able to listen to CD's as well as DAT, DCC, and standard cassettes."

For the reference system, Rosen settled on a Denon audio lineup consisting of the 130-watt DRA-1035R receiver, the five-disc DCM-520 CD changer, the DTR-2000 DAT recorder, and the DRR-780 cassette deck. To round things out, he added a Technics RS-DC10 DCC deck. The video equipment includes a Pioneer

CLD-1090 CD/laserdisc combi-player, a Philips CDI-910 CD-Interactive player, and a Mitsubishi HS-U54 VHS Hi-Fi VCR and CS-2724 27-inch stereo TV.

Clearly, Rosen is a technology hound (an MD deck is in the cards, too). "It stems from my background as a recording engineer," he explains. "It's my profession, but I also like to fool with new technologies as they emerge. Also, part of the stance of GRP is to deliver recordings in [many] formats."

All of the components are rack-mounted—just in case the sea turns nasty—in a pickled-oak cabinet designed by Plachter Interiors. The TV normally rests in the center of the cabinet; a hydraulic lift enables it to be quickly elevated for viewing. The table-height cabinet also sports two component bays and a number of storage drawers for recordings.

For critical listening, Rosen decided to go with a pair of KEF Model 102/2 Reference Series speakers, which are stowed away in a locker when not in use. "I listened to a number of different speakers before choosing these," he recalls. "I was looking for a speaker that sounded as natural as possible."

A Niles HDS-6LRM speaker selector is used to switch between the KEF monitors and an "everyday" five-speaker combo of four Niles Model 200 in-wall speakers mounted in the salon's headliner (ceiling) and an Infinity Infinitesimal Four powered subwoofer. When the selector is in the everyday position, Rosen can also activate any or all of four pairs of remote speakers—in the aft deck, galley, pilothouse, and sun lounge—each of which has its own local volume control. All speakers and components are wired with Monster Cable.

"The system is not used only for movies and background music," Rosen says. "When I'm on the boat, I use it for work. I bring along DAT masters and listen to them."

Of course, because the yacht's A/V network is so extensive, it's possible to enjoy music or watch TV almost anywhere—even if you happen to wander beyond the salon system or the areas tied into it. Self-contained mini-systems with speakers and a TV (or a TV/VCR combo) are integrated neatly into the flybridge (the top deck), the crew lounge (which is also linked to a second set of speakers in the captain's quarters), two guest rooms, the master stateroom, and the office. A 25-watt Sony XR-5500 cassette receiver (adapted from its normal car use) serves as the core audio component for each mini-system except in the stateroom and office, where JVC compact CD and cassette components are used. And to pump up the volume on the wind-battered flybridge, Evans used a 180-watt Sony XM-3060 car amplifier to drive four Bose Model 101 outdoor speakers.

The A/V package isn't the only high-tech wonder aboard *Jazz*, however. Rosen is particularly proud of its network of surveillance cameras—which can be viewed on any of the yacht's nine TV's—and its ultrasophisticated Laser Plot satellite-linked navigation system. "You enter your destination on a touch screen, put the boat on automatic pilot, and it will travel from Point A to Point B," he explains enthusiastically.

With all those distractions, it sure must be tough to get any work done. —Bob Ankasko







# JAZZ CLASSICS



Stereo Review  
**35**  
50TH ANNIVERSARY

Jazz, along with the movies one of the two great art forms America has given the world in the twentieth century, has always been a big part of STEREO REVIEW's musical coverage. Our first issue, for example, featured reviews of new albums by Charles Mingus, Count Basie, John Coltrane, Thelonious Monk, and Sonny Rollins, and in the thirty-five years since then, STEREO REVIEW has continued to document the jazz scene with articles about important musicians (and reviews of their recordings) by some of the best writers on the music around. Here, as part of our continuing anniversary retrospective, is a chronological sampling.

—Steve Simels

## DUKE ELLINGTON—A SERIOUS COMPOSER UNDERNEATH

Ellington, especially between 1950-1956 when his band appeared to be below his standards, has been sharply criticized by some critics for not abandoning the grueling, time-devouring life of a traveling band leader and instead devoting all his time to composing.

"I'm much too impatient to do that," he explains. "I have a fear of writing something and not being able to hear it right away. That's the worst thing that can happen to any artist. In fact, if the band hadn't always been there for me to try my pieces on, I doubt if I'd have gotten nearly as much writing done as I have. This business of just being a composer, in any case, isn't easy. Look at the hundreds of good composers who come out of the conservatories each year, write hundreds of symphonies, and never hear them played. No, I prefer being sure my music will be played and will be heard, and the best insurance is having one's own band around all the time to play it." —Nat Hentoff (July 1958)

FITZGERALD PHOTO BY JOE ALPER/FRANK DRICGS COLLECTION



**WHEN LOUIS ARMSTRONG  
TEAMS UP WITH THE DUKES OF  
DIXIELAND, A SWINGING  
SESSION ENSUES.**

“... [The producer] decided to ask for another take. The next *Avalon* was superb, with a thrilling high-note ending by Louis. The musicians relaxed and listened to the playback.

“Louis sure makes the Dukes sound good,” said a visitor. “Almost like jazzmen.”

“There’s more to them than you think,” said their manager, Joe Delaney, defensively. “Don’t forget, they’ve made eleven Audio Fidelity albums that together have sold almost a million-and-a-half records.”

Louis Armstrong walked into the control room. “You really like playing with them?” the visitor asked.

“Sure,” said Louis. “They’re home boys.”

—Nat Hentoff (November 1960)

**IS ELLA FITZGERALD  
A GREAT JAZZ SINGER?**

“NO. A major jazz singer must swing, improvise imaginatively, and phrase instrumentally. But a major jazz singer must also make each song reflect what he has lived and experienced. Musicianship, however skillful, is not enough. And Ella, technically brilliant as she is, is not emotionally open enough in her singing to merit a place in the first rank of jazz singers. After all these years, do we know yet just who Ella Fitzgerald is?”

—Nat Hentoff (April 1962)

**JAZZ GREATS,  
CLOCKWISE FROM  
LEFT: LOUIS  
ARMSTRONG, DUKE  
ELLINGTON, BILL  
EVANS, ELLA  
FITZGERALD**

“YES. There is no direct relationship between jazz singing and personal maturity or depth of emotional experience. . . . That Ella does not spill her guts before her audience and that she lacks a guttural tone no more militates against her competence as a jazz singer than her failure to acquire a police record. . . . Ella Fitzgerald is peerless in jazz on another level; she has virtues that are not to be sought, and certainly not to be found, in Billie [Holiday] or anyone else. Hers is a different vitality, a different not a lesser range of emotions—emotions that reach most listeners as completely as Billie’s emotions reached hers.”

—Leonard Feather (April 1962)

**BILL EVANS AND  
THE NEW JAZZ PIANO**

“Obviously, you can’t find in jazz the perfection of craft that is possible in contemplative music,” Evans says. “Yet, oddly enough, this very lack of perfection can result in good jazz. For example, in classical music, a mistake is a mistake. But in jazz a mistake can be—in fact, must be—



JOE ALPER



# JAZZ CLASSICS



justified. A note you play unintentionally must be justified by what follows it. If you were improvising a speech and started a sentence in a way you hadn't intended, you would have to carry it out so that it would make sense. It's the same in spontaneous music."

—Gene Lees (July 1963)

## RECORDING MILES DAVIS

Columbia's engineer Frank Laico, with two assistants, was threading tapes, adjusting dials, and visually checking the placement of the battery of microphones on view through a glass panel in the large rectangular studio directly ahead. Davis, meanwhile, was commenting to guitarist George Benson: "When whites play with Negroes and can't play the music, it's a form of Jim Crow to me. Studio musicians—they're supposed to be able to play all kinds of music. So they should know what's going on in our music too. One, two, three, four—anybody can do that. And if you don't do it, they don't believe the beat is still there." Davis was still smarting from the experiences of a previous session when an otherwise capable studio guitarist had failed him miserably. "I was so mad, they gave me a royalty check and I didn't even look at it."

—Martin Williams (February 1969)

## EDWARD KENNEDY ELLINGTON (1899-1974)

In all the years I knew Duke Ellington I never heard him criticize anybody or put them down. But once, at the Hickory House, he made a remark to me in a joking sort of way—"Goodness, you play so many notes!" It wasn't until some time later that it occurred to me that he might have been telling me in an oblique way that I was overplaying, and he was right! I've always tried to heed his advice.

—Marian McPartland (July 1974)

I have been distressed not only by the Duke's death, but also by the fact that here in London, while tributes have been fervent and well-informed, not a word of acknowledgement or appreciation has appeared

under the byline of any "music critic" of any London newspaper. I suspect that situation has not been greatly different in Ellington's native land, and for the same reason. The orchestra he fashioned, and the music he composed for it, constitute one of the musical glories of the century, and yet, throughout his long and productive life, "music critics," with very few exceptions, have behaved as though all of this were neither modern nor music. They weren't listening. One is tempted to say that this was the Duke's tragedy. It wasn't. It was theirs. —Henry Pleasants (July 1974)

## THE GENERATIONS OF BRUBECK

"My sons and the musicians they've brought to the house in Connecticut—and into the band—have had a terrific effect on me," Dave [Brubeck] says. "They've encouraged me to dig into myself, to become more basic, while opening up my more experimental side. I really feel young again. The boys have prodded me to move back in time to 1944, when [Paul] Desmond first heard me. I was free and a bit wild then. Looking back, I realize that I grew less and less liberated over the years. Now, at last, I'm regaining my freedom."

Chris [Brubeck] explains why this is so: "What we're trying to do is open people up to the improvised aspect of the music. Dad always tried to do that. We continue in that tradition—over ninety percent of our stuff is improvised. But our music is more diversified than past Brubeck product. Even the Dave Brubeck we offer is different!"

—Burt Korall (July 1975)

## TO FUSION OR NOT TO FUSION— HERBIE HANCOCK MEETS CHRIS ALBERTSON

Hancock: I have the impression you don't like electronic instruments.

Albertson: I'm not against them *per se*, but that highly individual tone that marked the playing of Coleman Hawkins, Ben Webster, or John Coltrane—don't you think that playing a saxophone through a synthesizer robs the performance of an important human quality?

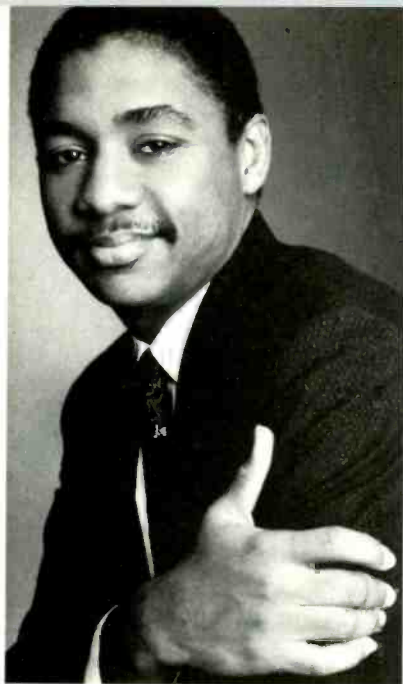






**OPPOSITE PAGE:  
MILES DAVIS (IN  
THE STUDIO) AND  
BENNY GOODMAN.  
THIS PAGE: HERBIE  
HANCOCK (IN  
SEVENTIES FUSION  
MODE), PIANO MEN  
DAVE BRUBECK  
AND EARL  
"FATHA" HINES.**





That's your feeling?

Yes.

I don't feel that way, and I have been listening to music for a long time. I started playing piano when I was seven, so I've got thirty-one years of experience as a player. So that is your opinion and that doesn't make it the truth.

*Certainly not, even with thirty-one years' experience as a listener. But let's get back to your album and those vocals. Why vocals?*

I never before had vocals on any of my records, and within the past couple of years I started thinking . . . why not? (November 1978)

**EARL HINES,  
PIANO MAN**

“You've got the melody at the beginning and the end, so I guess that was the Devil in between.”

Earl Hines had just finished recording *Between the Devil and the Deep Blue Sea* for a collection of Harold Arlen themes. His smoothly self-effacing reply to a compliment was nevertheless a revealing description of the performance. Not, surely, that the Devil should really be credited with the improvisation between the melodic statements, but that its spontaneity

and invention did indeed suggest some kind of possession.

For more than fifty years Hines has been famous for the independence of his two hands, and they still continue to take him into tortuous mazes from which only he can find the exits.

“Sometimes I don't know *how* I'm going to get out,” he says. “I frighten myself. . . .”

—Stanley Dance (February 1980)

**BENNY GOODMAN, SEVENTY-PLUS KING OF SWING**

“I asked the real Benny Goodman how he felt about the Hollywood version of his life (a 1956 horror called *The Benny Goodman Story*, starring Steve Allen in the title role).

“Well, forget it!” he said laughing, as if I had just told a joke. “I didn't like a good deal of it. I don't think I've seen it more than once or twice; it's a picture I'm not very intimate with. You know, it's terribly difficult to make a dramatic story out of a musician's life when nothing really terribly dramatic has happened. It was different in the case of Glenn Miller—he got lost, you know. . . .”

—Chris Albertson (February 1982)

**NEOBOPPERS—  
THE NEW JAZZ**

“I like to challenge myself,” said [Harry] Connick, who started playing on Bourbon Street when he was six. “When I think about what Trane did, what Bud Powell and Art Tatum did, I realize that they worked too hard on this music for me to waste my chance to do anything by playing something that doesn't challenge me. I have to respect those men for doing what they did and to try to understand them—so I'm dedicating my life to that.”

“All music is a challenge for a little while,” said [Branford] Marsalis, “but jazz is the only music that is *always* a challenge. Every time I listen to a Sonny Rollins record I am humbled—it's such beautiful music. The first record that made me turn on to jazz was Charlie Parker's *April in Paris*. What is more beautiful than Charlie Parker playing *Summertime*?”

Not a lot, man, not a lot. . . .”

—Chris Albertson (March 1989)



**YOUNG TURKS,  
FROM TOP:  
BRANFORD  
MARSALIS,  
HARRY CONNICK,  
WYNTON MARSALIS**



# LOUDSPEAKERS FOR THE GREAT OUTDOORS



BY IAN G. MASTERS

**Choosing speakers that don't have to come in out of the rain**

Ah, summer! Steaks on the barbecue. Something long and cool and wet by your side. A dip in the backyard pool.

Distortion.  
Thin bass.  
Silence.

As the season progresses and we spend more and more time outdoors, most of us reluctantly leave high fidelity behind, waiting for fall breezes to blow us back to our stereo systems. The less discriminating might park a portable radio or boombox by the corner of the patio, but until recently anyone interested in good sound had to go back inside to get it.

Not anymore. Audio manufacturers are well aware of our urge to have music everywhere, and a good many of them now offer speakers specifically designed for outdoor use. Or *some* outdoor use . . .

Fact is, setting up an outdoor audio system is just about as challenging as its under-the-roof counterpart, but all the rules have changed. The acoustics of open-air hi-fi are radically different from what we are used to, and the speakers themselves vary widely in how they sound outside and how they stand up to the elements.

But there are certainly many to choose from. What speakers you need, where you can put them, how many you want, and what kind of impression you wish to make will all influence what you buy. But, as elsewhere in audio, what you establish will be a *system*, one that will balance practicality, sound quality, cost . . . and weatherproofing!

## **Balance and Power**

Outdoor audio is mostly about speakers, because the rest of the system can live happily indoors. So how they sound is important, but not necessarily all *that* important. For one

thing, you're probably not going to do a lot of critical listening as you fry those burgers, so not-too-awful is usually okay on the patio. For another, the acoustics of the great outdoors are such that speakers behave very differently there from the way they do inside.

To some extent, all indoor speakers take into account the effects a listening room has on the sound. Reflections of various kinds can radically alter the spectral balance of a speaker, especially at low frequencies, and designers try to anticipate such influences when determining the inherent balance of their products. Generally, however, such boundary effects are minimal outdoors, so many speakers tend to sound thin when played in the open air. In some cases, the low end can be restored by equalization, but that tends to demand lots of power, and not all speakers can handle it. Better to choose something that already has full enough bass not to need support from wall reflections or EQ. Many in-wall speakers fall into this category, and they have the advantage of being quite well protected from the elements—if you can find an appropriate place to install them.

Many, but not all, dedicated outdoor speakers have intentionally boosted bass, and these also should be considered. Ideally, you should audition whatever you are considering outdoors; if that's not possible, listen for lots of bass in the store, or at least check that the speakers have lots of power-handling capacity.

Even if a speaker has the proper sort of balance for outdoor use without equalization, it is likely to be somewhat power-hungry because it will usually need to play louder than it would inside. That's partly because of, again, the lack of reflections, and partly because we tend to sit farther away from outdoor speakers than we do from their indoor counterparts. One solution is

The 9½-inch-tall MB Quart Model 250 speaker (\$399 a pair) combines a ½-inch polycarbonate tweeter and a 5¼-inch aluminum woofer in a plastic cabinet. Sensitivity is given as 88 dB and nominal impedance as 4 ohms.



Bose's 9-inch-wide Model 101 (\$219 a pair) features a 4½-inch full-range driver in a ported, polystyrene cabinet. Power handling is 60 watts and nominal impedance 4 ohms.

Boston Acoustics' 10½-inch-tall Voyager (\$400 a pair) boasts a Lexan cabinet with a stainless-steel mounting bracket. Its low-frequency limit is given as 70 Hz and its power handling as 60 watts.



simply to use a big amplifier. The other is to choose speakers with high sensitivity—look for figures in the high 80's or even 90's. Not all manufacturers specify sensitivity, though, so you may have to ask a few questions.

### More Is Better

An alternative to a pair of *loud* speakers is multiple speakers. In many situations, several speakers playing at low levels can produce a more pleasing sound than a single pair playing at high levels—and your neighbors will *much* prefer this sort of setup.

One drawback of this approach, of course, is cost. Additional speakers will obviously require more money than a pair, other things being equal, although with outdoor speakers—as with all sorts of speakers—cost and quality are not always closely related.

