

# Stereo Review

AUGUST 1990 ● \$2.50

INCORPORATING HIGH FIDELITY

**BACKYARD LOUDSPEAKERS**

**AUDIO FOR VIDEO**

**HEADPHONES ON THE GO**

**TESTED: QUAD CD PLAYER,  
HARMAN KARDON INTEGRATED AMP,  
NEAR SPEAKERS, AND MORE**

MR DAVID S BUCANAN  
8900 YELLOW WOOD PL  
LOUISVILLE KY 40242

#259B\*\*\*\*\*5-DIGIT 40242  
#BCH8900Y091#  
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08#LC



# IF GOD EVER SPEAKS TO YOU, THIS IS THE TAPE TO RECORD IT ON.

**T**here are some things you want to record with absolute accuracy. Which is why Maxell has created Metal Vertex — the most precise audio cassette ever.

52% LESS MODULATION NOISE.

And that's compared to our top-of-the-line MX tape. Thanks to a sturdier, fiber-glass-reinforced guideblock, steel pins, wider pressure pad, and high precision crown-shaped rollers, Metal Vertex virtually eliminates tape fluctuation. Plus our proprietary Techno-Silver backcoating reduces friction and further improves tape-running stability. All of which makes for a tape with the lowest modulation noise level available. Anywhere.

A REVOLUTIONARY  
NEW CASSETTE SHELL.

To better absorb outside vibrations, our new three-piece shell is made of a highly visco-elastic, super composite material with almost twice the specific gravity of that found in most cassettes. Yet what

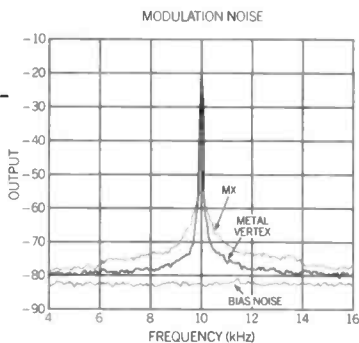
makes this mechanism truly unusual is the golden emblem center, which is not simply decorative but serves to dampen external vibrations even further. Bad vibes aside, our new Metal Vertex cassette shell also provides unmatched durability and heat resistance.

WIDER DYNAMIC RANGE AND  
THE HIGHEST MOL IN EXISTENCE.

The Metal Vertex magnetic coating consists of extremely fine (.3 micron) metal particles, packed together with high density through a process called parallel bundling. That not only increases dynamic range, it pushes the Maximum Output Level 1db to 2db higher than our MX tape (depending on frequency). That, in turn, allows for a substantial improvement in sensitivity and an astonishing 40% reduction in distortion.

If you're surprised by all these incredible specs, don't be. Remember, Maxell has always been at the forefront of creating magnetic tape for the world's most sophisticated equipment. So if what you're recording demands superior reproduction, look to Metal

Vertex from Maxell. Anything less and you don't have a prayer.





0004520

**Metal Vertex 90**

**maxell**

ANTI-MODULATION NOISE CASSETTE MECHANISM  
THREE-PIECE CONSTRUCTION

**Techno-Silver Back Coat**

A

**Panasonic brings you the CQ-ID90. It finds your favorite type of music automatically — no matter where you are.**

When you're driving, searching for your favorite music on the radio can drive you crazy. Especially if you're in unfamiliar territory.

But our new car radio has ID Logic\* circuitry. A computer chip that stores information covering over 10,000 stations in over 4,300 cities in the U.S. as well as parts of Mexico and Canada. You program it to know where your home town is. Then, the CQ-ID90 will not only pick up all the local stations, it will find them by format. And if you drive out of town, just indicate the direction you're heading in (N, S, E, W every 30 miles or so), and the ID Logic tuner will automatically look for the desired stations along the way. And that means, whatever you want to listen to (classical, country, rock, jazz, easy listening or talk), you won't have to fumble up and down the dial for it.

The unit also includes a full logic tape deck with Tape Program Search (TPS), Dolby\*\* B and C noise reduction, and a microprocessor to ensure smooth tape operation. Instead of protruding knobs and buttons, a smooth, touch-sensitive display serves as the control panel for most functions.

