

# Stereo Review

AUGUST 1987 ● \$2.25

**SPECIAL REPORT:  
EUROPEAN AUDIO**

**TURNTABLE R<sub>x</sub>**

**LAB TESTS:  
NAKAMICHI CD PLAYER  
THORENS TURNTABLE  
MAGNAT SPEAKERS  
...AND MORE**



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# Stereo Review®

BULLETIN.....	4	TECHNICAL TALK.....	25
EDITORIAL.....	8	POPULAR MUSIC.....	79
LETTERS.....	10	CLASSICAL MUSIC.....	85
NEW PRODUCTS.....	13	VIDEO REVIEWS.....	93
AUDIO Q&A.....	16	THE HIGH END.....	104

## EQUIPMENT

CAR STEREO	20
The Blaupunkt Berlin TQR07 cassette tuner in the lab and on the road <i>by Julian Hirsch and Michael Smolen</i>	
HIRSCH-HOUCK LABS EQUIPMENT TEST REPORTS	31
Thorens TD 520 Turntable, page 31	
Magnat MSP 300 Speaker, page 36	
Nakamichi OMS-2A CD Player, page 41	
Sherwood S-2770RCP Receiver, page 46	
Focus .7 High Definition Monitor Speaker, page 49	
EUROPEAN AUDIO	56
A special report <i>by Ian G. Masters</i>	
TURNTABLE R <sub>x</sub>	67
Diagnosing turntable problems can help you achieve better-than-new sound <i>by Ralph Hodges</i>	

## MUSIC

GERSHWIN	63
Anniversary tributes to one of America's greatest composers <i>by William Livingstone</i>	
BEST RECORDINGS OF THE MONTH	73
Suzanne Vega, Prokofiev's <i>Romeo and Juliet</i> , Warren Zevon, and Sergei Edelmann's Chopin	
RECORD MAKERS	102
The latest from Brian Wilson, Roger Waters, Placido Domingo, Whitney Houston, Phil Collins, and more	

Cover: Magnat's All Ribbon 8P speakers flank the ADS/Braun TV3 television set and the Philips/Magnavox CDV474 CD-video player. See report on European Audio, page 56. Design by Sue Llewellyn, photo by Roberto Brosan.

STEREO REVIEW BUYER POLL, SEE PAGE 90  
Please fill in if you bought equipment in the past thirty days.  
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Circle the items you want to know about.



PAGE 56



PAGE 102



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by *Christie Barter and William Burton*

## CD QUESTIONS?

A new consumer service called CD Hotline offers a wealth of information on compact discs and their availability via a toll-free 800 number. Calls are taken by knowledgeable operators with access to a computerized catalog of CD's in every musical category except, for the moment, classical. The operators provide information about individual track titles, running times, and names of producers and guest artists as well as critical summaries based on reviews appearing in major American and British publications. To find out what number to call in your area, tune in your local rock station or call the CD Hotline offices in New York City, 1-718-486-8788.

## FIRST DAT DECK FOR U.S.

At the Summer Consumer Electronics Show in Chicago this June, Marantz became the first company to announce U.S. marketing plans for a DAT (digital audio tape) recorder. The Marantz DT 84 is set to go on sale here in October. Japan's Ministry of International Trade and Industry was said to be advising manufacturers not to market DAT machines in the U.S. because of record-company opposition and pending anti-DAT copy-code legislation.

## DAT ON THE AIR

Five years after the first radio broadcast of a compact disc, Chicago's WFMT was the first station to broadcast music from digital audio tape. A Sony DTC1000ES deck played prerecorded DAT's from Telarc and GRP while the Summer CES was in town.

## MUSIC NOTES

Freddie Mercury, lead singer with the British rock band Queen, performed a duet with soprano Montserrat Caballé in a televised rock concert on the Spanish island of Ibiza to promote the 1992 Olympics in Barcelona. . . . Disneyland Records has released the

original-soundtrack recording of *Snow White and the Seven Dwarfs* on CD to celebrate the fiftieth anniversary of the film's release. . . . In June, WQXR-FM in New York became the first classical-music station in the U.S. to broadcast live from London. The week of transatlantic programming included a pick-up from Covent Garden, where Placido Domingo was appearing in a performance of *La bohème*.

## MORE CD MIDLINES

A&M has introduced a "midline" series of lower-price compact discs with an initial release of some forty titles costing between \$10 and \$12 each in most stores. Artists include Bryan Adams, Joe Jackson, Oingo Boingo, Quincy Jones, and Styx. MCA has launched a similar series beginning with recordings by Neil Diamond, Three Dog Night, Olivia Newton-John, and Lynyrd Skynyrd. And the first batch of PolyGram's "midline" pop CD's includes recordings by Bananarama, Eric Clapton, Genesis, James Last, Donna Summer, and the Velvet Underground. PolyGram plans to have about a hundred titles at midline prices out by Christmas.

## TECH NOTES

Thousands of new audio and video products were demonstrated by hundreds of manufacturers to thousands of retailers at the Summer Consumer Electronics Show in Chicago. Casio's "prototype" DAT player, which displayed the names of composers or performers on its front panel as it played to dealers, drew big crowds. . . . JVC showed the first Super-VHS videocassette recorder, Scotch, Maxell, and Fuji showed S-VHS tape, and Panasonic, Magnavox, and JVC showed S-VHS cameras. . . . Look for dbx's first VCR's as well as audio products from a new dbx division to be called Audio Dynamics. . . . New speakers were demonstrated by ADS, dbx, Mirage, Boston Acoustics, Snell, B&W, Robertson, and others. . . . Akai presented a line of "Quick Start" VHS VCR's with much faster access than typical models.

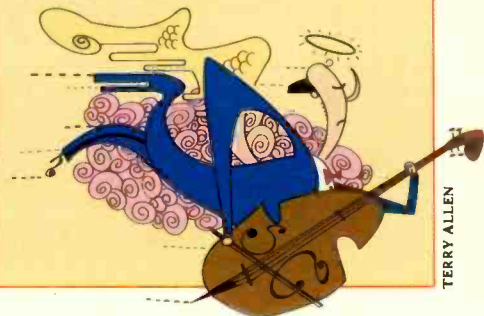
## CD-V BOOM AND SIZZLE

More than thirty hardware and software manufacturers supporting Compact Disc-Video presented CD-V discs and players in an extravagant audio/video display at the Summer Consumer Electronics Show. The CD-V discs are the same size as compact discs but have 5 minutes of audio with video in addition to 20 minutes of music alone. Audiences were impressed by the CD-V demo at the show, but many were still skeptical about the new format's chance of success because of consumers' apparent low interest in buying music videos.

## OBIT FOR THE ORCHESTRA

Ernest Fleischmann, executive director of the Los Angeles Philharmonic and general director of the Hollywood Bowl, proclaimed the death of the symphony orchestra as we know it in a recent address at the Cleveland Institute of Music. "If the music we care about so deeply is to survive," he said, "we must accept that the orchestra is burnt out, but from its ashes something infinitely richer, more varied, more satisfying can arise if we all work together to create it. Ladies and gentlemen, the symphony orchestra is dead. Long live the Community of Musicians."

Reports of the orchestra's demise are somewhat premature, however. According to the American Symphony Orchestra League, both the number of concerts and attendance at them continue to rise. In the 1984-1985 season there were 19,969 symphony concerts in the United States, up from 17,421 in 1976-1977. The estimated number of people attending those concerts rose from 21 million in 1976-1977 to 23.7 million in 1984-1985.



TERRY ALLEN

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**Matthew Polk's SDA SRS and SRS 2 have both won  
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# "The Genius of Matthew Polk Has Created Two Awesome Sounding Grand Prix Award Winning SDA SRSs"

*"Spectacular...it is quite an experience"*

*Stereo Review Magazine*

**N**ow the genius of Matthew Polk brings you the awesome sonic performance of the SDA-SRS in a smaller, more moderately priced, but no less extraordinary loudspeaker, the SDA-SRS 2.

## *Matthew Polk's own dream speakers can now be yours!*

Matthew Polk's ultimate dream loudspeaker, the SDA-SRS, won the prestigious Audio Video Grand Prix Speaker of the Year award last year. Stereo Review said "Spectacular...it is quite an experience" and also stated that the SRS was probably the most impressive new speaker at the 1985 Consumer Electronics Show. Thousands of man hours and hundreds of thousands of dollars were spent to produce this ultimate loudspeaker for discerning listeners who seek the absolute state-of-the-art in musical and sonic reproduction.

Matthew Polk has, during the last year, continued to push his creative genius to the limit in order to develop a smaller, more moderately priced Signature Edition SDA incorporating virtually all of the innovations and design features of the SRS without significantly compromising its awesome sonic performance. The extraordinary new SRS 2 is the spectacularly successful result. Music lovers who are privileged to own a pair of either model will share Matthew Polk's pride every time they sit down and enjoy the unparalleled experience of listening to their favorite music through these extraordinary loudspeakers, or when they demonstrate them to their admiring friends.

## *"Exceptional performance no matter how you look at it"*

*Stereo Review*

Listening to any Polk True Stereo SDA\* is a remarkable experience. Listening to either of the Signature Edition SDAs is an awesome revelation. Their extraordinarily lifelike three-dimensional imaging surrounds the listener in 360° panorama of sonic splendor. The awe inspiring bass performance and dynamic range will astound you. Their high definition clarity

\*U.S. Patent No. 4,489, 432 and 4,497, 064. Other patents pending.

allows you to hear every detail of the original musical performance; while their exceptionally smooth, natural, low distortion reproduction encourages you to totally indulge and immerse yourself in your favorite recordings for hours on end.

Julian Hirsch of Stereo Review summed it up well in his rave review of the SDA-SRS: "The composite frequency response was exceptional...The SDA system works...The effect can be quite spectacular...We heard the sound to our sides, a full 90° away from the speakers...As good as the SDA feature is, we were even more impressed by the overall quality of the Polk SDA-SRS...The sound is superbly balanced and totally effortless...Exceptional low bass. We have never measured a low bass distortion level as low as that of the SDA-SRS...It is quite an experience! Furthermore, it is not necessary to play the music loud to enjoy the tactile qualities of deep bass...Exceptional performance no matter how you look at it."

The awe-inspiring sonic performance of the SDA-SRS 2 is remarkably similar to that of the SRS. Words alone can not express the experience of listening to these ultimate loudspeaker systems. You simply must hear them for yourself!

## *"Literally a new dimension in sound"*

*Stereo Review*

Both the SDA-SRS and the SDA-SRS 2 are high efficiency systems of awesome dynamic range and bass capabilities. They both incorporate Polk's patented SDA True Stereo technology which reproduces music with a precise, life-like three dimensional soundstage which is unequalled and gives you, as Julian Hirsch of Stereo Review said, "literally a new dimension in sound". Each beautifully styled and finished SRS 2 cabinet contains 4 Polk 6½" trilaminate polymer drivers, a planar 15" sub-bass radiator, 2 Polk 1" silver-coil polyamide dome tweeters and a complex, sophisticated isophase crossover system. It is rated to handle 750 watts. The SRS utilizes 8-6½" drivers, a 15" sub-bass radiator, 4 Polk tweeters and an even more complex crossover. It is rated to handle 1000 watts.

Both the SDA-SRS and SRS 2 incorporate:  
1.) time compensated, phase-coherent multiple

driver vertical line-source topology for greater clarity, increased coherency, lower distortion, higher power handling, increased dynamic range and more accurate imaging. 2.) a mono-coque cabinet with elaborate bracing and MDF baffle for lower cabinet read-out and lower coloration. 3.) progressive variation of the high frequency high-pass circuitry for point-source

## *"Literally a new dimension in the sound"*

*Stereo Review Magazine*

operation and wide vertical dispersion. 4.) the use of small active drivers in a full complement sub-bass drive configuration coupled to a large 15" sub-bass radiator for extraordinarily tight, quick and three-dimensional mid and upper bass detail combined with low and sub-bass capabilities which are exceptional. The speakers are beautifully finished in oiled oak and walnut.

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No matter what your budget is, there is a superb sounding Polk speaker perfect for you. Polk's incredible sounding/affordably priced Monitor Series loudspeakers start as low as \$85 ea. The breathtaking sonic benefits of Polk's revolutionary True Stereo SDA technology are available in all Polk's SDA loudspeakers which begin as low as \$395. each.

## *"Our advice is not to buy speakers until you've heard the Polks"*

*Musician Magazine*

The experts agree: Polk speakers sound better! Hear them for yourself. Use the reader service card for more information and visit your nearest Polk dealer today. Your ears will thank you.

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## SPEAKING MY PIECE

by Louise Boundas



### The DAT Debate

**A**T the Summer Consumer Electronics Show in Chicago, Marantz announced its intention of marketing a digital audio tape recorder in the U.S. this fall. But those who expected other companies to follow suit were disappointed. Although several manufacturers displayed and demonstrated DAT decks at the trade show, they are still reluctant to introduce the recorders in this country in view of record-company opposition and pending legislation that would require copy-prevention scanners in the machines.

CBS Records, meanwhile, has reiterated its intention to make its Copycode notch filters available to members of the Recording Industries Association of America this summer. The filter is used to encode a master tape of a recording by cutting a narrow frequency notch into it. A scanner in a DAT deck detects the notch and prevents the deck from taping the recording. Since the notch is cut into the master tape, all CD's, LP's, and tapes made from that master will contain the notch. While CBS Records and the RIAA maintain that the notch is inaudible, audio experts contend that such encoding will, by definition, affect the sound of many recordings.

On the legislative front, there have been several developments

worth noting. Senator John Danforth (R-Mo.) withdrew support for S. 506, one of the proposed bills banning any DAT recorders not equipped with Copycode scanners. Senator Danforth said he was withdrawing his support because he had realized that the measure would prevent "legitimate home taping."

In response to a letter from Senator Dennis DeConcini (D-Ariz.) and Representative Robert Kastenmeier (D-Wis.), the RIAA agreed to allow the Copycode system to be tested by an "impartial" agency such as the National Bureau of Standards. The legislators also requested that the federal Office of Technology Assessment conduct a study to determine the impact of home taping on the record industry. The scope of the study is now under discussion.

It is clear from all this that we are a long way from a resolution of the DAT debate. It is also clear from STEREO REVIEW's mail that people who listen to recorded music are concerned about what is going on. Most of the letters we've been getting express alarm about the possible effects of the Copycode system on the sound of recordings, especially CD's, and a determination not to buy recordings that have been "tampered with." And they are concerned about the implications of the proposed legislation. Is it necessary? they ask. Why can't we just let DAT enter the marketplace so that consumers can decide its future?

If record companies encode their recordings, readers ask, will they be required to label their products so we will know what we're buying? Even if Congress passes no copy-prevention legislation now, will record companies encode the material anyway and press for the legislation again next year? Should we stock up on CD's now before the sound is adulterated?

Will copy-prevention coding really discourage piracy or merely prevent us from taping our records and CD's for our own use? Isn't home taping legal? Will anybody benefit from copy-prevention coding? If enough consumers refuse to buy encoded recordings, can't we convince the record companies that Copycoding is not in their interests either? □

## Stereo Review

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Introducing the RX-1100U. The Yamaha receiver that combines our legendary audio quality with broadcast quality video. A major enhancement to our long line of successful receivers.

In fact, the RX-1100U contains so many exciting features, you might want to visit your authorized Yamaha dealer and spend a few minutes exploring them for yourself.

Start by playing a video cassette through the RX-1100U. And watch the results on the finest video monitor:

The powerful new video-enhancing circuitry restores clarity and sharpness to even the weakest, noisiest video signal. So any prerecorded tape looks network crisp.

Then grab a camera, shoot a few minutes of tape on your own, and use the video enhancer while making a third generation dub.

You'll have a hard time telling the dub from the original.

While you're at it, experiment with the new video Rec Out Selector feature. Use it to mix your video with different audio sources to create original music backgrounds and sound effects.

Just like a post-production shop. Next, take the most musically demanding CD, crank open the 125 watt/channel\* amplifier, and listen to what's missing.

Distortion.

It's not there because the RX-1100U boasts our new Absolute Linear Amplification (ALA) circuitry.



This advanced amplifier technology injects a mirror image of the output distortion back into the input stage. The distortion component drops virtually to zero.

What's more, this receiver has plenty of headroom—up to 360 watts/channel into a 2 ohm load—so it's never cramped by the wider dynamic range and varying speaker impedances associated

with digital sources.

Now, walk to the other side of the room, where you can appreciate the new RS interactive remote control to its fullest.

Notice how it packs fingertip operation of the receiver, as well as other Yamaha RS-remote CD players, cassette decks and turntables, into one slim hand-held unit that ends coffee table clutter forever.

Home entertainment has certainly changed. It had to. You started out as an audiophile and find yourself becoming a videophile as well. Or vice versa.



But you can still trust Yamaha to satisfy your needs.

Because when you want to know what's new in top performing equipment, we've always been the ones to listen to.

Now, with our RX-1100U, we're the ones to keep an eye on as well.

\*125 watts RMS per channel, both channels driven into 8 ohms, from 20 to 20,000 Hz, at no more than 0.015% Total Harmonic Distortion.



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## LETTERS

### *Customer Service*

Believe it or not, there is still a company that believes in customer satisfaction. I'm speaking of Klipsch.

Last week a power surge went through my amplifier, which I later found out was defective. It was covered by warranty and was repaired free of charge. But my Klipsch La Scala speakers also suffered extensive damage. Klipsch's warranty only covers defects in materials and workmanship, so I was sure I'd be out the repair cost, but my faith in product service was restored.

Since my speakers were relatively new and had never been in for repair before, Klipsch simply said, "This one's on us." I think that deserves recognition. Not only am I satisfied with the performance of my speakers, but the service this company has rendered is far beyond what I'd hoped for. Most manufacturers probably couldn't afford to settle every problem in this manner. Klipsch probably can't. On second thought, maybe they can. Klipsch probably doesn't have many defects!

STEVE HALL  
Oklahoma City, OK

I want to commend and congratulate the Sony Corporation of America—and its Burbank, California, Factory Service Center staff in particular—for remarkable cooperation, courtesy, and utmost professionalism in dealing with a delicate circumstance. After a Sony CD player I had had a few problems with was evaluated by the service center, it was promptly replaced with a working model, accompanied by an incredible amount of concern on Sony's part. I was treated with respect, my phone calls were returned, and my problems were addressed and resolved.

VICTOR BISIO  
Encino, CA

### *Japan's Lead*

Julian Hirsch's discussion of the Japanese takeover of the American audio market in June's "Technical Talk" omits what may have been the single most significant causative factor: transistors. During the critical years 1965-1970 and immediately thereafter, American manufacturers and suppliers, held hostage by enormous inventories of vacuum tubes and tube equipment,

tried various stratagems to undermine public acceptance of the new technology, raising spectres of unreliability, insufficiencies of power or fidelity, etc., in a vain attempt to avoid the staggering losses predicted if they abandoned vacuum tubes.

The Japanese, as new entrants into the electronics manufacturing arena, had no attachment to obsolete products or processes and were able to start with state-of-the-art technology, giving them a lead that they have not yet relinquished. This episode seems part and parcel of a continuing saga of the shortsightedness of American industry, which sees cutting losses as a sign of weakness and holding the line, even unto bankruptcy, as laudable.

BEN TUTOLI  
St. Petersburg, FL

### *American Audio*

Thank you for Steve Birchall's informative "Special Report: American Audio" in June. Bill Hecht's major contributions to speaker design well deserved mention, but not to say one word about the American company that has set the



## LETTERS

benchmark for quality and construction cuts the report short. McIntosh has more than earned its reputation as the premier American audio company. Its commitment to its customers and uncompromising approach to product design are second to none.

JERRY HAWKHURST  
San Antonio, TX

What's Bob Carver up to these days?  
PAUL BUCCI  
Brooklyn, NY

*Steve Birchall's report on American audio technology was never meant to be comprehensive. He focused on current trends and the latest developments. Just as McIntosh and Carver were prominently mentioned in his similar article last year, this time other companies were highlighted.*

"Graceful admission of defeat is the greatest victory." I'm referring to STEREO REVIEW's attempt to move the Design Acoustics manufacturing facility to Japan. We surrender. We're looking at this adorable little facility in Machida that was used for manufacturing mood

rings back in the late Seventies...

Design Acoustics is, and has always been, an American manufacturer, originating in California and presently in Ohio. We were sorry to see no mention of us in the June issue's directory of American audio companies. Please inform the appropriate writers that the entire Design Acoustics staff will be sending pictures of their mothers baking apple pies while holding the Stars and Stripes in one hand and a Louisville Slugger in the other.

ROCK WEHRMANN  
Manager, Marketing Services  
Audio-Technica U.S., Inc.  
Stow, OH

*We'd like to be as graceful in admitting the error as Mr. Wehrmann was in pointing it out. We are sorry, but we are also nappy to report that Design Acoustics isn't moving after all—and we'd still like to see those photos.*

### Zappa

Michael Smolen's article on Frank Zappa in June brought back memories of my first exposure to fearless Frank's

music. In the summer of 1966 I purchased a copy of "Freak Out." One hour later I was at the record store demanding my money back, insisting that I shouldn't have to spend my good money on poorly produced and just plain bad music. The clerk refused, and later I gave the album a second chance. It became one of my favorites and is still in my collection more than twenty years later.

Incidentally, the infamous Suzy Creamcheese made her debut on that first album and not three years later on "Uncle Meat" as stated in the article.

GLENN POTTBERG  
Lancaster, PA

*Michael Smolen replies: Zapped again! I stand corrected.*

### Snake Fake

The snake pictured in June "Record Makers" is clearly a reticulated python (native of Asia), *not* a boa constrictor (native of South America) as stated in the accompanying text.

STEVEN A. ZILBER  
Cleveland, OH

## PERFECT MARRIAGE

New SA-XG is TDK's exclusive SA-X formulation—the world's quietest tape—technomiously joined together with TDK's most sophisticated mechanism ever—the RS-II.

Our unique 3-layer RS-II mechanism is specifically designed to suppress the generation of modulation noise. A precision die-cast alloy frame and molded tape guide block are sandwiched between two transparent precision-molded shell halves made of a special hard plastic, which also incorporate 4 precisely machined metal guide pins. The RS-II's rigidity of construction, accuracy of fit and superior thermal resistance assure unerring tape travel, optimum tape-to-head contact and reduced modulation noise. The result is virtually true-to-source sound quality.

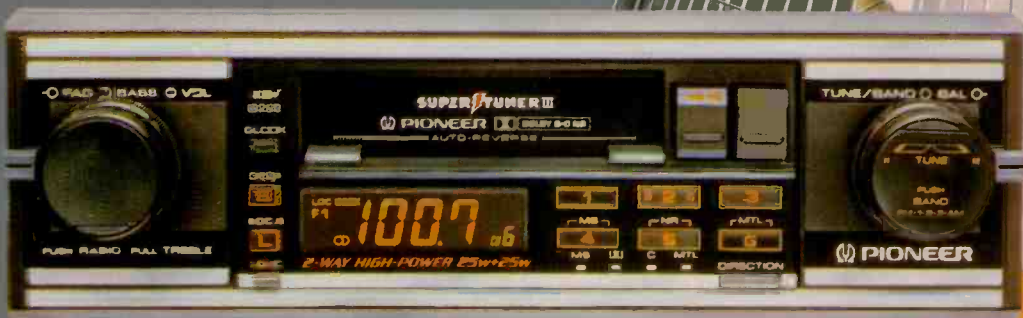
So whether you choose the outstanding SA-XG, or SA-X, with its new vibration-dampening Dual Layer Mechanism (DLM), you can be assured of one thing: An everlasting high bias honeymoon—till decibels do you part.



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## NEW PRODUCTS



### Sony

The Sony STR-AV950 receiver, with built-in surround-sound circuitry, is

rated to deliver up to 115 watts continuous power per channel. Sony's Legato Linear amplifier circuitry, combining

fixed bias with matched high-speed output transistors, is said to eliminate high-frequency switching noise and distortion. A proprietary Audio Signal Processor shortens the distance between the input and output stages. Separate power supplies and power transformers are said to eliminate electrical interference and noise between stages. Other technical features include high-current output stages and a special automatic RF attenuator. The RM-U70 Unicommander audio/video remote control is included. Price: \$750. Sony, Dept. SR, One Sony Dr., Park Ridge, NJ 07656.

**Circle 120 on reader service card**

### Design Acoustics

The Design Acoustics PS-103 speaker system has an acoustically isolated downward-firing 10-inch subwoofer, a 6-inch "midwoofer," and a 3/4-inch dome tweeter. Crossover points are 100 and 3,000 Hz. Time and phase anomalies are said to be avoided by using one driver for all midrange frequencies, and the separate trapezoidal enclosure for the midwoofer and tweeter is said to minimize diffraction effects.

Frequency response is rated as 38 to 20,000 Hz, sensitivity as 88 dB sound-pressure level at 1 meter with a 1-watt input. Nominal impedance is 8 ohms. The speakers have five-way binding posts and measure 13 1/16 inches wide, 38 1/4 inches high, and 13 1/16 inches deep. Recommended amplifier power is 30 to 250 watts per channel. Finish is solid oak. Price: \$900 a pair. Design Acoustics, Dept. SR, 1225 Commerce Dr., Stow, OH 44224.

**Circle 121 on reader service card**



### Universal

Designed for use in small to mid-size rooms, Universal's V-9100 surround-sound system comes with two pairs of full-range two-way speakers measuring 4 3/8 x 7 1/8 x 4 1/8 inches. The surround-sound component offers four modes of enhancement, including stereo synthesis for mono programs. A built-in 5-watt-per-channel amplifier is provided

for powering the four speakers; the V-9100 can be connected to an external amplifier if users desire more power. Features include Dynamic Noise Reduction, variable delay, bass and treble controls, a rear volume control, and a master volume control. Price: \$299.99. Universal Security Instruments, Dept. SR, 10324 S. Dolfield Rd., Owings Mills, MD 21117.

**Circle 122 on reader service card**

### ADS

The cones of the ADS S10, SB7, and SB10 (shown) automotive subwoofers are all made with a proprietary material, StiffLite, that has a high ratio of rigidity to mass and is said to provide exceptional transient response without internal resonances. Damped butyl surrounds are said to reduce resonances further. The subwoofers use Linear Drive motor systems, which have extra-long voice coils and complementary-magnet geometry. Cast-aluminum baskets prevent the moving systems from becoming misaligned during operation.

The SB7, intended for installation in vehicles without enclosed trunks, has dual 7-inch subwoofers housed in separate



rate braced enclosures. The SB10, also a dual-enclosure system for trunkless vehicles, has a pair of 10-inch subwoofers. The S10, with a single 10-inch subwoofer, is designed for trunk mounting. Prices: SB10, \$650; SB7, \$400; S10, \$220. ADS, Dept. SR, One Progress Way, Wilmington, MA 01887.

**Circle 123 on reader service card**

## NEW PRODUCTS



### Genesis

The Genesis Model 22 Series 2 speaker system has an inverted aluminum-alloy dome tweeter on a foam surround, a design said to result in a linear-throw piston action. The tweeter crosses over at 1,500 Hz to an 8-inch polypropylene/magnesium-silicate woofer. A 10-inch flat-piston passive radiator mounted on the rear of the cabinet, opposite the woofer, is said to help give the system a slow bass rolloff, deep-bass response, and high compliance. Dimensions are 14 x 23½ x 7½ inches. Price: \$500 a pair with oak veneer; \$440 with vinyl finish. Genesis, Dept. SR, 225 Heritage Ave., Portsmouth, NH 03801.

**Circle 124 on reader service card**



### Horizon International

The AV 3200 audio rack from Horizon International has a flip-open top compartment, two adjustable or removable shelves, and a drawer with a molded insert for audio cassettes and compact discs. The entire unit measures 20¼ inches wide, 44 inches high, and 21 inches deep, and it weighs 90 pounds. The top compartment, designed for a turntable, is just over 5 inches high. With both of the shelves removed, the middle area of the rack is 26½ inches high. The AV 3200 comes with casters, and it is available in black or white Formica finish (oak and black-ash finishes will soon be available). Price: \$399. Horizon International, Dept. SR, 1225 Connecticut Ave. NW, Suite 315, Washington, DC 20036.

**Circle 125 on reader service card**



### Sound Decor

The Sound Decor "Speaker Chairs" are designed to eliminate the "top-heavy effects" of typical pedestal-type stands. Each stand can accommodate a speaker that measures from 12 to 22 inches wide, up to 5 feet high, and up to 200 pounds. The tilt angle can be adjusted from 90 to 115 degrees. Price: \$69 per pair in medium- or dark-finish solid oak; \$89 per pair in black-lacquer finish. Montage Marketing, Dept. SR, 419 Main St., Suite 14, Huntington Beach, CA 92648.

**Circle 127 on reader service card**



### Buff Stuff

Buff Stuff's CD Saver solution is said to restore most damaged compact discs to brand-new condition. Developed to overcome audible problems caused by light scuffs and scratches, CD Saver is also said to prevent damaged discs from triggering a CD player's error-concealment circuits. Price: \$9.95 for a 30-milliliter bottle. Buff Stuff, Inc., Dept. SR, P.O. Box 43128, Upper Montclair, NJ 07043.

**Circle 126 on reader service card**



### Sanyo

High-density mounting, an ultra-thin drive mechanism, and LSI technology contribute to the small size and weight of Sanyo's CP12 portable CD player. Users can program the CP12 to play back sixteen tracks in any order, and it turns off automatically at the end of a disc or programmed sequence, or if the pause button is engaged continuously for more than 5 minutes. Features include a three-spot laser, track skip and search, and jacks for amplified speakers. The CP12 can be powered by the supplied AC adaptor, the supplied rechargeable zinc battery pack, alkaline batteries, or a car battery using an optional adaptor. Price: \$279.99. Sanyo, Dept. SR, 1200 W. Artesia Blvd., Compton, CA 90220.

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by Ian G. Masters



## Recording from AM

**Q** I do volunteer work recording music for senior citizens' groups and retirement homes, usually by selecting and assembling songs recorded from various AM radio stations. Are there receivers available with good enough AM sections for such an application?

GEORGE SCHOEN  
Brooklyn, NY

**A** That's a difficult question to answer, because AM specifications tend to be pretty sketchy and there is little to guide the consumer as to what constitutes a good AM tuner. There have been a few companies over the years that have lavished some care on this aspect of audio, but few manufacturers of stereo equipment have paid much attention, so the AM sections of most tuners and receivers today are fairly dreadful.

My own technique when I have had occasion to record from AM has been to ignore my hi-fi components altogether and record from a multiband portable radio. Even very modest ones have AM sections far superior to the ones in most hi-fi tuners.

By and large, however, such radios do not have line-level outputs, so you may have to take the signal from the headphone jack. Buy or make a Y-connector with a quarter-inch phone plug (or mini-plug, depending on the radio's headphone jack) on one end and two RCA-type phono plugs on the other.

This can then either be patched directly into your tape recorder's inputs or into a high-level input on your receiver or preamplifier. Since the headphone output will be affected by the radio's volume and tone controls, you will have to do some experimenting to find their proper settings.

Before you start, note the setting of your recorder's input level control when taping from a "normal" source, such as FM or phono; then set the control at that point and leave it. Turn the radio on and very carefully tune it to a station you wish to record. Then, with its volume control at minimum, connect the radio to the tape deck and gradually bring up the volume until the record-level meters are just at 0 VU. The meters should not move very much after that, because AM signals are typically compressed to a dynamic range of only 2 or 3 dB. Finally, adjust the radio's tone controls, if any, to get the most pleasing sound (AM signals are usually heavily equalized as well, so there is no such thing as "flat").

Finally, make sure that there are no nearby sources of interference. Television sets, fluorescent lights, and appliances with motors are the worst offenders, and these should be turned off. Even if the radio you choose can be powered by AC, you may find that the signal is cleaner when it is operating from batteries.

While these techniques will give you as good results as can be expected with AM, I wonder why you want to record from it in the first place. It's hard to imagine what sort of music might be played on AM that you could not also find on FM, but with much higher quality, particularly in your area. The benefits of the better signal would be even greater when it came to making second- or third-generation copies of your recordings.

## Equalizers in Series

**Q** I have purchased a ten-band graphic equalizer that allows separate control of the two channels and  $\pm 15$  dB of boost or cut. My receiver also includes its own  $\pm 12$ -dB, five-band equalizer, which affects both channels equally. Can the built-in equalizer be used to boost the effect of the outboard unit, or should it be left in the "flat" position and all adjustments made on the new equalizer?

ROBERT EDWARDS  
Willoughby, OH

**A** There's no real reason the two couldn't be used together, although you should take care not to overdo things—you will have the capability of varying some frequencies by as much as 27 dB, and this is far more than is

required for any rational application. Also, the center frequencies will be different for the two equalizers, so there is a potential for some rather peculiar interactions in the areas that overlap.

Either unit would probably be adequate on its own, but as long as you do have two, I would suggest you use them for different purposes. The ten-band equalizer would be suitable for smoothing out acoustic aberrations in your listening room, for instance. Once set, it could be left alone. The more modest built-in equalizer could then be used occasionally to balance program material, such as over-bright recordings, without disturbing the overall equalization of the system.

## Stereo Imaging

**Q** With stereo recordings, I can understand why a solo voice or an instrument such as an oboe might seem to move about the "sound stage." But why does the same thing sometimes happen with a piano?

JOHN W. KUNTZE  
Charlotte, NC

**A** Occasionally it is the result of an artistic decision by the recording engineer. Except perhaps with classical music, there is no particular virtue in having an instrument sound exactly as if it were present in your listening room. If a producer can create an interesting effect—tonally by using equalization or spatially by manipulating the imaging—he often will do so, even if it bears little resemblance to reality.