Technically, the chief risk in using more than a pair of speakers is presenting your amplifier with a low enough load impedance to damage it. Even if you are careful to select speakers with a relatively high nominal impedance—8 ohms, say—you can't be sure that it won't dip to a dangerously low impedance at some frequencies. And even if everything's okay on that score, it's usually unwise to connect more than a second pair of speakers in parallel (especially if the outdoor speakers are already running in parallel with the indoor system, a practice that should be avoided anyway).

The safest way to run multiple speakers outdoors is to amplify them individually. While this does increase cost, the amplifiers can be low power and thus fairly cheap.

### Singin' in the Rain

Wherever you live, one major enemy of an outdoor speaker is likely to be moisture, in the form of rain and humid air. To some extent, the effects of rain can be minimized by mounting the speakers in sheltered locations where it can't fall directly on them. That's not always possible, however, and even when it is, rain can still blow about and splash onto a speaker, so take some care to check the water-resistance of a particular model.

Look first at the enclosure. Most dedicated outdoor speakers are made of some sort of plastic, but you may prefer a model that would normally be used inside. That might be fine, but many indoor speakers are constructed of particleboard and, as one manufacturer put it, "particleboard turns to oatmeal in the rain."

Be careful with speakers that aren't





completely sealed. If there's a port, make sure it's well protected from rain and blowing winds so moisture is unlikely to get inside, where it could cause nasty problems: rusting components, mold, even tiny critters. Mere humidity can cause some of these, too, and it's even worse if there's a lot of salt in your air. Consequently, ported enclosures should probably be avoided in seaside installations, where even the small holes in banana-plug terminals might lead to trouble.

The drivers themselves should be plastic—polypropylene is ideal, according to industry sources. Cones made of fiber or, worse, paper can get soggy and disintegrate (although one manufacturer of outdoor speakers for professional use says you can prevent that by spraying the cones with Scotchgard). Metal cones and domes are also virtually weatherproof. Foam surrounds, on the other hand, can eventually admit moisture, but they are often used anyway to save money. Unless your speakers will be well out of the rain, ante up a few extra bucks for speakers with impervious (usually rubber) surrounds.

### Cool or Hot

The other major aspect of weather is temperature. Fortunately, even general-purpose speakers can normally work without problems over a wide range of temperatures. And while extremely cold weather could conceivably cause enough contraction to affect the free movement of a speaker's voice coil, or cause a plastic cone to become brittle, it's unlikely that anyone would want to listen outdoors under such conditions.

Heat is another matter, and hot weather is the main justification for outdoor listening. Very high temperatures can, indeed, affect some of the materials used in speakers (as well as the glue that bonds them together), and it might even cause minor electrical changes in a crossover network, although these are not likely to be very severe. Making sure that the speakers are located in the shade is usually an adequate precaution. If that's impossible, use light-colored speakers that reflect the heat rather than absorbing it. If the ones you choose come only in black, consider painting them.

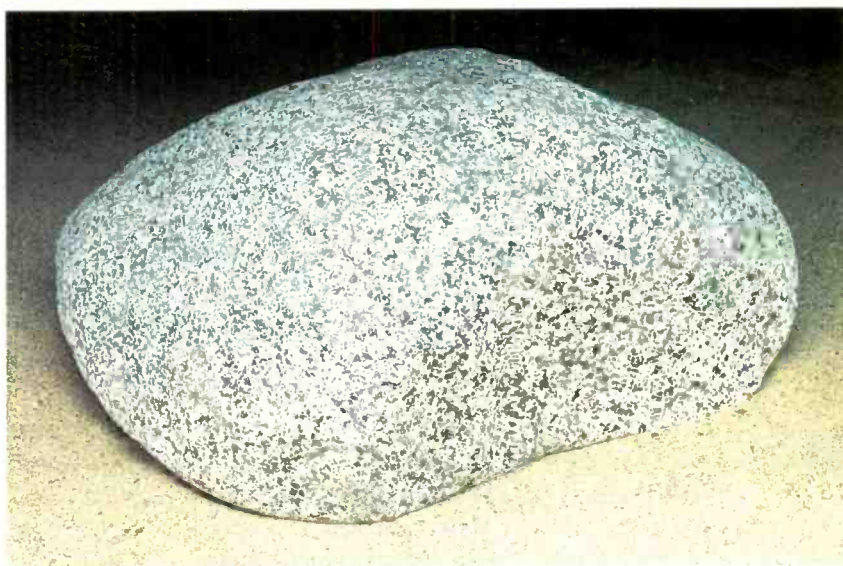
### The Light Fantastic

One potentially damaging element of sunlight is ultraviolet (UV) radiation, which can affect your speakers as well as your skin. Those rays can quickly turn some speaker materials—

**W**aterworks Acoustics' Soundpipe Two (\$699 a pair) teams a wide-dispersion tweeter and two 5-inch woofers in a 21½-inch plastic pipe that can be left outside "all year round." Power handling is 120 watts.

**A** Rockustics trio (below, left to right): The 85-pound Hillside (\$1,500 a pair), 9½-pound Econorock (\$540 a pair), and 38-pound Rocky Too (\$740 a pair) are all made of a waterproof polymer-marble mixture.

**C**oncrete is used to achieve the granite look of Owi's L.A. Rocker (bottom). Two 45-pound versions are available: a two-way system (\$440) that handles 80 watts and a three-way (\$450) that handles 100 watts.





**A** Itec Lansing's 15 $\frac{3}{4}$ -inch-tall Model 66 (\$200) houses two 6-inch polypropylene woofers and a polyimide dome tweeter in an ABS plastic enclosure. It can also serve indoors as a center-channel speaker.

**J** amo's 8-inch-tall Indoor/Outdoor 1 (\$238 a pair) has a 4-inch woofer and  $\frac{3}{4}$ -inch dome tweeter. Sensitivity is rated as 90 dB, the low-frequency limit as 80 Hz. A three-angle mounting bracket is included.



**N** E.A.R. says that you can submerge its AES 1.4 (\$399 a pair) in water, and it will still work. It has a 5 $\frac{1}{4}$ -inch metal woofer, a 1-inch titanium tweeter, a polyethylene cabinet, and a plastic grille.



**T** he 7-inch-tall KLH Model 610 (\$150 a pair) features a die-cast metal enclosure that houses a 4-inch woofer and a 1-inch tweeter. Power

handling is rated as 60 watts, sensitivity as 85 dB, and bandwidth as 80 to 20,000 Hz. Mounting hardware is included.

foam surrounds, for instance—to dust, and cause glues to disintegrate. Keeping your speakers out of direct sunlight is a sensible precaution, but if that doesn't fit your situation, you can minimize UV effects by picking a speaker with a grille that blocks most of the rays. If the grille snaps off, look through it in sunlight; if you can see much (or if you can see the drivers clearly when the grille is in place), UV can get through and do its damage.

### Ties That Bind

However well sealed a speaker might be, there are a couple of things that *have* to be on the outside of the enclosure, exposed to the elements: the connectors. There are basically three types, but only one is ideal for outdoor use. Jacks for banana plugs, as noted, run the risk of letting moisture into the box unless steps are taken to keep rain from falling directly on the speaker. Spring-loaded clips are sealed, but many of them are too flimsy to stand very much disconnection and reconnection. While it's not much of a concern indoors, metal parts are likely to oxidize quickly outdoors, making for a faulty contact. You can remove the oxidation by making and breaking the connection a few times to rub it off, but that's difficult when the terminal has fallen apart. Heavy-duty binding posts are the best, but they do cost a little more. If they are gold-plated, even oxidation is not a threat.

### Brace Yourself

It's inadvisable to place most outdoor speakers on the ground, a deck, or any other level surface, because they will probably end up sitting in a puddle sooner or later. Wall mounting is safer, and almost all outdoor-speaker makers supply brackets to make it easier. Even some indoor speakers have appropriate hardware, and there are a number of third-party brackets that can be used with a wide variety of speakers. Whichever you choose, make sure the brackets are rustproof and designed for solid connection to whatever surface you have available. If they accommodate only tiny screws and you want to mount them on a cinderblock wall, for instance, you're in trouble. And unless your speakers have perfect dispersion (and none do), make sure that the brackets will let you swivel them to face your main listening area.

Take a good look at how the braces attach to the speakers themselves. Flimsy tabs that fit into recesses on the enclosures might be less obtrusive



than heavy bolts, but they might also result in one of your speakers coming loose and bopping your Cousin Frieda on the head. Worse, the speaker itself might be damaged.

### ... and Away We Go!

The out-of-doors is basically hostile to audio equipment, and even the most impervious speakers won't last forever when exposed to nature. It is, however, possible to prolong a speaker's life by the simple expedient of taking it inside when it's not being used. To that end, many mounting brackets are designed to make dismounting relatively quick and easy, and the few moments it takes to disconnect or reconnect the cables is time well spent. In most parts of the country, taking the speakers inside in the fall and putting them back out in the spring might double their life, and wherever you live it makes sense to get them in—or at least cover them—when storms are on the way.

Outdoor audio is a relatively new phenomenon but one that's gaining in popularity. The choice of speakers is thus much wider now than it was only a few years back, and the right one for you is out there somewhere. If you start now, you should be able to find it before the barbecue season comes to an end. □



**A**dvent's 11-inch-tall Indoor/Outdoor Mini-Advent (\$200 a pair) has a 5½-inch polypropylene woofer and a ½-inch polycarbonate tweeter. Frequency response is rated as 110 to 21,000 Hz ± 3 dB, sensitivity as 88 dB.

**S**onance's 13-inch-tall MB30 (\$499 a pair) teams a 6½-inch woofer and 1-inch tweeter in a plastic cabinet with a stainless-steel grille. Frequency response is given as 60 to 20,000 Hz ± 3 dB, power handling as 110 watts, and sensitivity as 91 dB.



## OUTDOOR SPEAKER CHECKLIST

### Performance

- Adequate bass
- Adequate sensitivity (high 80's, in dB SPL)
- Adequate power handling

### Enclosure

- Sealed
- Weatherproof material
- Light-reflecting color
- Opaque grille

### Drivers

- Plastic or metal
- Rubber surround

### Terminals

- Heavy-duty
- Gold-plated

### Brackets

- Solid connection to surface
- Solid connection to speaker
- Removable
- Adjustable angle or swivel



**C**anton's Patio 160 (\$500 a pair) is a 10¼-inch-tall two-way system with a 6-inch woofer that is said to hit 42 Hz and handle 80 watts. Tweeter dispersion is said to exceed 125 degrees at 12,500 Hz.

**P**olk Audio's two-way AW/M3 (\$140) has a polymer-coated woofer with a rubber surround, an integral mounting bracket, and an epoxy-coated metal grille. The low-frequency limit of the 11¼-inch-tall speaker is given as 80 Hz and its sensitivity as 89 dB.



# TAPE-DECK CLEANUP

**D**ON'T fret—the analog cassette deck isn't going the way of the turntable—at least not yet. Sure, the audio industry hopes to replace the format with either its digital doppelgänger, the Digital Compact Cassette (DCC), or the noncompatible but ultrahandy MiniDisc (MD). In the meantime, though, you've still got your trusty deck, and you might as well get the most out of it.

Unlike just about all the other components in your system, most of which require only some dusting now and then, a cassette deck needs to be looked after if it's to perform well. Most important is regular cleaning of all the parts that actually touch the surface of the tape. The magnetic coatings that enable tape to retain a signal tend to shed slightly, and the debris accumulates on heads, capstans, and pinch-rollers, which can lead to uneven tape motion, poor tape-to-head contact, and gradual loss of high frequencies.

You *could* just haul your deck in to your local repair shop when routine maintenance is required. But there's really no trick to cleaning the transport and demagnetizing the tape heads and other exposed metal parts. The deck will need cleaning, at least, after every 10 hours or so of use. Before you begin, consult your owner's manual for any special instructions. Some heads shouldn't be cleaned with alcohol, for example, and the manual will say so.

Cleaning and demagnetizing by hand, as described here, usually gives the best results, provided you are thorough and careful. On the other hand, a good cleaning cassette used regularly is better than a packet of swabs and a bottle of alcohol left untouched on a shelf. And a cassette-shell demagnetizer may actually be a better choice for most people than a more powerful handheld unit, simply because it's more foolproof. Demagnetization is one of those things that is better not done than done badly.

**BY GLENN KENNY**





1. *Don't* go at your deck with harsh scrubbing tools like a toothbrush—these things must be done delicately. You won't need to take anything apart, so put those screwdrivers away. Forget that additive-laden rubbing alcohol, and for heaven's sake save that glass of bourbon for a'ter you've finished.

2. Use the proper tools—pure isopropyl alcohol, plenty of cotton swabs, and a handheld demagnetizer or a cassette-shell head demagnetizer.

3. Parts needing attention: the capstans (the two thin steel poles), record and play heads (in the middle), erase head (the small head at left), pinch-rollers (the two rubber wheels at the bottom), and tape guide (just above the left pinch-roller).

4. When using a handheld demagnetizer, first turn the deck off and remove any recorded tapes from the area. Stand at least a foot away when you turn the demagnetizer on, and approach slowly. Merely pass the tip over the tape heads and other parts—don't touch them. Pull away slowly *before* turning it off.

5. *Don't* soak the cleaning swab with alcohol. That will just drip liquid everywhere, and loosened fibers from the swab may detach themselves and stick to the tape heads and other parts.

6. Lightly moisten the swab, and don't hesitate to use a new one for every different part you clean. Swabs are cheap, tape heads aren't.

7. *Don't* poke or rub too hard, especially when swabbing the heads. Be thorough, though. To clean dirty pinch-rollers, turn the deck on and press play, which makes them rotate. Hold the swab against each one firmly enough to pick up all the shed oxide particles.

8. A discolored swab is the sign of a job well done. The gunk on the used swabs will bring home the difference that a careful but thorough cleaning can make. Now you can power the deck back up, pop in a cassette, sit back, relax, and enjoy that drink. You've earned it.



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## American Music Club: In the Gutter, but Looking at the Stars?

**P**OPULAR culture has always had a soft spot for the "beautiful loser"—the artist, driven to excess by an intellectual malaise that can make no sense of the world and its affairs, whose life is going down the drain with a kind of woozy stylishness. From Thomas De Quincey's nineteenth-century *Confessions of an English Opium Eater* to a contemporary film like *Barfly* (based on the career of the gonzo alcoholic writer Charles Bukowski), the idea of a life steeped in art, substance abuse, and profound melancholy has provided the grist for classic literature, movies, and music.

American Music Club has bought into that aesthetic from album one, and "Mercury," the group's latest—their fifth, and their major-label debut—refines it like a fog composed of the finest droplets. Fortunately, the group's leader and songwriter, Mark Eitzel, is aware that romanticizing dissipation can be wrongheaded and even dangerous. At the same time, he can't completely shake its claim on him. You might think he'd have begun to crawl out from under the volcano by now, but for this album, at least, he's still making a home there.

The groggy, anesthetizing tone of such songs as *Gratitude Walks*, *Apology for an Accident*, and *The Hopes and Dreams of Heaven's 10,000 Whores* has a fatalistic beauty that's undeniable, like a thick

comforter pulled over your head on a morning when you just can't face the world. Eitzel's voice conveys a weary torpor; battling anomie, he's barely attached to the music and slowly being sucked into a quicksand of solipsistic despair. In the face of all that, the detail and care he puts into his singing qualifies as heroic. "Mercury" recalls Love's classic "Forever Changes," an album of beauty and sadness sung brilliantly despite singer/songwriter Arthur Lee's perception of the dying of the light. The lengthy, surreal song titles in "Mercury"—such as *What Godzilla Said to God When His Name Wasn't Found in the Book of Life* and *Dallas, Airports, Bodybags*—also link it to the ambitious, enigmatic "Forever Changes."

No other album in recent memory has managed to create and sustain a mood so singular, full of quiet portent and remorseless self-scrutiny. In *Apology for an Accident*, Eitzel sings, "I tried to figure out what the world needs me for," which sounds like the prelude to a suicide note. In *Will You Find Me?* he cries like a man in search of a life raft, singing plaintively from within a pea-soup fog of Spanish guitar and spectral keyboard sounds: "If I have to wait anymore, then I won't believe in the love that I've known or the life that I've known." *Hollywood 4-5-92*, a kind of minor-key waltz with calliope sounds heightening

the sense of antic unreality, lays out the "beautiful loser" rationale eloquently and succinctly: "My revenge against the world is to believe everything you say / Balanced as you are on a pile of empty bottles."

Although Eitzel appears to live out those words, he's ultimately too smart to believe them, and therein lies the tension that animates this record. Near the end, a dose of black humor titled *Johnny Mathis' Feet* helps lighten the mood ever so slightly. Eitzel offers his songs for critique to the crooner, only to have him retort, "Never have I seen such a mess." Such moments of self-effacement, dark as they may be, are nonetheless welcome. This is a powerful album, with the courage of its contradictions. It should be interesting to see how—or if—Eitzel ever resolves them.

Parke Puterbaugh

### AMERICAN MUSIC CLUB

#### Mercury

*Gratitude Walks; If I Had a Hammer; Challenger; I've Been a Mess; Hollywood 4-5-92; What Godzilla Said to God When His Name Wasn't Found in the Book of Life; Keep Me Around; Dallas, Airports, Bodybags; Apology for an Accident; Over and Done; Johnny Mathis' Feet; The Hopes and Dreams of Heaven's 10,000 Whores; More Hopes and Dreams; Will You Find Me?*

REPRISE 45226 (50 min)



## James Earl Jones Draws A Fine "Lincoln Portrait"

**T**HERE have been any number of American-music collections celebrating democracy and the American ideal, but the new "Portraits of Freedom" from Delos—part of its award-winning Great American Composers series—is of more interest than most. The musical quality is variable in this collection of works by Aaron Copland and Roy Harris, but the performances by Gerard Schwarz and the Seattle Symphony have a less triumphal tone than usual, and the sound throughout is of the very best.

The CD opens with Copland's ubiquitous *Fanfare for the Common Man*, done for once in a fascinatingly reflective manner, without the usual bluster. *Canticle of Freedom* (1955) voices noble sentiments via Copland's rather foursquare setting of John Barbour's fourteenth-century text, and the Seattle Symphony Chorale puts the words across more clearly than the Mormon Tabernacle Choir did in Michael Tilson Thomas's CBS recording. The 1938 *An Outdoor Overture*, which Copland composed for New York City's High School of Music

PHOTO: DELOS RECORDS



and Art, is delightful, and it gets a snappy reading from Schwarz and the Seattle Symphony.