The new Panasonic car stereo with ID Logic. You always knew there was a way to make car audio more convenient. Now, you can put your finger on it. ■

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**Panasonic**  
just slightly ahead of our time

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**INTRODUCING  
THE FIRST CAR RADIO  
IN HISTORY  
THAT TAKES REQUESTS.**

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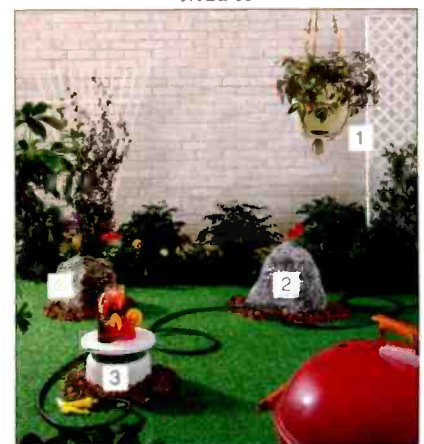
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Cover: Find the speakers—(1) Paramount Pictures PS300, (2) Rockustics Rocky Jr., (3) Paramount Pictures Granite 377B, and (4) Rockustics Sound Stone; see page 53.

Design by Sue Llewellyn, photo by Roberto Brosan.

Stylist, Nina Barney. Pitcher from ABC Carpet & Home, glasses from L-S Collection, garden hose from W. G. Lemmon Ltd.

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## Unfortunately, most CD changers change more than the discs.

Typically, a CD changer's complex transport mechanism doesn't isolate the playing disc enough to prevent vibration interference.

Something that can turn a perfectly good performance into a rather shaky one.

Fortunately there's a CD



changer that won't add any additional shake, rattle or roll to your music.

The new CDC-805 from Yamaha. The first CD

changer with a vibration-free transport system.

A remarkable accomplishment which isolates and clamps the playing disc, just like a single-disc player, so your music won't suffer from any vibes of the bad variety.

But there's much more to it than merely a superior changing mechanism.

Due to Yamaha's Single-Bit Technology, the CDC-805 sounds far better than most single-disc CD players on the market.

There's also something we call PlayXchange.

A creature comfort that provides uninterrupted music, permitting you to load up to four CDs without interrupting the disc playing.

The CDC-805 is also the only changer with a built-in equalizer.



*The CDC-805. The only CD changer with a five-mode digital equalizer.*

Five digital presets designed to give every

type of music even more musical presence — even a flat setting so you can bypass the EQ altogether.

The CDC-805 is the only five-disc changer that can provide 10-disc relay play by patching two CDC-805s together — something definitely worth considering for custom installations.

Here's yet another point well worth considering.

Instead of your typical belt drive, Yamaha's CDC-805 uses long-lasting gears for added reliability. A small, yet significant reason why Yamaha can confidently back every CDC-805 with a two-year limited warranty.

Stop by your Yamaha dealer's showroom for an earful of Yamaha's remarkable new CDC-805.

The first CD changer capable of changing even the most ardent audiophile's mind about buying a CD changer. **YAMAHA®**



by Rebecca Day and  
William Livingstone

## SHOW NEWS

Home theater and multiroom remote-control systems were prominent among the product introductions at the Summer Consumer Electronics Show held in Chicago in June. Technics demonstrated a system (including amplifiers, speakers, and a control center) incorporating Lucasfilm's Home THX technology, which is intended to bring theater-like sound to the home. Another THX system, with a Lexicon processor and Snell speakers, was also demonstrated. Sony, a/d/s/, Carver, and Meridian showed new multiroom remote-control systems, and Philips introduced its Wallvision rear-projection tv's that can stand alone or be mounted in a wall.

Digital audio tape (DAT) recorders will finally be available to U.S. consumers this summer. Sony announced that its DTC-75ES (\$950) and DTC-700 (\$900) would arrive in stores by the end of June. Due in stores later this year are recorders from Casio (\$1,000), Technics (\$1,200), JVC (\$1,000 and \$1,700), and Denon (\$1,000).

## BUYING POWER

Philips Consumer Electronics International in Eindhoven, the Netherlands, has agreed to buy a 25-percent stake in Bang & Olufsen Holding A/S, based in Struer, Denmark, for \$50 million. Bang & Olufsen retains ownership of the remaining 75 percent. The sale is based on agreements for cooperation on technology, purchasing, components, and subassemblies, but Bang & Olufsen will continue its current audio/video products and activities. . . . International Jensen, which earlier this year bought Acoustic Research from Teledyne Corp., has also acquired the California speaker company Now Hear This, Inc. (NHT).

## MUSIC NOTES

The critically acclaimed singer-songwriter Lucinda Williams,

most recently on Rough Trade, will make her major-label debut on RCA in September. . . . Sire is planning a "Best of" CD of the early punk band the Dead Boys. The lead singer of the group, Stiv Bators, died in Paris in June after being hit by a car. . . . The Recording Industry Association of America has certified sales of two million copies of Sinéad O'Connor's album "I Do Not Want What I Haven't Got" (Chrysalis). Albums recently certified Platinum (with sales of 1,000,000) include Depeche Mode's "Violator" (Sire), Heart's "Brigade" (Capitol), and Lisa Stansfield's "Affection" (Arista). Wilson Phillips's album "Wilson Phillips" (SBK) was certified Gold. . . . John Williams and the Boston Pops Orchestra have made their debut on the Sony Classical label with "Music of the Night," a collection of hits from Broadway shows. . . . Guitarist Narciso Yepes, whose Deutsche Grammophon album "Romance d'Amour" was released in May, has been made a member of Spain's Royal Academy of Fine Arts.