The effect you hear may also, however, be a flaw in the recording technique. Even in classical recordings, engineers often choose to place their microphones very close to their subjects. As singers or oboists turn their heads, or slightly alter their relative distance from the microphones, they may seem to leap back and forth across the stage. Pianos can seem to be 20 feet wide, with bass notes coming out of one speaker, treble ones out of the other.

It is also common to use a number of separate microphones for each instrument, "placing" the sound in the correct apparent location later by electronic manipulation. Slight adjustments of the controls during mixdown can often make the instrument seem to wander back and forth.

Such unstable images are normally tolerable unless they are emphasized by the playback equipment. Speakers with less-than-perfect imaging may make it difficult for a listener to localize on a center image, with the result that an adequately recorded instrument may seem to move back and forth between speakers.

# Impress Your Speakers

Let's face it—car speakers can be pretty blasé! It takes sheer gut-wrenching power to impress them, and Coustic car amplifiers deliver just that, along with amazing clarity and solid resolution.

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In bridged mode, the HEX-FET® switching power supply develops *substantially* more power into 3 ohms than into 4 ohms. For example, the AMP-380 delivers 175 watts RMS mono into 4 ohms and over **300 watts RMS** into 8 ohms!

This means it is not necessary for you to buy two power amplifiers to drive your speakers when the AMP-190/AMP-380 can produce double the power of most other car amplifiers...that's twice the power for virtually half the price.

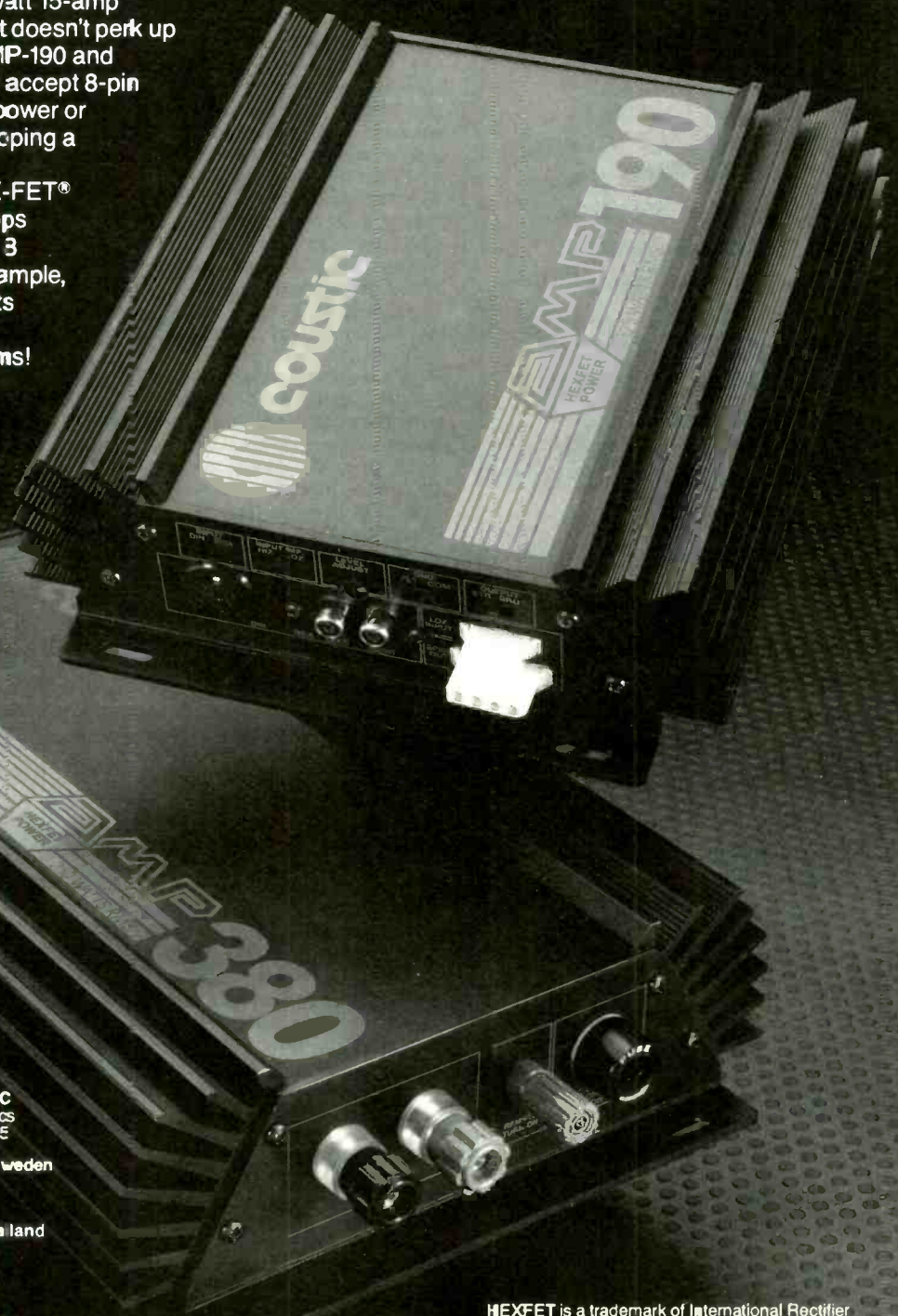
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*Stereo Review* wants to know more about our readers. How much equipment you buy (and how often), how much you spend on it, what sort of product features you like. And we've created the Stereo Review Buyer Poll to gather this important information.

We need your help to make the Buyer Poll work. If you've bought any audio/video equipment *within the past 30 days*, we'd like you to participate.

Simply turn to the Reader Service/Buyer Poll card in this issue. (You can locate it in the Table of Contents.) You'll find full instructions on the card.

We hope you'll join us this month—and every month in which you buy audio/video equipment. Your answers are important to us—and you'll find the resulting benefits important to you.

*Turn to the Buyer Poll now—and thanks for helping us out!*

## Stereo Review

### Headphone Sound

**Q** *I am impressed by the amazing sound—from organ pedal notes to tinkling triangles—from my miniature earphones. How can a half-inch diaphragm produce such a wide range?*

ROY VANDERBURG  
Albany, NY

**A** Since your eardrums can respond to such a range, it shouldn't be surprising that a device with perhaps ten times the surface area can produce it. With conventional audio systems—that is, using loudspeakers—you must contend with a lot of physical laws that conspire to degrade the sound before it ever gets to your ears. For instance, in a real acoustic environment, such as a listening room, high frequencies do a couple of things. First, they "beam" (that is, they are directional), so to the extent that you are even slightly off a tweeter's axis, treble sounds will be attenuated. Second, high-frequency signals naturally roll off the farther away you get from the source, so unless you are willing to sit with your ear pressed against the speaker you will perceive less treble than the speaker is actually producing.

With headphones you *can't* be off-axis; the phones are pumping the signal directly into your ears. Neither do you suffer from the rolloff that comes with distance, since the transducer is typically less than an inch from your eardrum. In terms of high-frequency energy, headphones receive exactly the same signal as speakers, but you get all of it.

At low frequencies, speakers produce an enormous amount of wasted energy. Bass is essentially omnidirectional, radiating equally in all directions. The amount that finally reaches your ear is a minuscule percentage of the total, which means that speakers must put out a prodigious amount of low-frequency energy for you to hear adequate bass. The tiny element in an earphone produces very little energy at the low end, but since the phone is closely coupled to your ear canal, very little is lost.

With speakers, the acoustic environment has an effect on sounds at all frequencies. Furnishings can absorb or reflect treble, and bass is subject to influence by the physical dimensions of the listening room (standing waves can boost or cancel certain frequencies) as well as by the limitations of the speakers themselves. Headphones have fewer restraints—whatever the diaphragm produces, you are likely to hear.

Even so, headphones are far from perfect reproducers of sound. Certainly they are able to produce very strong treble and surprisingly robust bass, but that doesn't mean that the frequency spectrum is balanced.

An earphone sets up a pressure system in the ear canal that is quite effective at transmitting to the eardrum exactly what the transducer is producing—if it's capable of a technically flat response, that's what you will hear. Unfortunately, the ear itself is not a flat-response device. All those twists and turns in the outer ear have a dramatic effect on what we normally hear. A flat signal reaching the outer ear is profoundly modified before it reaches the eardrum. It seems flat to us because that's what we're used to—all normally transmitted sounds are modified the same way—but on a response curve, the signal reaching the eardrum would look like a map of the Yucatan Peninsula.

Headphones bypass the twists and turns of the outer ear, so to sound natural their response curve would have to approximate very closely the net acoustic effect the outer ear has on a flat signal. Because no two ears are alike, this can only be approximated.

To complicate things further, most recordings are engineered to be played through speakers in a real acoustic environment. Headphones give such material an exaggerated, wider-than-life sound, characterized by the "soloist-in-the-middle-of-the-head" effect. This sound quality has its appeal, but it's not accurate. Headphones can certainly do remarkable things, and they have a very important place in audio. But they should be appreciated for what they are: convenient, pleasant, portable, but, so far, specialized devices with definite limitations.

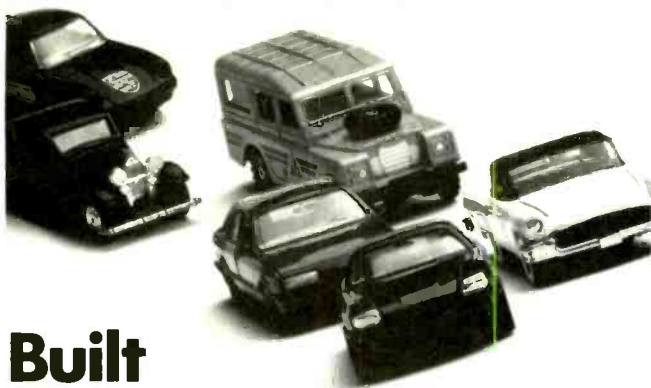
### CD Interference

**Q** *Whenever I switch on my CD player, I notice a loss in my tuner's reception quality. Is this a common problem or one unique to my situation?*

JEROEN DE VOS  
Montezuma, NM

**A** It's hardly unique. Before a CD player spits out an audio signal, it deals in very high frequencies—radio frequencies, in fact. To a great extent these are contained by shielding, but inevitably some do leak out, and they can affect the performance of nearby radio equipment. The effect is minimal, in my experience, but it does exist.

To prevent it, the easiest method is to keep the CD player as far away from the tuner as possible. If your system is stacked, keeping a couple of other components between the two is usually enough to get rid of the problem. Alternatively, turn the CD player off when you're not listening to it—there can't be many occasions when you wish to have both the radio and a compact disc playing at the same time. □

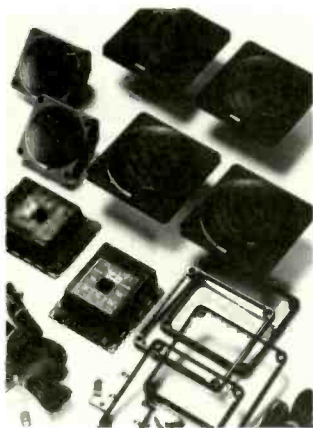


# Built for the Long Haul

**It's a mistake to assume that just because a car loudspeaker sounds and looks good when you buy it, it will sound and look good three or seven or twelve years from now.**

The fact is that many car loudspeakers simply aren't built for a 150,000 mile haul punctuated by scorching heat, chilling cold, oppressive humidity, rough roads, damaging ultra-violet rays and kids' baseball bats.

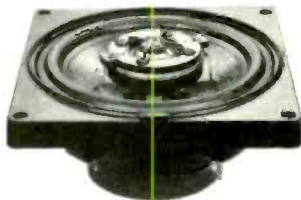
But a Canton automotive speaker system—designed and built in West Germany for service anywhere in the world, including the tropics—will last and perform to spec as long as your car stays in one piece.



Pullman Set flush-mount speaker systems come in a wide variety of configurations, with highly adaptable mounting hardware.

## Superior Sonic Performance

All eight Canton auto speaker systems are made of materials and components that are proven to stand up to the tough automotive environment.



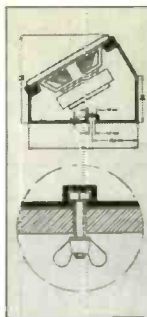
All Canton models, such as this new CX 160 coaxial, are built for the tough automotive

environment—with die-cast frames, treated cellulose cones and built surrounds.

For instance, specially treated cellulose cones insure that moisture, heat and UV deterioration won't compromise performance. Built surrounds won't decompose, like foam will. Rugged, precision-die-cast frames allow for greater structural integrity. Perforated metal grilles can take the punishment of bat, boot or any other blunt instrument.

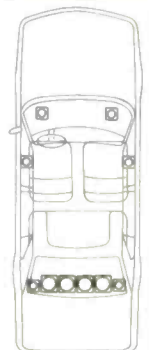
That quality of construction actually translates into superior sonic performance.

For easy installation and optimum flexibility, nothing equals the Pullman and HC 100 surface-mount systems.



A detail like the die-cast frame can produce finer design tolerances, which result in better transient response, more potent low end and reduced midrange intermodulation distortion.

You can hear the difference, not just today but for as long as you own your car. When you upgrade to CD or DAT, your Canton speakers will be as ready as they were the day they were installed.



The HC 100 and other Canton systems aren't built only for the automotive long haul. They'll last every bit as long in your boat, your RV or your home.

Canton's flush-mount "Set" series turns doors and trunk into speaker enclosures, generating powerful bass and high performance sound.



## Finest Fit and Finish

Beyond sonic performance, all eight systems—from the new flush-mount Set 600 and co-ax CX 160 to the surface-mount Pullman—share a fit and finish worthy of the finest cars in the world. If the basic black color isn't quite right, they can be painted with any high-quality automotive paint.

And their wide range of configurations makes them adaptable to virtually any

Don't like the idea of having holes cut in your car? But you want great sound? Canton's

Pullman and HC 100 surface-mount systems are the answer.

situation, from Honda CRX to Mercedes stretch limo.

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## BLAUPUNKT BERLIN TQR07

by Julian Hirsch and Michael Smolen

**T**HE new Blaupunkt Berlin TQR07 is a deluxe two-piece AM/FM cassette tuner whose line-level outputs are designed to drive one or two external stereo power amplifiers in installations with two, four, or more speakers. Although the Berlin head unit fits a DIN-standard dashboard cutout, it provides an extraordinary array of control and operating capabilities. The knobless control module, which also contains the tape deck, is entirely pushbutton operated. A similar-sized tuner module, which has no controls, is connected to the head unit by two cables.

The Blaupunkt Berlin is a diversity receiver, using two antennas several feet apart to reduce the effects of multipath on FM reception, but nowhere in the instruction manual or the installation instructions is this mentioned, nor are there any recommendations for antenna placement. The installation diagram, however, shows two unmarked antenna jacks on the tuner.

Because most of the buttons and displays perform several functions, the Berlin's control panel is relatively uncluttered. In tuner mode the luminous alphanumeric master display shows the selected band and memory bank (which Blaupunkt calls a "memory level"), the station frequency, and the presence of a stereo subcarrier. A second multifunction display panel shows the frequencies of the four stations entered into the selected memory bank, and four small buttons select the preset channels. When a cassette is inserted into its slot, the frequency display is replaced by the word TAPE and an arrow showing the

direction of tape play, the preset buttons become the tape-transport controls, and the multifunction display markings change to FR, FF, REV, or PLY (play) to indicate the transport mode.

Touching the TIME button converts the frequency display to a clock for a few seconds. Other push-buttons toggle the power on and off, step through the three tuning bands, activate the STORE mode for memorizing station frequencies, and activate the "automatic volume control" (AVC). According to the manual, the AVC feature adjusts the average volume level to compensate for changes in ambient noise.

Numbered buttons across the bottom of the panel select one of four memory banks. Each bank can store the frequencies of four stations in each of three bands, AM, FM, and FM ARI (for "automatic road information"), giving a total of forty-eight preset station frequencies. In addition, the Blaupunkt Berlin has a TRAVEL STORE feature that automatically scans a band and stores the frequencies of the sixteen strongest received signals. This brings the total possible storage ability to *ninety-six* stations.

Also along the bottom of the panel are two buttons marked with arrows, which shift the tuner up or down in frequency. Normally it operates in a scan mode, stopping on each receivable signal. Another button converts it to manual tuning. To the right of the tuning buttons are two similar buttons that electronically shift the volume up or down in discrete steps.

The MODE button changes the functions of all the memory-bank,

tuning, and volume buttons. The first two memory-bank selectors now serve as the bass tone controls, shifting the bass response through three boost and four cut steps. The second two buttons perform a similar function for the treble tone control, with the display showing TR. The two tuning buttons become the left/right balance adjustment (BL), with seventeen steps from +8 to -8. Finally, the volume buttons serve as a front/rear fader (FA), with an eight-step range.

The remaining controls are located just below the cassette opening. Except for the manual tuning button (identified by a lower-case "m"), they are somewhat cryptically marked. In the tuner mode, the one marked M-PS-SCA initiates a band scan. When a tape is playing, it operates the music-scan function, which fast-winds the tape in either direction to the next selection.

The next button is identified by MTL (for metal/chrome tape equalization) and a pair of less-obvious symbols for tuner functions. In AM reception, this control reduces the tuner bandwidth from 9 kHz to 4.5 kHz. In FM reception, it switches the tuner to mono mode.

The last button is marked by the well-known Dolby double-D symbol, followed by a pair of dots. In tape playback, it toggles between Dolby B and Dolby C noise reduction or shuts off the Dolby system entirely. In tuner mode, it increases the sensitivity so that an automatic band scan will detect weaker signals. The Berlin has a security-code feature to prevent its operation if it is removed from the car. The price of the Blaupunkt Berlin TQR07 is \$1,499.95. Blaupunkt, Dept. SR, 2800 S. 25th Ave., Broadview, IL 60153.

### Lab Tests

The only specifications provided for the Berlin TQR07 are its radio bands, FM frequency response (35 to 16,000 Hz), tape frequency response (40 to 18,000 Hz), and approximate tone-control adjustment range ( $\pm 12$  dB).

Our FM usable-sensitivity reading of 22.5 dBf (3.7 microvolts, or  $\mu$ V) was only fair, but shifting the signal frequency by only 18 kHz improved

# CAR STEREO

it to an excellent 11 dBf (1  $\mu$ V). The tuner's actual performance at all usable signal levels, however, was virtually unaffected by this frequency difference.

Although the Berlin's FM tuner had reasonably low noise levels, its distortion was relatively high. As with most car radios, the stereo channels are progressively blended at reduced signal levels to minimize noise. With inputs of 45 dBf (50  $\mu$ V) or more, the separation was a maximum of 38 dB at 1,000 Hz, falling to about 17 dB at 30 Hz and 25 dB at 10,000 Hz. At 25 dBf (5  $\mu$ V), chan-

nel separation was a relatively constant 18 to 22 dB across the audio frequency range.

Most of the tuner's other performance measurements ranged from ordinary to good. Alternate-channel selectivity could not be measured, probably because of desensitization by the tuner's automatic gain control (AGC) system, and the very good 8-dB adjacent-channel reading is suspect for the same reason. We have chosen to define the stereo threshold as the input signal level with which a tuner's output has decreased by 6 dB from its maxi-

mum. For this tuner, the threshold was 24 dBf (4.4  $\mu$ V).

The Berlin has a nondefeatable loudness-compensation circuit that boosts the low frequencies as the volume is reduced from maximum. Even at maximum volume, the response decreased smoothly with frequency, falling by about 5 dB between 200 and 15,000 Hz, and the effect was exaggerated at any usable volume setting. The output also fell off at low frequencies, decreasing by 10 dB between 50 and 20 Hz.

The AM response was excellent, with the greatest high-frequency extension we have encountered in years. It was flat through the midrange, falling to -6 dB at 70 and 7,000 Hz. The bandwidth-compression feature shifted the high-frequency cutoff point downward by an octave, although it was still better than we have measured from most contemporary AM tuners.

The tone controls had little effect on the midrange, between 500 and 3,000 Hz, but acted powerfully at low and high frequencies. The maximum range was about  $\pm 15$  dB at 40 to 50 Hz,  $\pm 10$  dB at 20,000 Hz. The audio output clipped at 2.3 volts, but at or near the maximum volume setting clipping occurred well below the full output level from a tape or tuner source, making it imperative to set the volume as low as possible. This problem is implied by one of the manual's few installation hints.

Except for the effects of the steeply falling bass response below 100 Hz built into the unit's audio section, the tape player had excellent frequency response. There was little difference between the response in the forward and reverse directions, and the steadiness of the output level at high frequencies indicated exceptional contact (for a car tape deck) between head and tape.

The forward and reverse arrows on the main display were misleading, pointing to the right for reverse and left for forward, although they agreed with the manual. The REV and PLY indicators also seemed illogically marked. While a tape is playing, REV is displayed but in a fast-speed mode the display changes to PLY. It turns out that the display indication refers to the *next* ex-

## FEATURES

- Digital-synthesis AM/FM tuner
- Reception of Automatic Road Information transmissions
- FM diversity reception with dual antennas
- Selectable AM bandwidth
- Preset memories for up to forty-eight stations in normal store mode; forty-eight additional memories for automatic preset of strongest signals in TRAVEL STORE mode
- Multifunction display for preset frequencies, tape-play modes
- Master display for tuned frequency, band, memory bank, stereo reception, AM narrow-band mode, tape direction, time
- Auto scan or manual tuning
- Dolby B and Dolby C noise reduction
- Selectable 70- or 120-microsecond tape playback equalization
- Tape program search
- Line-level audio outputs
- Anti-theft code system
- Data Bus linking circuitry for future options

## LABORATORY MEASUREMENTS

- Tuner Section** (all measurements for FM only except frequency response)
  - Mono usable sensitivity (75-ohm input): 22.5 dBf (3.7  $\mu$ V)
  - 50-dB quieting sensitivity (75-ohm input): mono, 13 dBf (1.25  $\mu$ V); stereo, 30.5 dBf (9.2  $\mu$ V)
  - Signal-to-noise ratio at 65 dBf: mono, 73.2 dB; stereo, 71 dB
  - Harmonic distortion (THD + noise) at 65 dBf: mono, 1.8%; stereo, 2.4%
  - AM rejection at 65 dBf: 72 dB
  - Selectivity: alternate-channel, not measurable (see text); adjacent-channel, 8 dB (see text)
  - Stereo channel separation at 100, 1,000, and 10,000 Hz: 26, 38, and 22.5 dB
  - Frequency response: FM, 30 to 15,000 Hz  $\pm 1$ , -3.5 dB; AM, -6 dB at 70 and 7,000 Hz
- Tape Deck**
  - Tape playback frequency response (standard IEC test tapes): 120- $\mu$ s EQ, 31.5 to 18,000 Hz  $\pm 1.5$ , -14 dB forward and reverse; 70- $\mu$ s EQ, 31.5 to 18,000 Hz  $\pm 2$ , -14 dB forward, +0.5, -14 dB reverse
  - Tape signal-to-noise ratio (A-weighted, referred to 250 nWb/m at 315 Hz, 120- $\mu$ s EQ): no noise reduction, 53.7 dB; Dolby B, 60.5 dB; Dolby C, 66.5 dB
  - Flutter: 0.13% JIS-weighted rms,  $\pm 0.22\%$  CCIR-weighted peak at start of tape; 0.16% JIS-weighted rms,  $\pm 0.25\%$  CCIR-weighted peak at end of tape
  - Tape speed accuracy: +1.1% at start of tape, -1.0% at end of tape
  - Fast rewind time (C-60): 98 seconds
- Audio Control Section**
  - Tone-control range: +12, -11 dB at 100 Hz;  $\pm 7.5$  dB at 10,000 Hz
  - Line output at clipping (into EIA load): 2.3 volts

## CAR STEREO

pected effect of a control operation, not the *current* state of the tape transport.

We confess to strongly mixed feelings about the Blaupunkt Berlin TQR07. It is without a doubt the most versatile and sophisticated automobile tuner/cassette player we have tested. An amazing number of features have been built into the compact head unit, and the use of multifunction displays and control buttons makes the panel of the Berlin one of the least cluttered that we have seen.

In most respects, the actual performance of the tuner and cassette player was at least competent. Very few car radios can match the overall performance of almost any home stereo receiver, and this one is no exception. Fortunately, most of its measured shortcomings did not produce audible effects. Many of the surprises we encountered in testing and using the radio apparently derived from design choices by Blaupunkt's engineers. These include the nondefeatable loudness compensation and the fixed low-frequency rolloff as well as some of the control and display labeling.

Most of our other problems arose because of important omissions from the operating and installation instructions. We found the omission of specific information on the ARI system to be annoying, and we were never certain that the tuner was operating properly in the ARI mode. Also missing is an explanation of the automatic volume control system, a surprising oversight in view of the obvious convenience of such a feature.

Anyone who has difficulty in programming a VCR, for example, is unlikely to be able to use the Blaupunkt Berlin TQR07. On the other hand, with careful study of the manual and plenty of hands-on practice, you could find it to be one of the most versatile automobile music systems now available. *J.H.*

### Road Tests

Installing the Blaupunkt Berlin in the small cockpit of my Toyota was no mean feat. Unlike many head units that have a separate, flat box for the tuner/control circuitry, the Berlin's tuner module is the same

size as the in-dash unit. It required some tricky placement to install—I had to put it under the dashboard instead of being able to utilize the available space under the passenger seat or floor mat.

Another problem was the poorly written instructions. I was able to get the Berlin hooked up only with the aid of experience. A novice installer should definitely leave the job to professionals—considering the price of the Berlin, it would be a shame to make a mistake during installation.

Once installed, however, the Berlin proved to be a marvel of modern autosound technology. In fact, its 16-bit, 32K microprocessor and Data Bus linking system make installing the Berlin in your car something like wiring a full-blown computer to a 12-volt battery.

Despite its many advanced features—diversity tuning, automatic best-station presets, user-programmable security code, multifunction display, etc.—the Berlin is also a prime example of superior ergonomics and user-friendliness. I quickly learned its features, and I felt comfortable with the twenty-two tilted front-panel controls just a few miles into the road test. The well-lit display was both easy to read and very informative.

The Berlin's advanced Codem III high-dynamic-range tuner performed very well throughout my open-country road trip. Its dual discrete tuners and two antenna inputs provided more consistent, good-sounding reception than I have heard from a car radio in some time. And the best-station automatic access system allowed easy hands-off storage of the sixteen strongest FM and AM stations (even C-Quam format AM stereo). Combining this system with the ability to store up to sixteen more AM and FM stations manually, and given the current state of radio broadcasting, I couldn't have filled all the memory banks if I'd wanted to.

After putting the tuner through its paces, I went in search of some killer New England chuckholes to see how well the Berlin's cassette mechanism would hold up. Simply put, while I had no trouble with the Berlin's cassette transport, I soon began

to fear for my car's front end instead. The full-logic cassette section performed flawlessly and fairly silently—no clunky mechanical noises were apparent.

The system through which I listened to the Berlin included a 70-watt Concord amplifier for the rear channels, a 45-watt Linear Power amplifier for the front channels, an Alpine graphic equalizer, ADS speakers in the rear, and AR speakers in the front. My test tapes include a full range of music, from heavy-metal to string quartets, recorded on a Nakamichi Dragon with TDK MA (metal) tapes alternately using Dolby B, Dolby C, and no noise reduction. I also use one tape recorded on the excellent NAD 6300 cassette deck, which has a special CAR circuit that provides a 20-dB boost to all low-level sounds.

The combination of the Berlin with the rest of my system provided some truly spectacular listening. Full, rich low-frequency information, an accurate midrange, and a crisp, undistorted high end were all evident, leaving me with nothing but good feelings for the Blaupunkt Berlin TQR07.

One especially nice feature of the Berlin, with audible benefits, is its automatic volume control (AVC) system. When engaged, the AVC continually monitors the ambient noise level inside the car—there's actually a microphone built into the rear of the main chassis—and automatically adjusts the program volume level to provide a constant relative volume regardless of wind and road noise. In addition, the Berlin provides three levels of automatic loudness compensation.

Frankly, I find \$1,500 an exorbitant price for *any* car stereo head unit, and although the Berlin sounded magnificent, I've heard some relatively inexpensive CD systems that can easily rub shoulders with it. But considering its Data Bus linking circuitry geared for future options such as electronic map systems and its superior overall cassette and tuner performance, I guess that's the price we have to pay for advanced technology. Now, if only Blaupunkt had incorporated a front-panel CD input . . . *M.S.*  
**Circle 139 on reader service card**



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| <p>349324. South Pacific. K. Ie Kanawa, J. Carreras, etc. (Digital—CBS)</p> <p>348458. Dvorak: Cello Concerto—Yo-Yo Ma; Moazel, Berlin Phil. (Digital—CBS Masterworks)</p> <p>347153. Cyndi Lauper—True Colors. (Portrait)</p> <p>346643. Andreas Vollenweider—Down To The Moon. (CBS)</p> <p>346478. Madonna—True Blue. (Sire)</p> <p>352328. The Psychedelic Furs—Midnight To Midnight. (Columbia)</p> <p>348979. Tina Turner—Break Every Rule. (Capitol)</p> <p>343319. Janet Jackson—Control. (A&amp;M)</p> <p>349571. Boston—Third Stage. (MCA)</p> | <p>347492. Glenn Miller Orchestra—In The Digital Mood. (Digital—GRP)</p> <p>293597. Led Zeppelin—Houses Of The Holy. (Atlantic)</p> <p>350736. Rolling Stones—Rewind. (Rolling Stones Records)</p> <p>339044. Mozart: Symphony No. 40 &amp; 41 (Jupiter)—Kubelik, Bavarian Radio Symphony. (Digital—CBS Masterworks)</p> <p>344622. Anita Baker—Rapture. (Elektra)</p> <p>345777. Peter Gabriel—So. (Geffen)</p> <p>334391. Whitney Houston. (Arista)</p> <p>319996-399998. Motown's 25 #1 Hits From 25 Years. (Motown)</p> <p>340323. Sade—Promise. (Portrait)</p> | <p>308049. Creedence Clearwater Revival Featuring John Fogerty/Chronicle. 20 greatest hits. (Fantasy)</p> <p>343582. Van Halen—5150. (Warner Bros.)</p> <p>339226. Gershwin: Rhapsody In Blue; Second Rhapsody, etc.—M. Tilson Thomas, Los Angeles Phil. (Digital—CBS Masterworks)</p> <p>326629. Bruce Springsteen—Born In The U.S.A. (Columbia)</p> <p>342097. Barbra Streisand—The Broadway Album. (Columbia)</p> <p>351516. Vladimir Horowitz Plays Chopin. (Digitally Remastered—CBS Masterworks)</p> | <p>343095. Philip Glass—Songs From Liquid Days. (CBS)</p> <p>219477. Simon &amp; Garfunkel's Greatest Hits. (Columbia)</p> <p>316604. Tchaikovsky: 1812 Overture; Marche Slave; Beethoven: Wellington's Victory—Moazel, Vienna Philharm. (Digital—CBS Masterworks)</p> <p>343251. Bach: Goldberg Variations. Glenn Gould. (Digital—CBS Masterworks)</p> <p>336222. Dire Straits—Brothers In Arms. (Warner Bros.)</p> <p>351122. Europe—The Final Countdown. (Epic)</p> <p>347039. Billy Idol—Whiplash Smile. (Chrysalis)</p> <p>287003. Eagles—Their Greatest Hits 1971-1975. (Asylum)</p> | <p>348649. The Pachelbel Canon And Other Digital Delights. The Toronto Chamber Orchestra. (Digital—Fantare)</p> <p>341073. Steely Dan—A Decade Of Steely Dan. (MCA)</p> <p>349373. Beethoven: Symphony No. 9 (Choral)—Bernstein, N.Y. Phil. (Digitally Remastered—CBS Masterworks)</p> <p>348110. Buddy Holly—From The Original Master Tapes. (Digitally Remastered—MCA)</p> <p>352245. David Sanborn—A Change Of Heart. (Warner Bros.)</p> <p>349670. Teresa Stratas Sings Weill—Y Chamber Symphony. Gerard Schwarz. (Digital—Nonesuch)</p> | <p>348318. The Police—Every Breath You Take—The Singles. (A&amp;M)</p> <p>346312. Billy Joel—The Bridge. (Digital—Columbia)</p> <p>344721. Lionel Richie—Dancing On The Ceiling. (Motown)</p> <p>353037. Miles Davis—Sketches Of Spain. (Digitally Remastered—CBS Masterworks)</p> <p>352666. REO Speedwagon—Life As We Know It. (Epic)</p> <p>355164. Favorite Encores. Vladimir Horowitz, Piano (Digitally Remastered—CBS Masterworks)</p> <p>336396-396390. Billy Joel's Greatest Hits, Vol. 1 &amp; 2. (Columbia)</p> | <p>349985. Johnny Mathis/Henry Mancini—The Hollywood Musicals. (Columbia)</p> <p>339903. The Cars—Greatest Hits. (Elektra)</p> <p>345785. Top Gun—Soundtrack. (Columbia)</p> <p>345553. Branford Marsalis—Romances For Saxophone. (Digital—CBS Masterworks)</p> <p>348987-398982. Linda Ronstadt—Round Midnight. (Asylum)</p> <p>341305. Robert Palmer—Riptide. (Island)</p> <p>353045. Miles Davis—Kind Of Blue. (Digitally Remastered—Columbia)</p> <p>354985. Billie Holiday—From The Original Decca Masters. (MCA)</p> <p>353607. Lou Gramm—Ready Or Not. (Atlantic)</p> |
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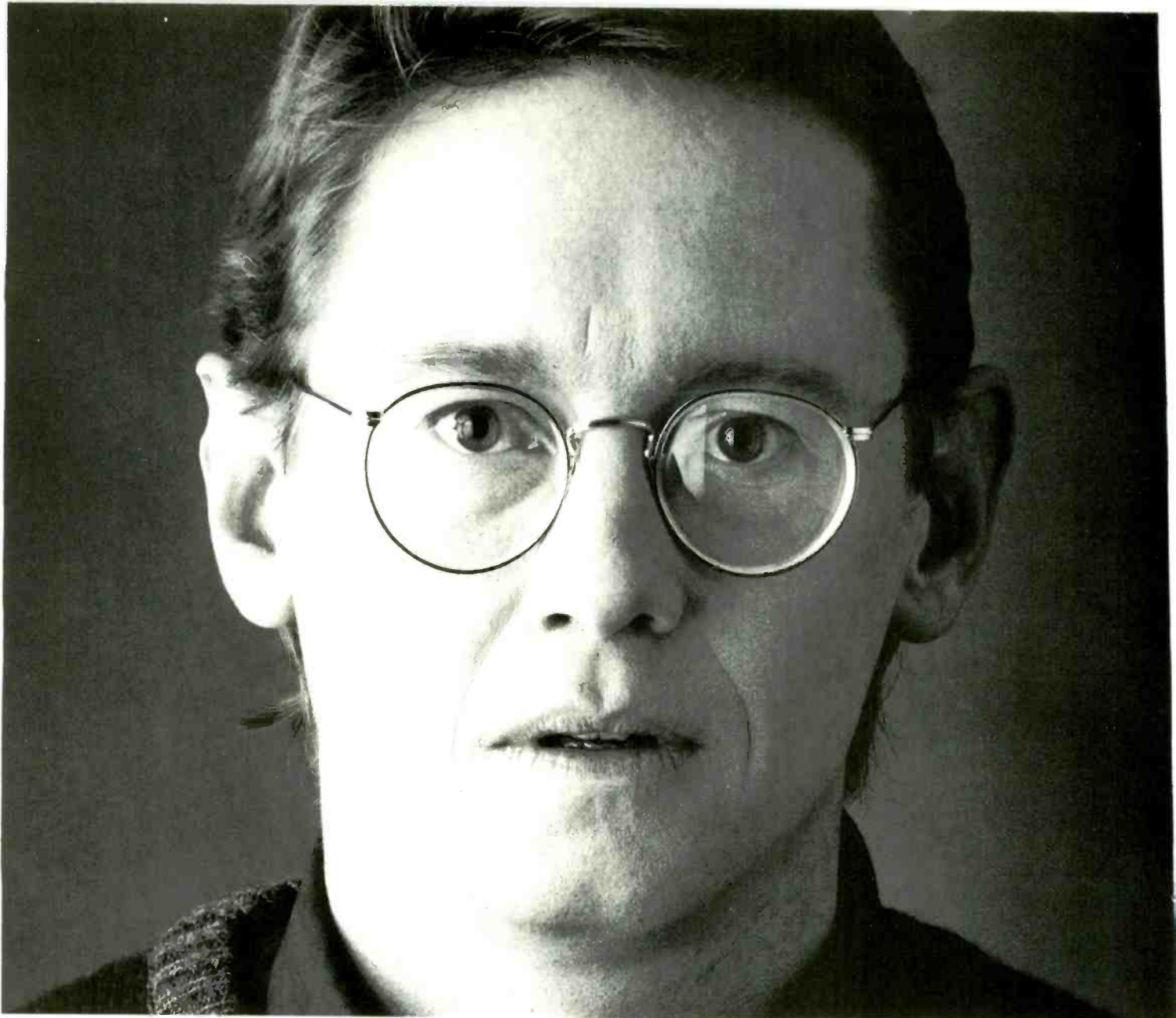
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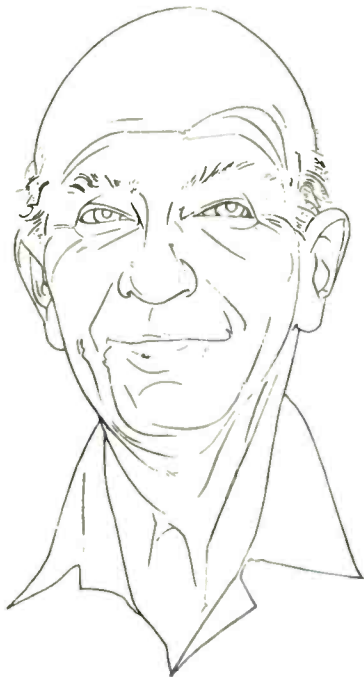
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CIRCLE NO. 2 ON READER SERVICE CARD

by Julian Hirsch



## Testing CD Players

IT has been some time since I have discussed the testing of CD players. When these products first reached the marketplace more than four years ago, there were no measurement standards and few test discs. The Sony YEDS 2 and the Philips TS3 were all I had to begin with, and my measurements were determined by the test tracks on those discs.