It is Copland's *Lincoln Portrait*, however, that outstrips everything else here. The distinguished African-American actor James Earl Jones narrates with a quietly forceful dignity and eloquence that I have heard equaled only by the late Adlai Stevenson in his 1965 Columbia recording with Eugene Ormandy and the Philadelphia Orchestra. The recording itself is especially fine in this work.

New to records is Roy Harris's *American Creed* (1940), commissioned by Frederick Stock to celebrate the Chicago Symphony's fiftieth-anniversary season. Its two sections, "Free to Dream" and "Free to Build," reflected elements of President Franklin Roosevelt's New Deal ideology, and the composer's grandiloquent program notes provoked the wrath of the critic and fellow composer Virgil Thomson when Stock played the work in New York. At all events, *American Creed* is not first-rate Harris. The first part reworks bits of earlier pieces and sounds rather like the opening pages of the Third Symphony. The fugal second part uses as its main subject "The Modern Man I Sing" from the 1935 Symphony for Voices on Poems of Walt Whitman. Schwarz does his best, but the music simply does not fly.

The disc concludes with Harris's *When Johnny Comes Marching Home*, a fantasia on the popular Civil War song that was first played (under a different title) at the Hollywood Bowl in 1932. The music, which represents Harris's best early "rawboned" manner, was later reworked for a 78-rpm recording by Eugene Ormandy and the Minneapolis Symphony and published in 1935. Sometime in the 1940's, however, the composer cut out the developmental heart of the piece and foreshortened it with a simple reprise of the exposition. That version, previously recorded by the Louisville Orchestra in 1978, is the one done here, at a blistering pace, by Schwarz and his Seattle forces. It makes a satisfying closer, but the real reasons to buy this CD are its splendid sonics and the *Lincoln Portrait* of James Earl Jones. *David Hall*

**COPLAND:** *Fanfare for the Common Man*; *Lincoln Portrait*; *Canticle of Freedom*; *An Outdoor Overture*

**HARRIS:** *American Creed*; *When Johnny Comes Marching Home*

James Earl Jones; Seattle Symphony and Chorale. Schwarz  
DELOS 3140 (62 min)

## Leon Fleisher's Triumphant Return



**B**y the time Leon Fleisher reached his mid-thirties he had documented his status as one of the outstanding pianists of his generation in recordings of the great concertos by Beethoven, Brahms, and others with the Cleveland Orchestra under George Szell, but he has made few recordings since 1965. It was then, at the age of thirty-seven, that Fleisher found himself no longer able to perform with his right hand, and he addressed himself to the repertory for the left hand alone, much of which was created in the decades following World War I for the Austrian pianist Paul Wittgenstein, who lost his right arm in combat. The best known of all such works is Ravel's Concerto in D Major, which Wittgenstein introduced in Vienna in 1932 but didn't much care for; another is the fourth of Prokofiev's five piano concertos, which Wittgenstein actually refused to perform (it wasn't heard till after Prokofiev's death); yet another is *Diversions*, a concerto in the form of an extended set of variations that the young Benjamin Britten composed in our country in 1940 and which actually delighted Wittgenstein, who was himself resident here by then. Now Fleisher has recorded these three works with Seiji Ozawa and the Boston Symphony Orchestra for Sony, an auspicious start for a new se-

PHOTO: CHRISTIAN STEINER/SONY



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ries on that label, which has already reissued the pianist's celebrated two-hand recordings on CD.

The Ravel concerto in particular is a work Fleisher has made very much his own, as certified in his earlier recording of it with Sergiu Comissiona and the Baltimore Symphony Orchestra, now on a Vanguard CD. The remake with Ozawa is more than a recertification or a sonic updating: It is nothing less than a triumph—for Fleisher, for Ozawa and the Bostonians, and for the work itself, which has never been more appealing. Fleisher's Baltimore recording of the Britten, issued about fifteen years ago on a Desto LP, hasn't made it to CD, but it is even more emphatically superseded by the Boston remake. Fleisher has clearly digested this work more thoroughly, and apparently come to love it more, over the years, and Ozawa seems to share his enthusiasm for it; their recording could be just the thing to catapult it at last into as solid a position in the

standard repertory as Ravel's concerto holds. And the Prokofiev so crackles with wit and glows with episodes of lyricism and simply dazzles with all-round brilliance that one can only wonder how Wittgenstein could have said he didn't understand it, how he could have failed to recognize it as a vehicle hardly less effective than the Ravel.

One might wonder, too, whether Fleisher himself would have been so productively drawn to these works if he had not lost the use of his right hand. In any event, while I deeply wish he were still playing Beethoven and Brahms and Schumann, it is not likely that any of the three works on this sumptuously recorded disc will be more persuasively set forth.

Richard Freed

**RAVEL:** Concerto for the Left Hand  
**PROKOFIEV:** Piano Concerto No. 4  
**BRITTEN:** Diversions

Fleisher; Boston Symphony Orchestra, Ozawa  
 SONY 47188 (68 min)

Her songs are no down-home homilies. Where she once kept one eye on trendy Los Angeles and the other on traditional Nashville, she now speaks of the isolation and solitude of living in New York and of the romantic and spiritual font of Paris. Never one to soft-soap anything, however, Cash couples her songs about hope and renewal with songs about doubt and frustration. Even as she's exuberant about the opportunity to *Change Partners*, she later laments (in *You Won't Let Me In*) that she can't make a deep and lasting connection with the man whose bed she now shares.

And for all her talk about rising *From the Ashes*, she can't resist a bitter parting shot to Crowell in the angry *Roses in the Fire*, a kind of melodic and attitudinal takeoff on the Rolling Stones' *Paint It Black* in which she tosses romantic peace offerings aside when a phone call makes her mate's infidelity clear. In a voice that sounds more like a clenched fist than her usual treacle-and-lemon tones, she sputters the album's strongest lyrics: "Oh, I'll kill you if we can't be friends / I'll bleed like diamonds running through your hands / I'll be a bitter taste you can't forget / And I won't leave this world until you relent."

Long-time fans will be elated that this brilliant artist and compassionate woman is now experiencing a Phoenix-like regeneration, evident even in her newly sleek and sculpted body. (She is almost unrecognizable in two of the album photos, one of which makes her seem like a medieval priestess and the other like a romantic party doll.) But her music is simply more resonant and vibrant when she's pitching those flowers in the flames than when she's summoning angels for the new object of her desire. Some of these songs float along in a dreamy yet controlled mood, as if Cash were repeating a mantra. Even when she tells her new friend that she knows *The Truth About You*, an intense song of sharing, there's nothing about the melody—folky plain and sketched out only with acoustic guitar and harmonica—that makes us care.

Still, "The Wheel" is so rich with psychological probing, both personal and universal, and it so effectively blends cosmic and ancient imagery with modern feminist ideas (God is a woman, for starters), that it becomes an uplifting work with a promise of transcendence. One wonders where the wheel will spin Rosanne Cash next.

Alanna Nash

**ROSANNE CASH**  
**The Wheel**

*The Wheel*; *Seventh Avenue*; *Change Partners*; *Sleeping in Paris*; *You Won't Let Me In*; *From the Ashes*; *The Truth About You*; *Tears Falling Down*; *Roses in the Fire*; *Fire of the Newly Alive*; *If There's a God on My Side*  
 COLUMBIA 52729 (45 min)

## The Rebirth of Rosanne Cash

**B**EFORE you buy Rosanne Cash's "The Wheel," there are three things you should know. One, it's not anywhere near as dark and tortured as her last album, "Interiors." Two, it's not a country album by any stretch of the imagination. And three, Cash, as avant-garde and imaginative as any artist working in any genre today, is not above the occasional cliché lyric, cloying image, or not very engag-

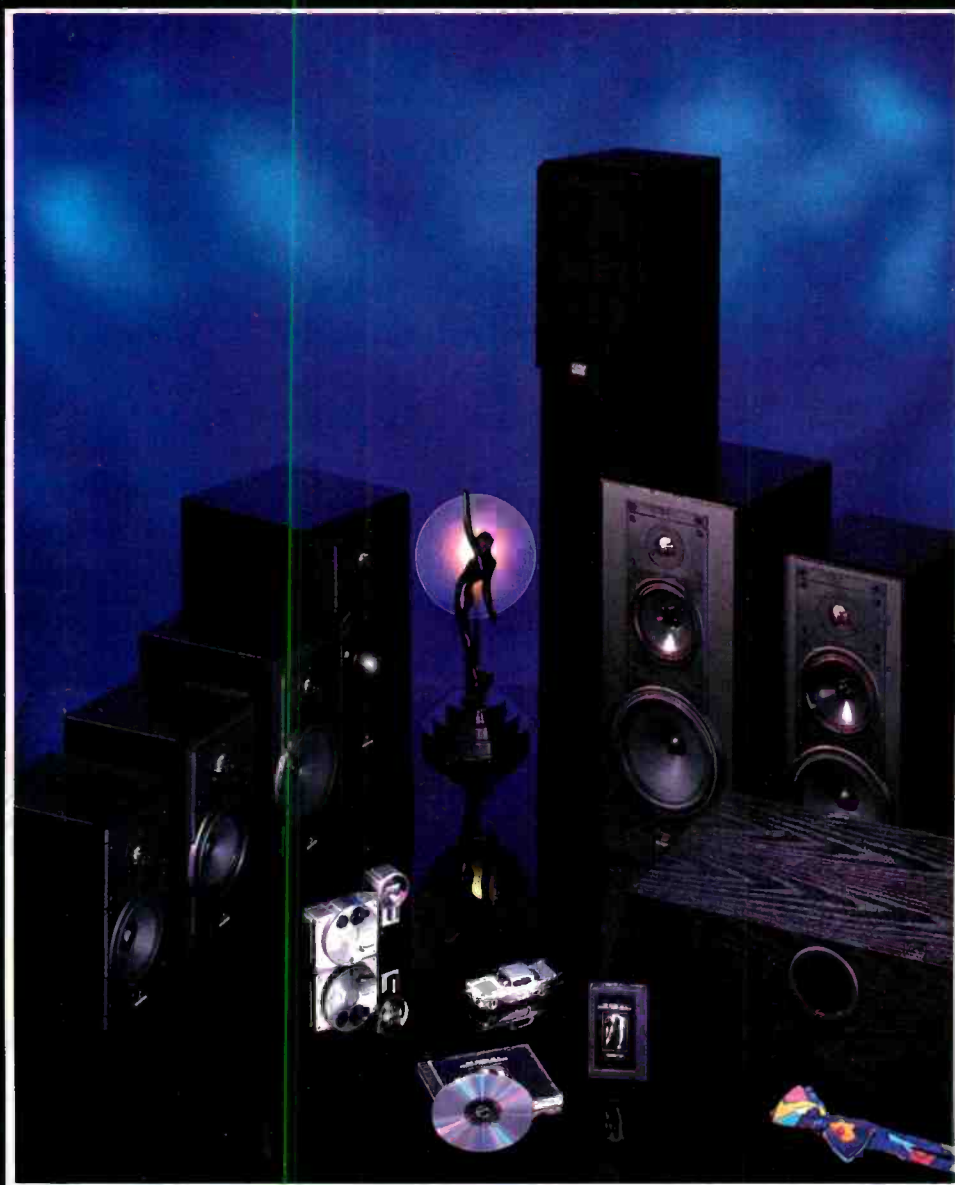
ing melody. But even in her transitional phases, Cash is always more involving and interesting than most artists meandering down the pike.

Since "Interiors" chronicled Cash's deeply troubled marriage and subsequent divorce from singer-songwriter Rodney Crowell, it's not surprising that "The Wheel" deals with her personal and spiritual healing, her sexual rebirth, and her profound change of lifestyle.





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“SWEEPS SPECTACULAR II”

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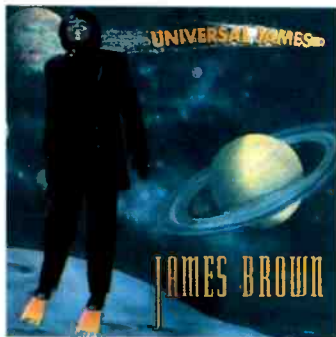
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**BASH & POP**  
**Friday Night Is Killing Me**  
 SIRE/REPRISE 45133 (41 min)  
**Performance: Zesty**  
**Recording: Murky**

Who'd a-thunk it? For ten years, people doted on the Replacements and gave much of the credit to singer-songwriter extraordinaire Paul Westerberg. Now that the group has splintered, two other members have beaten Westerberg into the store with albums, and both show that the Mats weren't a one-man band. The bassist, Tommy Stinson, has switched to guitar and lead vocals while fronting a Stonesian band called Bash & Pop. In "Friday Night Is Killing Me," the group's first album, he shows that, like Westerberg, he writes songs that revel in the hard life while wallowing in its pitiful shortcomings. As he yelps in the first lines of the opener, *Never Aim to Please*, "Tried to keep the party rolling / It rolled over me." Elsewhere, it sounds like Stinson has some pretty profound things on his mind, though he works hard to deflate his own image. Unfortunately, he tends to chew and swallow his own words while singing. Too often the subtlety—and even the basic meaning of his lyrics—is lost. Listening to "Friday Night" is like playing with an eight-ball toy that keeps telling you, "Answer cloudy. Ask again later." Hey, Tommy, if you're going to keep singing this carelessly, could you at least include a lyric sheet in your next album? We think you might be a major talent, but we want to know for sure. **R.G.**



**JAMES BROWN**  
**Universal James**  
 SCOTTI BROS. 75274 (49 min)  
**Performance: Papa bounces back**  
**Recording: Good**

In spite of bruising personal problems, James Brown has done far more than just keep rolling along. In this new recording, the first since his release from prison, the Godfather of Soul has bounced back with all the spirit, energy, and funky appeal that have made him a living symbol of black popular music. Not surprisingly, he shouts, grunts, and sings his way through such infectious tunes as *Just Do It* and *Watch Me*, with their steady rump-rolling rhythms and catchy horn licks. But there are some unexpected delights here too, such as the disc's opening, where the dramatic introduction of "Mr. JA-a-A-Ames Brown" leads into an ingenious tribute to the master by several guest rappers, with him joining in. It's only fair, since Brown's records have been sampled for rap hits more than those of any other artist.

# REVIEWS

## POPULAR MUSIC

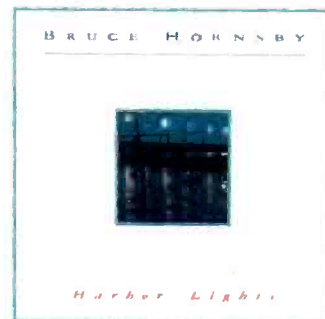
**New recordings reviewed**  
**by Chris Albertson,**  
**Francis Davis, Phyl Garland,**  
**Ron Givens, Roy Hemming,**  
**Alanna Nash,**  
**Parke Puterbaugh, and**  
**Steve Simels**

After that rousing opener, Brown settles into more familiar grooves. Along with the dance tunes, he serves up a bit of nostalgia in *Georgia-Lina*, which deals with growing up black and poor in the South. He's in an even more pensive mood in the final selection, *Moments*, which is spoken rather than sung against an instrumental accompaniment in a minor key. Brown solemnly preaches about everything from teenage pregnancy, homelessness, and AIDS to international peace; what makes it work so much better than similar sermons on pop records is that it truly seems to be from the heart. As is everything else here. **P.G.**

**BRUCE HORNSBY**  
**Harbor Lights**  
 RCA 66230 (53 min)  
**Performance: Exploratory**  
**Recording: Very good**

The Other Bruce has irritated a lot of my friends in the critical profession. His sweet tunes and sweeter piano have made them long for a heaping helping of grunge. Me, I've liked the prettiness of his melodies, the catchiness of his solos, the tart interchanges with the guitarists in his band, the Range, and the heartland stories he tells. But all of us will have to recalibrate our Hornsby meters a little. "Harbor Lights," his first album without the Range, shows him maturing as a piano man.

Not surprisingly for a guy who's been spending a lot of time in the past couple of years doing guest shots with people like the Grateful Dead, Branford Marsalis, and Bonnie Raitt, Hornsby has stretched out. The changes aren't monumental—singing like a jazzed-up Leon Russell in *Talk of the Town*, for example, or plunking down a string quartet in the middle of *Fields of Gray*—but they're the signs of a restless musical mind. Where he once played piano with a new-agey jazz accent, you can hear a number of different dialects here, from Keith Jarrett to Vince Guaraldi.



Nevertheless, Bruce Hornsby is Bruce Hornsby. He still sings, for the most part, like a guy about to burst with feeling. The ringing chords of songs like the title tune still outnumber their more somber neighbors. And he can still spin quite a syncopated yarn. Despite his deepening musical vision, he'll probably still make most rock critics pretty cranky. That doesn't bother me much, and I hope he doesn't lose any sleep over it, either. **R.G.**

**CHRIS ISAAK**  
**San Francisco Days**  
 REPRISE 45116 (42 min)  
**Performance: Brooding**  
**Recording: Good**

It's no accident that Chris Isaak appeared in *Twin Peaks: Fire Walk with Me*; his music is as evocative and enticing as that movie's alien, secretive milieu. He sings like a man lost in a forest. Even his more uptempo material—a song like *2 Hearts*, say—sounds like a whispered secret. Everything in "San Francisco Days," his new album, is shrouded in a prover-

MICHAEL TICHE/WARNER BROS.



Chris Isaak: fatalist with a twang bar



bial fog of minor-key apprehension, with Isaak insinuating that human motives are complicated beyond our power to comprehend and that romantic involvement is an invitation to danger. It is a subtle creeper of a record, representing perhaps his finest hour as a songwriter and performer.

In its livelier moments, keyboards that sound like big, soulful Hammonds (in *Move Along*) or cheesy, garage-combo Voxes (*I Want Your Love*) goose the songs along, creating an atmosphere that alludes to rock's earlier decades. But it's the guitar work, with individual notes and lightly strummed clusters resembling the distant sound of a foghorn warning of impending shoals (just check out *5:15* or *Waiting*), that really sets the edgy, portentous mood. Isaak's voice coolly glides over everything, subtly tremulous even as it tracks a smooth, mannered trajectory.