## INFORMATION, PLEASE

Pioneer Electronics has donated \$1 million worth of audio/video equipment to the Smithsonian Institution's Information Age exhibit now on permanent display in Washington, D.C. Pioneer is the exclusive audio/video supplier for the interactive exhibit, which explores how information technology has revolutionized society over the past 150 years. Ten miles of cable under the floor and in the ceiling was required to connect the show's components, including 43 video monitors, 52 laser videodisc players, and 78 computers.

## VANGUARD TO THE FORE

The classical catalog of the Vanguard Recording Society (a distinguished label of the LP era) has been acquired by the Omega Record Group. Omega plans to remaster the several hundred recordings digitally and rerelease them on compact discs, cassettes, and DAT under the name

Vanguard Classics. The performers include such famous conductors as Leopold Stokowski, Adrian Boult, Charles Mackerras, Michael Tippett, Nikolaus Harnoncourt, and Maurice Abravanel. The first release of approximately fifty titles is planned for Labor Day.

## ENVIRONMENTALLY SOUND

Ban the Box is a coalition of record-industry executives, artists, and companies formed to promote elimination of disposable, long-box CD packages because of their harmful effect on the environment. For information, write to Ban the Box, 12 E. 41st St., New York, NY 10017. . . . Fuji has donated 10,000 feet of movie film to shoot the Sierra Club's series of tv announcements on the hazards of global warming. Celebrities filming the announcements include Lloyd Bridges, Jill Eikenberry, John Ritter, and William Shatner. . . . Eveready has introduced 99.975-percent mercury-free alkaline batteries under its Energizer and Conductor brands, and Power Plus of America has introduced 100-percent mercury-free batteries under its Powerplus brand in response to global concern over the release of soluble metals into the environment. . . . MB Quart Electronics has discontinued its mahogany, ironwood, and rosewood speaker enclosures to help preserve the Brazilian rain forest.



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Where to buy Polk Speakers? For your nearest dealer, see page 96.

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## "REFERENCE SET"

"...Harman Kardon HD7600 is now a full member of our reference set... for testing speakers and amplifiers." — HOLLAND, *HTV Magazine*

## "TOP CLASS"

"The HD7500 has firmly placed itself in the distinguished top class." — GERMANY, *Hi Fi Vision*

## "ALMIGHTY"

"The HD7600...plain, simple, and natural, with feeling of transparency and accuracy...an almighty player." — JAPAN, *Audio Accessory*



Write for the free, easy-to-understand booklet explaining 3D Bit Stream. Meanwhile, audition the Harman Kardon HD7500 and HD7600. You'll hear for yourself why the whole world is cheering.

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# FREE Audio Catalog

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## LETTERS

### High-End Cables

The most satisfying part of the article on high-end speaker and patch cables ("interconnects") in June was the box entitled "Cutting the Confusion." In three of four of my past visits to audio stores, I have been confronted by salesmen pushing high-end cables, telling me of all of the sonic advantages, and every time I have walked out of the store shaking my head.

Electrical and electronic engineering has never really been a practice of perfection. When I was in school (DeVry Institute of Technology), I discovered that there can be quite a lot of difference in design between real products and no *perceptible* difference in performance. I will stick to my \$5 patch cords and 16-gauge lamp cord. They work just fine.

CHRIS HUGHES  
Columbus, OH

As an audiophile I was enthused by June's "Getting Wired"; as an engineer I was amused. The prices for these so-called "technologies" are amazing. I work with many of the types of conductors noted in the article. The typical wholesale cost of 15-gauge litz wire (119 strands) is 10¢ a foot in 10-pound quantities; Teflon-insulated wire costs roughly twice that amount—and *all* Teflon-insulated wire comes silver-plated.

MATTHEW HONNERT  
Carol Stream, IL

I sometimes say unkind things about the manufacturers and buyers of extremely high-end equipment, but I concede that I might be less opinionated if I were extremely rich. If I were I hope that I would still be offended by Rich Warren's "Getting Wired." No disrespect toward Mr. Warren, whose article was well written and informative, but this whole business is imbecile.

Michael Riggs's "Cutting the Confusion" clearly illustrates the superfluity of such cables. In the early Eighties STEREO REVIEW published the results of a comparison test involving Monster Cable and found it to have no sonic advantage over standard 14- or 16-gauge copper wire. As Riggs points out, no other tests have given any evidence to the contrary.