Happily, the situation has changed considerably since those days. Many test discs are now available, and specific test standards have been prepared, both in this country and elsewhere. Although we may think of test discs and test standards as separate entities, they are actually inseparable. The performance of a CD player cannot be measured without a suitable disc, and each disc provides specialized tracks that may be required by certain tests and not by others.

The Compact Disc Committee of the EIA (Electronic Industries Association) has been working for several years on a test standard for CD players. Though not yet officially

released, the standard is essentially complete. The associated test disc, developed by the late CBS Technology Center, is the CD-1.

Like its Japanese (EIAJ) equivalent, the EIA standard is comprehensive, defining almost every measurement that might be made on a CD player. Many of these are equivalent to similar measurements made on other types of audio components. Others are unique to CD players and are related to the digital properties of the format. Some of the more specialized tests defined in an overall CD measurement standard are of interest to designers and manufacturers but not necessarily to consumers or those who evaluate consumer products.

The key parameters of a CD player's performance are its output level, channel separation, signal-to-noise ratio (S/N), frequency response, distortion, and dynamic range. Others of lesser interest include square-wave response, phase shift, absolute polarity, linearity down to very low levels such as -90 or -100 dB, pitch error, and wow-and-flutter. For our STEREO REVIEW test reports, we measure all the key parameters as well as square-wave response (in order to establish whether digital or analog filtering is used). We also listen to the output from very low-level signals in an effort to hear differences in the way different machines decode these signals. So far, we have found that audible differences are rare, and in any case they would not be detectable on musical program material.

The American and Japanese CD standards call for an output level of 2 volts  $\pm$  5 percent, and almost all

machines meet this spec. We measure the output with an EIA standard load of 10,000 ohms in parallel with a 1,000-picofarad capacitor, which with some players drops the output close to or below the 5 percent limit and on others has little or no effect on level. The 2-volt level is based on a 0-dB, 1,000-Hz recorded signal, which is available as a reference on all the test discs.

Channel separation is measured at 1,000 Hz and at other frequencies from 100 to 20,000 Hz. Its measurement requires a 0-dB test tone, separately recorded in the left and right channels (the reference for level measurement is recorded as a mono, or L + R, signal). Incidentally, the test frequencies on a CD generally differ slightly from their nominal values, such as 997 or 1,001 Hz instead of 1,000 Hz. The reason for this is that prime numbers (divisible only by themselves and one) are chosen as test frequencies to avoid correlation with the 44,100-Hz sampling frequency of the CD format.

The channel-separation measurements, like some of the others, require a spectrum analyzer capable of selectively measuring a specific frequency component down to very low levels. Some CD players have better than 100 dB separation, which means that the signal level in the "off" channel is less than 20 microvolts. The S/N measurement begins with measuring the player's output from a 0-dB reference signal, which is normally very close to 2 volts. Then a silent track (recorded with an all-zero digital code) is played through an A-weighting filter that reduces the output below 500 Hz and above 10,000 Hz, and the filter output is measured on a sensitive voltmeter (noisemeter). As with channel separation, this measurement is normally in the microvolt range.

Many test discs provide only spot frequency tones for frequency-response measurement. Though convenient for manual data recording, these are slow and undesirable for automatic plotting. Most recent test discs include both swept and spot frequency test bands. We still use Philips 410 055-2 (Test Sample 3, or TS3) for our response plotting, since its 20- to 20,000-Hz sweep is com-

### Tested This Month

*Thorens TD 520 Turntable*  
*Magnat MSP 300 Speaker*  
*Nakamichi OMS-2A*  
*Compact Disc Player*  
*Sherwood S-2770RCP*  
*Receiver*  
*Focus .7 High Definition*  
*Monitor Speaker*

patible with the range of our Urei tracking response plotter. The EIAJ test disc sweeps from 16 to 20,000 Hz, and the new CBS CD-1 disc sweeps from 5 to 22,050 Hz. Both of these also have spot frequency tracks covering the full range from 4 to 20,000 Hz.

At the higher signal levels, distortion can be measured with a standard distortion analyzer, which nulls out the fundamental frequency component and measures the residual signal, including any noise that might be present, as a percentage of the fundamental signal. This measurement is referred to as total harmonic distortion plus noise (THD + N). Most test CD's have a series of 0-dB tones recorded at different frequencies in the audio range or a series of 1,000-Hz tones recorded at levels from 0 to -90 dB. We normally measure the 1,000-Hz distortion at levels from 0 to -20 dB.

Lower-level THD + N measurements are meaningless, since they tend to include more noise than actual harmonic distortion. Low-level distortion measurements require a spectrum analyzer and a lot of patience. At the lowest levels (-90 or -100 dB), a very narrow measurement bandwidth and a long scan time are needed to isolate the distortion components from the noise, and we rarely attempt to make this measurement.

Dynamic range is measured much like signal-to-noise ratio, except that the measurement is of the residual playback distortion from a -60-dB, 1,000-Hz test signal instead of the residual noise in the absence of a signal. This residual distortion (which is best measured on a spectrum analyzer) is usually around -30 or -40 dB relative to the -60-dB signal level. Since it is actually referred to the output from a 0-dB signal, the dynamic-range measurement typically falls in the range of 90 to 100 dB. Numerically, dynamic range and signal-to-noise ratio are generally quite similar.

We measure phase shift between channels by displaying the outputs of the two channels from a 0-dB, L + R signal on an oscilloscope. A 0-degree phase difference produces a straight line at a 45-degree angle, opening up to an ellipse as a phase

difference occurs and becoming a circle at 90 degrees.

Measurements from the oscilloscope display enable us to calculate the phase angle between the left and right signals as a function of frequency. This angle is not particularly important in itself, but it does tell us whether the player uses a single digital-to-analog (D/A) converter multiplexed between the two channels (which normally gives an 82-degree shift at 20,000 Hz) or whether each channel has its own converter (which gives close to a zero phase angle).

The maximum phase difference is halved by double oversampling and

*The key parameters of a CD player's performance are its output level, signal-to-noise ratio, channel separation, frequency response, distortion, and dynamic range.*

cut to one-fourth by quadruple oversampling. Together with the ringing superimposed on the square-wave signal provided on many test discs, which shows whether digital filtering is used in the player, the phase measurement merely gives us an indication (or confirmation) of what the manufacturer has built into his product.

We do not measure wow-and-flutter for CD players, since it would merely show the residual of the flutter meter (about 0.001 percent), and we do not measure pitch error, which is typically less than the measurement resolution of a five-digit frequency counter.

Most of our test discs were designed principally for use with instruments, but many also have at least some tracks that can be used by listening to the playback. Philips 410 056-2 (TS4A) and 814 126-2 (TS5A), for example, are modified versions of samplers containing a number of short classical and popular selections. The modification consists of a wedge-shaped "damage" area on the information layer (the surface containing the microscopic pits that carry the digital

information) and a series of black dots of different sizes on the outer playing surface of the disc.

We use these test discs to check the error-correction ability of the player by listening to the playback and noting when (or if) the program is interrupted by noises, silent gaps, or complete mistracking (such as repeating a specific point in the recording indefinitely). By noting where on the disc a problem occurs, we can establish the largest magnitude of damage that the machine can play through without audible mistracking.

Few among the first-generation CD players could play all of these calibrated defects without running into problems. (The test discs' simulated fingerprint, however, has never produced a tracking problem with any of the dozens of CD players we have tested.) Today, it is unusual to find a player that can't cope with the worst of the test defects without audible difficulty, so these discs have nearly outlived their usefulness. Strangely, none of the current proposed test standards or discs includes any sort of defect-tracking test, even though there are many cases where a CD fails to play properly in a machine that can play most other discs. Some form of meaningful test of this ability would seem to be desirable.

Our final test deals with the ability of the player to withstand impact shocks without mistracking. We test this by tapping on different parts of the player's case while it is operating to see how much (or little) effort is required to induce mistracking. Virtually any CD player can be made to skip or shut down by a sufficiently hard blow, but some will react even to a gentle drumming with the fingertips. Obviously, this is a totally qualitative procedure, so we assign arbitrary ratings of A, B, or C based on the player's behavior. Only rarely have we encountered one that merited a D, which corresponds to borderline acceptability.

After all the measurements, tests, taps, and calculations are finished, the best part of testing CD players takes place—listening! This part of the evaluation is always a pleasure, and it keeps me coming back for more. □

# VANTAGE

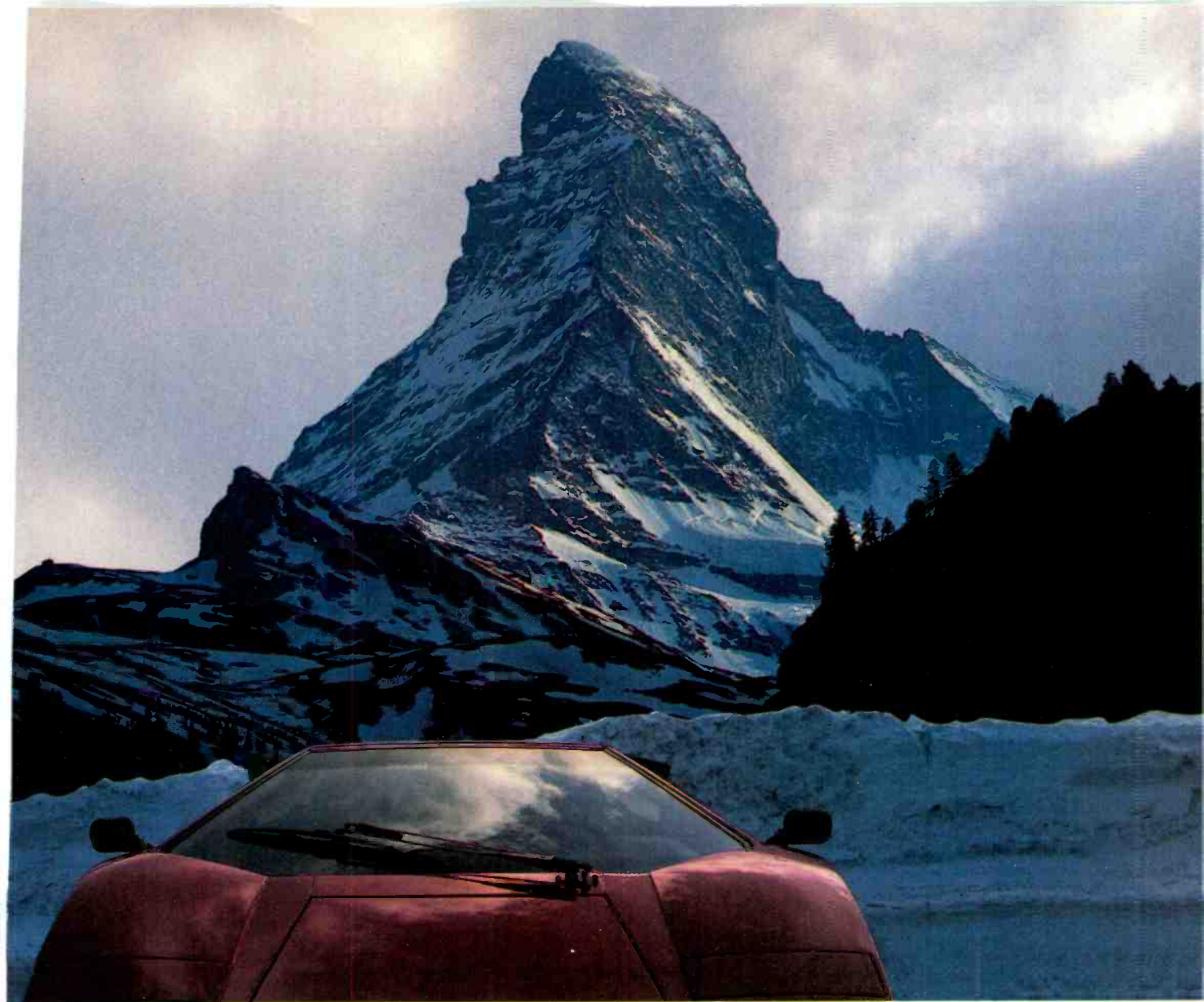
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## TEST REPORTS



JOOK LEUNG

### THORENS TD 520 TURNTABLE

*Julian Hirsch, Hirsch-Houck Laboratories*

**D**ESPITE the rapid acceptance of the CD as a source of recorded music—or perhaps *because* of it—the development of improved analog record players has not ceased. In fact, the new Thorens TD 520 turntable is not only the most refined record player to come from that well-known Swiss company but arguably the most versatile turntable available for home use. It is one of the very few contemporary turntables designed to operate at all three speeds— $33\frac{1}{3}$ , 45, and 78 rpm—and it can play 16-inch discs as well as all smaller sizes.

Like other recent Thorens turntables, the TD 520 is belt-driven. The platter-and-tonearm system is constructed as a rigidly coupled assem-

bly and floated on very soft (compliant) springs from the motorboard. This type of construction affords the maximum isolation of the playing system from its surroundings and minimizes the effects of acoustic feedback. The platter is driven from a sixteen-pole synchronous motor powered by an electronic two-phase generator whose frequency is determined by a stable Wien-bridge oscillator.

The two-piece platter, cast of non-magnetic zinc alloy, weighs just under 7 pounds. The main platter rests on a smaller platter that is driven by the belt. Stroboscope markings underneath the driven platter are illuminated by a neon lamp and are visible through a window on the top of the motorboard. Unlike turnta-

bles whose speed is changed by shifting the belt to a different pulley diameter, the speed of the TD 520 is controlled by the frequency of the oscillator that supplies the motor drive signal. A continuously variable pitch control operates over a limited range.

The TD 520 is a large turntable. Its base is made of heavy wood for acoustical damping, and it is supported on rubber feet. The platter/tonearm system resonates at just a few hertz. The external power transformer is connected to the record player by a cable about 6 feet long; the transformer plugs directly into a wall socket.

The TD 520 is fitted with the latest version of the popular Thorens TP 16 tonearm, the TP 16 Mk VL. The arm is first balanced by an adjustable counterweight, and then the vertical tracking force is set by a calibrated spring through an adjustment on the pivot structure. Anti-

## TEST REPORTS

skating correction is applied by a frictionless magnetic assembly adjusted by a knob on the side of the tonearm base. The same turntable as the TD 520 is also available, as the TD 521, with no arm and an undrilled arm board.

The operating controls of the TD 520 are distributed across its front surface. A three-position knob selects the operating speed, and a vernier knob can be used to vary the speed slightly. Pushbuttons turn the motor on and off, and a knob at the right of the player operates the arm lift. The arm will not descend unless the turntable is on, and at the end of play a frictionless optical system triggers the arm lift and shuts off the motor. During play there is no mechanical connection between the tonearm and the rest of the system except, of course, the stylus/groove contact.

The Thorens TD 520 measures 21 $\frac{3}{8}$  inches wide, 16 $\frac{3}{8}$  inches deep, and 6 $\frac{7}{8}$  inches high with its clear-plastic hinged dust cover lowered. It weighs 33 pounds. Price: \$999. Thorens, Dept. SR, 25 Hale St., Newburyport, MA 01950.

### Lab Tests

We installed a Shure V-15 Type V-MR cartridge in the Thorens

tonearm for our tests. The arm does not have a removable headshell, but the cartridge mounting plate can be rotated 360 degrees to simplify installation. After we balanced the arm, the actual vertical force was typically within 0.05 gram of the scale indication. The tracking error of the extra-long TP 16 arm was less than 0.5 degree per inch of radius over a 12-inch record.

Turntable rumble was -41 dB unweighted, -62 dB with ARLL weighting, and -68 dB with DIN-B weighting. The flutter was very low, 0.04 percent JIS-weighted rms and  $\pm 0.05$  percent DIN-weighted peak. The arm's effective mass was 14 grams, and with the Shure cartridge the system resonated at a nearly ideal 9 Hz. The system tracked severely warped records very well. The anti-skating dial calibrations were approximately correct, and the anti-skating torque shifted the arm only slightly outward on its descent, repeating about 3 or 4 seconds of a record each time it was cycled up and down.

The motor required about 9 seconds to accelerate the heavy platter from a standstill to 33 $\frac{1}{3}$  rpm. The speed was correct when the stroboscope pattern was stationary, and it could be adjusted over a range of

+4.4 to -10.6 percent. The turntable's suspension proved to be extremely effective in isolating it from any external vibration conducted through the mounting feet. There were only two low-level transmission modes, at 15 and 50 Hz. Comparison with our test data on other turntables showed that the TD 520 was very similar in this respect to other recent Thorens models, such as the TD 320, and comparable to the best we have measured in its overall immunity to external disturbances.

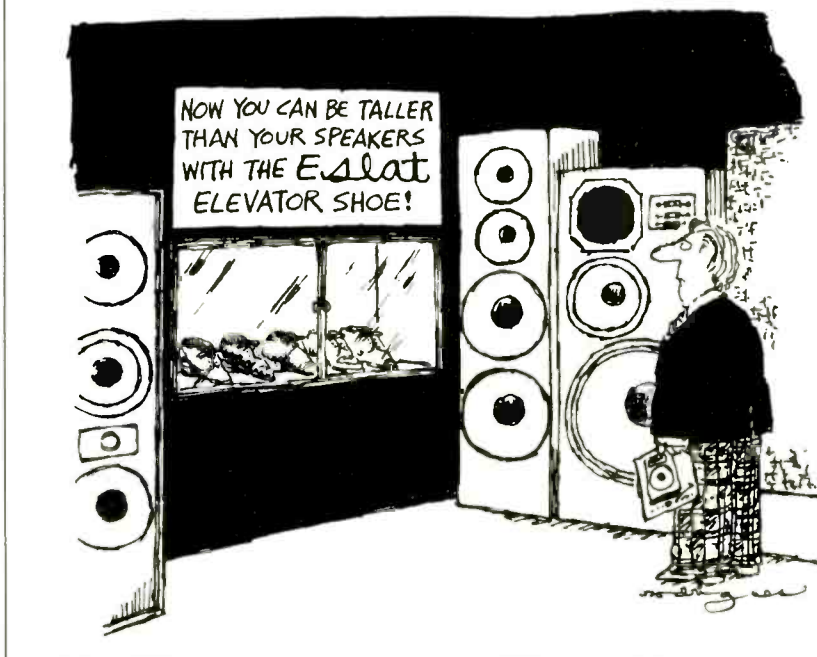
### Comments

While the Thorens TD 520 may not be "everyman's record player," it is certainly an answer to the present and future needs of serious record collectors. Most people with extensive record collections, which usually include 78-rpm discs and possibly even 16-inch transcription recordings, have required at least two and sometimes three record players to handle the various sizes and speeds involved. The TD 520 is the first we have seen that will play almost every record made in the past fifty or sixty years. The only exceptions that come to mind are 16 $\frac{2}{3}$ -rpm talking books and a handful of music discs at that speed that were produced about 30 years ago for a short-lived Chrysler automobile record player!

There is one possible difficulty, however, since the new Thorens tonearm does not lend itself to easy cartridge changes, unlike earlier versions that used interchangeable arm wands or headshells. The special plug-in alternate styli that are available for some cartridges might solve this problem.

In every other respect, the TD 520 is a superb turntable, about as good as they come in respect to low flutter and rumble and with extremely good acoustic isolation. Even before it is turned on, its size and weight set it apart from run-of-the-mill record players. Clearly, it was created for the serious phonophile who realizes that the selection of suitable record players is certain to shrink as the years go by. The TD 520 is built for the long haul, and it is an impressive product.

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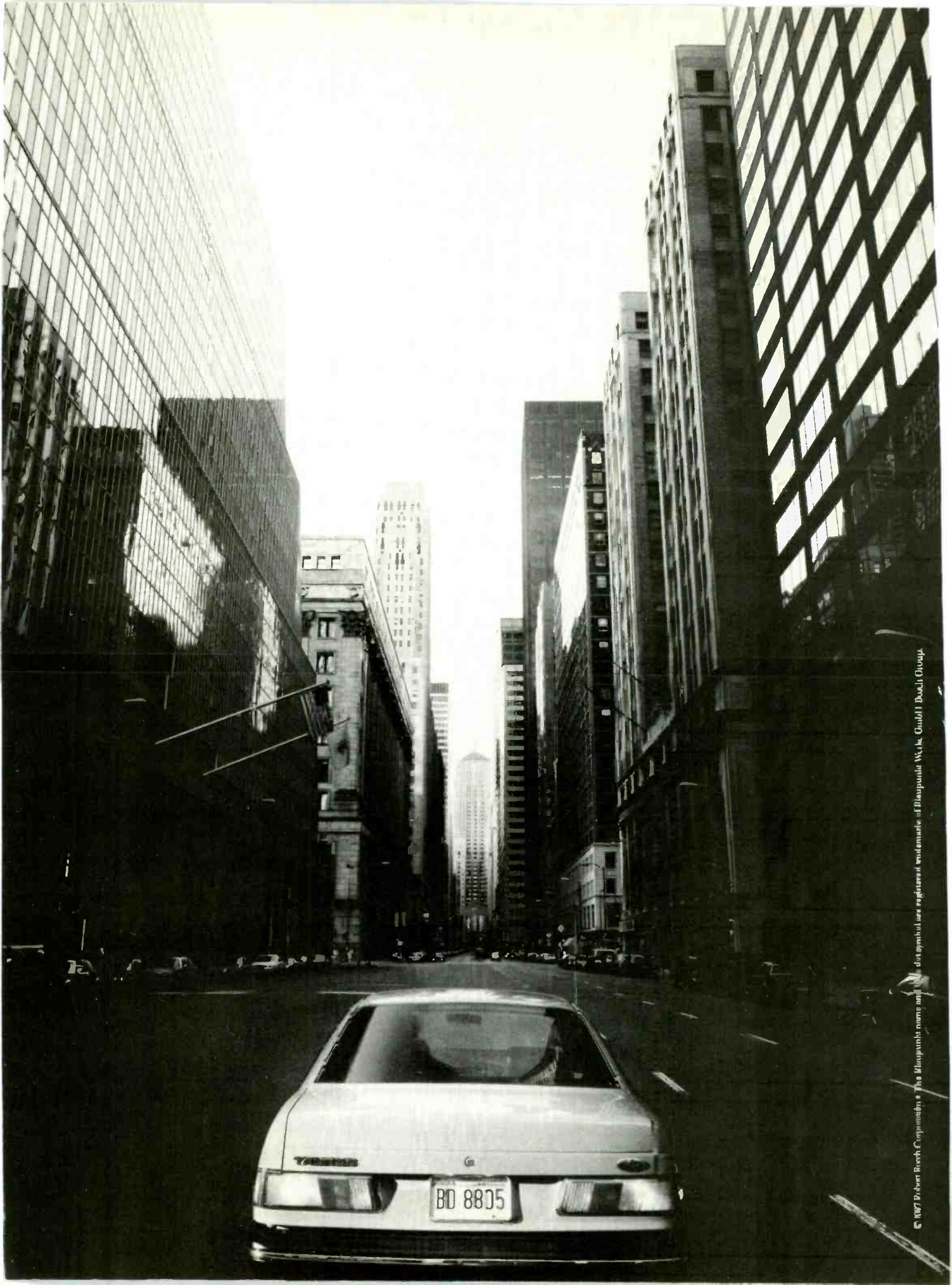
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### MAGNAT MSP 300 SPEAKER SYSTEM

*Julian Hirsch, Hirsch-Houck Laboratories*

**M**AGNAT speakers have only recently entered the American market, but the line is well established in Europe. A West German company, Magnat is one of the largest speaker manufacturers on the continent, both under its own brand name and as a supplier of drivers

for some of the best-known speaker systems from other European companies. In this country, a Magnat driver is used as a subwoofer in the ultra-expensive (\$65,000) Wilson WAMM speaker system.

The MSP 300 is the top speaker in Magnat's Special Products line. A conventionally styled columnar

speaker, its relatively tall, slender cabinet measures slightly over 41 inches high and about 11 inches square. It is a three-way system with two 7-inch woofers, a 3 1/4-inch cone midrange driver, and a 1-inch soft-metal dome tweeter. The proprietary soft-metal dome is made of an alloy said to combine lightness and rigidity with enough internal damping to eliminate most high-frequency audio resonances. Such resonances often occur with diaphragms made of hard metals such as titanium or beryllium.

Another proprietary Magnat feature is ribbon-wire voice-coil windings. The company makes its own oxygen-free copper wire and forms it with a rectangular cross section. The wire is wound edgewise on an aluminum former in Magnat's tweeters and midrange drivers, but in the woofers the wire is wound flat in five layers. The close packing of the ribbon wire enables the Magnat drivers to have about 40 percent more copper in their magnetic gaps than drivers made with conventional round wire, which improves their magnetic efficiency and heat-dissipating qualities.

The drivers in the Magnat MSP 300 are arrayed vertically on the black-finished speakerboard. The woofers are approximately halfway up from the bottom, and the midrange and high-frequency drivers are above them to the left of the center line. The left and right speakers are identical.

The MSP 300 is a nominally 4-ohm system rated to handle up to 200 watts of music program signals. The crossover frequencies are specified as 850 and 5,500 Hz, the frequency response as 25 to 34,000 Hz (DIN standard). The cabinet is handsomely finished on its sides and rear in satin-finish walnut or mahogany or in piano-lacquer mahogany. The top is finished in black piano lacquer, and a removable cloth grille covers the entire front surface. On the bottom of the enclosure are spring-loaded input connectors designed to accept the stripped ends of speaker wires. Each speaker weighs about 60 pounds. Price: \$1,390 per pair. Magnat, Dept. SR, 70 Atlantic Ave., Marblehead, MA 01945.



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## TEST REPORTS

### Lab Tests

The averaged room response from the MSP 300 speakers was unusually free from large variations—even in the bass, where room resonances almost always produce large response changes. Only at the high end did we see a clear departure from flatness, a smooth rise of about 5 dB from 10,000 to 20,000 Hz. The close-miked woofer response, which reached its maximum at 60 to 70 Hz, fell at 12 dB per octave below about 50 Hz and at a slower rate of 2 to 3 dB per octave above 70 Hz.

Splicing the woofer response to the room curve produced a composite curve that closely conformed to the way the speaker sounded in our room. From 50 to 11,000 Hz, the output remained within a total range of 3.5 dB, and it rose to its +5-dB maximum at 20,000 Hz. Our quasi-anechoic FFT response measurements, made at a 1-meter distance, showed a  $\pm 3.5$ -dB variation from below 1,000 Hz up to 26,000 Hz. The tweeter resonance was visible in these measurements as a peak of 6 or 7 dB at 26,000 to 27,000 Hz, confirming that the resonance frequency of the soft-metal dome tweeter was safely above the audible range. The group-delay variation was only  $\pm 0.2$  millisecond from 1,500 to 23,000 Hz.

We were informed by Magnat that its speakers are deliberately designed to have a flat measured response at a 3-meter distance, which is typical of usual listening distances, instead of at the more standard 1-meter distance. Since high-frequency response, either as measured or as heard, falls off with distance from the speaker, Magnat's designers chose to provide the flattest possible response for a typical listener even though doing so would result in a rising high-end response in most conventional measurements. This explanation was consistent with what we measured and heard as well.

The horizontal dispersion of the MSP 300 speakers was very good to the left of the central axis (the side where the midrange and high-frequency drivers are placed). Response measurements on-axis and

at 45 degrees off the axis began to diverge only above 8,000 Hz, and they remained within about 7 dB of each other up to 20,000 Hz. In the other direction (to the right as viewed from the listening position), the midrange response was affected between 3,000 and 5,000 Hz, and the on/off-axis responses diverged more sharply above 7,000 Hz, becoming separated by about 12 dB from 10,000 to 20,000 Hz. Although this divergence was obviously the result of the speaker's asymmetrical driver placement, it produced no detectable effects on the sound quality or imaging.

The measured impedance of the MSP 300 reached a minimum of 3 ohms from 80 to 140 Hz, and it averaged 4 to 5 ohms over most of the audio range; the maximum was 13 ohms at 3,700 Hz. The system's sensitivity was 87 dB sound-pressure level (SPL) at 1 meter with an input of 2.83 volts of pink noise. When we drove the speaker at a constant 4 volts (equivalent to a 90-dB SPL), the bass distortion was typically 1 to 2.3 percent from 100 to about 45 Hz, rising to 6.7 percent (almost all second-harmonic) at 35 Hz and 11.4 percent at 30 Hz.

Pulse-power tests produced an unusual distortion—a sharp symmetrical peaking of the waveform, essentially third-harmonic—at 100 Hz when the input was 900 watts into the speaker's 3-ohm impedance. Even at this huge power input, we did not experience the usual "flat-top" waveform and harsh rasping sounds that signal woofer overdriving. At 1,000 Hz, the amplifier clipped at 1,100 watts into the speaker's 5.5 ohms, and at 10,000 Hz it clipped at 920 watts into 7.5 ohms. In neither case was there evidence of nonlinearity in the speaker's acoustic output.