"San Francisco Days" sustains its entrancing atmosphere almost to the very end, faltering only with the longish *Round & Round*, which is better relegated to Isaak's concert repertory, and a by-the-books cover of Neil Diamond's *Solitary Man*. But in numbers like *Lonely with a Broken Heart* and *Beautiful Homes*, he weaves a web that's as irresistible as it is fatalistic. As with the mythical sirens' song, it's hard not to follow where Chris Isaak beckons. **P.P.**

#### JOHN & MARY

**The Weedkiller's Daughter**  
RYKODISC 10259 (42 min)  
**Performance: Enchanting**  
**Recording: Very good**

If you can't get enough of 10,000 Maniacs, then check out John & Mary, who are on the same family tree. Guitarist John Lombardo was an original member of the Maniacs, Mary Ramsey's voice bears an astonishing similarity to Natalie Merchant's, and their small ensemble often includes Maniacs Robert Buck and Jerome Augustyniak. The overall sound—pastoral, lithe, richly evocative—is highly reminiscent of the elder act. The more the merrier, as far as I'm concerned, because "The Weedkiller's Daughter" is a pure delight, giving off a glow as golden as late-afternoon sunlight.

As in John & Mary's first album, the lyrics here frequently awaken slumbering memories of childhood's playful idylls. In numbers like *Clare's Stuff*, where guest Alex Chilton adds just the right hint of near-dissonant guitar, and *I Wanted You*, a Beatlish pop song written two decades earlier by the British duo Hudson and Ford, John & Mary stake out an identity that isn't so closely bound to the Maniacs. *I Wanted You*, in fact, proves that Ramsey didn't acquire her way of singing entirely from studying X-rays of Merchant's larynx. When her delivery is as unaffected as it is in this song, her voice turns out to be more frail and flutelike than Merchant's. Instrumentally, John & Mary's personal territory is defined by his acoustic twelve-string and her supple viola.

Intriguingly, after most of a CD's worth of impressionistic, memory-filled songs, "The Weedkiller's Daughter" closes with three songs about death: *Clouds of Reason*, a sad but bouncy chantey about a young sailor's misfortune at sea; *Maid of the Mist*, an instrumental inspired by a ghost story based on Indian lore;



John and Mary: return of the Ex-Maniacs

and *The Poor Murdered Woman*, a traditional folk tune that recalls the shivery feel of Fairport Convention in its prime. **P.P.**

#### KENTUCKY HEADHUNTERS

**Rave On!!**  
MERCURY 512 568 (40 min)  
**Performance: Tries too hard**  
**Recording: In your face**

The Kentucky Headhunters jump in feet-first here with a blazing version of Carl Perkins's *Dixie Fried*, and they wind down the album with a ho-hum take on *Blue Moon of Kentucky*, Elvis Presley's first single. In between those twin tributes to the Sun Sound lie a bunch of songs that come up way short in comparison. The Headhunters attack songwriting with a piledriver's subtlety, apparently envisioning themselves as the missing link between Lynyrd Skynyrd and Hank Williams, Jr. They've got plenty of volume but not enough vision, unless a brace of clumsily worded songs concerning the ideal "redneck girl" (SWE, works behind the bar, does the dirty boogie, sleeps with a gun under her pillow) tickles your fancy.

Late in the proceedings, the band cuts loose from their dull moorings with *Freedom Stomp*, a genuine Dixie-fried boogie monster that'll make you want to quit your job and dance barefoot in the front yard, *Muddy Water*, and *My Gal*. It's still not enough, though. There have been some personnel changes since their last album, and the new singer simply overdoes it, growling like a grizzly bear. Combined with too much pro forma, cliché-ridden Southern rock, it all adds up to an album that squeals its wheels loudly without really going anywhere. **P.P.**

#### LENNY KRAVITZ

**Are You Gonna Go My Way**  
VIRGIN 86984 (46 min)  
**Performance: Mixed**  
**Recording: Likewise**

If every song in "Are You Gonna Go My Way" were as good as its title track—a syncopated, guitar-powered rock-funk powerhouse that opens the album—Lenny Kravitz

would have an instant contender for record of the year. Unfortunately, that track sets a standard that precious few other tunes here even approach. In fact, the album's lows sink as deeply as its highs soar skyward.

Pop doesn't get much lamer than the sappy ballad *Just Be a Woman* or *Black Girl*, which could pass for filler from a 1970's Curtis Mayfield soundtrack, or the agonizingly drawn-out *Sister*, or the generic, dilettantish reggae of *Eleutheria* ("The sunshine is a-shining / Because it is what it is," Kravitz sings, a line that wouldn't pass for enlightened even with your most spliffed-out islander). Then there are the *de rigueur* come-on songs, with falsetto vocals drizzled over choppy, angular funk—they won't exactly threaten Prince's purple reign. Even when Kravitz hits the mark, his versatile craftsmanship is more derivative than groundbreaking, raising a broader question—to wit, how long can the endless recycling of familiar forms continue before rock finally burns itself out? The embers still glow fitfully here, but they're covered in telltale-gray ash. **P.P.**



Lenny Kravitz: Curtis Mayfield wannabe?

DAVID MCGLAIN/RYKODISC

PER GUSTAFSSON/VIRGIN RECORDS

**LYNYRD SKYNYRD***The Last Rebel*

ATLANTIC 82447 (52 min)

**Performance: Mixed****Recording: Good**

**T**hough you can't envy Johnny Van Zant, having to fill his late brother Ronnie's shoes, you might have hoped he'd have more to sing than the compendium of clichés that pass for lyrics in "The Last Rebel," the reconstituted Lynyrd Skynyrd's second studio outing. The specious premises begin with the first song, *Good Lovin's Hard to Find*: "Every woman's out there lookin' for a rich man / Every man's out there lookin' for a perfect 10."

There's no philosophical consistency, just the inveterate jaw-flapping of "rebels" who seem proud to be uninformed.

"I don't read the paper / I don't watch the news," Van Zant brags in *Kiss Your Freedom Goodbye*, whereupon he complains about how society's ills are overwhelming his small town (pop. 62). In *Can't Take This Away* he laments the removal of Christian symbols and the Pledge of Allegiance from classrooms; one song later this paragon of virtue is taunting, "If you're looking for trouble, step outside of this bar." With Johnny leading the charge, Skynyrd sounds like reactionary right-wingers instead of the common-sense individualists they were during Ronnie's reign.

Musically, they simmer rather than cook much of the time, although Gary Rossington's slide guitar still provides reliable sizzle. The group flexes its muscle in *South of Heaven*, an archetypal Southern rocker that's all sinew, and then pulls off a slow, pretty number entitled *Love Don't Always Come Easy*. But this band of survivors really opens up and displays its range in two longer tunes: *The Last Rebel*, a dramatic lament for a soldier returning broken from the Civil War, and *Born to Run*, an extended son of *Free Bird* that moves from a slow, opening exposition to a kicker jam. Although there's plenty here to please Skyn-

yard diehards, there's not quite enough to match former glories, and the words are all too often an out-and-out drag. *P.P.*

## MASTERS OF REALITY



## SUNRISE ON THE SUFFERBUS

**MASTERS OF REALITY***Sunrise on the Sufferbus*  
CHRYSALIS 21976 (42 min)**Performance: Cream Lives!****Recording: Excellent**

**E**ric Clapton may be hauling in the loot and the Grammys, but his old Cream mate Ginger Baker is involved in a much more interesting musical project at the moment: Masters of Reality. Comprising recent U.S. arrival Baker and two upstate New Yorkers who formerly made an uninviting metallic din, this trio carries on where Cream left off, mixing blues-based progressions with songs of a more delicate, arty cast.

Guitarist/singer Chris Goss is a ringer for Cream's Jack Bruce, and he's equally capable of tremulous belting and restrained pop crooning. Baker's still got the quickest wrists in the West—listen to the crackling parade beat he lays down in *She Got Me (When She Got Her Dress On)*—but his influence is actually more subtle than that, keeping Masters of Reality to the high standards of his old band. The studio-crafted quality of such songs as *Jody Sings* and *100 Years (of Tears on the Wind)* recalls the more experimental side of those Sixties artisans, making for engaging daydreaming. Then there's the pricelessly funny *T.U.S.A.*, in which Baker declaims on Americans' inability to make a decent cup of tea. Wonderful! *P.P.*

## TALES FROM THE VAULTS

**RICHARD THOMPSON***Watching the Dark—A History of Richard Thompson*

HANNIBAL/RYSKO

(three CD's, 217 min)

If you're looking for "Richard Thompson's Greatest Hits," this new boxed set is not, strictly speaking, it: lots of A-list Thompson tracks aren't included. If, however, you're looking for proof that Thompson is one of the two or three greatest songwriters and guitarists to have emerged from post-Beatles English rock, look no further—this career retrospective (every important album is represented), fleshed out with riveting live cuts and unreleased tracks, documents one of the richest bodies of work in contemporary music. Act now.

**CHESS BLUES**

MCA/CHESS 9340 (four CD's, 292 min)

Here are 101 superbly remastered blues classics from 1947 through 1967, representing pretty much the peak work of such seminal figures as Muddy Waters, Willie Dixon, Albert King, Etta James, Little Walter, Howlin' Wolf, John Lee Hooker, and . . . the list (as they say) goes on and on. This may or may not be the all-time definitive survey of the genre, but at the moment there sure isn't a better one.

**HAVE A NICE DAY: SUPER HITS OF THE '70s (Vols. 16-19)**

RHINO 71196-99 (four CD's, 151 min)

The Ides of March's *Vehicle* (David Clayton Thomas on steroids), David Soul's *Don't Give Up on Us* (was he Starsky or Hutch?), Andrew Gold's *Lonely Boy* (which seriously posits sibling rivalry as the root of L.A.-superstar angst), Henry Gross's *Shannon* (a Beach Boys knockoff about—no kidding—the singer's dead dog) . . . do these (and other) Seventies artifacts collected here add up to a nicely nostalgic anthology of fondly remembered singles (many making their CD debuts), or is this set a mind-numbing monument to the lowest cultural ebb in twentieth-century American history? You make the call. Hilarious and frightening. *S.S.*

**DOLLY PARTON***Slow Dancing with the Moon*

COLUMBIA 53199 (41 min)

**Performance: Solid****Recording: Good**

**G**od forgive me for saying this, but Dolly Parton's albums through most of the Eighties were just plain flat. Whether you care to blame it on her flirtations with the movie



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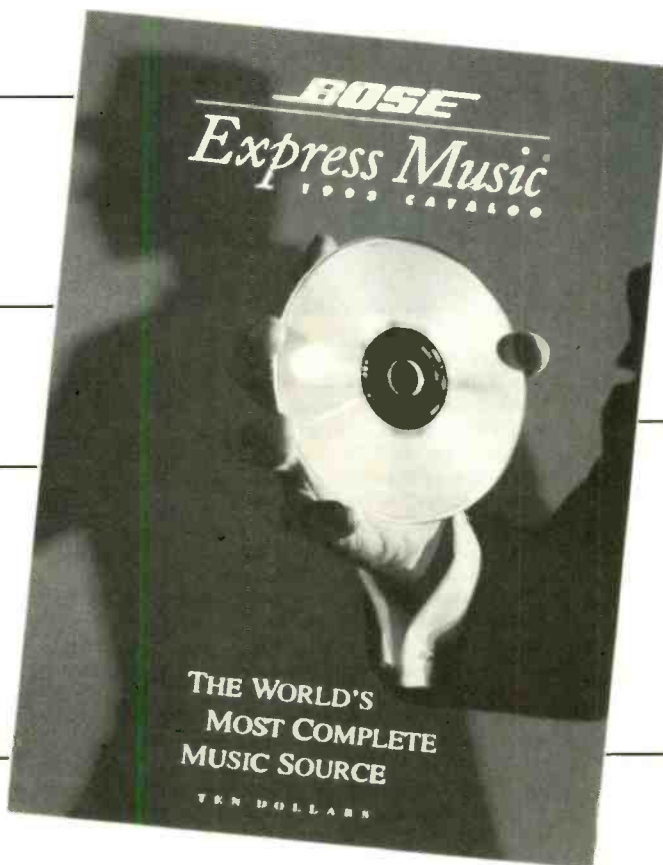
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business or her attempts to reach the wider pop market, her work was often bland and generic. She began to recapture some of her Nashville flair a couple of years ago in "Eagle When She Flies," and now she grabs two fistfuls of Music City in "Slow Dancing with the Moon." A whole bunch of big names accompany her, from Chet Atkins to Mary-Chapin Carpenter to Billy Ray Cyrus, which gives the album a little show-biz tingle, but, honestly, most of them are window dressing. Parton has no one to thank for the album's strength more than herself. That's because Dolly Parton, songwriter, has delivered some choice tunes for Dolly Parton, singer.

Parton wrote or co-wrote seven of the ten songs here, including a heavy-breathing rouser about hunks, *Romeo*, and a whisper-soft plea for family values, *What Will Baby Be*. They may not have quite the hickory-smoke tang of her best songs in the Seventies, but she isn't the same woman today as she was back then. She does, however, deliver these sentiments about love, heartache, and God with the same incomparable soprano. In the title tune, her vibrato flutters out in ribbons of tenderness, and her gospelized version of Jackie DeShannon's *Put a Little Love in Your Heart* raises the steeple right off the church.

From start to finish, "Slow Dancing with the Moon" is a solid winner. Dolly, it's nice to have you back.

R.G.

**STING**

Ten Summoner's Tales

A&amp;M 31454 0070 (48 min)

Performance: Serious fun

Recording: Very good

That Sting, he's a real card. He's planted a number of jokes and puns in this album, starting with the title, which plays on his last name: Sumner. The chorus of *Love Is Stronger Than Justice* (*The Munificent 7*), with its ooziely sincere support for family values, breaks up the sordid tale of a guy who kills six of his brothers to get a woman. And in *Seven Days*, the rushed backbeat plays off the anxiety of the guy in the song (who actually says, "Woe is me"). Before you think that Der Stingle has

really lightened up and delivered a comedy album, you should know that King Brood sings most of this stuff with a straight face. He may be cackling on the inside, but he doesn't want that to show. Might spoil the irony.

Tongue-in-chic intentions aside, "Ten Summoner's Tales" may be the most purely enjoyable work Sting has done since leaving the Police force. He seems to take a simple pleasure in pop music at this point, whether that means an unabashed proclamation of love (*If I Ever Lose My Faith in You*) or a softly realized agriculture-and-sex metaphor (*Fields of Gold*) or a rollicking claim of you-don't-know-me in *Epilogue* (*Nothing 'Bout Me*).

Musically, Sting seems to have mellowed a little. Instead of going for Grand Statements, he grabs onto a hook and rides it for all it's worth. There are some jazzy undercurrents here, thanks to keyboardist David Sancious and the rhythm section, Sting and drummer Vinnie Colaiuta. Colaiuta doesn't get a chance to goose the man as much as Stewart Copeland once did, but the music does approach snap-and-crackle pop a couple of times. That's not bad for a forty-one-year-old father who recently married the mother of his children. Maybe Sting's midlife crisis is over. "Ten Summoner's Tales" is certainly the work of a guy who's decided to enjoy life.

R.G.

**VAN HALEN**

Live: Right Here, Right Now

WARNER BROS. 45198 (two CD's, 142 min)

Performance: Cumbersome

Recording: Okay

"Right Here, Right Now" is a 2-hour-plus serving of Ken-L-Ration for the ears. Culled from the last three Van Halen tours, it features a raft of tunes from their trio of undistinguished post-David Lee Roth studio albums, plus a few Dave-era standards like *Panama*. After a while, the material fuses into a giant, oozy eruption of noise and attitude purveyed by one group of arrested adolescents to another. In addition to the bottom-of-a-well whoosh of a live arena recording, you get solos by all four members, including bass and drums snoozeramias; out-of-time singing and clapping by the audience; between-song patter from Sammy Hagar, that master of the ad lib (his rap in *Panama* plumbs new lows); and one brutish clunker after another. If the CD doesn't sound particularly promising, you could purchase the video of the same name, which documents an entire show from the band's last tour. For listening alone, only the faithful need consider this, and even then, caveat emptor.

P.P.





## WYNONNA

## Tell Me Why

CURB/MCA 10822 (38 min)

Performance: Still promising

Recording: Very good

Wynonna Judd has a hell of a voice, and she's still trying to figure out what to do with it. Her second solo album, "Tell Me Why," like last year's debut, is a model of young country style. It stands, foursquare, on the piece of turf where country, rock, pop, and R&B meet. It sounds like a model U.N. of contemporary musical correctness, with clean, crisp arrangements of tunes that are mostly about romantic failure. Those tunes draw upon Wynonna's natural brassiness in a way that emphasizes the strength of pain and anger that comes when a heart is breaking. In the title tune, she calls herself "a fool in love with a fool that never cared." In *Let's Make a Baby King*, her underplayed sass keeps Jesse Winchester's bar-blues celebration of Jesus from turning into the aural equivalent of a painting on black velvet. But she relies too heavily on sass-and-brass in weak songs like *Rock Bottom*, a stiff stab at soul, and her attempts at tenderness can seem forced, as in her mom's *That Was Yesterday*, a piece of nostalgic dreck that isn't entirely in her range.

There are many more ups than downs in "Tell Me Why," but the album's unevenness indicates that Wynonna doesn't quite know what her range truly is. Until she learns, her albums are likely to be just as good, but just as frustrating, as this one. R.G.

## DWIGHT YOAKAM

## This Time

REPRISE 45241 (42 min)

Performance: Casual

Recording: Sharp

Chalk up another one for Dwight Yoakam. "This Time" is a casual gem of a record from a country-and-western (make that Western) artist who continues to refine his style with rewarding results. His tunes have the lilt of vintage Fifties jukebox music, back when country rocked and western swung. Back-up singers layer on the doo-wahs in *Pocket of a Clown* to a skipping shuffle beat, and a piano playfully repeats short fiddle lines in *King of Fools* while Yoakam sings his sad tale with a silken twang. The title song boasts a brisk beat and that casual Fifties piano sound again, splitting the difference between pure honky-tonk fire and the casual roll of a more easy-listening style.