ROBERT ANZELLOTTI  
Astoria, NY

Until two months ago, I would have been the world's biggest skeptic regarding the sonic advantages of the myriad speaker and interconnect cables available. But then I auditioned several different cables in my own home.

I began with my own Monster Cable speaker wire, Vampire interconnects,

and some familiar music. With the simple addition of MIT's PC Squared interconnects between my preamp and amp, there was a remarkable improvement in imaging, transparency, balance of frequencies, and overall sound purity. Both instruments and vocals sounded more real and live. I was stunned! Adding the same interconnects to my CD player provided a second incremental improvement in these qualities.

For the record, I could hear differences with *every* cabling combination I tried. Most were considerably beyond subtle. I cannot explain why these sonic differences occur. I cannot explain electricity either, but that does not prevent my enjoying its benefits every time I flip on my audio system. I now consider my cables to be one of the most important "components" in my system.

JOHN D. LOVE  
Boise, ID

I found your article on high-end cables interesting and long overdue. Now, when can we expect to read about the effects of the generation and transmission of electricity on sound quality?

Most electricity in this country is generated in steam-driven turbines at remotely located power stations. It is then transported hundreds of miles and passed through innumerable transformers before being delivered to your home. Needless to say, the distribution system is not of audiophile quality. Therefore, it stands to reason that electricity generated in such a manner is unsuitable for serious music listening.

For the true audiophile the only solution is your own natural-gas turbine and generator. (Don't even think of using those inexpensive gasoline-powered generators found at hardware stores. The reciprocating action of the pistons makes the music sound choppy.) Sure, they are expensive, but I think using fresh electrons in your system is worth any expense. Besides, you can sell the excess to your local power company.

MIKE PORTA  
Little Rock, AR

### Tape Anthologies

I thoroughly enjoyed Steve Simels's "Mix, Match, and Tape" in June. He truly nailed the idiosyncrasies of this audio art form not only technically but creatively as well. But here's one recording "trick" that he failed to address.

To minimize both the crackling of those old LP's we audiophiles use and "dead air" between songs: Fade down the recording level as a song ends. Then rewind the tape a few seconds, listen for the last audible note, and quickly put the cassette machine in pause. Set your levels for the next song and start record-

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ing at the last possible moment before the song begins. It takes a little practice, but it's worth it.

JOHN ROCK SORENSEN  
Newark, CA

In his article on making tape anthologies, Steve Simels writes, "Face it, there's little in life, or music, more annoying than having a quiet folk song burst out of your speakers at twice the volume of the heavy-metal track that preceded it."

Sorry, Mr. Simels, but I can't face it. I just can't. Try as I may to deny it, I can't shake the feeling that quite a few things score higher on the annoy-o-meter than a volume discrepancy on a home-grown cassette: The savings and loan bailout, for example. Larcenous televangelists. Book burning. The contract out on Salman Rushdie. The greenhouse effect. George Steinbrenner. Shucks—I guess I'm just shallow.

DAVID ENGLISH  
Somerville, MA

### *Thomas Hampson*

We were delighted to read Richard Freed's appreciative review of Thomas Hampson's "Songs from *Des Knaben Wunderhorn*," one of the "Best Recordings of the Month" in June. Since Mr. Freed singled out "someone at Teldec" who had "the brilliant idea" to make this special recording, we thought it appropriate to tell STEREO REVIEW readers that that someone was Mr. Hampson himself. He not only chose the repertory but sequenced it as well.

KATHRYN KING  
WOLFGANG MOHR  
Teldec Classics  
New York, NY

### *The Pride of Wales*

In the article on the Alarm in May, Rick Karr writes that the band "[shares] with Tom Jones the distinction of being Wales's only pop successes." I would just like to point out a lady who has a most phenomenal voice—the best female vocalist, past or present: Shirley Bassey. She is an international superstar who was born in Cardiff, Wales.

PAUL J. TATTERSALL  
Toronto, Ontario

### *Sand in the Works*

The June issue's cover photo and illustration for the article "Stereo to Go" do a terrible disservice by implying that it is perfectly okay to take expensive electronics to the beach. Anyone who has had the experience of trying to service a unit with sand in it will tell you that no one will work on such a unit. It also voids the warranty. The only units made for this use are the Sony Sports models, which are equipped with rubber gaskets around all openings.