### Comments

As with most speakers, the initial sonic impression conveyed by the Magnat MSP 300 depends greatly on what you were listening to previously, as well as your personal taste in sound. In our case, there was an unavoidable expectation, deriving from experience over the years with other German speakers, that it would have a piercing, shrill

sound and little real bass. Of course, that was before we tested them.

Despite our preconceptions, what we heard was nothing like stereotypical "German sound." The MSP 300 is a strikingly smooth, sweet-sounding speaker. True, it sometimes sounded a bit "bright" compared with some speakers having a flat or sagging measured high-end output, and it was possibly a trifle "thin" compared with systems having a room-rattling low-bass output. But in this case our listening judgment and our measurements were highly consistent. Both suggested strongly that the MSP 300 is indeed as smooth and flat a speaker, over its useful range, as you are likely to find. Its effective lower limit is in the vicinity of 35 Hz, although its output is down a bit at that frequency. Only a bat, dog, or cat would be likely to detect its upper limits.

Magnat's philosophy of balancing the speaker response for flattest response at a normal listening distance makes a lot of sense. In our room, at least, the MSP 300 did not sound unbalanced at either end of the spectrum. It was certainly not lacking in either bass or top treble, and it had no trace of upper-bass emphasis (a flaw of most speakers). Not many speakers that take up only one square foot of floor space can match its performance.

We also noticed a pronounced widening of the sound stage beyond the limits set by the speaker locations (they were about 6 feet apart, 4 to 5 feet from the side walls, and 2 feet from the wall behind them). This effect normally requires some means, either electronic or acoustic, of canceling interaural crosstalk, and we found no obvious explanation for it in this case.

In short, the Magnat MSP 300 is an above-average speaker in its listening qualities, it is extremely rugged (it will play as loud as your amplifier will drive it, with little likelihood of damage to itself or your sensibilities), and it just plain sounds good! We did not find its sound tiring during many hours of listening. Finally, its attractive finish options and compact dimensions will be definite plus factors for most speaker buyers.

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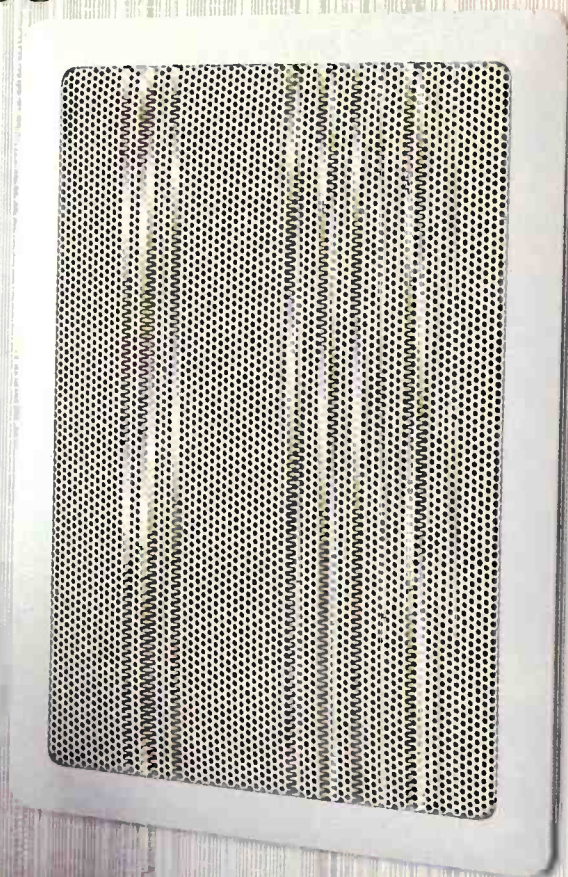
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## NAKAMICHI OMS-2A COMPACT DISC PLAYER

*Julian Hirsch, Hirsch-Houck Laboratories*

**T**HE OMS-2A is Nakamichi's least expensive CD player, although its \$499 price would probably place it in the top half of most other CD player lines. It shares many of the basic circuit features of the more expensive Nakamichi CD players, including a "Shunt-fed Analog De-Glitcher" designed to improve the resolution of low-level signals and thereby retain the ambience of the program. It uses a true 16-bit digital-to-analog (D/A) converter, with double oversampling at 88.2 kHz followed by a digital filter and a five-pole analog filter. The combination is said to provide much better group-delay characteristics than is possible using a "brick-wall" analog filter alone.

Like Nakamichi's higher-priced CD players, the OMS-2A employs a

"multi-regulated" power supply for maximum channel separation and to keep digital noise out of the analog circuits. Its three-spot laser pickup is also similar to those used in the other Nakamichi players, and the entire drive mechanism is floated from the main chassis on springs to isolate it from external shock and vibration.

Although the OMS-2A appears deceptively simple at first glance, it has most of the convenience features one expects in a CD player. It can be programmed to play up to fifteen tracks in any desired order, and either the programmed sequence or the entire disc can be repeated indefinitely. Track skipping in either direction is also provided, but there is no direct access to indexed program segments. Fast

forward and reverse search are provided only on the supplied wireless remote control. A disc can be scanned at two speeds, with the program audible when this mode is entered from play.

The OMS-2A's display is considerably simplified, however. Normally it shows only the number of the current track. Successive operations of the display button cycle it through its other modes, which show the remaining time on the disc and the elapsed time in the current track. When a disc is first loaded, the display shows the total number of tracks and the total playing time for 3 seconds each. Small lights in the display window show the status of the memory and repeat features. During programmed operation, the display shows both the track number and its position in the programmed sequence. The front panel of the OMS-2A contains a stereo headphone jack with its own volume control.

The Nakamichi OMS-2A measures 17 inches wide, 12¾ inches deep, and 3 inches high, and it

A decade ago, Concord changed car stereo forever. In those days, 8-track tape reigned supreme and the idea of high quality sound in a car was considered impossible. By challenging that belief, Concord appealed to a select few who demanded the best. High performance car stereo was born.

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Today Concord's leadership continues with the seven CX series cassette/receivers. The flagship CX70 incorporates the two most recent

Concord Firsts – a 3-Band Bass/3-Band Treble equalizer and an active preamp level Subwoofer Crossover. The equalization system provides an extraordinary degree of control over the unpredictable acoustics of a



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1979

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1978

First in-dash deck with Dolby B™ noise reduction

1977

First car deck with a preamp level fader

1977

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1979

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1977

First 50 watt car amplifier

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vehicle's interior. The crossover allows easy system bi-amplification. In addition the CX70 has a removable chassis that lets you protect your investment in good sound.

The CX70 also incorporates many other Concord Firsts. FNR™ FM noise reduction, a Matched Phase™ tape head, dbx™ tape noise reduction and a DC servo tape drive motor are all included.

Putting all the performance and control features of the CX70 in a car stereo unit could result in a jumble of indecipherable, hard to use controls.

But the large dual function, color coded controls of the CX units make it easy to get the most from their exceptional performance.

The CX70 is just one of seven CX cassette/receivers that incorporate a variety of the Concord Firsts. When used in conjunction with Concord's CS speakers and, for the greatest fidelity at higher volume levels, the Concord CA amplifiers, the CX cassette/receivers provide a level of musical enjoyment that will have you dreaming up reasons to spend more time in your car.

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# Concord Firsts.

## TEST REPORTS

weighs 11¼ pounds. It is finished in black with gold panel markings. Nakamichi, Dept. SR, 19701 S. Vermont Ave., Torrance, CA 90502.

### Lab Tests

With a standard EIA load of 10,000 ohms and 1,000 picofarads of capacitance connected to its outputs, the Nakamichi OMS-2A delivered an output of 2.32 volts from a 0-dB (maximum-level) test recording. The channel imbalance was only 0.07 dB. The frequency response was ruler-flat from 20 Hz to several kilohertz and rose slightly at the highest frequencies, with small superimposed ripples. The two channels differed slightly at the high frequencies, although they were never more than 0.5 dB apart.

The channel separation was 95 dB at the low and middle frequencies, decreasing slightly to 90 dB at 10,000 Hz and 87 dB at 20,000 Hz. Dynamic range (defined as the ratio of the 0-dB output to the total distortion content of a -60-dB, 1,000-Hz test tone) was 103 dB. Distortion was typically negligible at normal listening levels. The interchannel phase shift increased from a few degrees at low and middle frequencies to 34 degrees at 20,000 Hz.

The cueing of the OMS-2A was slower than that of most other current CD players; it took 6 seconds to go from Track 1 to Track 15 of the

Philips TS4 test disc. But it had no trouble with the transition between Tracks 17 and 18, which have no silent interval between them, and it did not clip any of the opening syllable of Track 18. The maximum levels of the calibrated defects on the Philips TS5A test disc were tracked without difficulty. The player's resistance to physical impact was very good on its side, good on the top.

### Comments

Our measurements showed the Nakamichi OMS-2A to be at least the equal of most other machines in its price class in respect to the basic parameters of frequency response, distortion, noise, and channel separation. In the important qualities of defect tracking, cueing accuracy, and impact resistance, it was also an excellent performer. None of this came as a surprise given the company's recognized dedication to making products of the highest quality.

Unlike some people, we have never found significant differences in sound quality between CD players (as distinguished from the CD's themselves, which differ at least as much as LP's ever did). It was also not surprising, therefore, to find that the OMS-2A sounded no better (or worse) than any other current, good-quality CD player we have used.

Nakamichi stresses the ability of

the OMS-2A to reproduce the lowest program levels in their correct proportions, in contrast to the many CD players that tend to "lose" the signal as its level becomes very low, cutting it off abruptly instead of allowing a natural gradual decay into the background noise. Although we did not detect any differences in this respect with music programs, listening to single test-tone signals at levels down to -100 dB confirmed that the OMS-2A did produce a smooth reduction in volume as the signal approached its minimum level. With some other good CD players, the signal volume tended to stabilize at about -80 to -90 dB before disappearing abruptly at -100 dB. To put this distinction into perspective, however, it should be said that a -90- or -100-dB level is barely audible with one's ear placed against the speaker and the gain of a 350-watt amplifier turned to maximum—and then only in a very quiet room! Unless you are one of those persons who are hypersensitive to this effect, its significance would seem to be somewhat exaggerated.

The most obvious difference we noted between the Nakamichi OMS-2A and most other CD players we have used was the relatively limited visual information displayed while a disc was playing. The OMS-2A's display *can* show just about everything that any other player can, but not simultaneously. Perhaps it is just that we have become accustomed to seeing *both* the track number and the elapsed time on the displays of CD players, but we would have preferred the OMS-2A to have a more conventional display. More than offsetting this minor quibble was the excellent headphone volume provided by the player, which drove the AKG K340 phones we were using to very high volume levels without difficulty.

Overall, the Nakamichi OMS-2A is certainly a first-rate CD player that is worthy of the name it carries, and when all factors are considered it is reasonably priced. If you *listen* to CD's, as opposed to watching the colored lights on equipment panels, you should find it an eminently satisfactory choice.

**Circle 142 on reader service card**

### FEATURES

- Three-spot laser tracking system
- Disc mechanism isolated on spring mounts
- 16-bit D/A conversion using double oversampling with digital and analog filters
- Multiple regulated power supply for maximum circuit isolation
- Wireless remote control
- Programming for up to fifteen selections in any order
- Track stepping in either direction
- Two-speed fast search in either direction with audible sound (through remote control only)
- Front-panel headphone output with volume control

### LABORATORY MEASUREMENTS

**Maximum output level:** 2.32 volts  
**Total harmonic distortion at 1,000 Hz:** 0.0044% referred to 0 dB, 0.0087% referred to -10 dB, 0.0094% referred to -20 dB  
**Signal-to-noise ratio (A-weighted):** 96.5 dB  
**Channel separation:** 95 dB at 1,000 Hz, 90 dB at 10,000 Hz, 87 dB at 20,000 Hz

**Frequency response:** +0.25, -0 dB from 20 to 20,000 Hz  
**Cueing time:** 6 seconds  
**Cueing accuracy:** A  
**Impact resistance:** top, B; sides, A  
**Defect tracking:** tracked all maximum-level defects on Philips TS5A test disc

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JOOK LEUNG

## SHERWOOD S-2770RCP RECEIVER

*Julian Hirsch, Hirsch-Houck Laboratories*

**T**HE Sherwood S-2770RCP is a highly versatile AM/FM stereo receiver with a wireless remote control. Described as an "audio/video" receiver by its manufacturer, it includes switching and dubbing facilities for several video sources. Beyond its copying function, however, it is not equipped to modify video programs, though its audio and general control features are extensive.

Instead of conventional tone controls, the S-2770RCP has a seven-band graphic equalizer with an adjustment range of  $\pm 10$  dB for each band. A memory circuit can store up to four different response settings for instant recall. The equalizer circuit also provides a single (fixed) loudness contour. A multi-colored array of illuminated LED bars provides a real-time spectrum-analyzer display of the audible pro-

gram. At the touch of a button the display switches to show the equalizer response settings.

Another illuminated display window, using colored symbols and words, shows the program source. In addition to the usual audio sources (tuner, CD, phono, tape monitor), the S-2770RCP can be connected to a VCR and another video/audio source, such as a videodisc player (VDP) or a second VCR (for playback only), as well as a TV monitor. Front-panel pushbuttons select the audio program source or one of the video sources, channeling the video outputs to the TV monitor. The audio and video programs from the second video source plug into phono jacks behind a hinged door on the front panel. For video copying, the VCR inputs can be switched to either external source by means of pushbuttons.

The illuminated display shows the status of the receiver at all times.

The digital-synthesis AM/FM tuner provides up to sixteen preset channels selected by eight pushbuttons. Each button serves two memory locations, which can be assigned to either band; the preset automatically recalls the correct band as well as the station frequency. The selected channel number is shown on an illuminated display. Other tuner indicators include the frequency, band, relative signal strength, stereo/mono reception, and auto/manual scan mode.

The S-2770RCP can drive two pairs of speakers either individually or simultaneously. Alternatively, in its surround mode the receiver drives rear speakers connected to the second set of outputs with stereo difference signals (L - R to the left speaker and R - L to the right) to produce an enhanced spatial effect on stereo programs. A switchable synthetic-stereo feature for mono programs introduces a slight time delay below 10,000 Hz to create a comb-filter effect, which spreads out the sound.





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## TEST REPORTS

At the right of the panel is a large volume knob with a bright red LED that clearly shows its setting, which is important for remote adjustment using the motorized control. Below the volume knob is a horizontal-slider balance control.

The audio amplifier of the Sherwood S-2770RCP is rated to deliver 70 watts into 8-ohm loads from 20 to 20,000 Hz with no more than 0.02 percent total harmonic distortion.

The preamplifier section has a switchable subsonic filter rated for a 12-dB-per-octave slope below its 30-Hz cutoff frequency.

The Sherwood S-2770RCP measures 17¼ inches wide, 13 inches deep, and 5⅞ inches high. It weighs 21 pounds, 2 ounces. The remote control operates most of the basic functions of the receiver, and it can also control compatible Sherwood components connected to the special control-output jacks on the rear of the receiver. Price: \$449.95. Sherwood, Dept. SR, 13845 Artesia Blvd., Cerritos, CA 90701.

Price: \$449.95. Sherwood, Dept. SR, 13845 Artesia Blvd., Cerritos, CA 90701.

### Lab Tests

The FM tuner section of the S-2770RCP had good, though not exceptional, sensitivity and distortion characteristics. Its noise level, however, was impressively low. The measured signal-to-noise ratios, 87 dB in mono and 83 dB in stereo (at inputs of 85 dB or higher), would be noteworthy in any tuner at any price. Other key measurements were all very good, including the 1.4-dB capture ratio, 73-dB AM rejection, and 70-dB alternate-channel selectivity.

The FM frequency response, though not ruler-flat, was down only 2 dB at the extremes of 30 and 15,000 Hz. Channel separation was 35 to 40 dB over most of the low and middle frequency range, and it was still a good 31 dB at 15,000 Hz. The AM tuner section's frequency response was down 6 dB at 46 and 3,000 Hz.

The equalizer curves were as expected, with a maximum range of about  $\pm 13$  dB and considerable overlap between them. With the equalizer switched off, the response was flat within  $\pm 0.3$ ,  $-1.0$  dB from 20 to 20,000 Hz. The loudness contour, which did not change with the volume setting, provided a moderate boost at both low and high frequencies. The subsonic filter had its  $-3$ -dB response at 27 Hz.

The RIAA phono equalization was flat from 1,000 to 20,000 Hz but sloped off at lower frequencies to  $-2$  dB at 50 Hz and  $-4.5$  dB at 20 Hz. The high-level sensitivity was 19 millivolts, with noise at  $-82.3$  dB. The phono input overloaded at 153 mV at 1,000 Hz, 235 mV at 20 Hz, and 94 mV at 20,000 Hz.

The audio amplifiers clipped at 88 watts per channel when driving 8-ohm loads at 1,000 Hz. Although the receiver is not rated for operation with lower load impedances, we checked it with 4- and 2-ohm loads, measuring clipping outputs of 108 and 102 watts, respectively. Dynamic power outputs into loads of 2, 4, and 8 ohms were 162, 171, and 126 watts.

### FEATURES

- Digital-synthesis AM/FM tuner
- Sixteen station presets, usable for either band
- Seven-band graphic equalizer with pushbutton operation (center frequencies at 63, 150, 400, 1,000, 2,500, 6,000, and 16,000 Hz)
- Four EQ presets
- Defeatable fixed loudness compensation
- Equalizer display switchable to real-time spectrum analyzer
- Selectable inputs for CD, phono, tuner, tape deck, VCR; front-panel input jacks for second VCR or VDP
- Front-panel VCR dubbing control
- Front-panel headphone jack
- Connections and switching for two pairs of speakers
- Surround mode to drive rear speakers with stereo difference signals
- Stereo synthesis for mono programs
- Motor-driven volume control with illuminated indicator
- Wireless remote control for power, input selection, tuning, and volume; can control compatible Sherwood tape deck, CD player, and turntable
- Detachable pivoted AM loop antenna

### LABORATORY MEASUREMENTS

- Tuner Section** (all figures for FM only except frequency response)
  - Usable sensitivity** (mono): 13.7 dBf (2.7  $\mu$ V)
  - 50-dB quieting sensitivity:** mono, 14 dBf (2.8  $\mu$ V); stereo, 35 dBf (30  $\mu$ V)
  - Signal-to-noise ratio at 65 dBf:** mono, 87 dB; stereo, 78 dB
  - Harmonic distortion** (THD + noise) at 65 dBf: mono, 0.16%; stereo, 0.4%
  - Capture ratio at 65 dBf:** 1.4 dB
  - AM rejection at 65 dBf:** 73 dB
  - Selectivity:** alternate-channel, 70 dB; adjacent-channel, 3 dB
  - Stereo threshold:** 26 dBf (11  $\mu$ V)
  - 19-kHz pilot-carrier leakage:**  $-70$  dB
  - Hum:**  $-80$  dB
  - Stereo channel separation at 100, 1,000, and 10,000 Hz:** 38.5, 40, and 33.5 dB
  - Frequency response:** FM, 30 to 15,000 Hz  $\pm 0.5$ ,  $-2$  dB; AM,  $-6$  dB at 46 and 3,000 Hz
- Audio Amplifier**
  - 1,000-Hz output power at clipping:** 88 watts into 8 ohms, 108 watts into 4 ohms, 102 watts into 2 ohms
  - Clipping headroom** relative to rated output: 1 dB (8 ohms)
  - Dynamic power output:** 126 watts into 8 ohms, 171 watts into 4 ohms, 162 watts into 2 ohms
  - Dynamic headroom:** 2.57 dB (8 ohms)
  - Harmonic distortion** (THD + noise) at 1,000 Hz into 8 ohms: 1 watt, 0.011%; 10 watts, 0.0043%; 70 watts, 0.009%
  - Maximum distortion** from 20 to 20,000 Hz into 8 ohms: 0.045% at 70 watts (20,000 Hz)
  - Sensitivity** (1-watt output into 8 ohms): CD, 19 mV; phono, 0.72 mV
  - Phono-input overload:** 94 to 235 mV
  - A-weighted noise** (referred to a 1-watt output): CD,  $-62.3$  dB; phono,  $-69.3$  dB
  - Phono-input impedance:** 51,000 ohms in parallel with 170 pF
  - RIAA equalization error:**  $\pm 0$ ,  $-4.5$  dB from 20 to 20,000 Hz
  - Equalizer range:**  $\pm 13$  dB at each center frequency

The amplifier distortion at the rated 70 watts into 8-ohm loads ranged from 0.004 to 0.01 percent from 20 to 4,000 Hz, rising to 0.045 percent at 20,000 Hz. At one-half and one-tenth rated power the distortion was even lower. The 1,000-Hz distortion into 8 ohms fell from 0.035 percent at 0.1 watt to 0.0045 percent between 10 and 30 watts, rising to 0.01 percent at 80 watts.

### Comments

The Sherwood S-2770RCP is clearly a feature-laden stereo receiver that can provide more than enough clean audio power for most people. Its FM tuner has exceptionally low noise and generally very good performance in other respects. Despite the receiver's flexibility, it is easy to operate and should present no problems to the user.

The built-in graphic equalizer is more versatile than conventional tone controls, but it is necessary to go through a sequence of pushbutton operations to make a response change that would require no more than a twist of a knob with a tone control. The spectrum-analyzer display gives useful readings only at rather high volume levels, and we did not find it particularly helpful.

We were pleased to see the motor-driven volume knob, which in our opinion is far superior to the pushbutton electronic volume controls used in some other receivers. Most of the front-panel displays are clear and informative, although the tuner signal-strength indicator gave full-scale readings on most signals, including some that were only marginally listenable.

The surround-sound system worked well, but there is no provision for adjusting the volume of the rear speakers relative to the front speakers, an important requirement for any multichannel reproducing system. We usually found the rear volume level too high. The problem could have been solved by using individual L-pad or T-pad attenuators in the rear speaker circuits.

Overall, we found the Sherwood S-2770RCP to be a good receiver, above average in versatility and general performance, and it offers good value at its price.

**Circle 143 on reader service card**



## FOCUS .7 HIGH DEFINITION MONITOR SPEAKER

*Julian Hirsch, Hirsch-Houck Laboratories*

**L**AST January, at the Winter Consumer Electronics Show in Las Vegas, we heard a speaker system with a strikingly airy, distinctive sound. The Focus .7 High Definition Monitor, to give it its full name, is a compact floor-standing system intended for

use with a matching stand that raises it some 18 inches from the floor and tilts it back about 7 degrees. The top, bottom, and stand are solid oak, and all four sides are covered with thick, black, nonremovable, acoustically transparent foam. The speaker itself is 28 inches

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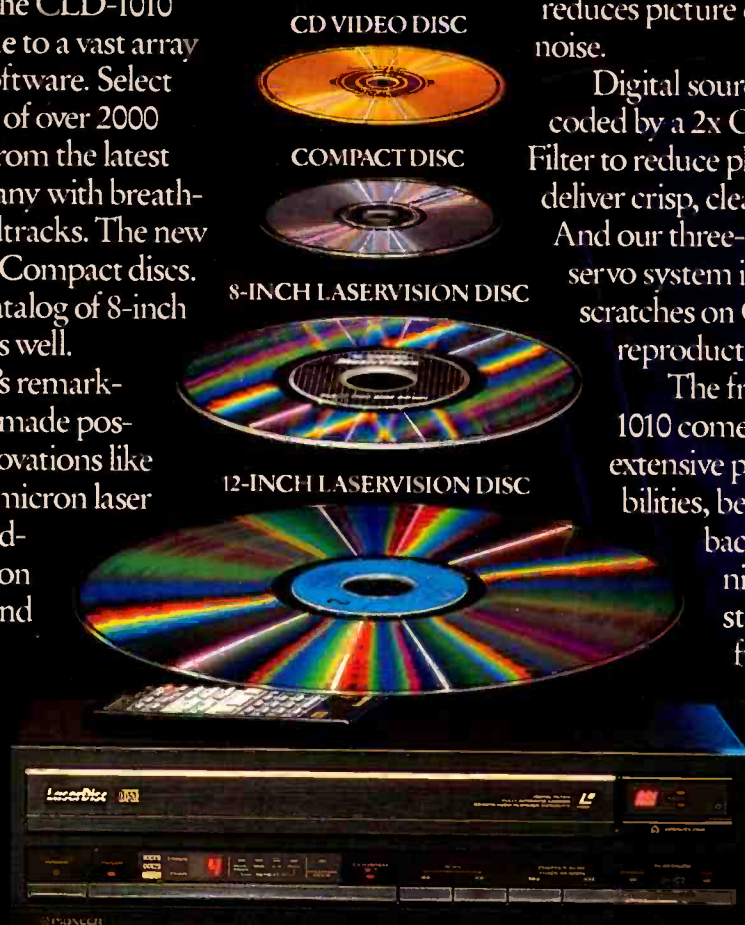
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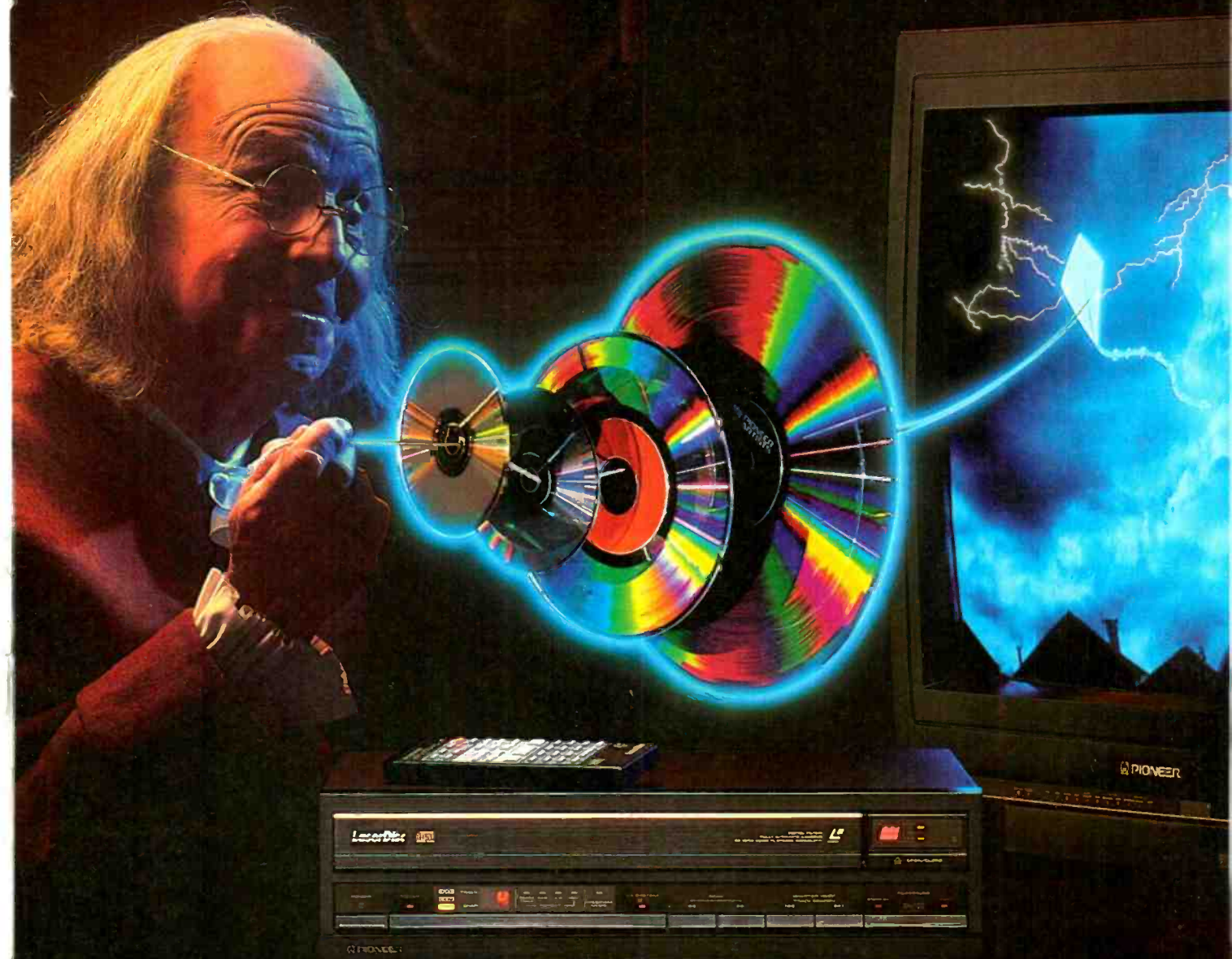
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## TEST REPORTS

high and 12 inches square, and the combination of speaker and stand weighs about 47 pounds.

The sound that caught our attention at the show was not obviously emerging from the speakers, which were in plain view, but took the form of a remarkably believable, seamless sound stage extending across the width of the room as well as behind the speakers, which were placed several feet out from the wall. We listened at some length, and we returned to the Focus room at other times to see if the effect was sustained (it was). Since we never make a final judgment of the qualities of speakers heard in unfamiliar surroundings, we looked forward to testing the Focus .7 HDM in our own facilities.

The Focus .7 HDM is a two-way time-aligned system whose 8-inch woofer operates in a rear-vented enclosure. At 2,700 Hz there is a crossover, at 6 dB per octave, to a 1-inch dome tweeter whose voice coil is cooled and damped by ferrofluid. The crossover uses 1-percent-tolerance air-core inductors and metalized polypropylene capacitors.

Throughout the process of designing this speaker, a great emphasis was placed on phase linearity and the elimination of "time smear" caused by reflection or diffraction from portions of the cabinet structure. The outer foam wrap is one result of this effort, but the cabinet itself features a unique construction that the manufacturer claims is a major factor in the speaker's performance.

The cabinet is constructed of fourteen layers of epoxy and paper wrapped into a seamless square tube, which is laminated with wood to a thickness of 1½ inches. The internal walls are cross-braced and nonparallel, with curved ¾-inch-radius corners. The only internal damping material is a layer of 1-inch-thick modified cell-polyurethane foam glued to the walls. The external portion of the cabinet, exclusive of the foam wrap and the top and bottom plates, is 10 inches square, with rounded corners of 1¼-inch radius to minimize diffraction effects on the cabinet edges.

The speaker's key specifications include a frequency response of 37

to 19,000 Hz  $\pm 2$  dB, nominal impedance of 8 ohms (minimum 4.8 ohms), and a sensitivity of 90 dB sound-pressure level (SPL) at 1 meter with a 1-watt input. Its group delay (a measure of phase linearity) is specified as  $\pm 0.2$  millisecond from 100 to 20,000 Hz. Correct phase alignment is obtained only when the speakers are mounted on their stands. Recommended amplifier power is 30 to 150 watts per channel. Price: \$995 a pair; stands, \$195 a pair. Focus, Dept. SR, 1101 E. Second St., Dayton, OH 45403.

### Lab Tests

Our room-response curves exhibited the usual irregularities in the lower midrange and bass, and there was a shelved drop in output of about 6 dB between 1,500 and 3,000 Hz. From 3,000 to 10,000 Hz the output was very uniform, and it rose about 5 dB through the next higher octave. Combining close-miked measurements of the output of the woofer and its port produced an unusually flat and smooth bass-response curve that varied only about 1.5 dB overall from 40 to 850 Hz, dropping off at higher frequencies. The low-bass output fell to  $-3$  dB at 30 Hz,  $-6$  dB at 25 Hz.

The best match of the close-miked curve to the room response produced a composite frequency response that was virtually flat from 40 to 900 Hz and again from 3,000 to 10,000 Hz, though the average level of the flat high-frequency portion of the curve was about 10 dB lower than the bass portion. The previously mentioned broad peak in the 10,000- to 20,000-Hz range increased the output about 5 dB relative to the next-lower octave.

The system's sensitivity measured 87 dB at 1 meter with a pink-noise input of 2.83 volts. For our bass-distortion measurements, we increased the drive level to 4 volts, corresponding to a 90-dB SPL. The distortion was between 1.3 and 1.5 percent from 100 Hz down to 60 Hz, which was the effective crossover frequency between the woofer cone and the port radiation. Below 60 Hz we measured distortion at the port, where it increased from 2 percent to a maximum of 9 percent at 25 Hz.

The system's impedance reached a maximum of 22 ohms at 65 Hz and was about 5.5 ohms from 150 to 500 Hz. It averaged 6 to 8 ohms over most of the audio range. In pulse-power tests with 1-cycle tone bursts, the woofer rattled at 100 Hz with 355 watts into its 7.3-ohm impedance. At 1,000 Hz, the amplifier clipped, at 1,030 watts into 7 ohms, before the speaker distorted, and at 10,000 Hz it clipped at 910 watts into 7.9 ohms.

Quasi-anechoic FFT frequency-response measurements confirmed the essential features of our strange-looking composite response curve for the Focus .7 HDM speaker. There was a 6-dB total variation from 2,000 to 22,000 Hz, with a slightly depressed output in the 2,000- to 5,000-Hz range and an increased output from 10,000 to 15,000 Hz. The horizontal dispersion was good up to 10,000 Hz, but at 45 degrees off the speaker's axis the output dropped steeply above 10,000 Hz.

Confirming the manufacturer's claims, the measured phase linearity of the Focus .7 HDM was exceptional. The group delay was constant within 0.2 millisecond overall from 400 to 21,000 Hz, and it was within 0.3 millisecond down to 150 Hz. There was no indication of the crossover frequency in the group-delay plot, which is a sensitive indicator of crossover phase shifts.