Throughout "This Time" Yoakam never breaks a sweat, though he does dig in his heels for the swaggering *Fast as You*, built around a twangy guitar riff for the ages. Given his evident talent, it's too bad he doesn't rock out more often. Still, songs as pretty as *A Thousand Miles from Nowhere* don't grow on cacti, and you'd be hard pressed to find a country or rock melody contoured as naturally as that of *Ain't That Lonely Yet*. "This Time" has a few underwhelming moments, namely the bathetic *Home for Sale* and a loser's anthem titled *Two Doors Down*, which comes stuffed with every predictable barroom cliché. Still, nine out of eleven winners isn't bad. Dwight Yoakam is one country artist who hasn't capitulated yet to the assembly-line holdrums that the genre seems almost to require. P.P.

## J A Z Z

## DAVE BRUBECK

Time Signatures—A Career Retrospective

COLUMBIA/LEGACY 52945

(four CD's, 275 min)

Performance: Broad and bountiful

Recording: Very good

In the late Fifties and early Sixties, the Dave Brubeck Quartet was the première campus attraction, and even jazz fans who didn't read *Playboy*, own an MG, or listen to FM had a Brubeck LP somewhere in their collection. Sure, the leader was a bit heavy-handed, but

his chord progressions were engaging, he could take a quiet breeze of a solo and build it into a thunderous storm, and he played wonderful tricks with time. Then there was Paul Desmond, whose fragile, ever-so-cool alto playing stretched and curved like a flamingo's neck. The other half of the quartet was bassist Gene Wright and drummer Joe Morello—rarely has jazz been blessed with so cohesive an ensemble.

Brubeck has had other groups before and since, but none as commercially successful as the quartet. Now Columbia—the label of his greatest triumphs—has issued a boxed set that

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just about covers them all, from a 1946 octet date to a 1991 duet with clarinetist Bill Smith. To broaden this retrospective, the producers managed to include performances recorded for the Fantasy, Atlantic, Concord, and MusicMasters labels, and there is also a 1987 Moscow appearance leased from the A&E cable network. In other words, a great deal of care and attention to detail have gone into this set. The music is almost as varied as jazz itself, and some impressive names add to the diversity: Carmen McRae, Cal Tjader, Jimmy Rushing, Gerry Mulligan, the trombone team of J.J. Johnson and Kai Winding, Louis Armstrong, Lambert, Hendricks & Ross, Charles Mingus, and Leonard Bernstein and the New York Philharmonic. It all adds up to more than 4½ hours of what Ross Perot would undoubtedly term "world class" music. And I would be remiss if I didn't also mention the accompanying seventy-six-page booklet, which contains an essay by Doug Ramsey, Brubeck's own comments on each performance, and a profusion of illustrations. Altogether, an excellent package. C.A.

### BILL FRISELL

Have a Little Faith

ELEKTRA NONESUCH 79301 (61 min)

Performance: Postmodern and patriotic

Recording: Excellent

Remember Bill Clinton's campaign promise of a cabinet that "looked like America"? Well, this other Bill—a guitarist as influenced by Jimi Hendrix as by Jim Hall—has delivered an unselfconsciously pluralistic album that *sounds* like America: The composers represented include Muddy Waters as well as Stephen Foster, Sonny Rollins as well as Aaron Copland, Bob Dylan and John Hiatt as well as Charles Ives, and Madonna as well as John Phillip Sousa.

There's a unifying theme here: the loneliness that's the flip side of such American ideals as rugged individualism and wide open spaces. That yearning quality is as evident in Dylan's woody *Just Like a Woman* and Madonna's *Live to Tell* (whose melody Frisell, bassist Kermit Driscoll, and drummer Joey Barron rub until it bristles) as in the two excerpts from Ives's *Three Places in New England* or "The Open Prairie" movement of Copland's *Billy the Kid* (which, as presented here in its entirety, with Guy Klucevsek's accordion imitating a harmonica and Don Byron's clarinet occasionally imitating a fife, could pass for a new piece). Despite the underlying moodiness, however, a good many of these pieces are deliciously jubilant in tone—not just Sousa's *Washington Post March* and Muddy's *I Can't Be Satisfied* (nice skiffle-beat by Barron) but even Foster's ostensibly weepy *Little Jenny Dow* and the oddity Nino Rota-esque "Celebration After Billy's Capture" from *Billy the Kid*.

Great stuff, all of it, that makes you want to stand up and cheer. F.D.

### JERRY GRANELLI

A Song I Thought I Heard Buddy Sing

ITM PACIFIC 970066 (58 min)

Performance: Excellent

Recording: Very good

"A Song I Thought I Heard Buddy Sing" is drummer Jerry Granelli's tribute to the original jazz legend, cornetist Buddy Bolden,



inspired by Michael Ondaatje's novel *Coming Through Slaughter*. Beyond fading recollections of his having played loud and rough blues, we know little about Bolden's music. He was never recorded, and he stopped playing before the world turned an ear to jazz, but it's safe to say that his music did not sound at all like the blues in Granelli's album. I don't mean that as a criticism, for I like this album—an expertly played, intriguing hour of impressionistic jazz that ranges from blues basics to bop. Trombonist Julian Priester (a highly underrated player) and altoist Kenny Garrett (not to be confused with the diluted-pop saxophonist Kenny G) are strong assets, and the rest of the rhythm section—guitarists Robben Ford and Bill Frisell, and drummer Anthony Cox—help give this set a modernized New Orleans feel. This music could not have been made with a thrown-together band, and these musicians seem to be on the same wavelength—Jerry Granelli's. It works, and it has a face of its own. C.A.

### WYNTON MARSALIS SEPTET

Citi Movement (Griot New York)

COLUMBIA 53324 (two CD's, 123 min)

Performance: Major, because he is

Recording: Very good

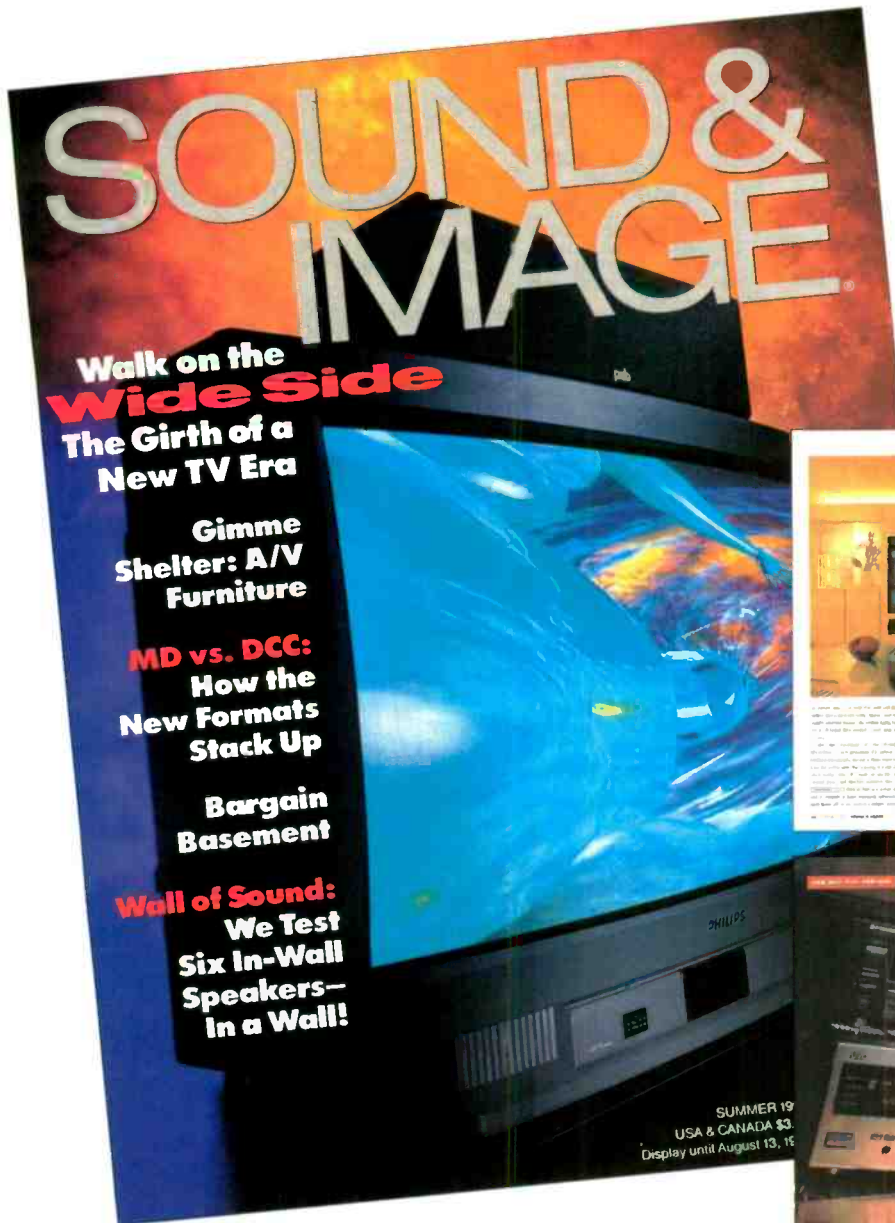
No longer the hard-bop reactionary that detractors and champions alike persist in hearing him as, Wynton Marsalis has blossomed as a bandleader and composer in the last few years. "Citi Movement" is his most impressive release so far, at least in terms of his success in combining modalism with such seemingly incongruous elements as New Orleans polyphony and Ellington-like wah-wah and whimsy. It includes three lengthy scores written for Garth Fagan's dance company, each subdivided into shorter tunes that stand quite nicely on their own (the comparison with Duke Ellington's suites should be obvious). A few of these pieces veer too closely to program music in their evocation of Manhattan rush hours, and a few others seem incomplete without the movements of Fagan's dancers. For the most part, though, "Citi Movement" is captivating proof that there's much more to Marsalis than was evident a decade ago (when he was, after all, still in his early twenties).

I have a hunch that many of Marsalis's fans are going to feel betrayed by this set for pretty much the same reasons that I'm delighted with it. I can just hear them now: too much paper, not enough blowing (and wasn't that more or less their complaint about the jazz avant-garde when they first pinned their hopes on him?). But just listen to the pianist Marcus Roberts



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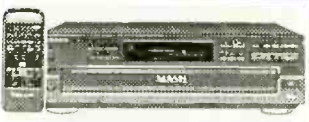


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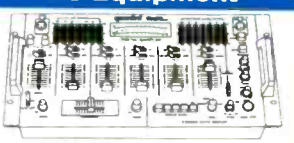
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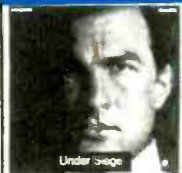






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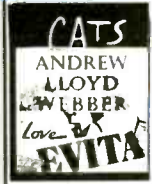
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## Willie Nelson: This Time It's Personal

After years of teetering on an artistic abyss, Willie Nelson is blazing proof that musically, at least, you're not dead until the last nail goes in the coffin and the first scoop of dirt sprinkles the top. Nelson, the once-lauded visionary who'd become something of a joke in the industry for resting on his laurels—singing duets with everyone except your veterinarian and turning out entire albums in a weekend—has had more than his share of troubles in the past few years, including the

*Unoriginal Sin*. "Across the Borderline" is a best-of-both-worlds album, one that should fully revitalize Nelson in both an artistic and a commercial way. It's stoked with celebrity cameos, but contains not one superfluous note or performance. And it's chock full of songs that throb with emotion and galloping rhythms instead of Nelson's favored midtempo rut.

Producer Don Was, who also resuscitated Bonnie Raitt's career, seems intent on honoring Nelson by giving him every op-

portunity to display his greatest strengths. Was coaxed vocal performances out of him that preserve his usual talking, singing-behind-the-beat style but far surpass his usual conveyance of understated pain and urgency. Was also came up with some first-rate material, pairing Nelson with Raitt for a duet of palpable, rock-bottom anguish, *Getting Over You*, and with (surprise) Sinéad O'Connor in Peter Gabriel's *Don't Give Up*. If that idea at first seems beamed from the outer banks of Mars, Nelson and O'Connor's interaction ultimately proves as heartfelt and believable as the friendship between Jimmy and Dil in *The Crying Game*. Both these duets, as well as the appearance of an uncharacteristically enthusiastic Dylan in *Heartland*, might run the risk of adding to Nelson's cartoonish profile as a duet-monger, but the songs and the performances are so real, unmanipulated, and moving that they transcend such categorization.

The album, an all-out effort that uses flashier instruments such as horns and keyboards in a way that never threatens Nelson's delicate gut-string guitar, also showcases Nelson's gift at recasting existing songs into almost entirely different offerings. He turns Paul Simon's *Graceland* (which Simon produced here) into more of a swiny American saga than a vaguely American theme laced with African rhythms. And he makes two Lyle Lovett songs, *Farther Down the Line* and *If I Were the Man You Wanted*, less quirky and stylized than the originals, more like pure Texas music.

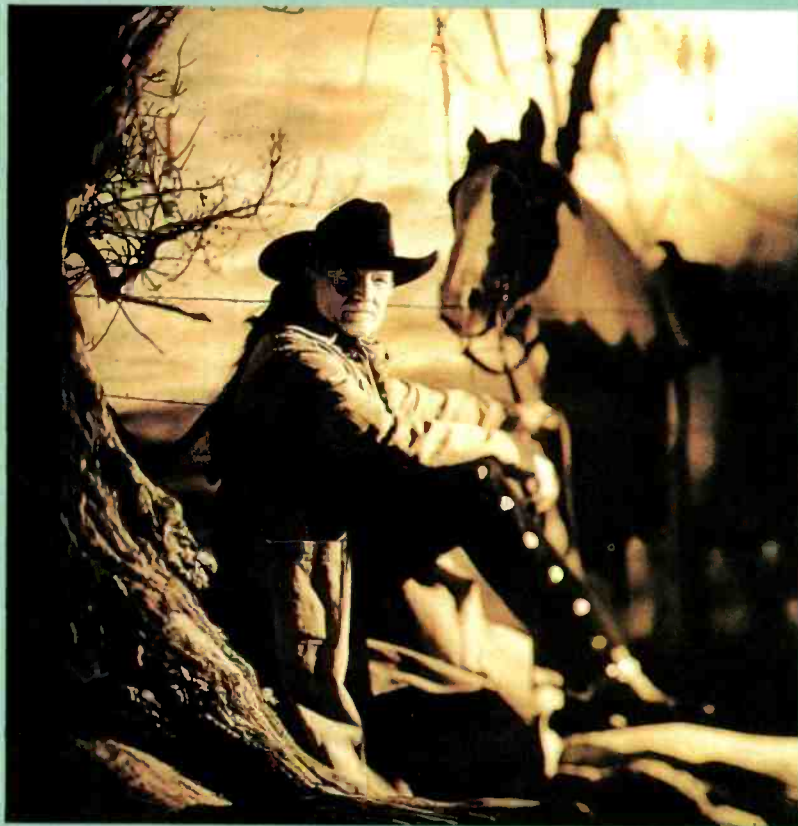
There are so many charming and affecting touches to "Across the Borderline" that even in the bleakest numbers, such as the title song, which is about far more than a boundary between countries, the project adds up to a record of enormous catharsis, and ultimately hope, pride, and renewal—not just for the listener, but for Nelson, too, perhaps now finally at the end of his circuitous journey. Musically, at least, this record definitively answers the unasked question: The Red-Headed Stranger is back with a vengeance. A.N.

### WILLIE NELSON

#### Across the Borderline

*American Tune: Getting Over You; (The) Most Unoriginal Sin; Don't Give Up; Heartland; Across the Borderline; Graceland; Farther Down the Line; Valentine; What Was It You Wanted; I Love the Life I Live; If I Were the Man You Wanted; She's Not for You; Still Is Still Moving to Me*

COLUMBIA 52752 (60 min)



suicide of his son and a much-publicized run-in with the IRS.