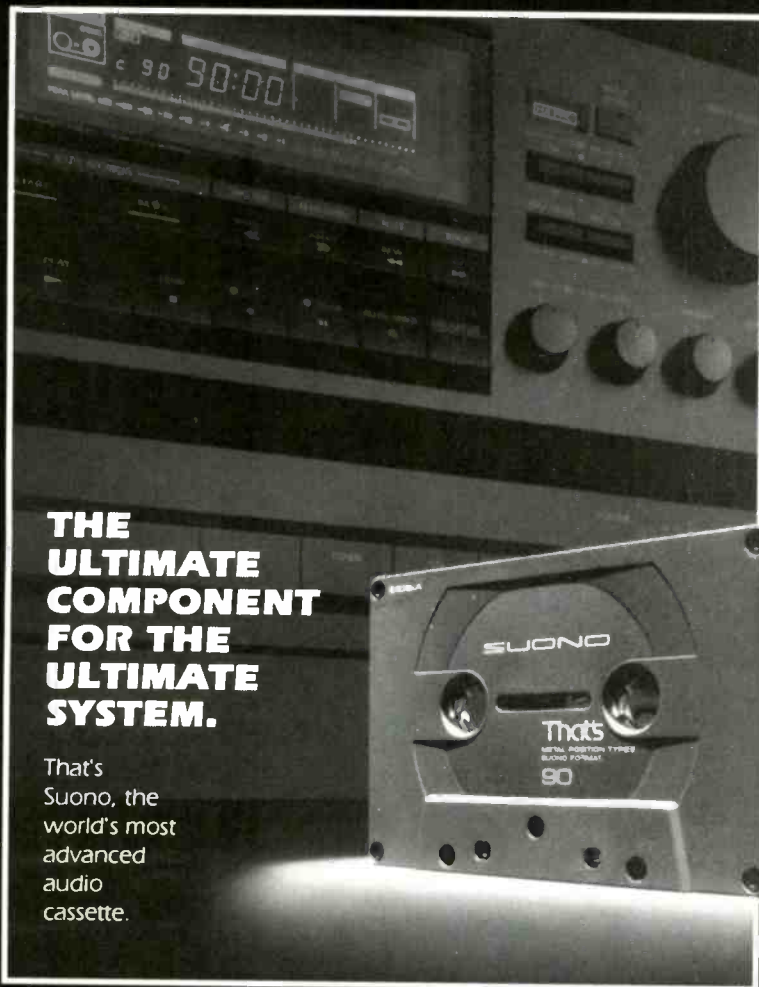
Please, set the record straight and do not encourage people to take unprotected electronics to the beach.

JEAN WARD  
Water Street Stereo  
Santa Cruz, CA

### *Correction*

Alicia de Larrocha made her U.S. debut thirty-five years ago, at a Hollywood Bowl concert with the Los Angeles Philharmonic, not twenty-five years ago as stated in the opening of Herbert Kupferberg's interview with Mitsuko Uchida in the July issue. Mr. Kupferberg called Ms. Uchida "perhaps the most exciting woman pianist to have arrived on the scene since Alicia de Larrocha twenty-five years ago," elliptically referring to De Larrocha's appearance with the New York Philharmonic, which was the beginning of her great American career. The reference to her U.S. debut was mistakenly inserted during editing. We regret the error. □

# S U O N O



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CIRCLE NO. 187 ON READER SERVICE CARD



Sony  
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**SONY**<sup>®</sup>

# Introducing The New Sony Portable Compact Disc Players.

Everyone knows that when it comes to the best in music reproduction, the Compact Disc is the hottest sound around. Now thanks to Sony, you can enjoy your favorite Compact Disc music wherever you are. At home... in the car... or anywhere on the go.

Meet the new Sony Portable Compact Disc players. A complete line of portable CD music systems and Discman® models that offer the finest in digital sound reproduction, along with the most exciting, convenient features available today. No matter who you are—or whatever your musical taste—Sony has a portable Compact Disc player that's right for you.