### Comments

From an examination of our frequency-response measurements, it would be difficult to predict the sound quality of the Focus .7 HDM speaker. The same problem in interpreting frequency-response measurements occurs with *any* loudspeaker, though few others we have tested have sounded as different from what their measurements would suggest as the Focus .7 HDM. Because of its reduced response in the 3,000- to 10,000-Hz range, if the bulk of the program energy were in the low and middle frequencies (the usual case), one might expect the speaker to sound smooth but with a "soft" top end. Alternatively, one might expect it to sound "bottom heavy."

As it happens, the Focus .7 HDM

# THE END OF THE RECEIVER.



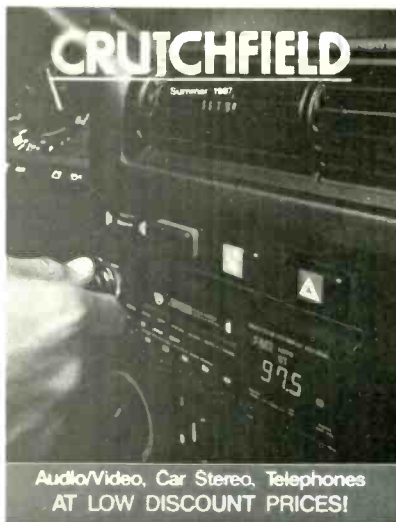
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## TEST REPORTS

speakers did not match either of these expectations. True, they did have a slightly warm sound, but it was by no means lacking in top-end response. In general, the sound was exceptionally smooth and free of any harshness or obvious colorations. And, most of all, there was the same remarkable sense of space that had impressed us at our first hearing of these speakers.

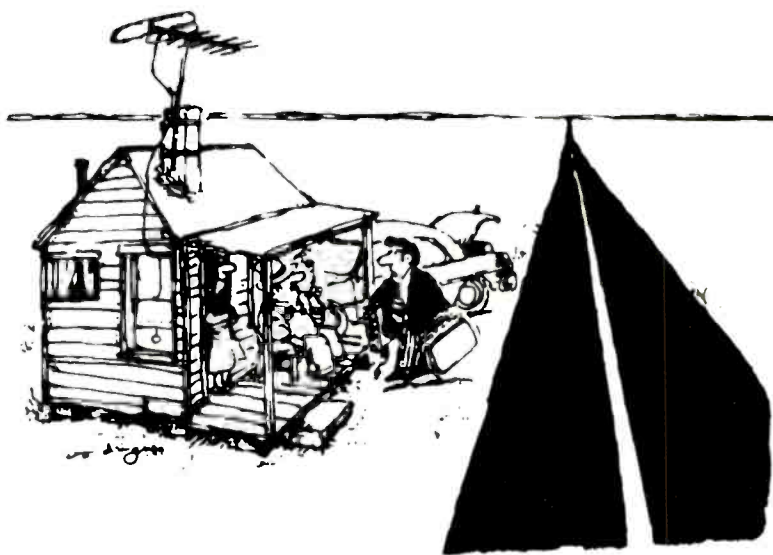
With most programs, the sound stage extended well beyond the speakers and seemed to fill the entire end of the room, from floor to ceiling. In A/B comparisons with another pair of high-quality speakers, our normal reference models, the differences were as striking as the similarities. Both speaker systems reproduced the frequency range from about 40 Hz to the limits of audibility in a very satisfactory manner. When we compared single speakers in close proximity, using mono source material, the two had very similar subjective frequency responses. In stereo, however, the reference speakers—whose sound stage was effectively limited to the space between them and back to the wall, but not behind it, or from floor to ceiling—appeared to have superior definition in the *frequency domain*. High-frequency transient sounds were more clearly distin-

guishable, and instrumental separation was frequently more distinct.

On the other hand, the Focus speakers had a more believable and realistic *spatial* definition. There was less of a feeling of listening to loudspeakers, and the overall subjective effect was unlike that of any other speakers we have heard in our room. The spatial breadth of the sound was reminiscent of what we have heard from the Carver Sonic Hologram, but in this case it required no electronic assistance, and its optimum performance was not limited to a specific area of the listening room.

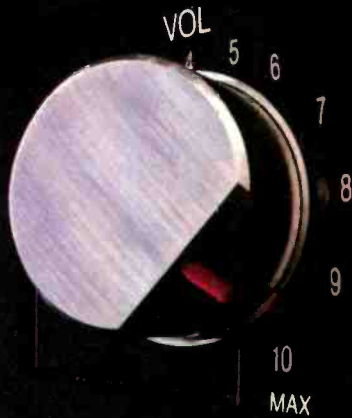
We suspect that the true frequency response of these speakers may be more dependent on the acoustics of the listening room than that of most others we have tested, but we lacked the space to experiment at length with this important variable. In any case, our tests confirmed the manufacturer's basic claims for the Focus .7 HDM, especially its ability "to re-create the recorded three-dimensional sound stage" with "uncanny" precision. We found its sound exceptionally appealing and easy to enjoy for extended periods, and for its price—about one-third that of our reference speakers—it is outstanding.

Circle 144 on reader service card



"I'm back, Pa. You were right. The multipath in New York City is wicked, awesome bad!"





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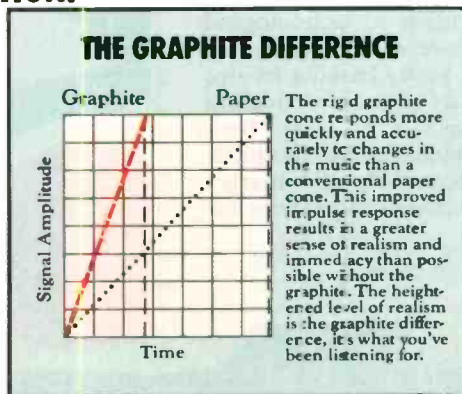
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CIRCLE NO. 40 ON READER SERVICE CARD

SPECIAL REPORT



# EUROPEAN AUDIO

by Ian G. Masters

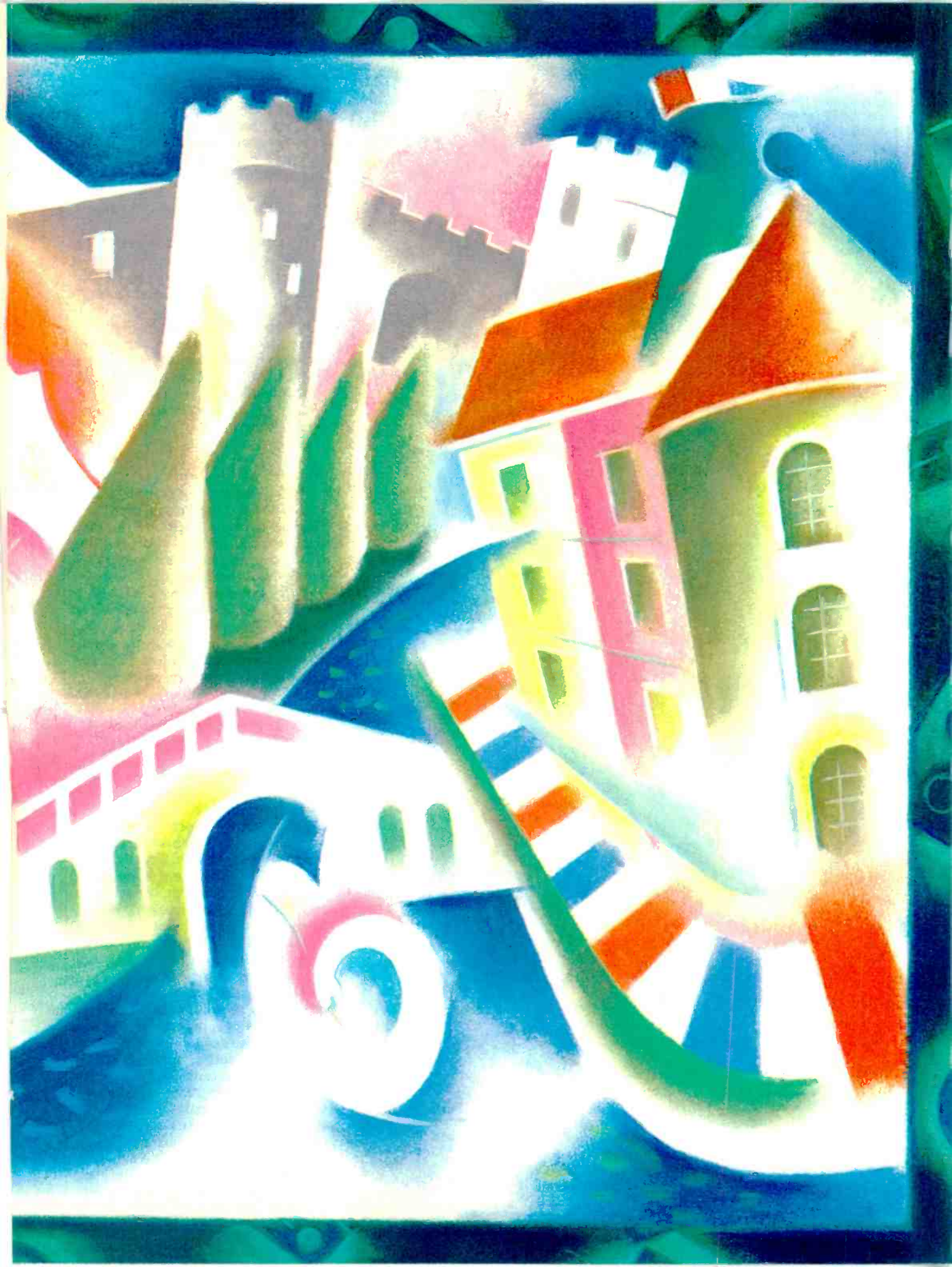
**F**ROM this side of the Atlantic, it often seems that audio and video are primarily Japanese and American fields. There are, of course, a number of prominent European brands marketed in North America, but they are definitely in the minority. Across the ocean, however, things look very different: not only have European companies been responsible for much of the basic technology of consumer electronics, from the original phonograph record to the compact disc, but their research and development work is continuing, in many cases placing them at the forefront of electronic innovation.

That European companies have a relatively low profile in this country is largely by design. The larger manufacturers do export to North America—Philips of the Netherlands, Bang & Olufsen of Denmark, Revox of Switzerland, Tandberg of Norway, Dual of Germany, AKG of Austria, and British high-end speaker companies such as B&W, Celestion, and KEF, to name just a few, are all familiar to American audiophiles. But even though such names account for a majority of European audio sales, they represent only a tiny fraction of the companies active in the European audio marketplace.

One recent estimate puts more than three hundred hi-fi manufacturers in Germany alone (primarily speaker companies). Most are very small, of course, and few of them contribute much to technological advance. Many of them do, however, share a fear of entering the American market, partly because its size would place impossible demands on their production capacity, and partly because the U.S. has never been particularly receptive to European audio products. For example, Philips—unquestionably the market leader in Europe and one of the largest consumer-elec-

ILLUSTRATION BY JEANNE FISHER





*Scotland's Linn Sonek LP12 turntable is famous for its classically simple design. Three springs suspend the subchassis to isolate the platter and tonearm from external vibrations and reduce acoustic feedback.*



*The television set shown below and on the cover is the centerpiece of the German-designed ADS Atelier audio/video system, which includes matching speakers and electronic components and cubical storage modules for CD's, LP's, and tapes.*



tronics firms in the world—chooses to sell many of its products in the United States under subsidiary brands: good ol' American Magnavox and Sylvania. Because of this, much of the technological development that takes place in Europe goes unnoticed in the U.S. But it does take place.

It may be dangerous to generalize too freely about a single European market, as each country has its own attitudes and interests, and in every part of Europe consumers and manufacturers alike tend to have a somewhat nationalistic regard for home-grown products and techniques. Still, there are some consistent threads that, if nothing else, point up the considerable differences between the European and American markets.

### *Speakers and Such*

By far the most competitive part of audio is the speaker business, and European companies are making some of their greatest contributions in advancing transducer technology. Perhaps that's inevitable—every country seems to have its share both of "box manufacturers" to serve the mass market and of companies employing exotic technology to satisfy the high-end audiophiles. To carve out a niche for themselves in the world markets, many European speaker manufacturers have put a great deal of effort into advanced techniques for designing, measuring, and building speakers. In the process, much research effort has been expended on the nature of the listening experience.

Traditionally, much of this work was done by the engineering department of the British Broadcasting Corporation (BBC), and some of the fruits of this research can still be seen—the LS35a speaker, developed as a small BBC monitor, is still available from Rogers and other companies, and it holds up well beside many more current designs. In the past few years the BBC has been less active in this sort of research as the private sector has become more deeply involved. England's KEF and Denmark's B&O, for instance, recently announced a co-operative program, in conjunction with the acoustics laboratory of the Danish Technical University, to develop "improved systems for . . . sound reproduction." The five-year program seeks to investigate "the psychological and physical aspects



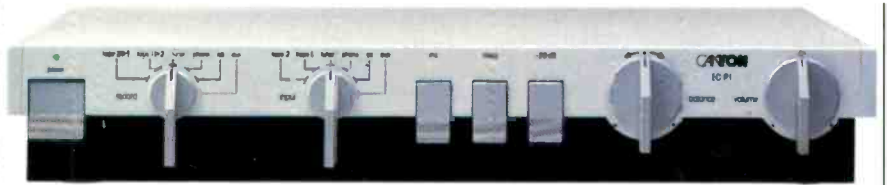
of listening in rooms." More immediately, the university, along with a consortium of Danish audio manufacturers, is organizing a symposium this summer at Gammel Avenæ on the perception of reproduced sound. Authorities have been invited from around the world to give papers at the event.

Most research is done by individual companies, however. Germany's Magnat, for instance, has tackled the challenge of designing a speaker that behaves like the legendary "pulsating sphere" (a phrase used over the years to describe a theoretically ideal reproducer of sound). By mounting pairs of spherically housed tweeters and mid-range drivers above conventional woofers, the company claims to have achieved almost perfect omnidirectional radiation. Several years ago, England's Quad aimed at the same goal by creating an electrostatic system that used two separate concentric panels and electronic time-delay circuitry to simulate the effects of a convex radiating surface.

Enclosure resonance was the particular concern addressed by Great Britain's B&W in the design of the Matrix series of speakers, which contain a latticework of internal braces to keep the walls of the enclosure rigid. Monitor Audio—a well-established brand in England, just now being introduced in the U.S.—has produced a vented tweeter that increases sensitivity by reducing the operating temperature of the driver. And Celestion has introduced a dipole subwoofer in the U.K. that the company says works as a velocity rather than a pressure device.

Blaupunkt, the German auto-sound company, has taken a novel approach to improving audio quality on the road with its Parametric Sound Amplifier (PSA), which combines a sophisticated four-channel amplifier and a three-band parametric equalizer. When a programmed module is inserted, the PSA tailors the system's response to the individual car model (assuming, of course, that the speakers have been installed according to Blaupunkt's specifications). Modules for more than eighty-three different cars will soon be available.

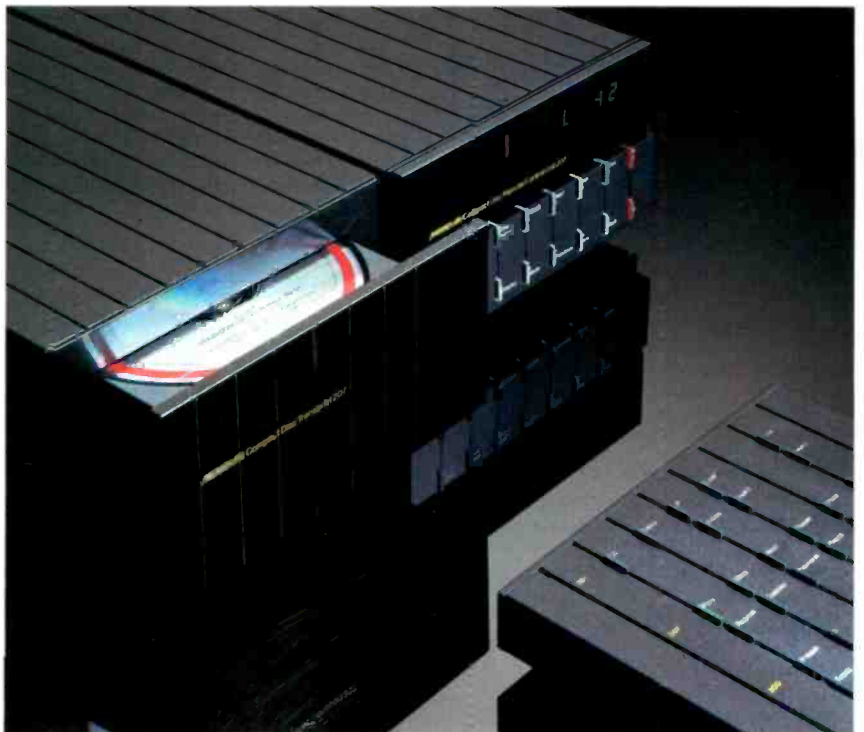
European—primarily British—speaker companies have long been innovators when it comes to cone materials. Early KEF models used polypropylene cones, which are now



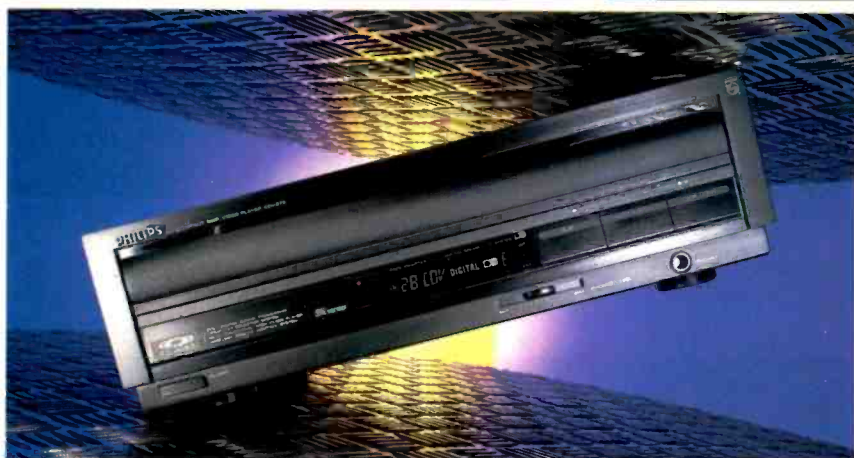
*Canton's EC-P1 preamplifier from Germany shows the influence of the Bauhaus design school in its simple, visually striking, and easy-to-use controls.*



*The imposing front panel of Tandberg's TCD-3014A cassette deck reflects the high level of mechanical engineering in this Norwegian machine.*



*Meridian's Model 207 Professional CD player has two separate components plus a remote control. It is made in England with some parts from Holland's Philips.*



The Philips CDV375 prototype CD-V player (left) sounds as good as a compact disc player and produces a picture as good as a LaserDisc player because it can play both CD's and LaserVision videodiscs. It can also play the new CD-Video discs, which have about 5 minutes of pictures with sound followed by 20 minutes of music. The remote-controlled CDV375 quadruply over-samples digital discs of all types at a rate of 176.4 kHz.



Jamo's CBR 200 (above) is the top speaker in the Danish manufacturer's Digital Monitor line. Each anthracite enclosure houses a 1-inch dome tweeter, a 5-inch cone midrange, and a 10-inch cone woofer. The rated frequency response is 25 to 24,000 Hz  $\pm$  3 dB, and the output level of the tweeter and midrange can be adjusted to compensate for placement and room acoustics.

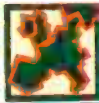


Danish design and technology are apparent in Bang & Olufsen's Beogram 5500 (above), a remote-controlled multiroom audio system with a wireless master controller that can be used in any room connected to the main system.

High-tech materials in Ortofon's MC 3000 moving-coil cartridge (below), also from Denmark, include a ceramic body, a carbon-fiber cantilever, and neodymium magnets.



Back-to-back pairs of hemispherical soft-metal dome tweeters and midrange drivers perch on top of an enclosure for six woofers in the Delta 3 from Germany's Magnat.



*Celestion's System 6000 subwoofer (left) makes a perfect bass base for the English company's SL600 two-way speakers. The double-dipole subwoofer radiates sound both forward and backward to minimize unwanted room reflections. First-order equalization compensates for the bass rolloff caused by the lack of an enclosure.*

*The three acoustic-suspension speakers in the Matrix Series from England's B&W (below) use honeycomb structures of interlocking perforated crossmembers bonded to the outer walls of the enclosures to reduce cabinet resonances and the resulting coloration.*



*Made in Austria, the K 340 (right) is the top-of-the-line headphone from AKG. There are two drivers in each earcup, a dynamic driver for low frequencies and an electrostatic driver for highs, as well as passive diaphragms. Rated frequency response is 15 to 25,000 Hz  $\pm$  3.5 dB.*



common in speakers from many companies, along with various other plastics. Celestion, Monitor Audio, Mordaunt Short, and several others employ metal domes in their tweeters, and metal midrange drivers are expected in the near future from several manufacturers.

The design process has been a field for technological innovation as well. In the early 1970's, England's KEF began using computers in the development of new models, and a number of other British companies shortly followed. B&W and Celestion, in different ways, were both pioneers in the application of lasers to the evaluation of driver performance (through a technique known as laser interferometry).

Headphones have also come in for their share of attention, particularly at the high end. Sennheiser's various models have long been a favorite of discriminating headphone fans, and the German company introduced infrared cordless headphones years before competitors caught up. In the days when most phones were heavy, claustrophobic head clamps, both Sennheiser and Beyer pioneered the sort of light, comfortable phones that we now take for granted. The trick was to make them both light and good sounding; early models by both companies still compare well with today's products. At the other end of the scale, Switzerland's Jecklin produces a no-holds-barred, helmet-like headphone that is really a pair of full-range electrostatic speakers positioned close to the ears.

Acknowledging that conventional stereo recordings are designed to be listened to through speakers, the European headphone companies have always been fans of true binaural recordings, which take full advantage of their products. This is a trend that has never really caught on, but one company, Austria's AKG, is reportedly developing a digital signal-processing system that will adapt any signal for optimum headphone listening. It would be a studio device, rather than something consumers could buy, but it could lead to recordings specifically mixed to be enjoyed on a portable CD or tape player.

One of the most critical transducers is the phono cartridge. Even in the face of digital audio's growth, companies like Ortofon in Denmark have reaffirmed their commitment to the vinyl record by continu-



ing development of advanced cartridges. Ortofon's top-of-the-line MC 3000 incorporates new magnetic material for higher output and a new stylus designed by Switzerland's Fritz Gyger.

### Vinyl Faith

A notable aspect of audio in Europe is the market strength of record-playing equipment. Although the compact disc has found wide acceptance, there remains a very vocal part of the audio community that remains, if not necessarily anti-digital, at least pro-record. And rather than abandon the field to the Oriental manufacturers, as has largely happened in North America, European companies are prepared to supply a wide range of sophisticated turntables and arms.

On the continent, both Thorens and Dual continue to fine-tune their products, although the main benefits tend to be seen in price reductions rather than new technological approaches. And Dual seems to be hedging its bets in the U.S. by intro-

*The top part of the English-made KEF 107 speaker swivels to enable users to change its high-frequency radiation pattern, reduce off-axis coloration, and optimize imaging.*



ducing a line of electronics, though the company has sold such products in Europe all along. England's SME has introduced the Series IV tonearm, which uses much of the same advanced technology as its Series V but is priced lower.

The United Kingdom seems to be the center of the exotic turntable market following the remarkable worldwide success of Scotland's Linn. Like the Linn products, other British turntables tend to be very simple in design but beautifully engineered. And also like Linn, the manufacturers often make extravagant sonic claims that may baffle buyers not initiated into the belief that the mechanical aspects of a record player can profoundly affect its sound quality. A relatively new turntable from tonearm manufacturer Alphason, for instance, claims to provide sound with "natural transient decay," a "sense of actual space between instruments," and "stable large-scale three-dimensional imaging."

In a truly atavistic move, one of the better-known British turntable companies, Rega Planar, recently introduced a unit that plays 78's—not 78's as well as other records but only 78's!

### Digital Diversity

Europe was the birthplace of practical digital audio, and the hi-fi companies there are still committed to it, even in the face of the vinyl backlash. Philips invented the compact disc, although Sony was enlisted to work out some of the format's more troublesome aspects, and Philips remains very active in developing new uses and formats for its baby. Miniature CD's, CD's with video (CD-V), CD's with text and graphic information (CD-ROM and CD-I)—all are in various stages of preparation for market, where they are expected to help keep the compact disc at the forefront of consumers' minds and, incidentally, breathe a bit of life into the more-or-less moribund videodisc, another Philips invention.

Few other European companies have the resources to compete with Philips in developing wholly new technologies, but a number of them have put their electronic skills to work to improve basic designs. Boothroyd Stuart Meridian of England continues to produce the CD player for the *cognoscente*, and Revox has applied its considerable en-

gineering skills to the production of its player. And the U.K.'s Cambridge Audio recently extended a trend seen elsewhere by announcing a 16-bit CD player that uses *sixteen-times oversampling*, at a frequency of 705.6 kHz!

### Elsewhere

As in most other places, in Europe electronic components tend to be imported, mainly from Japan. At the high end, however, a number of companies continue to produce specialized equipment that has a distinctly European flavor. B&O, for instance, has long prided itself on its combination of technological ability (shown by the new multiroom remote-controlled Beolink system) with an unparalleled sense of high style—rarely does the company let pass an opportunity to point out that its components are on display at the Museum of Modern Art in New York. Other companies, such as Canton, B&W, Revox, and Mission, also take more care with their products' "cosmetics" than might be the case in other parts of the world.

Tape recording has always played a more important role in European audio than in North America, and while the cassette-deck market is dominated by Japanese units, open-reel's small share is still firmly European, although the companies that supply this market, like Revox, Uher, and Tandberg, tend to modify their equipment very sparingly. As for tape itself, the major name is also the world's oldest, Germany's BASF, and it continues to refine its products. An irony is that Europeans have always preferred chrome tape, an American invention (although much improved by BASF), to other formulations. It now appears that chrome could have a new lease on life, as it may offer advantages in the high-speed duplication of digital audio tapes. Preliminary investigations into this possibility are reportedly being carried out by BASF.

Members of the European consumer-electronics community are sometimes puzzled when foreigners undertake to inquire about their technical advances. In their view, European companies have always led the world in this area, and there's no reason why that should change. History, as well as present activity, suggests that they are probably right. □



# GERSHWIN

*The American composer George Gershwin died fifty years ago last month. Anniversary tributes are taking place in concerts, on TV, and on records.*

BY WILLIAM LIVINGSTONE

LAST spring on a PBS television special, "In Performance at the White House," First Lady Nancy Reagan spoke of a period fifty years ago when "musical theater in this country was experiencing a Golden Age. What was emerging," she said, "was a new kind of entertainment."

That Golden Age in American theater (and later film) musicals resulted from the work of such composers as Irving Berlin, Jerome Kern, Vincent Youmans, Richard Rodgers, Harold Arlen, and George Gershwin. The White House special was a tribute to Rodgers and his frequent collaborator the lyricist Lorenz Hart, and PBS has recently honored a number of other composers and lyricists from that period, but the one who is receiving the most tributes this year is Gershwin.

At the height of the Golden Age, on July 11, 1937, Gershwin died, tragically young. (He was only thirty-eight.) The fiftieth anniversary of his death is being observed this year on television, in concerts throughout the country, and on records.

Among the songwriters Americans love best Gershwin ranks very high. His success went beyond the realm of popular music, however, to the concert hall and opera house, and he may well be the greatest composer the United States has ever produced.

The best of his so-called serious works—*Rhapsody in Blue*, *An American in Paris*, and *Porgy and Bess*—have grown in stature since his death, as have such songs as *Embraceable You*, *The Man I Love*, and *Fascinating Rhythm*. Writing of his songs in the book *The Gersh-*



*win Years*, Edward Jablonski and Robert D. Lawrence said: "Each year since 1937 we hear them more delightedly and gratefully than ever before—ever discovering in them a resilient charm, a durable brilliance, a permanent beauty."

Gershwin's biography contains some of the elements of a typical New York success story in that he was born in Brooklyn (September 28, 1898), the son of Russian Jewish immigrants, and spent part of his early life in that fertile breeding ground of genius the Lower East Side of Manhattan. But he and his older brother Ira, who later provided him with some of his best lyrics, did not know poverty in childhood. Their parents were able to educate them, and young George had good music teachers.

Success came to Gershwin early,

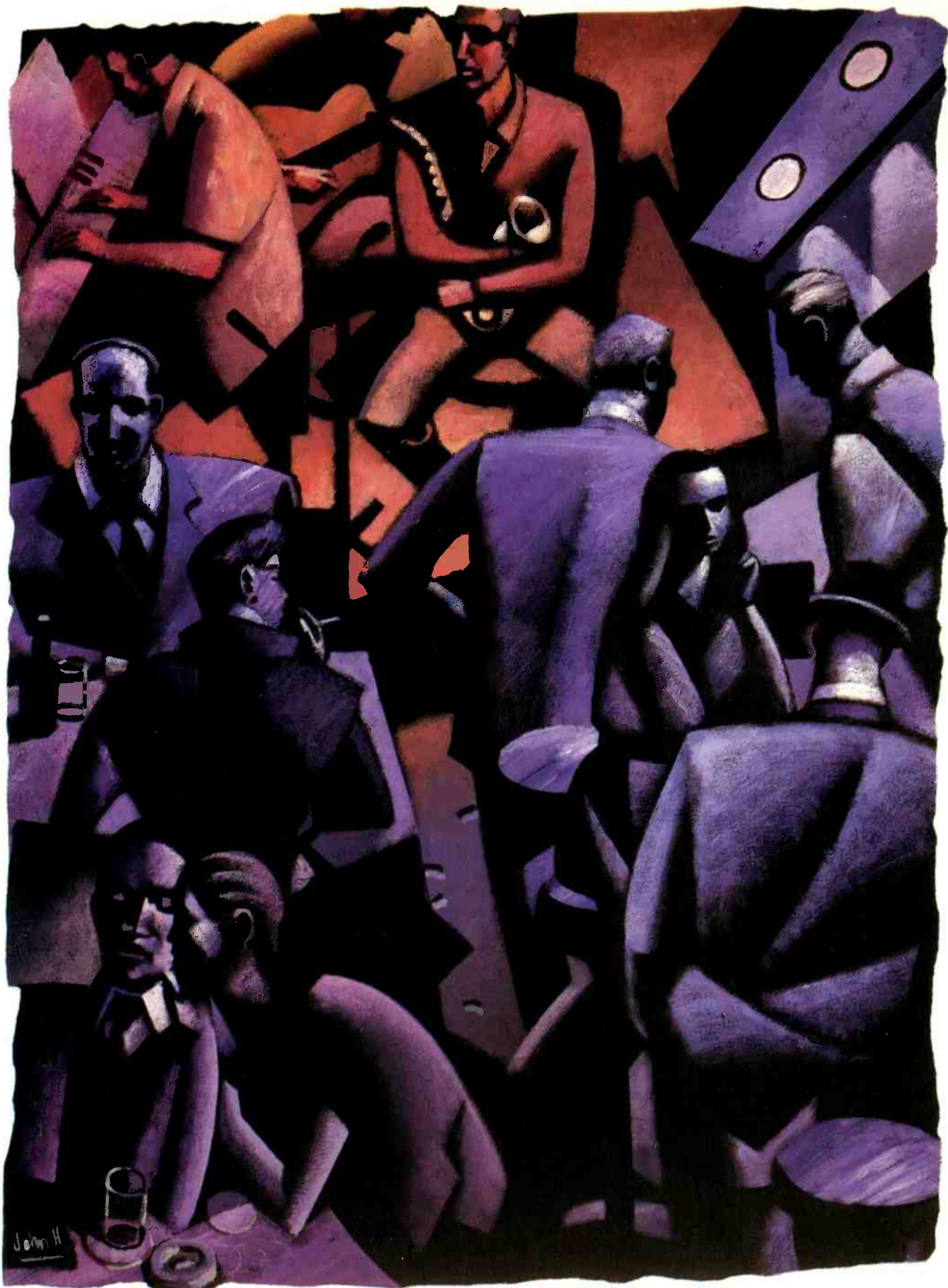
not after years of struggle. He left high school at sixteen to become a song plugger at a music-publishing company in Tin Pan Alley (West 28th Street in New York) and while still in his teens began to write songs of his own. In 1919 his first fully scored musical to open on Broadway, *La-La-Lucille*, did well, and that same year *Swanee*, the song that was to become his greatest commercial success, was introduced by Al Jolson.

Thus established financially, Gershwin continued his musical studies while writing songs for the theater, and in 1924 he won recognition as a serious composer with the première of his *Rhapsody in Blue*. He was just twenty-five.

He composed half a dozen similarly ambitious large works in the thirteen years of life that remained to him and produced a steady flow of distinguished songs for musicals. The songs, which are too numerous to list, include such standards as *Somebody Loves Me*, *'S Wonderful*, *Liza*, *I Got Rhythm*, *They Can't Take That Away from Me*, *Nice Work If You Can Get It*, and *Love Walked In*.

In a way no other composer had done before, Gershwin became a celebrity and enjoyed the fame and lifestyle brought to him by success. He was a tireless promoter of his own music, and at any party where there was a piano no one had to drop a hat to get him to play some of his songs. He is said to have wondered whether his work would be performed after he was no longer around to play it. He needn't have worried.

Gershwin died in Beverly Hills, California, following surgery for a brain tumor that flared up sudden-



ly. The loss to American music, to American life and culture, was widely mourned. Jablonski and Lawrence report that on the day of his funeral in New York, work stopped in Hollywood film studios for a moment of silence at ten o'clock in tribute to "this man who filled our world with sound and song and gave our lives a tempo."