Given that background, it's not surprising that the overarching themes of "Across the Borderline," his thirty-fifth Columbia album and his best since "The Red Headed Stranger" of 1975, are abandonment, betrayal, and loss. Nelson frames some of the songs in larger terms, against the national landscape, as in *Heartland*, which he and Bob Dylan wrote by fax about the plight of farmers, and a remake of Paul Simon's *American Tune*. But most of them are intensely personal, from Nelson's originals, like *She's Not for You*, to Dylan's dark, brooding, and menacing *What Was It You Wanted* and the sizzling anger of John Hiatt's *(The) Most*

### WILLIE NELSON ON HIS NEW ALBUM

"For a long time now, I've been in a rut as far as being able to do what I wanted to do. And I think this album is finally it. I'm happier with it. It's definitely new energy, and because I have a lot of good new songs, and a new producer, Don Was, and I'm working with a lot of new musicians, I think we're coming out with some sort of original sound. It was time I stretched a little bit, and looked around to see where I was. Whether it's better commercially or not, who knows?" A.N.



play blues with a hint of boogie-woogie in *Martianiel* or to any number of Marsalis's own trumpet spots. These are topnotch improvisations that are all the more powerful because they occur in carefully composed contexts. Special mention should be made, also, of the skill and sensitivity displayed by the saxophonists Wes Anderson and Todd Williams in evoking—depending on what Marsalis has in mind for a given piece—John Coltrane, Johnny Hodges, or Sidney Bechet. *F.D.*

**BOB MINTZER BIG BAND****Departure**

DMP 493 (64 min)

**Performance: Spirited****Recording: Excellent**

**B**ob Mintzer's first big-band recording appeared eight years ago, and today, six albums later, it remains superb. With his new album, "Departure," he takes an extra step away from convention, and the result is one of the finest big-band releases in a long time. Like Toshiko Akiyoshi, Mintzer approaches big-band arranging from a fresh perspective without forsaking the past. He does not follow a tried-and-true formula, but neither does he go so far afield as to become inaccessible. And besides the sometimes innovative arrangements, Mintzer brings to the music a rare vigor: His musicians are not routinely reading their charts—they are getting down to serious business, and having fun in the process. Chalk it up to redirected public taste, television addiction, MTV, or a combination of these factors, but it is virtually impossible to maintain a working big band in today's economic climate. All the more reason to admire people like Mintzer and Akiyoshi, who keep the spirit of big-band jazz alive. *C.A.*

**MARCUS ROBERTS****If I Could Be with You**

NOVUS 63149 (76 min)

**Performance: Outstanding****Recording: Excellent**

**T**he piano, says Marcus Roberts, is not unlike a woman: "It can function quite well as a solo instrument, complete unto itself, but it is often shoved into the background . . . to function as a pacifier, a backdrop." In this, his sixth Novus album, Roberts once again demonstrates in a superb, diversified manner just how well the piano can function without other instruments. This 76-minute keyboard stroll through jazz history reflects the extent of the young pianist's listening experience and the scope of his understanding. We know that he can play Joplin's *Maple Leaf Rag* as written, and most pianists at least attempt to do that, but Roberts imbues it with subtle variations. He caresses *Embraceable You* with a haunting tenderness, and his introspective treatment of *Moonlight in Vermont* is stunning. When it comes to livelier fare, he strides through James P. Johnson's *Carolina Shout* and *Keep Off the Grass* as if he had written them. Apropos authorship, Roberts did not write Johnson's *Snowy Morning Blues*, that's an error in the accompanying booklet, but he did compose seven of the twenty selections in this superb collection. (Several demerits, though, to whoever stupidly superimposed a good portion of Stanley Crouch's liner notes on a photograph, rendering them all but unreadable.) *C.A.*

**QUICK FIXES****SARAH BRIGHTMAN****Diva**

A&amp;M 31454 0083 (52 min)

Enya on helium? New Age electro-pop from hell? Whatever it is, it's courtesy of the *Phantom of the Opera* ingenue formerly married to the equally annoying Andrew Lloyd Webber, and I say get it outta here. Docked numerous points for a horrendous cover of Procol Harum's *A Salty Dog*, which the without-a-clue chanteuse strips of all melodic interest or drama. *S.S.*

**JIMMY GIUFFRÉ 3****Flight, Bremen 1961**

HAT ART 6071 (63 min)

This never-before released CD of a German radio concert belongs in every comprehensive jazz and new-music collection. The album's shining virtues include the members' extended instrumental techniques (Carla Bley's inside-the-piano rummaging, leader Giuffrè's clarinet key rattling), their close interplay, and their achievement of melodic continuity despite the absence of harmonic markers or a stated pulse. This music sounds just as adventurous today as it must have in 1961, and you owe it to yourself to hear it. [Available from North Country Distribution, Redwood, NY 13679; telephone 315-287-2852.] *F.D.*

**ORQUESTA NOVA****Solon New York**

CHESKY JD86 (65 min)

A pioneer in the current trend of fusing Latin pop with chamber music, Orquesta Nova has come up with another winner. The group pays tribute to the late Argentine tango composer Astor Piazzolla and plays Latin American standards and new tunes by Carlos Franzetti. The standout is a medley by the great Puerto Rican songwriter Rafael Hernández. The songs are melodious, the sound is luscious.

*William Livingstone***PSYCHEDELIC MICRODOTS****VOL. 3: MY RAINBOW LIFE**

SUNDAZED 11014 (45 min)

An anthology of mostly obscure tracks by regional garage bands circa 1968 (culled from the Roulette Records catalog) and, as such, a pretty fair approximation of the kind of music you might have heard at high-school dances in gymnasiums of the day—down to the obligatory *Hey Joe* (courtesy of Minneapolis faves the Stillroven). Despite a certain period charm, most of this stuff is pretty dire, but the album's worth getting anyway for the first CD appearance of the Choir's *It's Cold Outside*, a deservedly legendary piece of vintage power

pop by the Cleveland group that in the Seventies mutated into the far better known Raspberries. Greatest album cover of all time, incidentally. *S.S.*

**JOHN SEBASTIAN****Tar Beach**

SHANACHIE 8006 (43 min)

Former Lovin' Spoonful honcho Sebastian, currently raking in big bucks thanks to a cold-cuts-commercial revival of his theme from *Welcome Back, Kotter*, essays his first solo album in ages in generally fine form. Nothing here is as memorable as his Sixties classics, but the better tracks are warmhearted and melodically charming. Pick hit: *Night Owl Cafe*, a nicely nostalgic portrait of the now-vanished Greenwich Village club where the Spoonful was once in residence. *S.S.*

**SYLVIA SYMS****You Must Believe in Spring**

ELBA 5004 (53 min)

Sylvia Syms's last album is a must not only for her many admirers but for anyone to whom good popular songs are more than just hummable tunes or catchy rhythms. Recorded shortly before her death in 1992, it finds her digging incisively into the lyrics of twelve songs by Alan and Marilyn Bergman about lost or remembered love—and doing so like few other singers ever could. [Available from Elba Records, 20 Maple St., Garden City, NY 11530.] *R.H.*

**VIGILANTES OF LOVE****Killing Floor**

FINGERPRINT 9204 (59 min)

Do singer-songwriters get paid by the metaphor? That would help explain why Bill Mallonee, the writing and singing half of this group, is so fast and loose with his figures of speech. Despite some lost allusions, Mallonee's thesaural exploration of the depressed life often rings true. And the music by Mallonee, his co-Vigilante Billy Holmes, and a bunch of guests is spartan folk-rock with a few neat twists. *R.G.*

**VIVINO BROTHERS BAND****Chitlins Parmigiana**

DMP 492 (66 min)

Well-known Manhattan session cats weigh in here with an appealing mix of soul, jazz, blues, and funk featuring a particularly authoritative cover of the Meters' *Africa*. Imagine a down-and-dirtier version of the *Saturday Night Live* house band and you've got the idea. And don't blink, or you'll miss a cameo appearance by New Jersey cable-TV kid-show host and cult hero "Uncle Floyd" Vivino. *S.S.*



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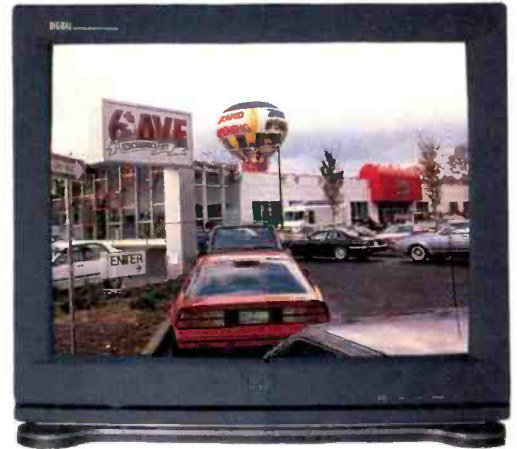
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**BACH: Mass in B Minor**

American Bach Soloists, Jeffrey Thomas  
KOCH 3-7194 (two CD's, 107 min)

**Performance: Literate**  
**Recording: Very good**

**A**fter causing more performance-practice headaches than almost any other major work by Bach, the B Minor Mass seems to be settling into a stable tradition. In recent recordings with pretensions to authenticity, the chorus has between twenty-four and thirty singers. Conductor Jeffrey Thomas's chorus is at the low end of this range, and he makes good use of it to set forth his concept of the piece. While some conductors treat Bach's vocal lines so abstractly they might as well be another instrument in the polyphony, Thomas seems to consider Bach a word painter almost on the level of Handel.

He goes about proving that here by using all sorts of nuances and accents to bring out the meaning of the text, occasionally sounding eccentric but often delivering modest revelations. Most striking is his treatment of the *Crucifixus*, which powerfully suggests Christ's long, painful trudge to Mt. Calvary with its stabbing accents and effectively plodding tempo. Much of Thomas's success is due to his intelligent lineup of soloists, including such early-music stars as Julianne Baird and Judith Nelson. *D.P.S.*

**BARBER: Andromache's Farewell;  
Scenes from "Antony and Cleopatra"  
and "Vanessa"; Orchestrated Songs;  
Knoxville: Summer of 1915**

Alexander: Netherlands Radio Philharmonic,  
De Waart

ETCETERA KTC 1145 (60 min)

**Performance: Excellent**  
**Recording: Very good**

**R**oberta Alexander's outstanding CD of vocal music by Samuel Barber demonstrates the soprano's understanding of the composer's musical language and emotional intent. For the most part, her diction is exemplary; only when the text itself is not immediately intelligible, as in the scenes from *Antony and Cleopatra*, or when the orchestration is particularly dominating, do the words sometimes blur.

The orchestrated songs, all first-time recordings, are *I Hear an Army* (James Joyce), *Nocturne* (Frederic Prokosch), and *Sure on This Shining Night* (James Agee)—the last



**Zoltán Kocsis: landmark Bartók**

# REVIEWS

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Richard Freed, David Hall,  
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surely one of the most beautiful songs by any composer. They are performed with unusually fine musicianship by Alexander, and the Dutch orchestra plays very well under the



tasteful leadership of Edo de Waart. The more familiar arias from *Vanessa* ("Must the winter come so soon" and "Do not utter a word") and the great *Knoxville* are on a similar level. *R.A.*

### BARTÓK:

**Works for Piano Solo, Vol. 1**

Zoltán Kocsis

PHILIPS 434 104 (54 min)

**Performances: Ideal**  
**Recording: Excellent**

**W**ith its array of generic titles—fourteen bagatelles, two elegies, six Romanian folk dances, a sonatina, and three Hungarian folk tunes—this collection of Bartók's early piano works certainly isn't the sexiest program imaginable. But even though these pieces date back as early as 1908, they have much of the rugged individualism of his later works, making this a highly stimulating first volume in a series that will offer all of his solo piano music played by Zoltán Kocsis.

The bagatelles are almost like updated Chopin preludes: little shards of ideas, all the more intriguing for being short, spare, and lacking any decorative qualities. What they imply is as interesting as what they say. The folk-based works display an almost shocking rhythmic

vigor, the Romanian dances having an extra charm because the different layers of the music don't quite mesh. Kocsis knows enough not to try to make the pieces fit. He plays everything here with clean, technically assured sonorities, but the music never seems scrubbed up. Indeed, he plays many of these works as though he'd just written them. They can be sprawling and enigmatic, but Kocsis highlights the contour of every phrase with a subtle rubato or cunning accent. This series could become a landmark. *D.P.S.*

### BERG: Violin Concerto

**JANÁČEK: Violin Concerto**

**HARTMANN: Concerto Funebre**

Zehetmair; Philharmonia Orchestra, Holliger;  
Deutsche Kammerphilharmonie, Zehetmair  
TELDEC 46449 (60 min)

**Performance: Excellent**  
**Recording: Very good**

**T**he Austrian violinist Thomas Zehetmair has put together here an imaginative program of powerful twentieth-century violin concertos in which he must believe deeply. He carries them off brilliantly, with splendid partnership from the Philharmonia under Heinz Holliger in two of them and conducting for himself in the third, and Teldec's well-judged sonic focus is appealing in both its detail and its warmth. Personally, I find Frank Peter Zimmermann a tad more compelling in the Berg Concerto, on an EMI disc, and Christian Tetzlaff a tad more attuned to the Janáček idiom in his otherwise very similar Virgin recording of that composer's recently reconstructed miniature concerto titled "The Pilgrimage of a Little Soul." Josef Suk, somewhat less richly recorded on Supraphon, takes us perhaps still deeper inside this piece.

Karl Amadeus Hartmann's *Concerto Funebre*, in which Zehetmair is both soloist and conductor, is a heroic gesture from a German living in Munich in 1939: it laments the demise of the Czechoslovak Republic and the onset of World War II, citing both the Hussite hymn that Smetana used earlier in the final sections of *Má Vlast* and a Russian song that Shostakovich would use nearly two decades later in his Eleventh Symphony. Christiane Edinger, in her recording on Thorofon, takes a more expansive approach that perhaps allows the music to register still more deeply, and her performance is paired with a stunning one of Szymanowski's Violin Concerto No. 1. But the slight preferences I've expressed here are purely subjective. The bottom line is that Zehetmair's new disc is a distinguished one, and anyone attracted by its line-up of works can invest in it with confidence. *R.F.*

### BRAHMS: String Quartets Nos. 1 and 2

New World String Quartet

I.M.P. MASTERS/ALLEGRO IMPORTS  
MCD 53 (70 min)

**Performance: Warmhearted**  
**Recording: Likewise**

**T**he New World Quartet, founded only sixteen years ago, has had several changes in its personnel (Ross Harbaugh, the cellist, is the only remaining member of the original foursome), but it sounds here like an ensemble molded by many years of steady collaboration—and, more to the point, like a group particularly at home in this repertory. Both the



playing and the recorded sound are, in fact, well suited to the warmhearted nature of the two quartets that constitute Brahms's Op. 51. Tempos are invariably convincing, phrasing is at all points natural and unfussy, and balances could hardly be better. Try almost any portion of the A Minor Quartet (No. 2) and you're likely to be sold.

The one drawback is the group's apparent reluctance to play really softly; this will strike some listeners less forcefully than others, but those who do notice may feel it injects a degree of blandness into the otherwise very attractive performances. The Takács Quartet's London disc of these two works remains my first choice; with their more imaginative dynamic shading and greater sense of animation, they produce a richer response to Brahms's dark-lit coloring, and they are also recorded a bit more smoothly. The Tokyo Quartet is more fetching still in No. 1, on an economical Vox CD, but the coupling is different—the last of Brahms's three quartets (Op. 67 in B-flat) instead of the Second—and this team does not play first-movement repeats. *R.F.*

**DONIZETTI: Lucia di Lammermoor**

Gruberova, Shicoff, Agache, Miles; Ambrosian Singers; London Symphony, Bonyng TELDEC 72306 (two CD's, 143 min)

Performance: Uneven  
Recording: Excellent

As Lucia, Edita Gruberova is a slow starter. Her opening scene is well sung but without notable dramatic conviction. Her portrayal grows as the opera unfolds, and by the end she is an affecting heroine, even though her performance lacks the thrust of those recorded by Maria Callas and Joan Sutherland (both available on CD). Everyone expects the soprano tackling Lucia to hit and hold the optional high notes; Gruberova does so, but not always with a sure pitch, which mars an otherwise musically performance.

As Edgardo, Neil Shicoff sings accurately and copes valiantly and sincerely with the demands of the role. He is not always dramatically convincing, often sounding tearful when a more stalwart feeling is expected, but he commands a lovely lyric tenor. Edgardo, however, calls for a true *spinto* quality that is not congenial to his light instrument.

The Enrico of Alexandru Agache is fittingly commanding, implacable, and hateful; his singing is particularly effective in passages of feigned sympathy toward Lucia. The rest of the cast acquit themselves commendably, and the Ambrosian Singers perform with a schooled sense of Donizetti's flowing melody and dramatic vigor. The London Symphony plays very satisfyingly in this well-engineered recording, and Richard Bonyng conducts with authority. *R.A.*

**HINDEMITH: Kammermusik Nos. 1-7**

Harrell, Kashkashian, others; Royal Concertgebouw Orchestra, Chailly LONDON 433 816 (two CD's, 138 min)

Performance: Polished  
Recording: Excellent

Paul Hindemith clearly seemed to be updating Bach's "Brandenburg" Concertos when he wrote his seven *Kammermusik* from 1921 to 1927. These youthful chamber concertos for various diverse and colorful combina-

tions of instruments are scored with dazzling brilliance. He even incorporated jazz and cabaret influences into his spiraling tonalities, with a fluency and conviction suggesting that it's the most natural thing in the world. The first concerto, for example, features accordion and police siren (a nod to Satie's *Parade*?) in some of the most audacious, humorous music since Haydn. But the same piece is also serious, even soulful, as in the solo-flute section, which has the aura of a lone confession.

Some of the later pieces occasionally seem a bit routine, but they're still jammed with genuine music that rewards repeated listening. If nothing else, Hindemith always keeps the listener guessing with novel instrumenta-

TALES FROM THE VAULT

Jean-Pierre Rampal is generally credited with having made the flute a popular solo instrument with twentieth-century music lovers. It's hard to argue with that when you consider the incredible number of recordings he has made over the years. Elektra International Classics recently made a good many of them available again in a midprice Rampal Edition series on the Erato label. Bach, Handel, Vivaldi, and Mozart all receive at least one CD, and other discs group lesser French, Italian, and German Baroque composers, Romantic composers, and twentieth-century concertos. Recorded during the Sixties and Seventies, these CD's not only remind us of Rampal's artistry but provide an introduction to four centuries of classical flute music. *Robert Ripps*



tion, the solo instruments ranging from the warm viola d'amore in No. 6 (my favorite) to the organ in No. 7.

This is the first complete recording of these pieces since the late-Sixties set by Concerto Amsterdam on Telefunken. The conductor, Riccardo Chailly, has given them star treatment with handpicked soloists including the cellist Lynn Harrell and the violist Kim Kashkashian. Occasionally the performances seem a bit slick compared with the similarly distinguished Telefunken set, but this release is still a major rediscovery. *D.P.S.*

**PROKOFIEV: Romeo and Juliet, Suites Nos. 1-3**

Orchestre de la Suisse Romande, Jordan ERATO 45817 (76 min)

Performance: Evocative  
Recording: Excellent

The suites Prokofiev drew from his most successful ballet, adding up to about half of the complete score, have been heard less in recent years than various conductors' compilations that conform to the dramatic sequence. The third suite, a sort of afterthought, is a real rarity, and only Neeme Järvi has preceded Armin Jordan in offering all three suites uncut on CD. Jordan is more than a match for Järvi in both brilliance and warmth. This is obviously music for which the Swiss conductor has a special feeling, and both the orchestra and Erato's sound engineers have come through splendidly for him. The annotation might have been more helpful, and it's curious that the Second Suite is placed first on the disc, but there is not one number among the twenty that fails in its evocative power.