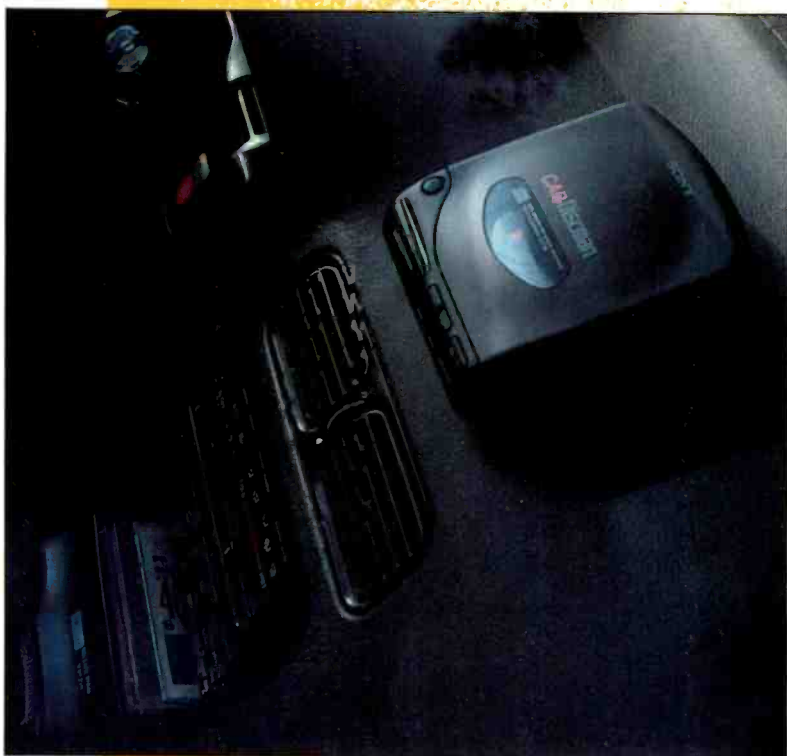
Best of all, these players are from Sony, the inventor of the Compact Disc format and The Leader In Digital Audio.™ So they incorporate state-of-the-art digital technology like an 8X oversampling digital filter and single element, laser pick-up design. But what else would you expect from the company that created both the first portable CD player *and* portable CD music system?

## Total Compact Disc Versatility

When it comes to Compact Disc versatility, nothing beats a Sony Discman portable CD player. Because each Discman allows you to enjoy incredible digital audio sound in virtually any listening environment.

For example, a Sony Discman is ideal for headphone listening when you travel, since it can play up to 8 full hours on a set of batteries. Or you can use the supplied cable to connect your Discman to practically any hifi system. (And you can operate it by an optional Remote Commander.™) There's even an adapter available that allows you to conveniently play your Discman through most car stereo systems.

And talk about versatility! Take the D-35 Discman. It measures a mere 5 inches square, yet offers







advanced home CD player features like 8X oversampling for superior sound. And 10-key Direct Access™ operation to instantly locate any music selection. As well as a Program/Time Edit function that makes it easier than ever to create the perfect music cassette.

Or when it comes to CD sound for your car, the D-180K Discman has been designed to handle nearly every situation. Including such refinements as a dual damper, anti-shock mechanism that helps isolate your music from the rigors of the road. And for nighttime driving, there's even a special illuminated display.

So when it comes to portable Compact Disc, look to Sony Discman. As **Stereo Review**\* says: "Clearly, for Sony engineers, the design of CD portables is no longer a science. It is an art."

### You Can't Beat "THE SYSTEM"

Imagine what it would be like if you took a great sounding portable CD player and combined it with a high quality cassette deck, graphic equalizer and AM/FM stereo tuner.

Well, now you can! In fact, there's a complete line of Sony Portable Compact Disc Music Systems available. And each one offers the features and performance that make it perfect for use in either a dorm or a den... or just about anyplace great sound is required.

For example, if portability is important, there's the compact CFD-50. It includes such important CD features as 16-track programming, 3-way repeat and Music Introscan™ —and all for a surprisingly affordable price.

Then there's the new Sony 700 Series!™ Each of these hi-tech models delivers high powered CD performance that is, in a word, awesome. And each offers a vast array of sophisticated features, including quartz synthesis AM/FM tuning, dual-well cassette deck and Mega Bass™ sound.

No matter which model you choose, each Sony Portable CD Music System is designed to maximize your music enjoyment. And to Sony, the creator of the world's most complete line of Compact Disc player models, that's what Compact Disc is all about.

\*—From the July, 1990 issue of *Stereo Review*,

# Here are some reasons why Sony Discman is the most versatile portable CD Player available today!

**D-11**—Even our least expensive Discman, the compact D-11 offers a number of playback options, including Mega Bass™ sound for improved bass response.

**D-T2**—This full-featured Discman model also gives you the opportunity to listen to your favorite radio stations, via its built-in AM/FM stereo tuner.

**D-180K**—With the D-180K Car Discman, Sony drives the Discman concept even further with its special dual damper, anti-shock mechanism that's ideal for automotive use. And along with a supplied car battery cord and stereo cassette adaptor, the 180K is equipped for both battery and AC operation.

**D-35**—The D-35 (as well as the D-66 not shown) features an 8X oversampling digital filter which "resamples" each bit of digital information eight times, for greater music accuracy. The D-35 also includes sophisticated disc programming and a rechargeable battery, as well as Sony's exclusive 10-key Direct Access, Sleep Timer and Program/Edit functions.

**D-555**—In addition to its advanced 8X oversampling digital filter, the D-555 features Sony Digital Signal Processing (DSP) technology, which allows you to digitally adjust your CD bass, dynamic range or EQ response without adding undesirable noise or distortion. Simply put, DSP is the biggest breakthrough in digital audio since the Compact Disc itself.