**N**O one has questioned Gershwin's ability to write great songs, but a few snobs have dismissed that skill as mere "tunesmithing." Although some critics have found structural flaws in his serious works, Gershwin won the respect of such other contemporary composers as Béla Bartók, Maurice Ravel, and Ralph Vaughan Williams.

The unflinching public response to *An American in Paris* and *Rhapsody in Blue* has kept them among the most widely performed and recorded twentieth-century works for orchestra. Leonard Bernstein summed up their appeal succinctly when he wrote (in the introduction to *Gershwin, His Life and Music*): "What's important is not what's wrong with *Rhapsody*, but what's right with it. And what's right is that each of [its] inefficiently connected episodes is in itself melodically inspired, harmonically truthful, rhythmically authentic."

Gershwin wrote *Porgy and Bess* as an opera. In its original production in 1935, however, it was performed in a reduced version as a Broadway musical. Esteem for this unique work grew after Gershwin's death, and by the middle Sixties it had been performed (more or less in its Broadway form) in opera houses in Germany, Austria, and Italy.

The much larger dimensions of *Porgy and Bess* as a grand opera with tremendous musical and dramatic power were revealed in 1976 by a recording of the full score (London 13116, 414 559-2) conducted by Lorin Maazel with a cast headed by Willard White, Leona Mitchell, Barbara Hendricks, and McHenry Boatwright. A similar recording of a production by the Houston Grand Opera conducted by John DeMain (RCA ARL3/RCD3-2109) was released in 1977.

Since then *Porgy and Bess* has been mounted splendidly at the Metropolitan Opera in New York conducted by the company's artistic

director, James Levine. Last year the Glyndebourne Festival in England reached a pinnacle of artistic excellence with its production of Gershwin's masterpiece conducted by Simon Rattle.

During this anniversary summer the Glyndebourne production is being repeated. The Houston Grand Opera production has been revived this year as a joint venture of more than a dozen opera companies in such cities as Miami, Cleveland, Detroit, Los Angeles, San Francisco, and Seattle.

Opera in the United States is far more vital today than it was fifty years ago, but the Golden Age in the American musical theater, alas, has been over for a long time. Now the Broadway stage is dominated by blockbusters from England—*Me and My Girl*, *Les Misérables*, and Andrew Lloyd Webber's *Cats* (still!) and *Starlight Express*, with his *Phantom of the Opera* waiting in the wings till November. The rerecording of vintage American musicals seems to be dominated by New Zealand in the person of soprano Dame Kiri Te Kanawa.

Dame Kiri has starred with José Carreras in Deutsche Grammophon's operatic version of Leonard Bernstein's *West Side Story* and in CBS Records' similarly puffed-up version of Rodgers and Hammerstein's *South Pacific*. London Records will soon release a recording of Lerner and Loewe's *My Fair Lady* with the title role sung by the ubiquitous Dame Kiri.

In contrast to this decadent trend toward Victorian puffiness, Gershwin's work is now being treated with the care lavished on Bach, Handel, and Haydn by Christopher Hogwood, Trevor Pinnock, and other advocates of original instruments and authentic performance practices.

Gershwin has not escaped Dame Kiri's attention, but don't expect her in a new recording of *Strike Up the Band* conducted by Herbert von Karajan. No. Her next release, due from Angel Records this summer, is a recital of Gershwin songs performed with properly authenticated original orchestrations conducted by John McGlinn. A specialist in American theater music, McGlinn also has an album of Gershwin overtures due soon from Angel.

These two records, made especially to commemorate the Gershwin anniversary, could not exist in their

present form had eighty cartons of long-misplaced musical manuscripts not been discovered in a Warner Brothers warehouse in Secaucus, New Jersey.

Containing priceless manuscripts of songs, original scores, and orchestral parts for American operettas and Broadway shows from the Golden Age of the Twenties and Thirties, these cartons were like buried treasure. The trove was especially rich in Jerome Kern material, but it also contained manuscripts by such composers as Vincent Youmans, Victor Herbert, Cole Porter, Richard Rodgers, and Gershwin among many others. They were found, recognized, and analyzed by Gershwin scholar Donald Rose, Warner executive Henry Cohen, and musical-theater historian Robert Kimball.

Artistic advisor to the Gershwin family, Kimball is editor of the National Institute for Music Theater's *Catalogue of the American Musical* and co-author (with Alfred Simon) of *The Gershwins* (1973). He says, "This is an important find and one that is very exciting for this field. I'm thrilled about it. The discovery of seventy Gershwin songs among the Secaucus manuscripts fills gaps with material we had despaired of finding. One hundred Gershwin songs are still missing, and we hope those will turn up some day."

**K**IMBALL is a strong partisan of treating American theater music with the same respect accorded classical music. "I would like for Gershwin's works to be heard as they were written," he says. "Currently, only *Porgy* is performed as he wrote it. The rest are presented without the complete songs or with songs interpolated—unnecessarily, I think—from other shows."

Kimball points out that after five years of sifting and cataloguing, the Secaucus manuscripts are now being used in performances and recordings. A concert performance at the Library of Congress in May, for example, constituted the U.S. premiere of Gershwin's show *Primrose* and included a performance of the 1933 show *Pardon My English*, which is a Secaucus score. Dame Kiri's new Angel record includes at least one song from Secaucus.

Across the country this year record companies and performing-arts organizations large and small are

observing the Gershwin anniversary with varying degrees of authenticity. Pianist Leonard Pennario has a recent recording of *George Gershwin's Song Book* (Angel DS-37359, CDC-47418). The producer, Patti Laursen, says of it: "I wanted something more than just another straightforward piano record, so to give a sense of nostalgia I used a sound that suggested a performance in an empty theater in the way that a great actor might come back and do his soliloquy one more time for himself in an empty house."

"Leonard's playing style is very straightforward, however. Ira Gershwin assured him that George did not like for his music to be played too slow with a lot of ritards, and he particularly disliked a sentimental approach to his music."

The French duo pianists Katia and Marielle Labèque are making their debut on London Records with a Gershwin album in recognition of the anniversary. The American pianist Jeffrey Reid Baker, who says *Rhapsody in Blue* is a piece he plays every couple of years whether he needs to or not, will have an all-Gershwin album on the Newport Classic label. It will consist of synthesizer realizations of *Rhapsody in Blue*, the Concerto in F, and *An American in Paris*.

The Goodspeed Opera, of East Haddam, Connecticut, is reviving *Lady, Be Good*. Conductor Andrew Litton, who has a new Gershwin album on MCA, conducted the National Symphony in a Gershwin concert at Wolf Trap that has since been broadcast on PBS. On July 17 and 18 in Hollywood Bowl, Litton

Maureen McGovern sings on a new CBS recording of Gershwin shows.



will replicate a 1937 memorial tribute to Gershwin with Michael Feinstein at the piano.

New recordings of *Porgy and Bess* are planned. EMI/Angel will record it with conductor Simon Rattle and soloists from the Glyndebourne production. Philips plans to record it with André Previn conducting and with the title roles sung by Simon Estes and Dame Kiri Te Kanawa (who else?).

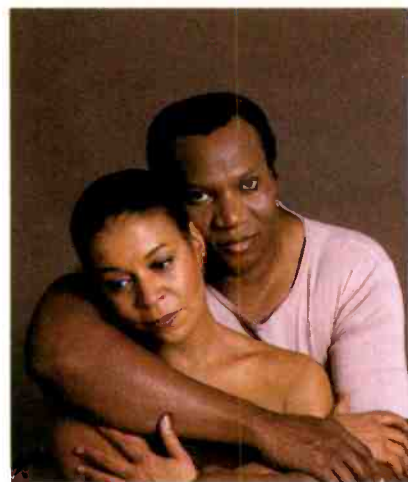
On August 24, PBS will telecast *George Gershwin Remembered*. A celebration of the composer's life, it will include clips from his films, previously unseen home movies, and interviews with his friends and members of his family. I don't know what Dame Kiri is doing that evening, but Michael Feinstein, Leonard Bernstein, and Michael Tilson Thomas will appear.

In the midst of his performances and recordings of Beethoven, Mahler, and the rest of the standard symphonic repertoire, Michael Tilson Thomas has made some very highly regarded recordings of Gershwin's music. This year at a Gershwin celebration at the Brooklyn Academy of Music he conducted the shows *Of Thee I Sing* and *Let 'Em Eat Cake* in concert.

Original orchestrations were found for *Of Thee I Sing*, and the score of *Let 'Em Eat Cake* was carefully reconstructed with the aid of the ninety-year-old composer Kay Swift, a close friend of the Gershwins. Thomas has recorded these shows for CBS Records with the Brooklyn forces, including the Orchestra of St. Luke's and the soloists Maureen McGovern, Larry Kert, and Jack Gilford. The album should be released shortly.

Interviewed after the recording sessions, Thomas said, "I didn't play this music during the early years of my career, although I have known it all my life. Since it has a special place in my heart, I am particularly pleased to be playing it and recording it during this anniversary year. My family has had a close relationship with the Gershwins for three generations, and I will always be at their service and at the service of the music and words of George and Ira.

"In an age when we have become accustomed to gimmicks and hooks that are used to make music—particularly theater music—seem attractive, it's really a treat to work with music whose fundamentals



Simon Estes and Roberta Alexander sang *Porgy and Bess* at the Met.

reach such a high level of quality."

Thomas agrees that Gershwin's work seems to be gaining in stature. While he applauds the trend toward returning to the authentic performing style of Gershwin's work, he points out that this is quite different from the original-instruments movement in Baroque music.

"We have on-the-line musicians who worked with Gershwin. These living witnesses are very different from scholars speculating over manuscripts in libraries because you get a very different kind of savvy from performers. Still, there are many things that are up in the air—how fast, how slow, how much rubato. Here we must rely on the instinct of the present-day performer, who should not attempt to slavishly imitate what may or may not have happened at a particular concert in the past, but should make the material on the page come to life, which is what the performer is always supposed to do."

Thomas speaks eloquently of the perfect placement of each note in Gershwin's music, of the space, clarity, and elegance that link it to the classic tradition. He seems to think its greatest appeal to audiences, however, is emotional.

"I think people gravitate to Gershwin's music because it relates to our feelings of having come from somewhere else—from many different places—to be blended together in this culture that includes skyscrapers and jazz music, yet it contains an element of loneliness, of longing for the little villages we came from. This music," he said, "is part of the American soul." □

# TURNTABLE Rx

by *Ralph Hodges*

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*Diagnosing  
turntable  
problems can  
help you achieve  
better-than-  
new sound.*

**R**ECORD-playing equipment has never been more interesting technically, or offered better value, than it does today. Although many turntable manufacturers have abandoned the field because of the expanding dominance of the CD and the cassette, those who are left tend to offer truly exceptional products. It's easier than at any time in recent memory to find a genuine turntable bargain (that is, a *good* machine at a low price) or a significant technological refinement.

That's good news for the millions of people who still buy LP's or who have sizable collections of possibly irreplaceable vinyl. Nonetheless, even today a record player that performs at its best right out of the box is a rare commodity. Careful installation and setup are still important, and the extent to which you can continue to improve your machine's performance is limited only by your patience and ingenuity.

## *Shake, Rattle, and Roll*

A turntable's purpose is to enable the physical vibrations of the stylus as it tracks the record groove to be transformed into electrical audio signals. The problem with most turntables is that they also expose the stylus to spurious vibrations from the turntable's own operation or from external sources. A "rumble" measurement made with a test record may suggest the existence of a spurious-vibration problem, but the number alone can't tell you where the noise is coming from, let alone how to fix it. And the noise may not even be rumble by strict definition. Finally, an impressive rumble specification may be valid only for the good sample the test lab got, not for the lemon you may own.

The way to diagnose turntable noise at home is with a toy stethoscope. Professional stethoscopes tend to be *too* sensitive for this task, and their flat diaphragms are less suitable than a toy model's rubber pickup cone. The test involves placing the stethoscope at various points on the top of the turntable, or motorboard, as the platter rotates.

The most critical point to audition with the stethoscope is the area around the tonearm mount, but you may find yourself chasing noises all over the machine until you've precisely located their origins. There are many sources of noise in a turntable, and a stethoscope

will reveal them unmercifully. Don't panic when you hear something, however. What is important is to concentrate on the *kind* of sound you're hearing and to analyze how it may affect what is happening at the working end of the tonearm, where the stylus is.

### *What to Listen For*

Sounds that suggest mechanical grinding or binding usually signal a need for immediate professional attention. Smooth "whirring" noises, however varied and cacophonous, are normally much more benign, although it is highly desirable to minimize such noises where the tonearm is mounted (this is especially important to consider if you're mounting a separate tonearm and have some flexibility in where to put it).

**C**yclic disturbances, particularly noises whose repetition corresponds with the platter's rotation, need close scrutiny. Many belt-drive turntables have a platter consisting of an outer ring and an inner hub. If you have one of these, try rotating the ring on the hub for a minimum of disturbance. Then do the same with the platter mat, if there is one. Observe how the belt "rides" on the hub, and estimate its contribution to the noise you hear. Naturally, you should review your owner's manual to make sure you have not neglected any of the manufacturer's recommendations on drive-belt maintenance and replacement.

Your initial investigations can be conducted without a record in place. Now select a record, preferably one with a wide dynamic range, and let it rip—but with the amplifier turned off. Does the stethoscope pick up music in the vicinity of the tonearm base? Does it pick it up elsewhere? If the arm conducts vibrations from the cartridge to the motorboard, it is probably also providing a return path for mechanical noise and acoustic feedback. A low-compliance cartridge mated with a flimsy tonearm is a classic combination for this sort of misbehavior, but subtler causes may be involved as well.

Music heard elsewhere on the turntable's top surface may point to a transmission path through the platter assembly, and—whatever you've heard to the contrary—using a more substantial platter mat may be at least the beginning of a solution. The mat should not be so substantial and weighty, however, that the turntable's suspension hits bottom when a record is added.

The next test—which should be familiar to all audiophiles—involves lowering the tonearm onto a stationary record, turning up the volume to a normal listening level, and tapping the turntable's motorboard and base with your finger tips. A tightly damped, short-duration thud is what you should hear from the speakers; a blooping, bonging, persisting sound is bad news. Sometimes, but certainly not invariably, you'll be able to hear in the "hangover" of the sound a quality recognizable from the stethoscope tests. If you listen through the stethoscope as you tap, you may note some areas of special sensitivity in the turntable's support structure.

Repeat the tap test using headphones instead of loudspeakers. You'll be disoriented at first by the difference in the character of the sound, but you should be able to judge whether it persists for a shorter time after each tap than when you listened using speakers. If so, acoustic feedback from the speakers is a principal component of your problem. You should also be able to recognize any

special "sonic signatures" familiar from previous tests, indicating that you've definitely found a structural problem, even if you don't yet know what it is.

Finally, play a record (preferably not one you value much), put on the headphones, and tap repeatedly all over the motorboard. What you'll experience should mostly be effects of instability in the cartridge, the tonearm, or the suspension, and they may range from benign glumps and bumps to groove-jumping, break-up, and severe "bottoming" of the headphones from strong infrasonic signals. If you use electrostatic headphones connected to the speaker outputs, you could even pop amplifier fuses.

The information from these tests, interpreted with a heavy dose of intuition, should lead you to a successful diagnosis of your turntable's particular flaws and foibles. But before applying your intuition, it helps to repeat the tests on one or more other record players (I did say "patience" was needed) in order to establish a sort of norm, or acceptable level of performance.

Incidentally, if you have a tape deck in your system, it's a good idea to record all of the tests involving contact of the stylus with an LP. The recordings will jog your acoustic memory, and they may serve notice of difficulties undetected on first hearing, such as infrasonic signals not quite strong enough to trouble headphones but sufficient to overload your deck's recording stages or to saturate the tape.

### *Diagnostics*

The stethoscope tests are useful because they enable you to trace a vibrational disturbance to a source—or at least an apparent source. They do not, however, tell you whether the disturbance is audibly significant. With a belt-drive turntable, if the motor is extremely audible at some motorboard locations but barely perceptible at the tonearm base, there is little reason to worry—unless you can still hear the motor, as well as perhaps a wisp of music, when you play a record with the amplifier off. Direct-drive turntables often transmit vibrations everywhere, but at a frequency so low as to be inaudible unless a record is actually being played, in which case you may hear it (through headphones) as a "chugging" sort of vibrato or (through the stethoscope) as an excitation near the tonearm base that wasn't there when the arm was in its rest.

**T**he test using loudspeakers reveals your system's susceptibility to acoustic feedback. Given all the variables involved, including room acoustics, I'd advise avoiding the headaches of trying to isolate the turntable and just relocate it, in another room if possible. If that doesn't help, haul out the stethoscope again and learn whether transmissions through the structure of your house or apartment are shaking the turntable's support mechanism.

The tests using headphones not only involve the risks already mentioned, they require caution. Unfortunately, they're the only tests that can identify cartridge/tonearm instabilities short of using a test record and professional instrumentation. Many manufacturers today give advice on arm/cartridge matching, and it should be followed unless you have good reasons not to. In my experience, cartridge/tonearm mismatching is a major source of dissatisfaction with LP sound. Fortunately, it is an easy problem to correct.



SAMUEL BAYER

There are also, however, cases of defective cartridges, loose tonearm bearings, and tonearms that shouldn't have been sold for a particular turntable in the first place. Even qualified test labs may have difficulty sorting out these aberrations. An experienced listener, using tests as simple as the ones described above, can often do just as well, if not as quickly and confidently.

### *Remedies*

A great deal has been written about seemingly magical modifications to turntables and tonearms, and a fair number of modifiers stand ready to offer you their services—if you're willing to sacrifice any factory warranty still in force. You can apply high-density caulking compounds to platters, bases, and headshell assemblies. You can buy spiky feet, springy stands, tricky mats, record hold-down appliances, fascinating wires, and much, much more. Do any of these things do any good? Yes—but only if you know what you want to fix and understand how these devices apply to your own situation.

The tendency of a turntable platter to transmit vibration is lamentable, but coating its underside with Duxseal to inhibit the effect will only unbalance it, eventually giving you a wobble where you only had a "boing" sound. Similarly coating the underside of the motorboard will redistribute resonant modes that may have been cunningly contrived by the turntable designers to suppress themselves at certain critical surface areas, and

it may also load the suspension in such a way as to upset its stability further.

A good record mat—one that forms a good record/platter interface—can be a godsend, but it can also visit you with the same curses as overdamping with Duxseal. For example, during parties I use a heavy mat and a record clamp on my turntable because it is close to my speakers. I dispense with these accessories for normal listening because they excessively load the mechanism, unbalancing it, and the sound levels are not sufficient to make acoustic feedback a problem. In other words, I make compromises for special occasions while still retaining a sense of how the turntable ought to perform under ideal conditions.

Having such a sense of how things ought to be is probably the best basis for troubleshooting a record player. If your machine is truly in trouble, the tests I've described will let you know it, even if it turns out that you cannot do a great deal about the problems yourself. And if the manufacturer or dealer can't help, you've still done your best—and you can bury the thing with a clear conscience.

I should note that everything I've suggested is intended to supplement, not substitute for, what the turntable manufacturer tells you about his product. Defy his instructions and expect the worst. But don't expect the best, either, unless you're willing to do a little work on your own. □

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# ur Power Base.

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Or, in the words of Audio Magazine's Len Feldman, "The significance of its design can only be fully appreciated by tuning the weakest, most unaccept-

able stereo signal you can find, then pushing those two magic buttons. Separation is still there; only the background noise has been diminished, and with it, much of the sibilance and hissy edginess so characteristic of multipath interference."

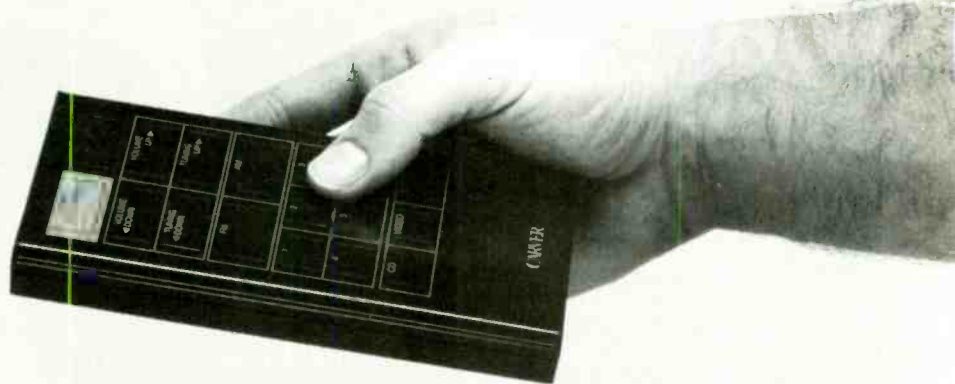
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## BEST RECORDINGS OF THE MONTH

*Stereo Review's critics choose the outstanding current releases*

### VEGA'S "SOLITUDE STANDING"

**W**E all went to school with someone like Suzanne Vega—the spindly, quiet girl in the second row who read a lot but never had her homework done, who had one best friend and always went straight home after school to listen to records. It doesn't seem possible that music critics now expect that timid, homely little creature to revive the folk-music scene single-handedly. But that's just what Suzanne Vega is doing.

Actually, the "folk" tag doesn't even begin to describe Vega's eloquent, gut-wrenching music. Like Joni Mitchell and Ricki Lee Jones, Vega writes songs that are intelligent, personal yet universal. Her lyrics approach real poetry, not just street poetry or pop-music poetry. Her new album, "Solitude Standing," is peopled by an assortment of real and imagined characters—waiters and lovers, mothers and children, ghosts and heroes—of whom Vega herself is not always the most important. The principal character in *Luka*, for example, is an abused child; in *Ironbound*, the principals are a mother and her son at the gates of an inner-city schoolyard.

When Vega does appear in her songs, she's not always the same. In the existential reverie *Tom's Diner*, she's a vaguely preoccupied customer who's ignored by the counter man, then watches as he fusses over the next woman who comes in. It's enough to make anybody wonder, "Am I really here?" Even a woman who at first seems to be peering in at Vega from outside turns out to be looking at her own reflection in the window. Vega's reaction to all this is strangely ambivalent; her *a cappella* vocal moves at an increasingly tentative pace, pausing between

verses as though she'd forgotten what exactly she was supposed to be doing. In fact, she's in a brown study, thinking about an old lover.

Contrast that Suzanne Vega to the Vega of *In the Eye*, where she stares down a mugger and practically defies him to kill her: "If you were to kill me now/Right here I would still/Look you in the eye/And I would burn myself/Into your memory." In *Calypso*, Vega fantasizes a life as a mythical siren; in *Gypsy*, she recalls an East Village version of Heart's *Magic Man*; in the title song, *Solitude Standing*, she keeps an assignation with death. The Vega of "Solitude Standing" is vulnerable but not weak, sensitive but not sentimental, and she can get her point across without climbing onto a soapbox.

While "Suzanne Vega," her first album, suggested folk music by its simple, acoustic guitar-based arrangements and her fragile, girlish voice, "Solitude Standing" is more like rock. It's tougher, but it's prettier too. Backed by a permanent band this time, Vega fleshes out her

songs with jangling electric guitar and sweeping synthesizer. In "Suzanne Vega," her busy, precocious arrangements often packed more words into a song than the music could hold. "Solitude Standing" pays much closer attention to melody, and Vega never fights against the rhythm.

Whether "Solitude Standing" will unleash a torrent of denim-jacketed singers with harmonicas and acoustic guitars is doubtful—it upends so many folk-music stereotypes that you can hardly call it folk at all. But that really isn't the point. "Solitude Standing" stands on its own as music that lets you see the world around you a little more clearly and feel things a little more intensely. It's music that matters. *Mark Peel*

**SUZANNE VEGA:** *Solitude Standing*. Suzanne Vega (vocals, acoustic guitar); other musicians. *Tom's Diner*; *Luka*; *Ironbound*/*Fancy Poultry*; *In the Eye*; *Night Vision*; *Solitude Standing*; *Calypso*; *Language*; *Gypsy*; *Wooden Horse* (*Caspar Hauser's Song*); *Tom's Diner* (*Reprise*). A&M SP-5136 \$8.98, © CS-5136 \$8.98, © CD-5135 no list price.

*Suzanne Vega: tougher, but prettier too*



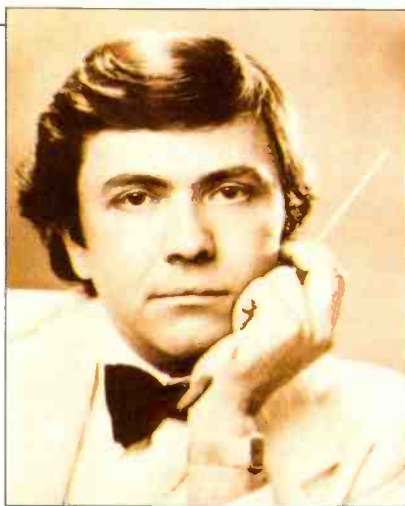
## BEST RECORDINGS OF THE MONTH

### SCHWARZ: MASTERLY PROKOFIEV

**S**ERGEI PROKOFIEV completed his now-classic evening-long dance evocation of Shakespeare's *Romeo and Juliet* in 1936, but a long-running series of differences with both the Kirov and Bolshoi ballets resulted in a two-year lapse before the work received its première—not in the U.S.S.R. but in Brno, Czechoslovakia. Meanwhile, the exasperated composer put together two seven-movement concert suites from the music, designing the suites to provide effective contrasts between movements rather than dramatic coherence.

While a number of conductors who have recorded one or both of the concert suites—Georg Solti on London, Joel Levi on Telarc, among others—have rearranged the numbers from the concert suites to follow the order of Shakespeare's drama, in his new recording for Delos with the Seattle Symphony, Gerard Schwarz has stuck with the concert arrangements. He has also used Prokofiev's original scoring, free from the modifications he was compelled to make for theater performance. As a filler, Schwarz has given us the second of the two waltzes that Prokofiev composed in 1949 as part of the commemoration of the 150th anniversary of the birth of the great Russian poet Pushkin.

Schwarz and his orchestra deliver masterly performances, reaching a peak of brilliance in the mercurial *Dance* in the Second Suite. There is also fine lyrical playing through the extended duet episodes for the young lovers, and *The Death of Tybalt* is properly ferocious and blood chilling. *The Montagues and the Capulets* is as baleful and menacing as one could ever ask, but my only interpretive caveat concerns this episode. Not even Rostropovich, in his predominantly solemn reading of the concert suites for Deutsche Grammophon, makes Juliet's entrance midway in this episode sound quite as slow and mournful as Schwarz does.



Conductor Gerard Schwarz

The CD catalog offers strongly competitive versions of this music, but only Rostropovich and Schwarz offer both suites on a single disc. Between the two, I would give Schwarz and the Delos production team the edge for sonic opulence as well as generally more convincing pacing.

David Hall

**PROKOFIEV:** *Romeo and Juliet, Suites Nos. 1 and 2, Op. 64b/c; Pushkin Waltz No. 2, Op. 120.* Seattle Symphony Orchestra, Gerard Schwarz cond. DELOS © D/CD 3050 no list price.

### ZEVON'S WITTY, SUBVERSIVE ROCK-AND-ROLL

**W**ARREN ZEVON'S best records have always sounded, as he suggests in one of his latest songs, like trouble waiting to happen. Even when he was accompanied by terminally laid-back Los Angeles sidepersons, his music had the gleefully manic edge of a man for whom the *Friday the 13th* movies are a comedy series. "Sentimental Hygiene," Zevon's first album in nearly five years, retains that subversive spirit, but for the first time his collaborators sound as if they're in on the joke. The result is clearly his strongest effort since the ineffable "Excitable Boy."

Working with only a few more

chords than *Louie Louie*, Zevon seizes the contemporary moment with the album's very first cut. The title song, enigmatic and impenetrable as it may be (I mean, I think I know what sentimental hygiene is, but I'm not sure if it's fun or not), is clearly *the* sex anthem for the Eighties, or what's left of them. As a bonus, it also features Neil Young playing two of the most deliciously concise and fuzzed-out guitar solos of his entire career. The instrumental contingent from R.E.M. makes an appearance soon after, assisting on *The Factory*, which is not the Bruce Springsteen pastiche you might expect. Instead, it's a very funny blue-collar horror song rendered irresistible (and politically potent) by an insistent idiot-prole chorus screaming, "Yes sir! No sir!" while none other than Bob Dylan tries to remember which end of his harmonica to blow into.

Other memorable moments include *Detox Mansion*, a long-overdue skewering of celebrities who celebrate their personal problems in the pages of *People* magazine ("We get therapy and lectures, we play golf in the afternoon," Zevon sings plaintively); a dead-serious ode to boxer Boom Boom Mancini, featuring impressively raucous guitar work by Zevon himself; and the howlingly funny *Bad Karma*, in which the composer takes "a wrong turn on the astral plane" while a dinky little toy sitar plunks away in the background.

Singer-songwriter Warren Zevon



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# MUSIC FOR THE MIRACLE

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## BEST RECORDINGS OF THE MONTH

Of course, like life, no Zevon album is perfect. "Sentimental Hygiene," being no exception, does contain the requisite two unconvincing love songs (I'm sure you mean them, Warren, but face facts: sincerity is not your best quality). And the concluding *Leave My Monkey Alone*, an unfocused song about Kenyan colonialism, seems to exist for no other reason than to give guest arranger George Clinton a shot at crafting Zevon a dance-club hit. Nevertheless, in terms of wit, exuberance, rock-and-roll crunch, and all-around idiosyncratic personal vision, this is clearly one of the most satisfying efforts of 1987, and its creator seems a strong candidate for Comeback of the Year. I'd say even nicer things, but, as Zevon remarks in the album's conceptual centerpiece, "Even a dog can shake hands." *Steve Simels*

**WARREN ZEVON:** *Sentimental Hygiene*. Warren Zevon (vocals, guitar, piano); Peter Buck (guitar); Neil Young (guitar); Bob Dylan (harmonica); Mike Mills (bass); Bill Berry (drums); other musicians. *Sentimental Hygiene; Boom Boom Mancini; The Factory; Trouble Waiting to Happen; Reconsider Me; Detox Mansion; Bad Karma; Even a Dog Can Shake Hands; The Heartache; Leave My Monkey Alone*. VIRGIN/ATLANTIC 90603-1 \$8.98, © 90603-4 \$8.98, © 90603-2 no list price.

### EDELMANN: IRRESISTIBLE CHOPIN

**N**OT since RCA issued Emanuel Ax's first Chopin record eleven years ago have I come across a recording that made so strong a case for a new pianist as Sergei Edelmänn's first Chopin collection, just issued on the same label. Edelmänn's debut recording for RCA was a Schumann collection that struck me as "bracing and heart-warming"; his Chopin warms the heart even more deeply.

As in the case of the Ax record, Edelmänn's Chopin is so exceptionally beautiful that a usually verbose listener can only grope for words. I

was struck by the poetry of the playing, the spontaneity, the pianist's apparent abandonment of himself in favor of Chopin (instead of his proclaiming, "Listen, this is *my* Chopin!"), the exceptional regard for beautiful tone and subtle shadings. But no inventory of elements can convey the impact of this performance. Any one of the three mazurkas, or the single nocturne, would make the record irresistible. I might wish Edelmänn had found greater dimensions in the B Minor Sonata, as Emil Gilels did in his unforgettable Deutsche Grammophon recording. It isn't that Gilels simply laid on more muscle than Edelmänn can summon up, but that he felt the work as something grander and more majestic; now that his version is (inexplicably) gone, though, I'd have no hesitancy in placing Edelmänn's smaller-scaled, more intimate one at the head of this work's by no means undistinguished current discography.

For this release, RCA's veteran producer John Pfeiffer and engineer Edwin Begley seem to have gone a bit beyond anything they have done before, to give us one of the finest likenesses of a piano we are likely to hear—and in an analog recording. You may find your own adjectives when you've heard this record, but more likely you, too, will find that the only way to express yourself about it is simply to make someone else listen to it. *Richard Freed*

**CHOPIN:** *Piano Sonata No. 3, in B Minor, Op. 58; Mazurkas in E Minor, Op. 41, No. 2, in C-sharp Minor, Op. 50, No. 3, and in F-sharp Minor, Op. 59, No. 3; Nocturne in F-sharp Major, Op. 15, No. 2; Polonaise-Fantaisie, Op. 61*. Sergei Edelmänn (piano). RCA 5915-1 \$9.98, © 5915-4 \$9.98, © 5915-2 no list price.

*Pianist Sergei Edelmänn*



### NOW ON CD Compact Discs of previously released LP's

#### POPULAR

- **CHICK COREA:** *Trio Music*. ECM 823 468-2 (two CD's). "Imaginative and thoroughly satisfying" (March 1983).
- **DEREK & THE DOMINOS** (Featuring Eric Clapton): *In Concert*. RSO 831 416-2 (two CD's). "Master at work" (July 1973).
- **JUDY GARLAND:** *At Carnegie Hall*. CAPITOL CDP-46470 (one CD). The landmark 1961 recording, though missing four tracks included in the original two-LP set.
- **KEITH JARRETT:** *Solo Concerts Bremen/Lausanne*. ECM 827 747-2 (three LP's on two CD's). "Brilliantly played, superbly recorded" (Best of Month, November 1974).
- **KISS:** *Double Platinum*. CASABLANCA 824 155-2 (two LP's on one CD). "Recommended to the Teenage Wasteland everywhere" (October 1978).
- **MAZE:** *Life in New Orleans*. CAPITOL CDP-46659. "Their best" (November 1981).
- **THE PAJAMA GAME** (Jerry Ross-Richard Adler). COLUMBIA CK 32606. Original Broadway cast of 1954, with John Raitt, Janis Paige, and Eddie Foy.
- **SHEILA E.:** *The Glamorous Life*. WARNER BROS. 25107-2 (CD bonus: club version of title track). "Sassy, flamboyant, inventive music making" (October 1984).