If compelled to choose a single disc of music from *Romeo and Juliet*, I think I would remain loyal to Charles Dutoit and the Montreal Symphony on London; in one of their finest offerings, they give us twenty-four of the ballet's fifty-two numbers in their original stage order and achieve a cumulative dramatic impact beyond the scope of the suites. But Jordan offers the strongest alternative for those who prefer the suites. *R.F.*

**RIMSKY-KORSAKOV: Scheherazade; Russian Easter Overture**

New York Philharmonic, Temirkanov RCA VICTOR 61173 (64 min)

Performance: Expansive  
Recording: Gorgeous

Everyone who happened in while I was listening to this gorgeous-sounding disc commented on the beauty of the New York Philharmonic's playing; since these performances were taped less than a month after

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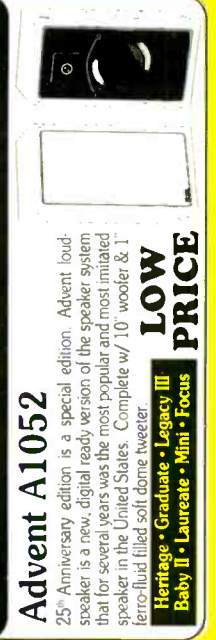
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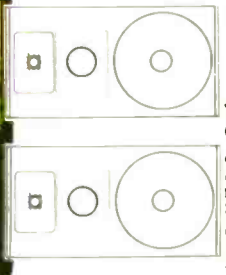
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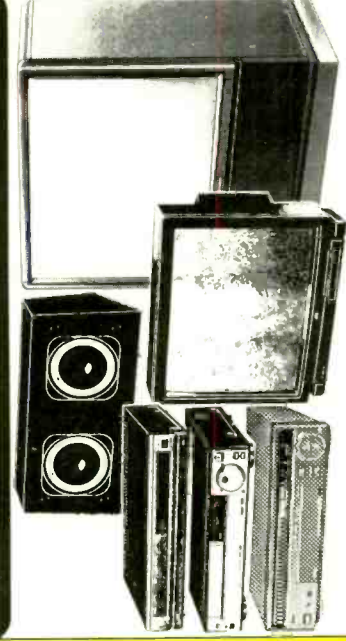
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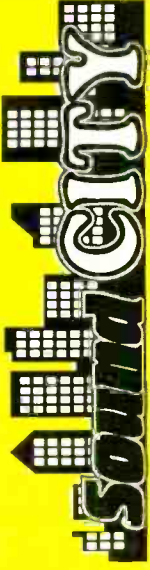
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Kurt Masur took over as the orchestra's music director in the fall of 1991, it is hardly a matter of "transformation" but simply a nod to the fine band Zubin Mehta turned over to his successor—as well as to the players' apparently exceptional rapport with a guest conductor recording with them for the first time.

One of Mehta's benefactions was his bringing in the Philharmonic's current concertmaster, Glenn Dicterow, whose luscious violin solos stand out among the numerous felicities of Yuri Temirkanov's *Scheherazade*. The Rus-



sian conductor takes an expansive view of both works here. He is not about to let any of Rimsky's imaginative touches pass less than fully explored, and with breathing suspended, as it were, to let a lovely phrase sink in here and there, momentum is sometimes stretched rather thin—perhaps even more in the overture than in the larger work—but it is never really in question, and neither is Temirkanov's wholehearted commitment. There are other accounts of both works I personally find more stimulating, but very few of either offer such

full-scale realization of Rimsky's wonderful colors on the part of both the musicians and their similarly committed recording team. *R.F.*

**SAINT-SAËNS: Samson et Dalila**

Domingo, Meier, Fondary, Courtis, Ramey, others: Chorus and Orchestra of the Bastille Opera, Chung  
EMI 54470 (two CD's, 123 min)

Performance: Sensuous  
Recording: Very good

There have been several worthwhile recordings of Saint-Saëns's *Samson et Dalila* before this one, notably the 1962 EMI/Angel set, in my view the best of the lot. Its conductor, Georges Prêtre, may have been charged with certain wayward tendencies, but he did preside over a performance boasting a truly seductive Dalila and a truly heroic Samson. Now, thirty years later, EMI has given us a set to challenge, and in some ways surpass, its predecessor.

As Samson, Plácido Domingo may not match Jon Vickers's intensity and magnetism, nor his unmistakable individuality. What Domingo projects is the warrior's dignity and melancholy, in tones of sustained eloquence and steadiness—qualities that silence criticism. The Dalila, Waltraud Meier, is a high mezzo-soprano who lacks the dusky contralto sonorities one would like to associate with the Biblical seductress. But her finely nuanced, deeply involved delivery offers rich compensations, and she conveys the requisite torrid passion in the second act.

Where the new set clearly scores over all previous efforts is the faultless casting of the three low male voices: Alain Fondary as a powerful and furious High Priest; Jean-Philippe Courtis as an impressive, taunting Abimelech; and Samuel Ramey as the Old He-

brew, turning his brief comments into a starry occasion. Conductor Myung-Whun Chung leads his excellent chorus and orchestra at an unhurried pace, sustaining amplitude, dignity, and the proper feel for the opera's sensuous orchestral colors. I missed the storm effects, however, that would have heightened the tension in the second half of Act II. *G.J.*

**SCHUMANN: Piano Quintet; Piano Concerto**

De Larrocha; Tokyo String Quartet; London Symphony, Davis  
RCA VICTOR 61279 (64 min)

Performance: Splendid quintet  
Recording: Excellent

Given that Clara Schumann was the first pianist to perform her husband's Piano Quintet and Piano Concerto, having Alicia de Larrocha play that part in both of these masterpieces on a single CD seems wholly appropriate. The quintet performance appears to mark her disc debut as a chamber musician, and I'd call it a total success. She and the Tokyo String Quartet make music together like a seasoned ensemble. Because of the wide and open Manhattan Center recording locale, the opening may seem a bit bass-shy on first hearing, but the spacious ambience is not obtrusive. There is plenty of energy and flow in the first movement, but the high point is the slow movement with its contrasting somber and consolatory elements. Violist Kazuhide Isomura does himself and the music proud with his darkly burnished tonal quality. The scherzo has tremendous exuberance, though its second trio provides an especially lovely point of repose. The impetus carries over into the jubilant finale, and the tricky polyphonic development is beautifully balanced.

Despite the loving collaboration of Colin Davis and the London Symphony, the concerto reading doesn't achieve quite the same high level. De Larrocha's approach is highly poetic, beginning shyly at her initial entry and gaining in nuance and passion as she continues. At times I felt that her poietizing verged on the wayward in the first movement, and her swooning phrases in the middle of the otherwise charming slow movement are a bit much. No problems, however, in the finale. The recorded sound is A-1. *D.H.*

**SCRIABIN: Symphonies No. 1 and No. 4 ("Poem of Ecstasy")**

U.S.S.R. Radio Chorus and Symphony Orchestra, Svetlanov  
RUSSIAN DISC/KOCH 11056 (71 min)

**SCRIABIN: Symphony No. 2; Réverie**

U.S.S.R. Symphony Orchestra, Svetlanov  
RUSSIAN DISC/KOCH 11057 (51 min)

**SCRIABIN: Symphonies No. 3 ("The Divine Poem") and No. 5 ("Prometheus, the Poem of Fire")**

Richter: Chorus, U.S.S.R. Symphony Orchestra, Svetlanov  
RUSSIAN DISC/KOCH 11058 (74 min)

Performances: Raw but vital  
Recordings: Decent air checks

The Russian Disc label, distributed here by Koch International, makes its debut with apparently the first complete Scriabin orchestral cycle from Russia under a single conduc-

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• **HAYDN: The Creation.** Janowitz, Ludwig, Wunderlich, Krenn, Berry, Fischer-Dieskau; Karajan. DEUTSCHE GRAMMOPHON 435 077 (two discs). This much-praised 1969 recording with the Berlin Philharmonic is now available in DG's midprice Galleria line.

• **HAYDN: Symphonies Nos. 60, 70, and 81.** Blum. VANGUARD OVC 5000. Pungent, vigorous performances by the chamber-size Esterházy Orchestra, recorded in the mid-Sixties. The inexplicably neglected No. 60 ("Il Distratto") is reason enough to buy the disc.

• **MOZART: Operatic and Concert Arias.** Price: Adler. RCA VICTOR 61357. This recital by the great soprano Leontyne Price, on the midprice Gold Seal label, offers "... superb music glowingly performed" (January 1970).

• **ROSSINI: La Pietra del Paragone.** Carreras, Wolff, Bonazzi, Diaz; Jenkins. VANGUARD OVC 8043 (three discs). The first complete opera recording from the tenor José Carreras showed him to have "... the right purity, lightness, phrasing, and style ..." (June 1973).

• **CANADIAN BRASS: Toccatas, Fugues, and Other Diversions.** VANGUARD OCD 3014. Originally released as a direct-to-disc recording, this collection of brass pieces by Bach, Purcell, and others was mastered for CD from a 30-ips back-up tape.

• **THE COMPLETE JOSEF HOFMANN, VOL. 2.** VAI AUDIO 1020 (two discs). Selections from this amply filled set were originally released on a Columbia LP in 1958. Most of the recordings date from 1937, but four newly released Chopin selections are from a 1945 Carnegie Hall recital.





tor. Evgeny Svetlanov. What the recordings, air checks of live broadcasts from Moscow dating from 1988 to 1992, may lack in terms of state-of-the-art sound, they make up in what they tell us about Russian performance style in this repertory. Svetlanov's readings completely eschew the voluptuous approach to this music represented by, say, Riccardo Muti's Philadelphia Orchestra cycle on EMI. They amount to Scriabin in the raw—full-throated, totally uninhibited, and possessed of an animal vitality not often encountered in non-Russian recordings.

The First Symphony is a six-movement affair with a final choral hymn to art. In that last movement we hear two sharply contrasted solo voices: the tenor Andrei Salynikov and a stentorian mezzo-soprano, Nina Gaponova. Svetlanov brings far more urgency to the last pages than Muti does. In the five movements of No. 2, the high point is the slow movement with its Wagnerian blend of the bucolic and the passionate. The end is pure fustian, or as Scriabin himself put it, "a military parade." The *Tristan*-esque *Réverie* on the same CD belies its name with the music's restless character. The three-movement *Divine Poem*, the most often heard of the early symphonies, is grandiose and overlong for my taste, but Svetlanov proves a powerful advocate.

With the single-movement *Poem of Ecstasy* we are confronted by the mature Scriabin and his harmonic scheme built on fourths. The prominent solo-trumpet role is ably handled

by Lev Volodin with a tone that cuts through the orchestral texture like a hot knife through soft cheese. The end, with organ and bells added to the clamor, must have left the audience gasping, as no applause is heard. *Prometheus*, also cast in a single movement, is the most volatile of Scriabin's orchestral scores and features a virtuoso role for solo piano. Sviatoslav Richter, who has been rivaled as a Scriabin interpreter only by Vladimir Horowitz, plays with unique authority in this 1988 performance, his only recording of the score that I know of. If I had to pick one of these three Russian Disc issues for the best musical value compared with more polished Western recordings, it would have to be this one. *D.H.*

**SHOSTAKOVICH: Jazz Suites Nos. 1 and 2; Piano Concerto No. 1; Tahiti Trot**

Brautigam. Royal Concertgebouw. Chailly  
LONDON 433 702 (59 min)

Performance: *Suave*  
Recording: *Charming*

**S**hostakovich wrote his "jazz" music in the mid-1930's, when it was still possible in the Soviet Union to flirt with decadent American music and when nobody in that part of the world, least of all Shostakovich himself, had the slightest idea of what jazz actually was. The two Jazz Suites were written for "serious" jazz ensembles that were nothing more than light-music orchestras (compared with these Soviet bands the Paul Whiteman Orchestra was playing advanced bebop). The



closest any of this comes to anything American is an imitation Kurt Weill foxtrot in the Suite No. 1. The Suite No. 2, traditional dances surrounded by a march and a finale, is perched somewhere between Glazunov and English prom music à la Albert Coates.

The once well-known Concerto for Piano, Trumpet, and Strings (rather awkwardly included in this collection of Shostakovich's "jazz music") is, in spite of a manic finale that carouses all over the place, a serious work of art. The outer movements are based on the nose-thumbing and in-joke wit that were the composer's trademarks, but the inner movements are quite strong and evocative. The roots of this music are not in jazz but in Mahler and Russian popular music.

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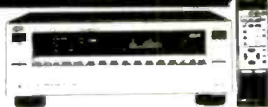
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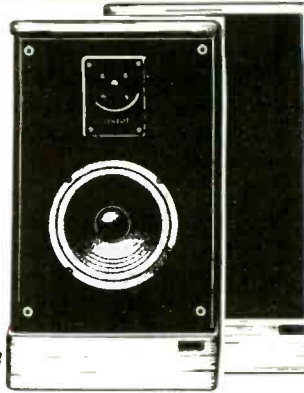
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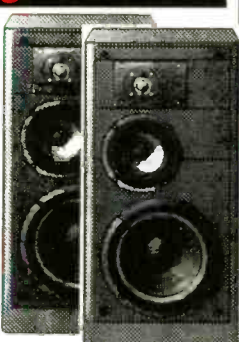
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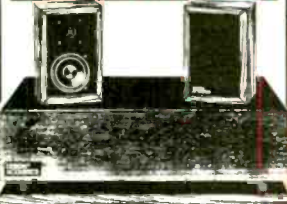
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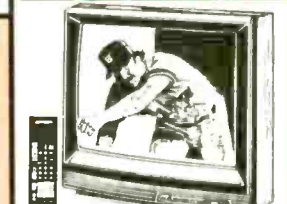
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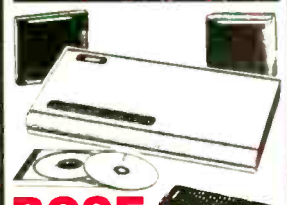
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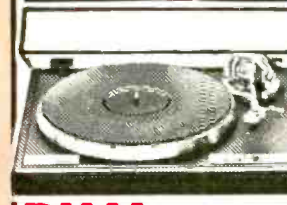
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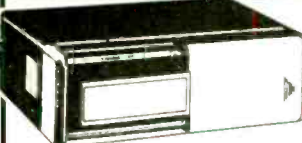
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handed performance that brings out the high spirits while allowing the work its musical due. But by far the most fun here is *Tahiti Trot*, which is, believe it or not, a 1928 arrangement of *Tea for Two*, verse and all, composed on a bet and wildly popular in its day in Russia and, on occasion, elsewhere.

In short, while this music has a certain staying power, it is not jazz, nor is it the rough, satirical young Shostakovich we have come to expect. It is, however, a veritable cornucopia of sophisticated wit, especially in these suave performances and recordings. *E.S.*

**Collections**

**ALAN FEINBERG:**  
The American Virtuoso  
ARGO 436 121 (75 min)

Performance: Lyric virtuosity  
Recording: Smooth

Here's a neat collection of American piano music from the late nineteenth and early twentieth centuries, led off by Louis Moreau Gottschalk and followed in close ranks by two women, the Venezuelan virtuoso Teresa Carreno and Mrs. H. H. A. (Amy to her friends) Beach, Edward McDowell, and the very eccentric Australian/American Percy Grainger. The key pieces are arrangements: improbably wonderful Gottschalk versions of *Home Sweet Home*, *The Star-Spangled Banner*, *Yankee Doodle*, and several Latino ditties: Amy

Beach's haunting impression of the transcendental song of our best native melodist, the hermit thrush; Grainger's quirky versions of everything from John Dowland to Gabriel Fauré to *Danny Boy* to *The Man I Love* (yes, Gershwin). There are originals, too, but they also seem to cover known territory without losing those qualities of innocence and optimism that are so refreshingly American.

Alan Feinberg is a poetic virtuoso rather than a heaven-storming one, and his intense and personal musicality binds together a collection of no less than seventeen fairly disparate items. He did not literally discover all of them, but he plays them all as though he did. The program is a series of discoveries of one sort or another, and the warm, open, and personal lyricism, far from contradicting the pioneering and virtuoso aspects of the enterprise, actually enhances them. The piano sound of the English-made recording is smooth and roomy-realistic, emphasizing the lyric qualities rather than brilliance. *E.S.*

**HELICON**  
Horizons

DORIAN DISCOVERY 80103 (55 min)

Performance: Lively  
Recording: Sparkling

In this age of jet planes and instant communications, CNN and the global village, electronic memory and live replay, it is perhaps not surprising that world music, world beat, cross- and multiculturalism have come to the

fore and that new-music groups with a repertory from everywhere should appear. Ethnomusicologists and other purists are horrified, no doubt, but the rest of us will not complain.

Helicon is from, of all places, Baltimore. Chris Norman plays various flutes, tin whistle, bagpipes, and more. Ken Kolodner fiddles and hammers the dulcimer. Robin Bullock strums six- and twelve-string guitars, a cittern, a fiddle, a mandolin, and something called a mandocello. The music here comes from Macedonia, Romania, Peru, Sweden, Finland, Ireland, the United States, Greece, and Brazil. Some of it is new; most of it consists of adaptations of traditional material, some well known, some quite obscure. My favorite, at least for title, is the *Ceausescu Quickstep*, but all of it is quite wonderful.