# Why Sony Portable Compact Disc Music Systems are the best for music enjoyment

CFD-50



CFD-50—The CFD-50 offers the convenience of an AM/FM tuner and record/playback cassette, combined with great Sony CD sound; all in a sleek, lightweight affordable package.

CFD-454



CFD-454—If the "hifi" look is essential, there's the CFD-454. It comes complete with detachable 2-way speakers, for better stereo imaging. As well as enough power to deliver big CD sound in even the largest of rooms.

CFD-750



CFD-750—One look at this high-tech, high-powered 3-piece CD portable should convince you it's time to make the move into Compact Disc. For in addition to a full-featured CD player, the 750 features a quartz synthesis AM/FM stereo tuner, 3-band graphic equalizer, Mega Bass™ sound, digital clock/timer and dual stereo cassette deck. (There's also the CFD-760 not shown, which adds auto reverse and supplied Remote Commander™).

CFD-770



CFD-770\*—This is it—the ultimate in portable Compact Disc stereo! With up to 8 watts-per-channel of power, the CFD-770 could be easily mistaken for a hifi component system. It includes a full-featured Sony Compact Disc player, quartz synthesis AM/FM stereo tuner and dual auto reverse, Dolby B cassette deck with feathertouch logic control. The 770 even offers the convenience of a supplied Remote Commander™ that gives you total control of all Compact Disc, cassette, tuner volume and power functions.

\*Available September 1990

# Discman® Specifications

	D-11	D-9	D-66	D-T2	D-180K	D-T66	D-25	D-35	D-555
Oversampling Digital Filter	2	2	8	2	2	8	4	8	8
Digital Signal Processing	—	—	—	—	—	—	—	—	Yes
AM/FM Tuner	—	—	—	—	Yes	Quartz Synthesized 20 Random Presets	—	—	—
Mega Bass®	Yes	Yes	Yes	—	—	Yes	—	Yes	Digital
RMS Programming Tracks	16	22	22	—	—	22	22	22	22
AMS	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Music Search	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Shuffle Play	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Repeat Play Modes	5	5	5	3	3	5	5	5	5
CD Edit	—	—	—	—	—	—	—	3-Way	—
LCD Music Calendar	—	—	—	—	—	—	—	Yes	—
Rechargeable Battery	—	BP2EX	BP2EX	—	—	BP2EX	BP2EX	BP-5	BP2EX
AA Batteries Holder	Internal x 4	EBP-2	EBP-2	Internal x 4	Internal x 4	EBP-2	—	EBP-4	—
Resume Play	Yes	—	Yes	—	Yes	Yes	—	—	—
Dual Anti-Shock Damper	—	—	Yes	—	Yes	Yes	—	—	—
Direct Track Access	—	—	—	—	—	Yes	—	Yes	—
Remote Control	Optional	Optional	Optional	Optional	Optional	Optional	RMDM2 Supplied	Headphone Remote	Optional
Size (WxHxD)	5 1/8" x 1 1/2" x 5 1/16"	5 1/8" x 1 1/4" x 5 1/8"	5" x 1 3/16" x 5 1/16"	5 1/8" x 1 1/2" x 5 1/16"	5 3/8" x 1 1/2" x 6 3/8"	5" x 1 3/16" x 5 1/16"	4 1/8" x 1 1/16" x 5 1/16"	5" x 1" x 5 1/16"	5" x 1 3/16" x 5 1/16"
Weight	1 lb.	1 lb. 4 oz.	11 oz.	1 lb. 1 oz.	1 lb. 1 oz.	14 oz.	1 lb. 2 oz.	14 oz.	1 lb. 5 oz.
Supplied Accessories	AC Adaptor, Cord, Belt, Headphone	AC Adaptor, Battery, Cord, Case, Strap, Headphone	AC Adaptor, Strap, Cord, Battery, Headphone	AC Adaptor, Strap, Cord, Headphone	AC Adaptor, Cord, CP6-2, Cassette Adaptor, DCC-50	AC Adaptor, Strap, Cord, Battery, Headphone	AC Adaptor, Battery, Cord, Case, Strap, Headphone	AC Adaptor, Case, Cord, BP-5, EBP-4, Headphone	AC Adaptor, Case, Cord, Headphone