#### CLASSICAL

- **BARBER:** *Antony and Cleopatra*. Hinds, Wells; Badea. NEW WORLD NW 322/24 (two CD's). Revised and recorded live in Spoleto, Italy, in 1983.
- **BRUCKNER:** *Symphony No. 9*. Giuliani. EMI/ANGEL CDC-47637. "Beautifully played" (April 1978).
- **LALO:** *Violin Concerto; Concerto russe*. Wallez, Koizumi. PG/IBR PCD 7374. First recordings, made in 1976, of these little-known minor masterpieces.
- **MAHLER:** *Symphony No. 5*. Haitink. PHILIPS 416 469-2. "Full of energetic and expressive detail" (June 1972).
- **OFFENBACH:** *La Périchole*. Berganza, Carreras; Plasson. EMI/ANGEL CDCB-47361 (two CD's). "A gem—highly polished and lushly recorded" (July 1983).
- **WAGNER:** *Orchestral Excerpts. PROKOFIEV: Romeo and Juliet, Excerpts*. SHEFFIELD LAB CD-7/8. A recording of "crystalline clarity" in its original direct-to-disc LP issue (July 1978).

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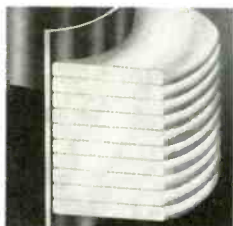
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Discs and tapes reviewed by  
Chris Albertson, Phyl Garland,  
Alanna Nash, Mark Peel,  
Steve Simels

**BRYAN ADAMS: *Into the Fire*.** Bryan Adams (vocals, guitar, piano, keyboards); Keith Scott (lead guitar, backing vocals); Dave Taylor (bass); Mickey Curry (drums); instrumental accompaniment. *Heat of the Night; Into the Fire; Victim of Love; Another Day; Native Son*; and five others. A&M SP-3907 \$8.98, © CS-3907 \$8.98, © CD-3907 no list price.

Performance: *Excellent*  
Recording: *Excellent*

Bryan Adams is the kind of musician critics find easy to dismiss but listeners absolutely love. His meat-and-potatoes rock-'n'-roll—straight-ahead AOR, free of all cultural influences outside the Grain Belt—is secondhand and derivative. The group Adams most reminds you of is Foreigner, itself three generations removed from anything resembling an original idea. None of this matters to Adams's fans.

On the evidence of "Into the Fire," I'm beginning to think his fans are right. Okay, so just about every melody and lyric sounds strangely familiar. Wasn't the title cut on U2's third album? Didn't Robert Palmer do *Victim of Love*? What about *Another Day*—wasn't that Tom Petty? But if Adams is short on invention, he's strong on execution. "Into the Fire" is over-the-top rock, with complex but uncluttered arrangements and hard-edged, no-nonsense playing. It's also Adams's first "serious" album. Sometimes that's good: *Rebel*, for instance, is a terrifically affecting song, summoning forth images of the gray skies and sleepy, crumbling high streets of an English coastal town. Sometimes it's not so good, as in *Native Son*, a lament on the plight of the American Indian that's well-intentioned but uninspiring.

Big issues, however, are not why one listens to Bryan Adams. You listen to Adams for the shuffling rave-up *Another Day*, the thundering back beat and zigzagging slide guitar of Keith Scott on *Only the Strong Survive*, Scott's fretboard fireworks on *Into the Fire*, and the anthemic piano chords of *Rebel*. You listen to Bryan Adams for his raw, scratchy, totally unaffected vocals,



## TOM PETTY & THE HEARTBREAKERS

"MAY you live in interesting times," goes a venerable Chinese curse. Well, these are interesting times, all right, and we're living in 'em, as anybody following the sticky-fingered careers of Reagan Era icons like Ivan Boesky, Jim and Tammy Bakker, and Oliver North can testify. Or, closer to home, look at big-time rock-and-roll. I mean, is it my imagination, or can one count the number of best-selling rock stars whose work seems motivated by anything other than simple greed on the fingers of, at most, two hands?

Given such a climate, it is, of course, easy to overinflate the virtues of any album that seems to have a genuine reason to live, and I don't want to suggest that "Let Me Up (I've Had Enough)," the latest effort from Tom Petty and Heartbreakers, is some kind of imperishable masterpiece. It is quite obviously the work of people making music for the sheer love of it, the novelty of which is, to say the least, refreshing. And since these people are also enormously skillful and working near the top of their form, you can also forgive them for not exactly breaking new ground at the same time.

The record is, in fact, a sort of return-to-the-roots project for Petty and Company. Gone are the hordes of co-producers, collaborators, composers, and guest instrumentalists who made their previous "Southern Accents" such an ungodly mess. What we hear instead is a sort of ultra-sophisticated r-&b and Byrds-derived garage rock played by a self-contained five-piece band that has by now achieved the almost telepathic tightness of a good jazz combo. And

while that kind of authority might sound inimical to rock-and-roll, these guys still remember that noise can be liberating, that musicianship need not preclude spontaneity, and that the essential rock-and-roll move is a rude gesture. All of which you can hear on "Let Me Up."

There's much to admire: the gorgeous Middle Dylan Goes Synth-Pop ambience of *Runaway Trains*, the frat-party rowdiness of *Think About Me*, the glee with which *Jammin' Me* sticks it to heroes and villains ranging from Eddie Murphy to the Ayatollah, and the "Exile on Main Street '87" guitars that inhabit the title tune. But in the end it's not the specifics that stay with you, delightful as they may be. What really impresses about this album is something a little more radical: the audible evidence that, even in this day and age, it remains possible to make music for a mainstream audience without pandering to anyone's expectations but your own. That's the simple little truth of "Let Me Up (I've Had Enough)," and I, for one, am grateful to have it reaffirmed.

Steve Simels

**TOM PETTY AND THE HEARTBREAKERS: *Let Me Up (I've Had Enough)*.** Tom Petty and the Heartbreakers (vocals and instrumentals). *Jammin' Me; Runaway Trains; The Damage You've Done; It'll All Work Out; Think About Me; My Life/Your World; All Mixed Up; A Self-Made Man; Ain't Love Strange; How Many More Days; Let Me Up (I've Had Enough)*. MCA MCA-5836 \$8.98, © MCAC-5836 \$8.98, © MCAD-5836 no list price.

### EXPLANATION OF SYMBOLS:

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Lisa Lisa and Cult Jam: strictly of the here and now

which are closer in spirit and tone to a hard-working club performer than a video-age rock star. And you listen to Bryan Adams because the guy flat-out rocks. *M.P.*

**JONATHAN BUTLER.** Jonathan Butler (vocals, guitars); vocal and instrumental accompaniment. *Lies; I Miss Your Love Tonight; Take Good Care of Me; Going Home; All Over You; Love Songs, Candlelight and You; One More Dance; Barenese;* and eight others. JIVE/RCA 1032-1-J two LP's \$8.98, © 1032-4-J one cassette \$8.98, © 1032-2-J one CD no list price.

Performance: *Very good*  
Recording: *Excellent*

Jonathan Butler's new album is a fascinating testament to the global impact of American popular music. Born in Capetown twenty-five years ago, the youngest of seventeen brothers and sisters, Butler heard many of the same pop tunes on the radio in the late Sixties and Seventies as American youngsters did. He taught himself how to play guitar at six, was performing with a traveling troupe by the time he was eight, and has been a star since his teens. Currently a resident of London, this strikingly handsome balladeer released a jazz-guitar album in the U.S. in 1986 and is now being presented in the more popular role of a singer and instrumentalist.

The music Butler offers on this release is so derivative of familiar American styles that hearing it may give you an eerie sense of *déjà vu*. Most of the

songs are benign, meticulously executed, girl-boy love songs without a trace of indigenous Africanisms. While they *do* reveal an artist of extraordinary appeal, with a light, boyish singing style, Butler's most formidable gifts are as an instrumentalist. The truly outstanding selections are those featuring him on solo guitar, and when he sings, scat-style, over his instrumental improvisations, he approaches the level of George Benson at his pop-jazz best. *P.G.*

**LISA LISA AND CULT JAM:** *Spanish Fly.* Lisa Lisa and Cult Jam (vocals and instrumentals); vocal and instrumental accompaniment. *Everything Will B-Fine; Head to Toe; A Face in the Crowd; Someone to Love Me for Me; Talking Nonsense;* and four others. COLUMBIA FC 40477, © FCT 40477, © CK 40477, no list price.

Performance: *Motownish hip-hop*  
Recording: *Satisfactory*

At times, Cult Jam's lead singer, Lisa Lisa, with her high, slightly nasal voice, sounds more than a little like the young Diana Ross, but everything that surrounds her musically is strictly of the hip-hop, rock-funk here and now, complete with thunderous synthesizer effects. When this trio borrows from the old Motown sound, they can produce music that is engagingly lighthearted and highly danceable. That is certainly the case with their latest hit, *Head to Toe*. Similar echoes are found in *Lost in Emotion*, which has a hint of Smokey Robinson in the lyrics and melody. The

back-up vocal-instrumental group Full Force lends a lusty, full-bodied quality to the sound throughout, especially on *Someone to Love Me for Me*, and while some of the selections are a bit thin musically, their youthful vitality demonstrates why this group has quickly gathered a large following. If they stick to this pattern, they're likely to be around for a while. *P.G.*

**NITTY GRITTY DIRT BAND:** *Hold On.* Nitty Gritty Dirt Band (vocals and instrumentals). *Fishin' in the Dark; Joe Knows How to Live; Blue Ridge Mountain Girl; Baby's Got a Hold on Me; Oleanna;* and five others. WARNER BROS. 25573-1 \$8.98, © 25573-4 \$8.98, © 25573-2 no list price.

Performance: *Bankable*  
Recording: *Very good*

With "Hold On," the Nitty Gritty Dirt Band's nineteenth album in its twenty-one-year career, the group raises the curtain on the recent departure of John McEuen and the subsequent addition of Bernie Leadon, formerly of the Eagles. Unlike the Eagles and a whole host of other West Coast country-rock groups who tacked a few country riffs onto their otherwise light-rock format, the Dirt Band began with a true country base, particularly with the addition of McEuen. Now that McEuen is out plowing the pastures of a solo career, NGDB isn't exactly abandoning its country roots, just emphasizing its rock heritage a little plainer, primarily with its song selection.

Still, this record is not a radical departure—there are plenty of country scents, flavors, and instrumental touches wafting through here, and a couple of songs broadly tip their hats to Tennessee and Virginia. All in all, "Hold On" could end up on several of the music charts and not cheat buyers of any persuasion. Whether it will also *satisfy* all of them, however, may be another matter. *A.N.*

**THE REPLACEMENTS:** *Pleased to Meet Me.* The Replacements (vocals and instrumentals); Steve Douglas (saxophone); other musicians. *I.O.U.; Alex Chilton; I Don't Know; Nightclub Jitters; The Ledge;* and six others. SIRE © 25557-1 \$8.98, © 25557-4 \$8.98, © 25557-2 no list price.

Performance: *Almost grown*  
Recording: *Very good*

Growing up, say the sages, is a bitch, and this new Replacements album proves it. No more cheapo-cheapo production jobs (this one is all digital, if you can believe it), no more out-of-tune guitars or adolescent jokes. Instead, we get expensive sidemen like the Memphis Horns, a great big guitar sound ready for radio play, and an almost palpable air of "Now what?"

Lead Replacement Paul Westerberg is still, for me, the finest rock songwriter in the world, and some of his stuff

here—the chilling *The Ledge*, the scrumptiously hooky *Alex Chilton*—is up to his very considerable standard. And the rest of the band, even when augmented by strings, as on *Can't Hardly Wait*, continues to project the inimitable ragged intensity that initially made the group special. Overall, though, these guys seem poised on the verge of an adulthood that they're not completely comfortable with. If you're a fan (and if you like rock-and-roll, you should be), chalk up "Pleased to Meet Me" as a transitional album and keep your fingers crossed for the next one. If you're not a fan, buy the CD of "Let It Be" or "Tim" instead, and prepare to have your life changed. S.S.

**RESTLESS HEART: *Wheels*.** Restless Heart (vocals and instrumentals); instrumental accompaniment. *Wheels; That Rock Won't Roll; I'll Still Be Loving You; Hummingbird*; and six others. RCA 5648-1 \$8.98, © 5648-4 \$8.98, © 5648-2 no list price.

Performance: *Déjà vu*  
Recording: *Very good*

Restless Heart is a country-rock outfit that sounds like a cross between the old Firefall, the Little River Band, and, in its few moments of noticeable life—mainly a runaway train of a tune called *Hummingbird*—Southern Pacific. I'm sure they'd rather I added the Eagles, since Restless Heart tries to look like them in the jacket photograph, but we're talking pipe dream here.

Thoroughly lightweight and unidentifiable, Restless Heart offers blandly smooth MOR instrumentals, dull and predictable song structures, and pleasant but so-what harmonies, with only a wisp of country background. Let's not even mention *New York (Hold Her Tight)*, an ode to the "Town That Stole My Girl Friend." Restless, perhaps. Heart, no. A.N.

**JOHN SCHNEIDER: *You Ain't Seen the Last of Me!*** John Schneider (vocals); vocal and instrumental accompaniment. *I Lost My Head Last Night; So Good; Angelena; The Gunfighter; Credit*; and five others. MCA ● MCA-5973 \$7.98, © MCAC-5973 \$7.98, © MCAD-5973 no list price.

Performance: *Deep as a birdbath*  
Recording: *Better than needed*

In the latest phase of his cinematic sweep through country music, John "Dukes of Hazzard" Schneider "demonstrates his ability to passionately fuse rock 'n' roll and country," it says here in his bio. Right. "You Haven't Seen the Last of Me," Schneider boasts. Will bad news never cease? A.N.

**SUZANNE VEGA: *Solitude Standing*** (see Best of the Month, page 73)

**WARREN ZEVON: *Sentimental Hygiene*** (see Best of the Month, page 74)



## "IT WAS TWENTY YEARS AGO TODAY..."

**R**EGARDING the Beatles' "Sgt. Pepper" compact disc, released twenty years to the week after the original album altered the course of Western Civilization for about five minutes, a couple of questions need to be addressed at the outset. Is it dated? Is it kitsch? And how does it sound?

Quick answers: Yes, no, and terrific. It's impossible to hear the CD without realizing that both the world and rock-and-roll were a lot different back in the summer of 1967. In fact, it's hard to believe that anybody, let alone a bunch of jaded, world-weary show-biz vets like the Beatles, were ever as innocently, naively optimistic as the music on "Sgt. Pepper" sometimes suggests. And, yes, the record's much-vaunted innovations—the overarching concept, the sonic frippery, the Edward Lear-derived psychedelic lyricism—are somewhat less overwhelming than they seemed (through a cannabis haze, perhaps?) at the time. But even back in 1967, a number of folks (including, apparently, the Beatles themselves) already knew that the album was a dead end rather than a breakthrough to some kind of brave new world.

None of that really matters, though, because there are still moments, moments you've probably forgotten, when your jaw will drop at the rightness of it all, like the glorious metallic guitar solo

that erupts out of the wall-of-sound horns decorating *Good Morning Good Morning*, or the sublime and still terrifying calm of John Lennon's vocal entrance on *A Day in the Life*. Make no mistake about it: These guys deserve their legend, and if "Sgt. Pepper" now seems more an encapsulation of a particular moment in time than the great phonographic work of art the legend enshrines, that takes away not one whit from the magnitude of the accomplishment. You can't listen to it today without, on some level, being moved, and nostalgia has little to do with it.

The CD transfer, meanwhile, is every bit as good as one might hope. You can hear into the music in ways that almost justify the new package's claim that this is the "most important" CD that ever was or will be. Steve Simels

**THE BEATLES: *Sgt. Pepper's Lonely Hearts Club Band*.** The Beatles (vocals and instrumentals). *Sgt. Pepper's Lonely Hearts Club Band; With a Little Help from My Friends; Lucy in the Sky with Diamonds; Getting Better; Fixing a Hole; She's Leaving Home; Being for the Benefit of Mr. Kite; Within You Without You; When I'm Sixty-Four; Lovely Rita; Good Morning Good Morning; Sgt. Pepper's Lonely Hearts Club Band (Reprise); A Day in the Life*. PARLOPHONE/CAPITOL © CDP-46442 no list price.

CAPITOL RECORDS

## CREED TAYLOR'S JAZZ



Ron Carter

**T**HERE was something slick about the sound on producer Creed Taylor's CTI and Kudu labels, which were founded in 1970 and flourished through most of the decade. Technically, the music, performed by a roster of hand-picked professionals from the jazz and borderline-jazz worlds, sounded almost too perfect at times, but it had a disarming opulence about it.

The CTI/Kudu roster did indeed include recognizable stars like Ron Carter, Billy Cobham, Hubert Laws, Freddie Hubbard, Joe Farrell, Jack DeJohnette, Esther Phillips, Airto, George Benson, and Stanley Turrentine. They were heard in a variety of combinations, often with an electronic, fusion-oriented supporting cast of top studio musicians. The sessions tended to be expensive, lavish affairs, and it was always clear that the producers, while certainly favoring jazz, looked beyond the jazz market for their product. As a result, CTI and Kudu records were sometimes dismissed by jazz lovers as commercial pap, but they undoubtedly helped many listeners make the transition from middle-of-the-road fare to something with a little more substance.

Now, after years of absence, the CTI/Kudu catalog of more than a hundred albums is being revived on digitally remastered compact discs distributed by CBS. Taylor went out of his way to make his recordings as technically palatable as possible, so it is not surprising to find that the CD's have superb sound. The initial release comprises thirteen titles, and many more are scheduled to appear before the end of the year.

Among the first reissues is a concert of straightforward jazz by Gerry Mulligan and Chet Baker recorded live at Carnegie Hall in 1974. When the two of them stepped on stage for this reunion, they were actually being quite trendy,

for the music world was gripped by nostalgia at the time and many younger performers were finding it lucrative to re-create the sounds of bygone days. But Baker and Mulligan were emulating neither past performers nor past performances. They were, after two decades, reapproaching the repertoire that made them college favorites in the middle and late Fifties. With six other musicians participating, they obviously made no attempt to clone the famous piano-less quartet, but, if only by default, the familiar sound of the old group is very much in evidence. The CD release of "Carnegie Hall Concert" combines the two original analog albums into a generous and uninterrupted hour and eleven minutes of timeless jazz.

Apropos nostalgia, whenever Esther Phillips sang, she evoked memories of her idol, Dinah Washington, yet each song bore her own stamp as well. "What a Difference a Day Makes," her CTI album named after a Washington hit tune, represented a departure for her, one she seems to have been reluctant to make. Phillips was thirteen when she joined the Johnny Otis rhythm-and-blues show and made her mark as "Little Esther." She grew up in a blues-

Gerry Mulligan



drenched environment, absorbing sounds of earlier eras and taking advice from such veterans as Butterbeans and Susie, Jimmy Witherspoon, and Big Mama Thornton. Their brand of music and entertainment was earthy and raw, nothing like the slick product favored by the disco set. This album was made when disco was at its peak, and while Joe Beck's arrangements too often mirror the trite stuff of the day, Esther Phillips emerges with her integrity intact.

Not quite as generous in terms of playing time, but even more rewarding musically is "Blues Farm," a 1973 album by Ron Carter. I thought the original release of this set overly favored the bass, and I blamed engineer Rudy Van Gelder, but I take it all back. Carter's bass is indeed prominent, but I rather like it this time around. Maybe the generally enhanced sound of the CD release has something to do with it. Flutist Hubert Laws also contributes considerably to this fine set.

Other albums in this first CTI compact disc release include Hubert Laws's "The Rite Of Spring" (ZK 40693); Deodato's "Prelude" (ZK 40695), which features his hit rendering of the 2001: A Space Odyssey theme from Strauss's *Also sprach Zarathustra*; Don Sebesky's "Giant Box" (ZGK 40697), originally a two-record set with some of the label's top stars wrapped in ambitious arrangements; and "In Concert" (ZGK 40688), featuring Freddie Hubbard and Stanley Turrentine with Herbie Hancock, Ron Carter, and Jack DeJohnette.

Chris Albertson

**GERRY MULLIGAN AND CHET BAKER: Carnegie Hall Concert.** Chet Baker (trumpet); Gerry Mulligan (baritone saxophone); Bob James (keyboards); John Scofield (guitar); Ron Carter (bass); other musicians. *Line for Lyons; For an Unfinished Woman; My Funny Valentine; Song for Strayhorn; It's Sandy at the Beach; Bernie's Tune; K-4 Pacific; There Will Never Be Another You.* CTI/CBS ASSOCIATED © ZGK 40689 no list price.

**ESTHER PHILLIPS: What a Difference a Day Makes.** Esther Phillips (vocals); instrumental accompaniment. *One Night Affair; What a Difference a Day Makes; Mister Magic; You're Coming Home; I Can Stand a Little Rain; Hurtin' House; Oh Papa; Turn Around, Look at Me.* CTI/CBS ASSOCIATED © ZK 40710 no list price.

**RON CARTER: Blues Farm.** Ron Carter (bass); Hubert Laws (flutes); Billy Cobham (drums); other musicians. *Blues Farm; A Small Ballad; Django; A Hymn for Him; Two Beat Johnson; R2, M1.* CTI/CBS ASSOCIATED © ZK 40691 no list price.

# International Audio and Video Fair Berlin Aug. 28-Sept. 6, 1987

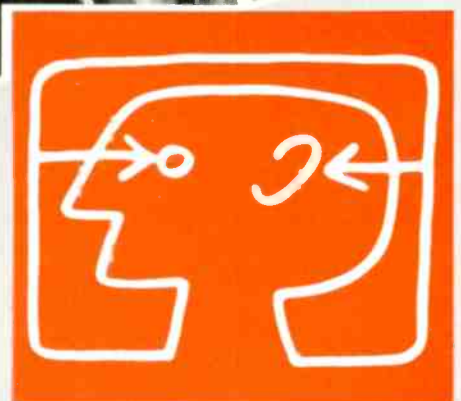


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*Discs and tapes reviewed by  
Robert Ackart, Richard Freed,  
David Hall, Stoddard Lincoln*

**BRUCH:** *Violin Concerto No. 1, in G Minor, Op. 26; Scottish Fantasy, Op. 46.* Cho-Liang Lin (violin); Chicago Symphony Orchestra, Leonard Slatkin cond. CBS ● IM 42315, © IMT 42315, © MK 42315, no list price.

Performance: *Very good*  
Recording: *Sumptuous*

The taste and passionate conviction that Cho-Liang Lin brings to these two Max Bruch works, often sentimentalized to the hilt in performances on and off records, whets my appetite to hear what he can do with the very biggest works of the concerto and chamber repertoire. I must admit to a bias in favor of the Anne-Sophie Mutter/Herbert von Karajan recording of the G Minor Concerto, but Lin does a first-rate job here within his own aesthetic frame of reference. He also has the benefit of gorgeous recorded sound and fine backing from Leonard Slatkin and the Chicago Symphony working in Medinah Temple, which seems to produce more consistent sonic results than Orchestra Hall in its renovated state.

The real gem here is the Scottish Fantasy, a product of Bruch's years as conductor of the Liverpool Philharmonic. For all the care the composer lavished on the fine Scottish tunes, I had found the score a bit tiresome until this record came along. Lin brings to the music a combination of strength and tonal warmth that recalls Joseph Szigeti and Adolf Busch in their palmiest days. As far as I can determine, this is the first digital recording of the Scottish Fantasy, and on the basis of the performance here I would give this entire CBS production a resounding "Huzzah!" *D.H.*

**BRYARS:** *Three Viennese Dancers: Prologue; String Quartet No. 1; First Viennese Dance; Epilogue.* Pascal Pongy (horn); Charles Fullbrook, Gavin Bryars (percussion); Arditti String Quartet. ECM/POLYGRAM 829 484-1 \$9.98, © 829 484-4 \$9.98, © 829 484-2 no list price.

Performance: *Atmospheric*  
Recording: *Good*

If memory serves, the British-born composer Gavin Bryars has a literary and a pop or jazz background. He has

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Guy de Mey (*Atys*) and Agnès Mellon (*Sangaride*)

THE KING'S OPERA

**T**HE first (and perhaps only) major observance by the record industry of the Lully tricentennial this year is the new Harmonia Mundi recording of the composer's opera *Atys*, performed by Les Arts Florissants under the direction of William Christie. In Christie's own words, Jean-Baptiste Lully "practically invented French opera" while in the service of Louis XIV of France, and *Atys*, which became known as the *opéra du roi*, was indeed the king's favorite.

Favorite though it may have been at the French court in the late 1600's, *Atys* dropped completely out of sight when Rameau moved in on the *lullistes* with his own innovative operas a half century later. *Atys* hadn't, in fact, been fully staged in more than two hundred years when Christie, based in Paris, worked up a production last winter that opened at the Opéra-Comique in January. It was an enormous success: it had been well rehearsed, was handsomely realized on stage, and was performed by a group of first-rate, thoroughly dedicated musicians.

*Atys* basically tells the story of the goddess Cybèle, who is no *dea ex machina* but the work's central, tragic figure. She has the misfortune of falling in love with a mortal—*Atys*. But *Atys* loves someone else. Whereupon Cybèle takes her revenge by driving him crazy and finally turning him into a pine tree.

Lully was always lucky in having the likes of Molière, Corneille, and Racine to work with, but his preferred librettist was the French poet Philippe Quinault, who turned out to be nearly the equal of any of them as a dramatist. (Rameau was not so lucky.) *Atys*, the fourth of the

eleven *tragédies lyriques* Quinault and Lully collaborated on over a thirteen-year period, is a marvel of dramatic poetry, and one of the joys of the new recording is the impeccable delivery of Quinault's lines.

Impeccable, too, is Christie's musicianship. His performance of this glorious music, though founded in scholarly concerns and historical practices, banishes the academic dust of three centuries in favor of the emotive truth and urgency of modern music making for modern audiences—or record buyers. Very few opera recordings in my experience possess the immediacy that this one has, which obviously results from the fact that all the musicians involved—singers and instrumentalists alike—have prepared as an integrated team to perform the opera as living theater, on stage, in the opera house.

The names of the four principal singers will be virtually unknown to anyone in this country who's not a Baroque specialist, but the four of them—Guillemette Laurens, Agnès Mellon, Guy de Mey, and Jean-François Gardeil—turn in stylish performances of gleaming intensity, and Christie's "Arts Flos" provides enlightened support throughout. Altogether a triumph for all concerned.

*Christie Barter*

**LULLY:** *Atys.* Guillemette Laurens (soprano), Cybèle; Agnès Mellon (soprano), Sangaride; Guy de Mey (tenor), *Atys*; Jean-François Gardeil (baritone), Célénus; others. Les Arts Florissants, William Christie cond. HARMONIA MUNDI ● 1257/59 three LP's \$38.94, © 40.1257/59 three cassettes \$38.94, © 90.1257/59 three CD's \$45.

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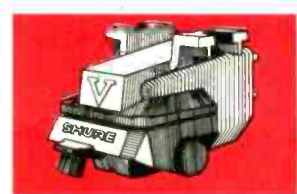


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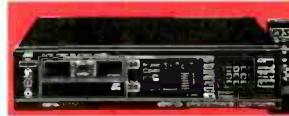
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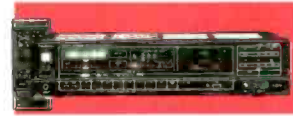
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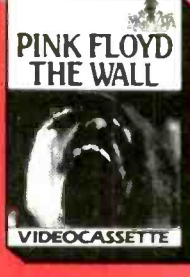
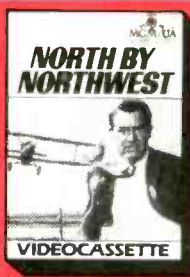


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Glenda Maurice: a rich voice

written a piece based on the music played by the deck band of the Lusitania, an opera based on the Medea legend, a music-theater piece on the life (or death) of the philosopher Immanuel Kant, and a major segment of Robert Wilson's *Civil Wars*. Someone with credits like that can't be all bad. But I found this album disappointing.

The three Viennese dancers of the overall title are Mata Hari, Maud Allan, and Isadora Duncan, none of whom were Viennese. All were reputed to have stayed in Vienna on a night in late 1906, but the significance of that escapes me. The *First Viennese Dance* movement, subtitled *M.H.*, has been reworked from a number dropped from Wilson's *Civil Wars*; its alleged connection with Mata Hari seems obscure. What the String Quartet No. 1 has to do with the other two ladies is anybody's guess. None of this would matter in the slightest if I loved the music, but I don't. It is atmospheric in a slightly sinister way—a sort of Edgar Allan Poe minimalism—and not in the least lovable. The most interesting material comes at the end of the quartet, which features harmonics played on the detuned strings of electronic instruments.

Curiously, this is a live album in which almost everything sounds electronic, and I imagine that the live experience of the music in a room with the musicians would be far superior to the effect of the recording. There is some amazing writing here, but when you hear it on a record it emerges as merely electronic sound and seems to lose its edge of mystery and astonishment. Anybody can make funny sounds on a digital synthesizer. *E.S.*

**CHOPIN:** *Piano Sonata No. 3; Three Mazurkas; Nocturne in F-sharp Major; Polonaise-Fantaisie* (see Best of the Month, page 76)

**DUPARC:** *Chanson triste; Élégie; Phidylé; La Vie antérieure; Lamento; Le*

*Manoir de Rosamonde; Au pays où se fait la guerre.* **POULENC:** *Calligrammes.* **RAVEL:** *Deux mélodies hébraïques.* Glenda Maurice (mezzo-soprano); Dalton Baldwin (piano). RIZZOLI © 2003, © 2003, no list price.

Performance: *Voluptuous*  
Recording: *Well-balanced*

Glenda Maurice has a big, rich voice and an active sense of drama. With one exception, her feeling for the sense of the words in these songs by Duparc, Poulenc, and Ravel is as striking as the voluptuous tone itself. The exception is the first of Ravel's two Hebraic songs, *L'Enigme éternelle*. It's sung in Yiddish, and in this case the singer seems to have little regard for the words and even less for the gently sardonic humor. Occasionally, too, in the Duparc sequence, there are worrisome points when Maurice's vibrato becomes a wobble, when the rather close focus on her big voice turns some of Duparc's intimate gestures into something larger than life. But, overall, there is much to enjoy here. Dalton Baldwin's playing is, of course, on the very highest level and always exceptionally well integrated with the voice. Close up or not, the recording has the two elements in virtually ideal balance. Full texts and translations are provided. *R.F.*

**DVOŘÁK:** *Symphony No. 7, in D Minor, Op. 70.* Cleveland Orchestra, Christoph von Dohnányi cond. LONDON © 417 564-1 \$10.98, © 417 564-4 \$10.98, © 417 564-2, no list price.

Performance: *Neat as a pin*  
Recording: *Flawless*

Dvořák's Seventh, the most Brahmsian and, in many respects, most impassioned of his mature symphonies, gets a surprisingly cool and refined treatment here, especially considering the fiery brilliance that conductor Christoph von Dohnányi brought to his memorable 1984 recording of the Eighth. A lyrical emphasis characterizes the first movement, and the slow movement is notable for Dohnányi's scrupulous attention to details of melodic interweaving between strings and woodwinds. The delectable scherzo moves along in a most refined, yet still vital, fashion, and the finale gets splendid pacing, if no overwhelming sense of climax at the close. The acoustic venue, Cleveland's Masonic Auditorium, is ideal for this music in terms of brilliance, tonal warmth, and presence. But for all the sonic beauties of this recording, I found the performance too dispassionate compared with the other versions on compact disc. And since there are only slightly more than thirty-six minutes of music on the CD, London should have added an overture or one of the shorter Dvořák tone poems as a filler. *D.H.*

**GRIEG:** *Piano Concerto in A Minor, Op. 16* (see RACHMANINOFF)

**HAYDN:** *Symphony No. 95, in C Minor; Symphony No. 104, in D Major ("London").* London Philharmonic Orchestra, Georg Solti cond. LONDON © 417 330-1 \$10.98, © 417 330-4 \$10.98, © 417 330-2 no list price.

Performance: *Grand*  
Recording: *Good*

**HAYDN:** *Symphony No. 102, in B-flat Major; Symphony No. 104, in D Major ("London").* English Chamber Orchestra, Jeffrey Tate cond. EMI/ANGEL © CDC-47462 no list price.

Performance: *Crisp*  
Recording: *Fine*

While the sonority of the London Philharmonic under Georg Solti is, of course, quite different from that of the English Chamber Orchestra under Jeffrey Tate, both conductors are equally convincing here in conveying Haydn's genius. The larger forces of the LPO produce a lush, full-bodied sound that Solti cultivates in unhurried, even grand performances. The smaller ECO and Tate's brisker approach underscore the composer's keen sense of orchestration and his ever-present wit. One might argue that Tate's orchestra and performing style are closer to what Haydn had in mind, but both pairs of readings work beautifully on their own terms, and both are well recorded. *S.L.*

**LISZT:** *Songs.* **R. STRAUSS:** *Songs.* Brigitte Fassbaender (contralto); Irwin Gage (piano). DEUTSCHE GRAMMOPHON © 419 238-1 \$10.98, © 419 238-4 \$10.98, © 419 238-2 no list price.