The musicians of Helicon have a deep feeling for an amazing variety of styles. True, in the process of adapting and arranging and otherwise turning this material into their own, they flatten it out a little and remove some of the stylistic individuality and piquant localism; for those things you have to go back to the originals. But Helicon also shows the universality of popular traditions, not a bad thing to emphasize in this day of rampant and mindless nationalism. And this group is introducing a lot of people to some remarkable music they might not otherwise get to know. They respect the music they play, they play with spirit and sparkle, and they obviously love what they do. So do I. So will you. *E.S.*

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**DEBUSSY:** Suite Bergamasque; Pour le Piano, Sarabande; La Plus Que Lente (Valse); Valse Romantique  
 Claudio Arrau (piano)  
 PHILIPS 434 626 (41 min)

While Beethoven, Schumann, and Liszt may come first to mind when we think of the late Claudio Arrau, the great pianist identified no less fully with the music of Debussy. Arrau died shortly after the recording sessions for this CD, Volume 2 of the series Philips has labeled "The Final Sessions." Everything here is compelling in its affectionate and clarifying detail and the always elegant sense of line. Beautifully recorded, too. *R.F.*



**FRANCK:** Violin Sonata  
**STRAUSS:** Violin Sonata  
 Meyers; Silva

RCA VICTOR 61283 (56 min)  
 Anne Akiko Meyers, an intelligent musician, shows a fine grasp of form and structural balance in both of these sonatas, but she does not fully realize their essential character. She seems uninterested in varying her color in the Franck, a work that depends on that element for its effectiveness, or in conveying the basic warmth that is at the very heart of both sonatas. Rohan de Silva, her sympathetic keyboard collaborator, and the recording itself also rely on power more than warmth. *R.F.*

**HAYDN:** Piano Sonatas Nos. 19 and 46  
 Ivo Pogorelich  
 DEUTSCHE GRAMMOPHON 435 618 (52 min)

Haydn admirers won't want to miss Ivo Pogorelich's highly colored interpretations of these sonatas. Much more concerned with bringing out the music's odd chromatic undercurrents and rhythmic vigor than its formal symmetry, Pogorelich makes the ambitious slow movements seem like harbingers of late Beethoven. The music accommodates this approach with little audible strain. *D.P.S.*

**STRAVINSKY:** The Rite of Spring

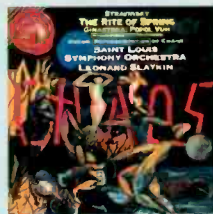
**HAYDN:** Representation of Chaos

**GINASTERA:** Popul Vuh

Saint Louis Symphony. Slatkin

RCA VICTOR 60993 (68 min)

Haydn's prelude to his great last work, the oratorio *The Creation*, here precedes the première recording of Alberto Ginastera's colorful *Popul Vuh*, about the creation of the world Mayan style. *Popul Vuh* in turn leads to the main work, Stravinsky's *Rite*,



though the thematic connection is by way of Walt Disney, who turned these "Pictures of Pagan Russia" into another Creation of the World in *Fantasia*. While the juxtapositions do not quite work, these are exciting performances, brilliantly recorded, and the Ginastera is a notable addition to the repertory. *E.S.*

**TCHAIKOVSKY:** Violin Concerto  
**PROKOFIEV:** Violin Concerto No. 1

Spivakov; Royal Philharmonic, Temirkanov  
 RCA VICTOR 60990 (56 min)  
 At first sight, pairing Tchaikovsky and Prokofiev seems incongruous, but Vladimir Spivakov's lean violin tone and superbly centered intonation make the combination work. A truly demonic scherzo in the Prokofiev, with splendidly alert collaboration from Yuri Temirkanov and the Royal Philharmonic along with topnotch sonics from Watford Town Hall. *D.H.*

**TURINA:** Rapsodia Sinfonica;  
 La Oracion del Torero

**RODRIGO:** Four Madrigales  
 Amatorios; other works

San Diego Chamber Orchestra, Barra  
 KOCH 3-7160 (44 min)

Joaquín Turina's mildly ambitious 8-minute *Rapsodia Sinfonica*, well played by the pianist Gustavo Romero, is ultimately small-scale, rather uninteresting, not very Hispanic, and a weak album opener. Things improve with his *Bull-Fighter's Prayer* and the series of little-known sweet treats by the other Joaquín, Rodrigo: some terse, beautiful songs sung, a little too operatically, by the soprano Ruth Golden, three neat old dance tunes, and the charming final *Sarabande and Villancico-Dulces*. Spanish bonbons. Unprepossessing trifles. But their very brevity and simplicity are also a recommendation. *E.S.*

**NEW YORK-BUENOS AIRES**

**CONNECTION:** The New Tango

VAI AUDIO 2001 (55 min)

A fitting tribute to the late composer Astor Piazzola, who died last year, "The New Tango" continues his kind of updating of the tango by mixing the old dance melodies with jazz and classical elements. This five-man group (piano, violin, guitar, bass, and the accordion-like bandoneón) plays well, and their new compositions are interesting, but the most appealing pieces here are virtuosic reinterpretations of two old classics, *El Choclo* and *La Cumparsita*. Good sound. *William Livingstone*

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# THE HIGH END

BY RALPH HODGES

## A Phono Refresher

**W**ITH the market for phonograph records having almost completely dried up, not much is written anymore about the fine points of playing them. Yet many people have substantial record collections that they would like to continue to enjoy. A single magazine page cannot cover the topic of LP playback with any pretense to completeness, but it may serve to jog some memories as to phono realities that remain as vital as ever, even if they no longer consume our attention as much.

To start off, a description of an informal experiment performed back in the Seventies may prove provocative. It involved playing an LP into a specially designed computer over and over and comparing the data streams that resulted from the various plays. The computer was primitive by today's standards, so only a brief snatch of music could be stored, and that quite imperfectly. Furthermore, synchronizing the record's content and the computer's sampling rate must have been a matter of catch-as-catch-can. Still, the investigators came away moderately confident that a record player cannot, in general, play a record the same way twice—something that's not a problem with digital media.

The reasons why the LP medium might lack absolute consistency would make a long list, which would include such considerations as seismic disturbances and the chance of the record's having been altered by the very act of being played. But there are some things that are more under the user's control.

You might recall a science-class experiment in which a heavyish weight is suspended from a hand-held helical spring and coaxed to bob around at different rates. With rapid, vibratory hand movements the weight scarcely moves at all, but if the hand moves slowly and smoothly, the weight follows obligingly along. And then there is an intermediate condition, at the

mass-compliance resonance, where the weight's motion becomes almost violent and precisely contrary to (out of phase with) the input, so that the weight rises to meet the descending hand and falls away when the hand goes back up. If you were forced to attempt this experiment yourself, you certainly recognized that none of these states of motion felt particularly stable, and the situation at mass-compliance resonance was all but out of control. Probably this revelation did not excite you at the time, but it takes on new meaning when you realize that the activity of a tonearm and phono cartridge playing a record is precisely the same as in the experiment, but turned upside down, with the weight (the tonearm) *above* the spring (the elastomeric bearing that carries the phono stylus). The inversion does not improve the stability of the arrangement at all.

When observed on a meter, the electrical response of a record-playing system, determined by its mechanical response, is that of a simple high-pass filter. In a properly matched system, response above about 20 Hz is essentially that of the phono cartridge alone. Very low frequencies, such as those generated by record warps, are steeply rolled off, and properly so. At the dividing line between the two regions (the system's resonance frequency), the system's response peaks severely and its mechanical behavior becomes chaotic. As a result, the tracking force can oscillate rapidly between colossal and zero—or even less, producing a groove skip.

Some two decades ago, Shure Brothers began examining real-world LP records to determine what sort of signals, intended or otherwise, were actually on them. A few examples had “music”—presumably the fundamental tones of large organ pipes—extending significantly below 20 Hz. *All* exhibited appreciable energy from ½ Hz (the rotational rate of the record) to about 10 Hz. The sources of this energy were record warps and irregularities in the discs' cross-sectional profiles—variations in disc thickness, in other words. Between these two zones of turbulence, however, was an “eye of the storm”: a region of relative

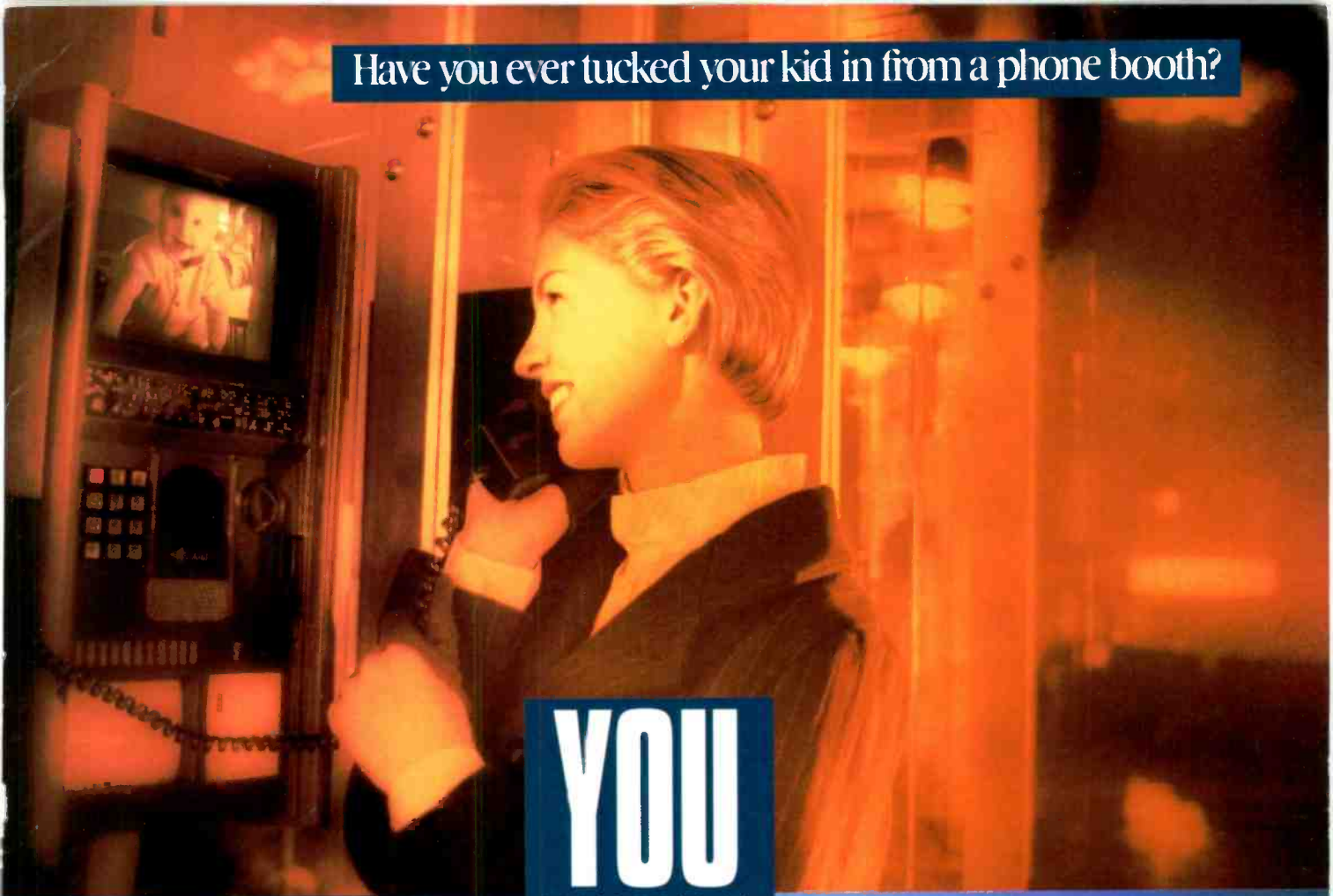
quietude. That region, somewhere between 10 and 16 Hz, was the place to locate the tonearm/cartridge resonance, the Shure engineers concluded. And it still is, if you hope to achieve some consistency in tracking force (meaning tracking ability) and stylus-groove geometry (meaning tracing accuracy), and thus to keep the record wear that results from mis-tracking and excessive stylus force under control.

**T**UNING this resonance to the target frequency range requires matching the effective mass of the tonearm and the compliance of the cartridge's stylus suspension. Raising either value lowers the resonance frequency; decreasing either increases it. Note that these two quantities are built into their respective devices, and short of applying a hacksaw (to the arm) or rubber cement (to the cartridge), you cannot change them. If the correct match does not exist, the arm or cartridge must be replaced or damping must be applied somehow to reduce the amplitude of the resonance. Alas, well-founded compliance specifications for phono cartridges are hard to find, and the effective mass of a tonearm is likely to be dominated by the weight of the cartridge installed, making the idea of a “universal” tonearm pretty much of a fantasy. So unless your powers of divination are exceptionally strong, you are thrown upon the tender mercies of knowledgeable dealers and friends.

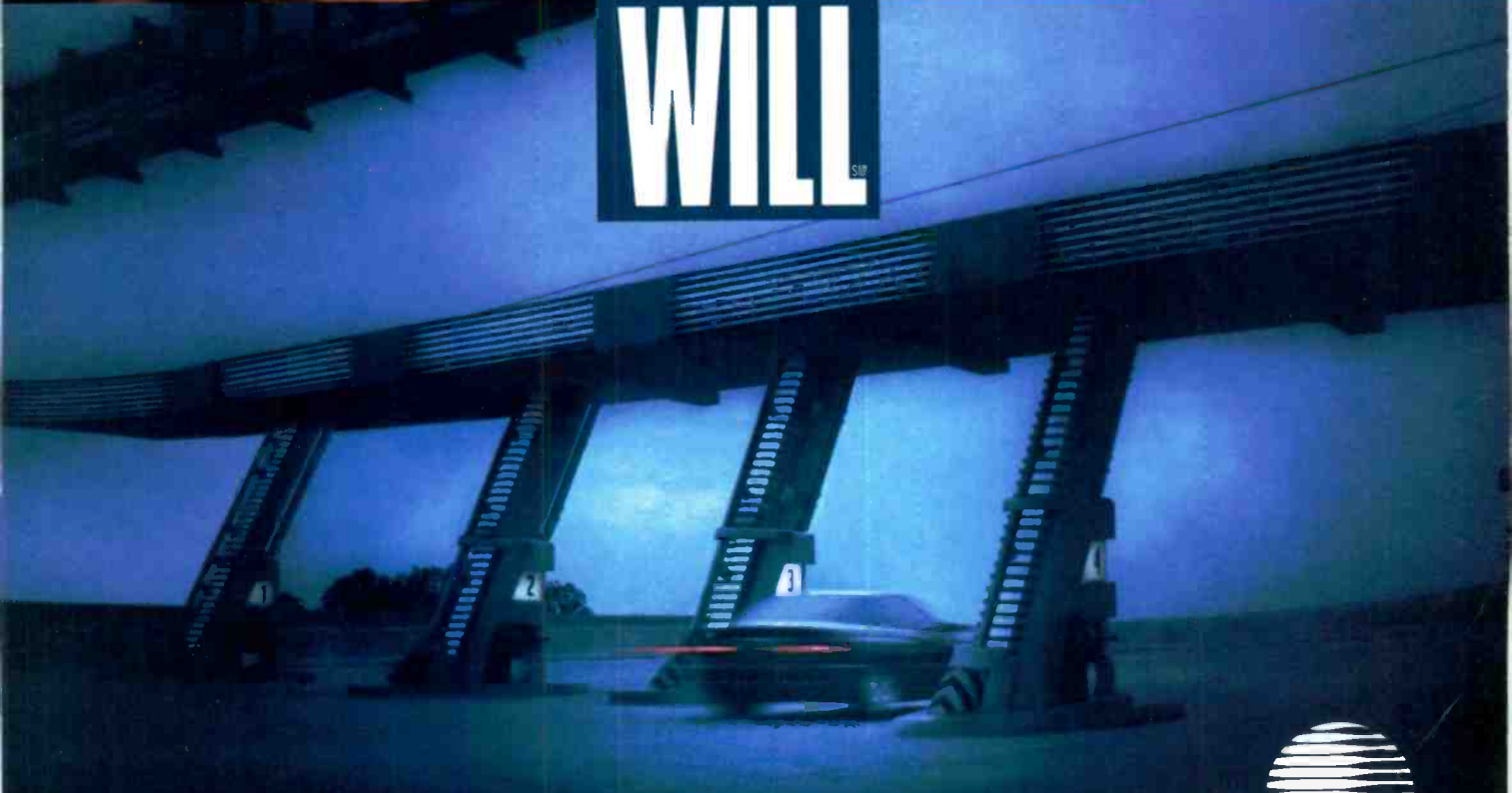
The final days of the LP's eminence were marked by recordings of extraordinary quality and by an avid scampering in all directions to develop playback equipment worthy of them. There was a proliferation of moving-coil cartridges, of stylus cantilevers and even cartridge bodies fashioned of precious and semiprecious materials, fascinating new stylus shapes, and super-rigid tonearms. These developments were, and are, very interesting. But if the final record-playing system did not meet the conditions discussed above, its chances of extracting the maximum of what was really on the record were negligible. So were its chances of leaving the recorded signal intact as it attempted its extraction. □



Have you ever tucked your kid in from a phone booth?



**YOU  
WILL** SIP



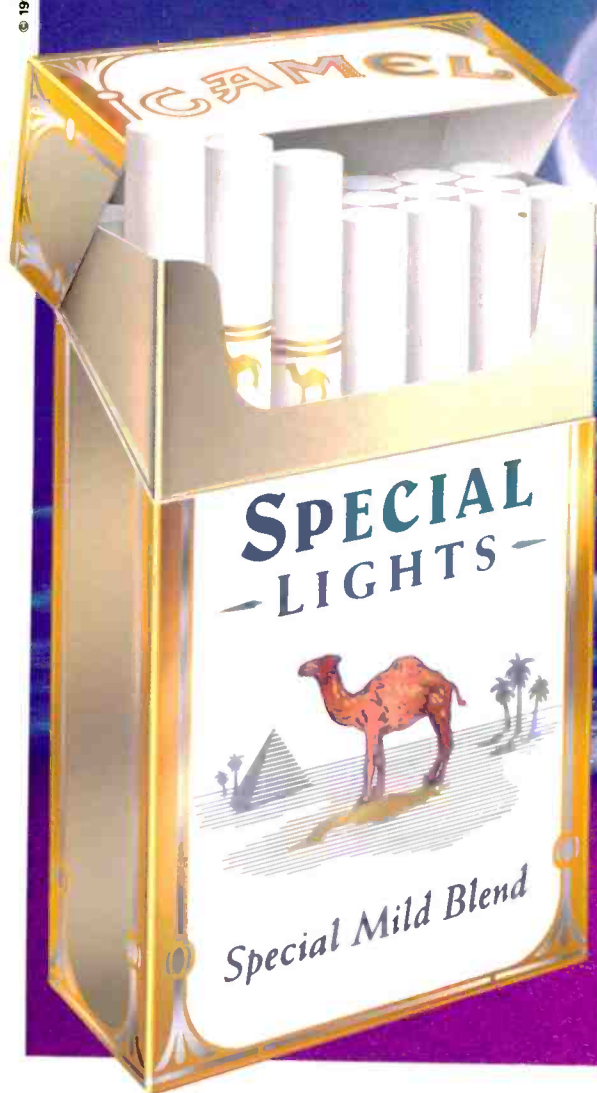
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