Performance: *Correct*  
Recording: *Crisp, clear*

Recorded in 1985 and 1986, this collection presents mezzo-soprano Brigitte Fassbaender (I cannot agree with Deutsche Grammophon that she is a contralto) in contrasting selections that she sings smoothly and tastefully. I enjoyed the four French songs by Liszt

Brigitte Fassbaender: tasteful singing



more than the five German ones of Strauss because Liszt's gift for melody is more evident. Old hat though it is, *Oh! quand je dors* is the most affecting piece of this half of the concert. Strauss is represented by the familiar *Allerseelen*, *Zueignung*, and *Morgen!* and by the more infrequently heard *Fünf Lieder*.

I describe the total performance as "correct" because, while Fassbaender offers some lovely moments, she does not communicate intense identification with her material the way that, say, Elly Ameling does in her recent recital of French songs for Philips. Fassbaender's interpretations are consequently somewhat bland and removed. The piano accompaniments are well executed by Irwin Gage, and the sound is good throughout. *R.A.*

**POULENC:** *Calligrammes* (see DUPARC)

**PROKOFIEV:** *Romeo and Juliet, Suites Nos. 1 and 2; Pushkin Waltz No. 2, Op. 120* (see Best of the Month, page 74)

**RACHMANINOFF:** *Piano Concerto No. 2, in C Minor, Op. 18.* **GREIG:** *Piano Concerto in A Minor, Op 16.* François-René Duchable (piano); Stras-

bourg Philharmonic Orchestra, Theodor Guschlbauer cond. ERATO ◉ NUM 75247 \$10.98, ◉ MCE 75247 \$10.98, ◉ ECD 88164 no list price.

Performance: *Crisp and cool*  
Recording: *Soloist up front*

This recording confirms my previous impression of François-René Duchable as a pianist of formidable technical prowess who takes a rather coolly objective approach even toward such heart-on-the-sleeve concerto staples as the Rachmaninoff Second and the Grieg A Minor. In the Rachmaninoff, he makes an impressive statement with the famous opening chords and brings ample brilliance to bear on the main body of the movement. The same goes for the finale, where his slightly slower than usual pace allows a wonderfully crisp projection of the fugato episode, which other soloists tend to rush through. In the slow movement, however, Duchable's lack of genuine "singing" quality is disappointing. Theodor Guschlbauer's orchestral support is firm but warm.

Pianistically, the Grieg is full of verve and brilliance, especially in the final movement, where the front-and-center placement of the solo piano leaves no doubt who is boss, but I find the conducting a bit of a letdown for its lack of

urgency and incisive attack in the outer movements. The recording itself, though closely focused on the soloist, is full bodied and wide range. *D.H.*

**RAVEL:** *Deux mélodies hébraïques* (see DUPARC)

**SCHOENBERG:** *Transfigured Night, Op. 4; String Trio, Op. 45; Phantasy for Violin and Piano, Op. 47.* Schönberg Ensemble. PHILIPS ◉ 416 306-2 no list price.

Performance: *Intense, ingratiating*  
Recording: *Very good*


This CD offers an especially dramatic recording of the original sextet version of Schoenberg's *Transfigured Night* by the Schönberg Ensemble, a Dutch group that for some reason favors the original spelling, with the *Umlaut*, instead of using the revised orthography the composer himself adopted. The annotation, by Elmer Schönberger, advises that in the preparation of this performance, the Schönberg Ensemble took into account the composer's final thoughts on the work as represented in the 1943 string-orchestra revision, with its "numerous changes and adjustments of shadings in terms of tempo, instrumentation, dynamics and tone color." Surely all musi-

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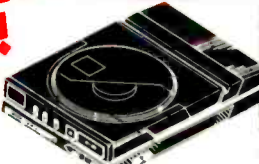
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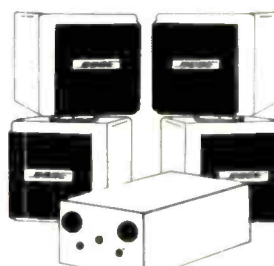


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# Stereo Review

cians who have performed the original version in the last four decades have been aware of the same considerations, but the new recording seems much closer to the way we are accustomed to hearing this work from a string orchestra than from a sextet. The gestures are bigger and bolder and altogether more demonstrative than what might be considered the chamber-music norm, as if the Dutch musicians regard the piece as a reduction of a symphonic poem. Their intensity may seem excessive to some listeners, but more, I suspect, will simply find it unusually gripping—as well as beautifully played and recorded.

The big early work is followed by unequivocally superb performances of the last chamber works of Schoenberg's final years, the String Trio and the Phantasy for Violin and Piano, both of which illustrate how accessible—how downright ingratiating—twelve-tone music can be. In sum, an issue that is hugely satisfying in its own right and one that may well encourage further exploration of what remains unknown territory to too many listeners. R.F.

R. STRAUSS: *Songs* (see LISZT)

STRAVINSKY: *Le Sacre du printemps; Four Norwegian Moods*. Cleveland Orchestra, Riccardo Chailly cond. LONDON 417 325-1 \$10.98, © 417 325-4 \$10.98, © 417 325-2 no list price.

Performance: *Fine*  
Recording: *Resplendent*

The CD versions by Muti, Karajan, Dorati, and even Bernstein (despite a tight recording acoustic) represent very strong competition for this latest recording of Stravinsky's early blockbuster. What Riccardo Chailly's recording has going for it, however, is a superb orchestra, the Cleveland Masonic Auditorium acoustic, and an A-1 microphone array that offers just the right amalgam of instrumental detail and sonic warmth throughout. The percussion transients at the bottom of the frequency spectrum, so important in *Le Sacre*, are simply breathtaking here, true to life without in any way compromising the overall textural balance.

Chailly hews closely to the tempos adopted by Stravinsky himself in his last and uniquely valuable recording of the score, which is to say that the performance may sound fast to some ears but not to mine. Throughout the performance everything is clear yet warm in sound, and, miracle of miracles, the concluding pages of Part One come across with coherent texture and rhythmic definition instead of the usual chaotic roar. In view of the demonstration quality of the CD, I regret that London did not see fit to provide indexing for the separate parts of the ballet.

Stravinsky's amiable 1942 pastiche of Grieg, derived from an aborted film score, makes for an entertaining, elegantly played filler. D.H.

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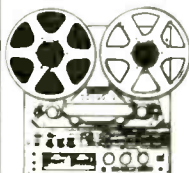


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## VIDEO REVIEWS

*Discs and tapes reviewed by Robert Ackart, Chris Albertson, Louis Meredith, Alanna Nash*

**CARLO BERGONZI:** *Bergonzi Celebrates Gigli.* Carlo Bergonzi (tenor); Vincenzo Scalerà (piano); George Jellinek (host and commentator). V & E AV-001 VHS Hi-Fi and Beta Hi-Fi \$59.95.

Performance: *Polished*  
Recording: *Good*

I do not quite understand why Carlo Bergonzi should "celebrate" Beniamino Gigli, who perhaps had a more beautiful voice but never attained Bergonzi's stylistic elegance. Still, I enjoyed this program of nineteen lesser-known Italian popular songs and arias, and the short intermission, featuring still photographs paralleling the careers of the two tenors, is of interest.

The principal attraction of this videocassette, however, is Bergonzi himself. He makes of each song, none of which boasts any special musical merit, a complete vignette. His voice, at age sixty, is clear and limpid, his singing is unforced and fluid, and his performances are utterly without personal show. He makes music because he loves to make music. For the student of singing, the program offers an opportunity to observe how the tenor handles his voice physically, for much of the photography is done at close range. Here is a remarkable lesson in concentration and relaxation working simultaneously. I regret that the selections themselves are not more worthy of Bergonzi's attention. Still, I can recommend the tape to admirers of fine singing and of Bergonzi's finished art. *R.A.*

**FREDDIE HUBBARD:** *Live at the Village Vanguard.* Freddie Hubbard (trumpet, flugelhorn); Cedar Walton (piano); Ron Carter (bass); Lenny White (drums). *Happy Times; Guernica; Little Waltz; Fantasy in D.* PIONEER/SIGNATURE PS 86-008 LaserDisc \$24.95.

Performance: *Good*  
Recording: *Good*

The focus of this videodisc is less on the music of Freddie Hubbard and more on the Village Vanguard and Max Gordon, its owner for the past fifty years. Hubbard's quartet does play four selections, but all too much of the fifty-eight minutes of playing time is devoted to talk. One by one, Hubbard's sidemen—Cedar Walton, Ron Carter, and Lenny White—are herded into Gordon's small office to chat with him about their experiences at the famous New York club, but Hubbard himself seems, wisely, to

have remained on stage. The producers have also thrown in some commentary by jazz critic Gary Giddins, but he adds little of substance to this misguided production. Freddie Hubbard deserves better treatment. *C.A.*

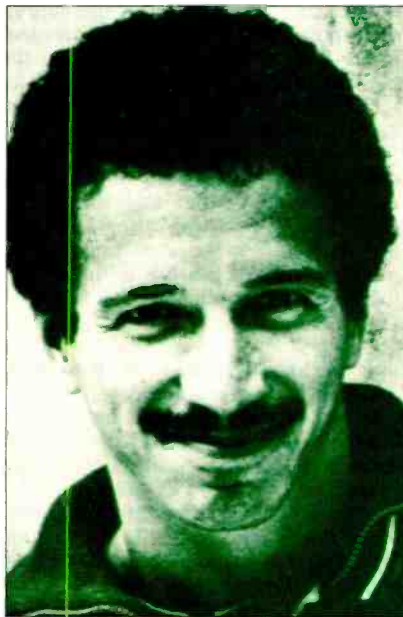
**JOE JACKSON:** *The Big World Sessions.* Joe Jackson (vocals, keyboards); other musicians. *Right and Wrong; Big World; Home Town; Soul Kiss;* and two others. PIONEER PA-86-M049 LaserDisc \$16.95.

Performance: *Different*  
Recording: *Impressive*

Speaking as somebody who found Joe Jackson's "Big World" album—a concert performance recorded without overdubs in front of an audience enjoined not to respond for fear of messing up the music—more of an interesting experiment than an enjoyable listening experience, I'm surprised that this video of the sessions is as entertaining as it is. Basically, what you get on this eight-inch videodisc is a bunch of crack musicians concentrating very hard on playing rather than performing, something of a rarity in rock these days—and a downright refreshing one. It helps, of course, that the songs being performed, particularly the title tune and *Right and Wrong*, are among Jackson's best.

Jackson, to be sure, is not the most appealing presence, and there is a certain nervous tension here that can get on your nerves if you're not in the mood. Nevertheless, in its unobtrusively shot and extremely well-recorded way, this is one of the more intriguing video documents in recent memory. Recommended. *L.M.*

*Keith Jarrett: ritual dances*



**KEITH JARRETT, GARY PEACOCK, JACK DEJOHNETTE:** *Standards.* Keith Jarrett (piano); Gary Peacock (bass); Jack DeJohnette (drums). *I Wish I Knew; Rider; Late Lament; God Bless the Child; Stella by Starlight; If I Should Lose You;* and three others. SONY J0318VH VHS Hi-Fi \$19.95, J0318BE Beta Hi-Fi \$29.95; PIONEER PS 86-010 LaserDisc \$29.95.

Performance: *Excellent*  
Recording: *Superb*

In the late Seventies pianist Keith Jarrett amassed a devoted following with a lyrical and often highly emotional improvisational style. Concert after concert, album after album, he churned out impressionistic solo performances that tested the listener's imagination. We did not know it at the time, but Jarrett had launched a rambling style that would prove to be the mood music of the Eighties, a style that would be exploited successfully—in terms of sales, at least—by a new record label called Windham Hill. What Jarrett served was never as bland as most so-called New Age music is today, but he did tend to stretch the listener's attention span to the limit.

In 1983, when Jarrett teamed up with bassist Gary Peacock and drummer Jack DeJohnette for a session that yielded three ECM albums of standard tunes, much was made of the fact that he had broken away from solo improvisation. The shift in direction was believed by many to be temporary, but it continued beyond those three albums. Now Jarrett, Peacock, and DeJohnette can be seen as well as heard on Sony videotape and a twelve-inch Pioneer videodisc with digital sound.

The video medium is perfect for Jarrett, who rarely sits still during a performance. While his fingers gallop across the keys, he often stands up and executes something like a ritual dance, or else he crouches over the piano, groaning and grimacing, while DeJohnette looks as if his toenails were being extracted. All of this contributes to a visually arresting performance, but there is much more than that to this concert. Lasting almost two hours, it was videotaped live at Tokyo's Kosei-enkin Hall in 1985, and the camera work and direction offer a stunning lesson in how to capture a concert on camera. The use of closeups and superimposition is consistently artful, and you're aware of the audience only when it applauds at the end of each selection.

You will want to applaud, too, because these are superb performances, and the technical excellence that characterizes the visual aspect of this production is carried through on the audio side. Rarely has such a thoroughly distinguished release come my way. *C.A.*

## VIDEO REVIEWS

### COLLECTIONS

**HOT ROCK VIDEOS, VOLUME 2.** Thompson Twins: *Hold Me Now*. Meat Loaf: *Modern Girl*. Jefferson Starship: *Layin' It on the Line*. Lou Reed: *My Red Joystick*. And two others. PIONEER PA-86-M045 LaserDisc \$16.95.

Performance: *Wildly variable*  
Recording: *Excellent*

Pioneer's latest collection of "hot" rock videos—why "hot," I wonder, since they're all utterly chaste?—is again a mixed bag. The Thompson Twins are represented by a needlessly arty split-screen version of *Hold Me Now*, proving once more that this is the most useless band of the Eighties. Meat Loaf, trimmed down and looking like a rock-and-roll Arnold Schwarzenegger, galumphs his way through a predictably elephantine visualization of his forgettable *Modern Girls*. And, seemingly without embarrassment, the Starship performs the appalling *Layin' It on the Line*, only to be upstaged by G. Gordon Liddy and Timothy Leary in a cameo appearance.

The ghost of Elvis Presley hovers uneasily over *Blue Suede Shoes*, which tells a rather strained modern story intercut with some evocative newsreel footage of the King in his Fifties prime as well as a brief appearance by Carl Perkins as a cafeteria attendant. Things pick up, however, with Rodney Dangerfield's *Rappin' Rodney*, an irresistibly funny sequence in which the man gets no respect even outside the Pearly Gates. And Lou Reed's *My Red Joystick*, in which the singer abandons all community property to his ex-girl friend save for the gizmo of the title, is a thoroughly entertaining urban vignette. All in all, this is a modestly diverting disc, and Pioneer's sound is aces. *L.M.*

**VIDEO A GO-GO, VOLUME 2.** Ashford and Simpson: *Solid*. Gap Band: *Party Train*. Bar-Kays: *Your Place or Mine*. Kool & the Gang: *Misled*. And two others. PIONEER PA-86-M041 LaserDisc \$16.95.

Performance: *Has its moments*  
Recording: *Terrific*

Say what you will about music videos, they are going to provide endlessly fascinating material for future scholars to ponder. Consider, for example, Kool & the Gang's *Misled* as it appears on this latest Pioneer eight-inch video anthology. In the middle of a fairly straightforward visualization of your basic faithless-lover lament, the video suddenly veers off into a big-budget pastiche of *Raiders of the Lost Ark*, complete with leather-jacketed archaeologist and hordes of angry Arabs. What can this mean? Personally, I haven't a clue, but I am reminded of Lily Tomlin's worry



### RAY DAVIES ON FILM

**R**AY DAVIES of the Kinks scripted, directed, and wrote the music for *Return to Waterloo*, a Pioneer Artists videodisc, but his filmmaking debut is definitely not just another long-form music video. Instead, it's a thoughtful, disturbing and thoroughly personal piece of work that brings to mind the kind of independent films we used to get from mavericks like John Cassavetes—only this time with music.

Presenting a day in the life of a middle-class commuter who may or may not be a rapist/killer (he's played by Ken Colley of *Return of the Jedi*), the film is a surreal odyssey through the modern world featuring minimal dialogue and a nice bunch of Kinks songs,

mostly from the "Word of Mouth" album, utilized as a sort of Greek chorus. Davies's sensibility is very Sixties (I guess alienation never really goes out of style), but his visual sense is thoroughly contemporary, and his integration of music and action is flawless. Prime examples: a chorus of suited businessmen singing a number called *Missing Persons* and a harrowing scene with two punks spitting *Sold Me Out*. In short, this is what we used to call an art film, and a damn good one at that.

*Louis Meredith*

**RAY DAVIES: *Return to Waterloo*.** Ray Davies and the Kinks (vocals and instrumentals). PIONEER PA-86-171 LaserDisc \$24.95.

that "perhaps drugs have made us more creative than we really are."

In any case, nothing else on "Video a Go-Go" approaches the Kool clip for scratch-your-head weirdness. Most of it, in fact, is basically MTV-standard. Musically, the high point is the Gap Band's *Party Train*, an eminently funky tune featuring breakdancing Krishnas on the beach at Venice, California. Conceptually, the low point is Al Corley's *Cold*

*Dresses*, a third-rate piece of ersatz Cars techno-pop that only proves Corley will never be accused of dancing pretty well for a white boy.

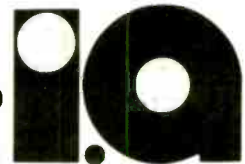
And for old-fashioned street smarts, the winner is clearly Kurtis Blow, whose *Basketball* is a genuinely funny rap/ode to the likes of Dr. J. and Moses Malone. None of this is Art, exactly, but I wish I were going to be around in fifty years to see what people make of it. *L.M.*



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- QU Joliette: Videovision Tromoc Inc. \* Le Perrot: Radio Dorion \* Valleyfield: Stereo Vision \* David Lewis: Techno-Son Inc. \* Noranda: Television Pierre Lussard \* Sherbrooke: Bourget Stereo \* Granby: Sonix Plus \* Jonquiere: Jockar Electronique Inc. \* Alton: Jockar Electronique Inc. \* Rimouski: Audio Video Service \* Quebec City: Audiolight, Sonart \* LaSalle: Audiocentre JB \* Lével: Audiocentre JB \* Chateauguay: Sonart \* Quebec City: Quebec 1 Option Selections \* Lével: Sonart \* Ste Julie: Son Vision Plus Est \* Sagit-les: Sept-les Audio Engineering \* Chicoutimi: St. Gelas Electronics \* St. George de Beauve: Marco Radio Ltd.
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- AK Anchorage: Magnur Electronics
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- CA Berkeley: Horizon Sound Co. \* Campbell: Sound (1986) \* Concord: Sound Detection \* Encinitas: North County Stereo \* Foster City: Digital Sonics Inc. \* Galeta: House of Audio Video \* Hollywood: Amertron \* Irvine: Soundquest \* La Jolla: Stereo Vision \* Los Angeles: Supervision \* Mountview: Sound Goods \* Newport Beach: Executive Sound \* Redondo Beach: Systems Design Group \* San Francisco: Manbrun's, Harmony Audio Video \* Santa Rosa: Golden Ear Hi-Fi Video \* Sherman Oaks: Systems Design Group \* Van Nuys: Vista Sight & Sound \* Walnut Creek: Sound Detection \* Westminster: Audio Today
- CO Boulder: Recycled Audio \* Colorado Springs: Soundtronics, The Sound Shop \* Denver: Soundings, U.S. Tech \* Fort Collins: Soundtronics \* Greeley: Sound-Trons \* Grand Junction: The Sound Company \* Longmont: Odin Sound \* Pueblo: Soundtronics
- CT Danbury: Carston Stereo \* New Haven: Take 5 Audio
- DE Wilmington: HiFi House
- FL Boca Raton: Captain Video \* Ft. Lauderdale: Master's Captain Video \* Jacksonville: Hoyt HiFi/Video Center \* Lake Park: Lake World Audio Advertis \* Lauderdale: Master's Captain Video \* St. Augustine: Audio Design \* Stuart: Fox Audio
- HA Honolulu: Honolulu Audio Video Co. The Stereo Station
- ID Boise: The Stereo Shoppe \* Ketchikan: Infinite Audio & Video \* Pocatello: Sound Waves \* Twin Falls: The Sound Company
- IL Algonquin: Teah Electronics \* Bloomington: Audio Visions Inc. \* Burbank: Digital Audio Video TV \* Champaign: Glenn Poor's Audio Video \* Charleston: Uptown Audio \* Chicago: Intec Audio, Victor's Stereo \* Deerfield: United Audio \* Oak Lake: Audiolux Inc. \* Jacksonville: Front Row Records \* Kaneok: Barrett Entertainment Co. \* Lansing: United Electronics \* Merrill Grove: Hites: United Audio \* Normal: Glenn Poor's Audio Video \* Rockford: Absolute Audio \* Schaumburg: United Audio \* Springfield: The King's Stereo \* Vernon Hills: United Audio \* Waukegan: Hear/Hear
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- OK Tulsa: The Phonograph
- OR Hermiston: Quicksilver Audio
- PA Allentown, Bryn Mawr, Feasterville, Jenkintown, Montgomeryville, Philadelphia: Sassafras \* Campbell: Hi-Fi House \* Erie: House of Record \* Harrisburg: HiFi House \* Throop: Shehad Sound
- PR Rio Piedras: On Top Audio
- RI North Providence: Eastern Discount
- SC Columbia: Audio Alternative \* Greenville: Stereo Video Inc. \* Hilton Head Island: Stereo Plus Inc.
- SD Sioux Falls: Western Stereo
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**INDEX TO ADVERTISERS**

READER SERVICE NO.	ADVERTISER	PAGE NUMBER
	Acoustic Research.....	33
	Acoustic Research.....	45
60	Adcom.....	53
9	Alpine Electronics of America.....	28-29
67	Berlin Audio & Video Fair.....	83
	Blaupunkt.....	34-35
	Boston Acoustics.....	40
33	Canton.....	19
49	Carver Corporation.....	70-71
	CBS Compact Disc Club.....	23
	CBS Records.....	72
11	Concord Electronics.....	42-43
68	Coustic.....	17
	Crutchfield.....	54
71	Discount Music Club.....	91
10	Discwasher.....	37
	Ford Audio Systems.....	39
	Illinois Audio.....	95
40	International Hi-Fi.....	91
39	J&R Music World.....	86-87
2	Klipsch & Associates.....	24
52	Luxman Home Electronics.....	C2, 1
56	Magnat Elektronik.....	78
	Marlboro.....	C3
22	McIntosh Laboratory, Inc.....	30
50	Mission Electronics.....	C4, 101
	Mitsubishi Stereo.....	75
19	NEC.....	5
40	Phase Linear.....	55
65	Pioneer Electronics—Car.....	12
81	Pioneer Electronics—Home.....	50-51
37	Polk Audio.....	6-7
	Radio Shack.....	2
	R. J. Reynolds—Camel.....	77
	R. J. Reynolds—Vantage.....	27
	R. J. Reynolds—Winston.....	47
73	Stereo Discounters.....	89
	TDK.....	10-11
66	Teac Corporation of America.....	84
25	We "R" Electronics.....	91
	Wisconsin Discount Stereo.....	92
14	Yamaha.....	9

**AUGUST**



by Christie Barter  
& Steve Simels

**S**URF'S UP (AGAIN) DEPT. Hard as it may be to believe, Brian Wilson, the eccentric genius who as leader of the Beach Boys more or less invented summer in the Sixties, has never made a solo album. We are pleased, then, to report that this crime against nature will soon be redressed by the release of "Brian Wilson" on Sire.

Wilson, whose personal problems have, unfortunately, been nearly as widely celebrated as his wonderful music, seems to be on a roll of late. His swell single, *Let's Go to Heaven in My Car*, was the standout song on the *Police Academy 4* soundtrack, and he also turned in quite an amusing acting performance in the recent *Wall of Voodoo* video of his classic *Do It Again*.

Advance word indicates that Wilson's new solo effort



Wilson in *Wall of Voodoo* video: going solo

will be worth the wait, but in the meantime we urge all right-thinking Americans to agitate for a CD reissue of his masterpiece, the Beach Boys' transcendently beautiful 1966 album, "Pet Sounds." □

Hadley at the Met: crossing over



JAMES HEFFERNAN/HERBERT H. BRUESLIN

**T**HE tenor singing Freddie in the forthcoming (September) release of *My Fair Lady* on London Records—co-starring with Kiri Te Kanawa, Jeremy Irons, and John Gielgud—is a young American named Jerry Hadley. Like Dame Kiri, Hadley has provisionally crossed over to musical comedy from the worlds of concert and opera. He made his Metropolitan Opera debut last March, as Des Grieux in Massenet's *Manon*, and he can look forward to performing with Dame Kiri again early next season—though then it will be on the stage of Chicago's Lyric Opera in Mozart's *Così fan tutte*.

Hadley can currently be heard in a recording of Beethoven's Ninth Symphony conducted by Robert Shaw on the Pro Arte label and in a Mozart Requiem, again under Shaw, on Telarc. He has just finished singing Rodolfo in Deutsche Grammophon's much-heralded all-American *La bohème*, recorded in Rome with Leonard Bernstein conducting, and he is featured in a London recording of Donizetti's *Anna Bolena*, with Joan Sutherland, due for release next year. □

**A**MONG musicians making their first recordings this summer is bagpiper Nancy Crutcher. She performed as

soloist in Peter Maxwell Davies's *Orkney Wedding, with Sunrise*, just taped for Philips by the Boston Pops conducted by John Williams.

Isn't it unusual for women to play the bagpipes? "Less so now," says Crutcher. "A couple of hundred years ago in Scotland I'd have had my fingers cut off." □

**L**OTSA strange stuff is going on in Nashville these days, what with people like Dwight Yoakam and Randy Travis making country records that actually sound like country records. But now look out for something even more bizarre: a new video entitled "Cooking with Country Music Stars" from International Video Entertainment. The hour-long tape features eight top country artists puttering in the kitchen like so many down-home Julia Childs. Among the highlights: Brenda Lee attacking her Special Chinese Pork and Vegetables, Minnie Pearl preparing her inimitable Zucchini Squash (sounds good, Minnie), and the girthsome Charlie Daniels wrestling his Great Chocolate Cake into submission. Naturally, each cassette comes with a recipe pamphlet. List price of the video is \$19.95. □

**T**HERE'S a certain grim irony surrounding the new album by Roger Waters titled "Radio K.A.O.S." (Columbia). This latest effort from

Crutcher at the Pops



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MUSIC VIDEO SERVICES



Mel Tillis and Brenda Lee: country cooking

the dour former Pink Floyd honcho is based around a fictitious Southern California radio station and features a renegade D.J. who's fighting an uphill battle against format-controlled radio.

"The whole issue of the increasing takeover of broad-

**A** FILM version of Franco Zeffirelli's production of *Pagliacci* starring Placido Domingo is due to be aired by PBS on August 14 in its Great Performances series. Zeffirelli's "updating" of the Leoncavallo opera to Depression-era southern Italy was originally seen at La Scala in the early Eighties, and it was subsequently recorded under the musical direction of Georges Prêtre. The soundtrack has been available for some time on Philips, and was rereleased on compact disc a year or more ago; it remains the only recording of this popular opera on CD so far.

Also on tap from PBS this month is *Aretha Franklin: The Queen of Soul*, August 17, and *George Gershwin Remembered* on August 24, a tribute to the composer on the fiftieth anniversary of his death. □

**J**UST ahead of the release of her new Top 10 album, Whitney Houston was in Switzerland toplining the Montreux Rock Festival and sharing top honors for her video treatment of *The Greatest Love of All*, a No. 1 hit from her first album. Also honored was Paul Simon, whose *You Can Call Me Al* and *Boy in the Bubble* from "Graceland" were named Video of the Year and Best Male Video, respectively.

Simon is taking it easy this month, having just completed a grueling "Graceland" tour, but Houston is on the road supporting "Whitney,"

the follow-up to her all-time best-selling debut album, "Whitney Houston." Since its release in February 1985, "Whitney" has sold in excess of eight million units in the U.S. and a total of thirteen million worldwide. According to Houston's label, Arista, the single from her second album, *I Wanna Dance with Somebody (Who Loves Me)*, was added to playlists by more radio stations in its first week than any other single ever. □

**G**RACENOTES. Phil Collins, between gigs with Genesis, just received an honorary degree from Fairleigh Dickinson University in New Jersey, at least as prestigious as the Congeniality award in the Miss America pageant. The balding superstar is also set to make his film debut in *Buster*, a true-crime story co-starring Julie Walters. Good news for fans of Japanese monster movies (and aren't we all?): The upcoming home-

video release of the 1967 classic *Gamera the Giant Turtle* will not—repeat, not—be colorized. . . . The cover art for "Freedom/No Compromise," the latest album



Houston: topliner

by Little Steven Van Zandt (Manhattan), is by Dino Danelli, one of the greatest American rock drummers of the Sixties. Why isn't this guy in a working band? □

Domingo: a Depression-era Pagliacci



DAVE PLASTIK/RETNA LTD.



Waters: renegade D.J.

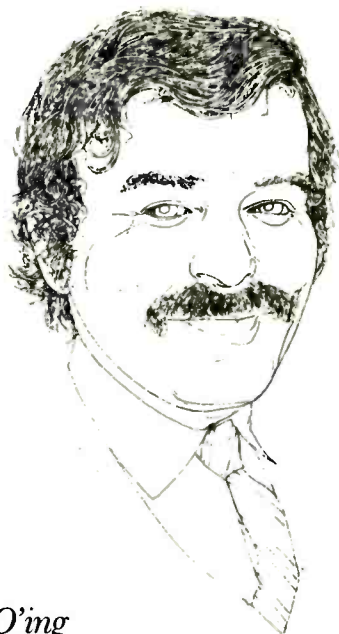
casting by market research-based programming is a subject of great concern," says Waters. "Its effect is to dramatically change the face of radio for the worse." This, of course, from a guy whose earlier albums were as responsible as anybody's for the rise of the mind-numbing market-researched format known as AOR (for Album Oriented Radio). Oh, well. Look, if you must, for a "Radio K.A.O.S." American tour some time this fall. A film version will go into production next year. □

PAUL RIDER/RETNA LTD.

THIRTEEN/PBS

# THE HIGH END

by *Ralph Hodges*



## *EQ'ing*

**N**OT too long ago there was only one type of home equalizer on the market: the noisy type. Switching it into the circuit was so immediately depressing that not many serious listeners had the heart to continue on in search of its possible merits. Equalizers were used only by gizmocrats—and by informal equipment testers who attempted to make different loudspeakers sound as alike as possible. When and if a close match was achieved, the spectral differences between the loudspeakers could presumably be deduced from the equalizer's control positions. This exercise was good fun, but I don't think it ever contributed much to speaker design.

Today, the best home equalizers are so improved in noise and distortion characteristics that it makes one wonder whether music and electronics might not actually get together after all. Recently I've used a few equalizers whose (properly adjusted) presence in the signal path hasn't bothered me in the least. Yet I still balk at giving equalizers a permanent place in my equipment rack, and that's mainly because I still haven't figured out what, in home situations, they're good for.

In professional applications they are obviously invaluable. Broad-band processors are part of any mixing console designed for studio recording, and narrow-band equalization is essential for any P.A. system that might feed back into the microphone. The three home applications for which equalizers are usually suggested are fixing faulty recordings, compensating for imperfections in loudspeakers and other equipment, and adapting the overall sound system to listening-room acoustics.

Carefully applied equalization often seems up to the first two tasks, although I'd still prefer to attack the problems at their sources, but in the third capacity, perhaps its most appealing one, it is usually an outright failure. Phase anomalies regularly come under suspicion as the reason for the failure, but then they always do. A better explanation, at least in my experience, lies in the indiscriminate way that equalization affects reverberation.

A P.A. system can respond well even to drastic amounts of equalization, and so can a studio recording. In both cases, however, reverberation is usually not applied until after the equalization is done. The opposite is true in home playback situations: the reverberation, natural or artificial, is already present in the recording in amounts dictated by the producer, and any equalization applied after the fact affects that reverberation as much as it affects the recorded direct arrivals at the microphone. Apparently the audible results of equalized reverberation can quite quickly border on the objectionable.

Let's consider two scenarios. In the first, you're annoyed by excessive sibilance in a singer's voice, so you go to your octave-band equalizer and "notch out" an octave centered in the upper midrange. The sibilance does diminish, but for some reason your listening pleasure doesn't correspondingly increase. In fact, everything has begun to sound distinctly weird. What has happened is that you've processed not just the singer's voice as picked up by the microphone, but also the contribution of every other microphone present at the recording session. And what is possibly worse,

you've violated the integrity of the reverberation envelope introduced by the acoustics of the recording venue or the ingenuity of the recording engineer.

In a plot of reverberation time vs. frequency, the resulting curves will certainly differ for different environments, but they will have a generally smooth contour for any space suitable for music. Vigorous equalization, by introducing a sharp discontinuity in the curve shape, is immediately apt to offend the ear, which seems to be instinctively wise in these matters. The theory suggests that the more reverberation present in the recording, the more unnatural the effect of equalization—and experience appears to bear the theory out.

In the second scenario, you are confronted with the type of room mode popularly called a standing wave, which causes an obnoxious boom and tubby hangover to occur when a particular (lower) frequency is reproduced. You identify that frequency and then make the happy discovery that your equalizer has a control band that closely corresponds to it. You activate the equalizer in the logical way, anticipating bliss, and instead experience a loss of impact and excitement from the sound.

What has happened here involves the time-dependent nature of a standing wave. It must be stimulated by a note of certain duration before it establishes itself, and a more satisfactory corrective measure might come from a device that equalized only long notes and no short ones. Failing that, the resonant mode may have been tamed a bit, but at the cost of decapitating the musical attacks in the same region of the spectrum.

Is this indictment of equalization a little severe? Possibly, but I think it also provides a necessary counterbalance to the overly optimistic claims for the regenerative qualities of equalizers that are revived and revised every year. Equalization is uniquely useful in a number of applications, but experts tend to agree that the best sort of EQ is the least, and that sound systems and listening environments should be designed accordingly. □



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