# Portable CD Music Systems Specifications

	CFD-50	CFD-68	CFD-454	CFD-750	CFD-760	CFD-770
CD RMS Programming	16 Tracks	—	—	20 Tracks	20 Tracks	20 Tracks
CD Shuffle Play	Yes	—	—	Yes	Yes	Yes
CD Edit	—	—	—	2-Way	2-Way	2-Way
CD Music Calendar	—	—	—	Yes	Yes	Yes
CD Intro Scan	Yes	—	—	Yes	Yes	Yes
AM/FM Tuner	Stereo	Stereo	Stereo	Quartz Synthesized	Quartz Synthesized	Quartz Synthesized
Station Presets	—	—	—	20 Random	20 Random	20 Random
Double Cassette	—	—	—	Yes	Yes	Yes
Auto Reverse	—	Yes	—	—	Record/PB	Record/PB (Dual Auto Reverse)
High Speed Dubbing	—	—	—	Yes	Yes	Yes
Dolby® B NR	—	—	—	—	—	Yes
Tape Selector	—	—	—	—	—	Yes
Graphic Equalizer	—	—	5-Band	3-Band	3-Band	3-Band
Mega Bass®	—	—	—	Yes	Yes	Yes
Remote Control	—	—	—	—	CD/Tuner	Multi-Function
Batteries (Optional)	D x 6	D x 8	D x 8	D x 8, AA x 4	D x 8, AA x 4	D x 10, AA x 4
Size (W x H x D)	23 1/4" x 6 1/8" x 7 1/8"	23 3/4" x 7" x 7 3/4"	26 3/4" x 11 3/8" x 7 3/16"	27 1/2" x 9 1/32" x 9 1/16"	27 1/2" x 9 1/32" x 9 1/16"	27" x 9 1/32" x 9 1/16"
Weight	10 lbs. 2 oz.	10 lbs. 2 oz.	16 lbs. 12 oz.	18 lbs. 12 oz.	18 lbs. 15 oz.	24 lbs.
Other Features	Auto Shutoff	Bass Boost	Synchro-dubbing	Clock/Timer	Clock/Timer	Clock/Timer, Feather-touch Tape Deck Controls

# SONY

THE LEADER IN DIGITAL AUDIO

Sony Corporation of America  
National Operations Headquarters  
Sony Drive, Park Ridge, New Jersey 07656

## NEW PRODUCTS

### FISHER

The RS-Z1 receiver is part of Fisher's Professional Digital Reference Series of components. It incorporates the company's Class A II amplifier circuitry, two linear 18-bit digital-to-analog (D/A) converters, and an eight-times-oversampling digital filter. The RS-Z1 is rated to deliver at least 150 watts rms per channel into 4 or 8 ohms from 20 to 20,000 Hz with no more than 0.007 percent total harmonic distortion. It has an

optical-fiber input for a direct digital connection to a CD player, DAT deck, or satellite broadcast receiver. There are analog inputs for two tape decks, a turntable, a CD player, and an auxiliary source. Other features include twenty-four station presets, a sleep timer, and a remote control. Price: \$1,400. Fisher, Dept. SR, 21350 Lassen St., P.O. Box 2329, Chatsworth, CA 91311.

*Circle 120 on reader service card*



### BOSE

Bose's new Lifestyle Music System is a compact two-zone, multiroom system that can be either displayed or concealed from view. Its radio-frequency remote unit enables users to control either zone from anywhere inside or outside a home, including through walls or around corners. The Lifestyle Music Center (lower right in photo) includes an AM/FM tuner, a compact disc player, and a microprocessor control section. The black-finished Acoustimass bass module (center) houses its own 100-watt amplifier as well as separate 50-

watt amplifiers for the dual-cube satellite speakers (lower left). Optional Lifestyle powered speakers (right) for additional rooms include their own amplification, equalization, and volume control. Prices: \$2,400 for a basic one-room system; \$2,739 for a two-room, two-zone system (as shown); additional three-piece Acoustimass speaker system, \$1,300; Lifestyle powered speakers, \$339 a pair; extra remote controls, \$149 each. Bose Corp., Dept. SR, The Mountain, Framingham, MA 01701.

*Circle 121 on reader service card*



### MARTIN-LOGAN

The Monolith III is Martin-Logan's newest hybrid electrostatic speaker system. Two 2 x 4-foot transparent curvilinear electrostatic transducers reproduce frequencies above 120 Hz, and a pair of 12-inch dynamic woofers provide bass. System frequency response is rated as 28 to 24,000 Hz  $\pm$  2 dB and sensitivity as 89 dB at 1 meter with a 2.83-volt input. Recommended amplifier power is 80 to 250 watts per channel. The Monolith III measures 73 $\frac{3}{4}$  x 26 $\frac{3}{4}$  x 11 $\frac{3}{4}$  inches and weighs 120 pounds. Standard finishes are light, dark, and black oak, walnut, mahogany, teak, and rosewood. Price: in single-amp passive form, \$6,500 a pair; biamped with an electronic crossover, \$7,000 a pair. Martin-Logan, Dept. SR, 2001 Delaware St., P.O. Box 741, Lawrence, KS 66044.

*Circle 122 on reader service card*



### SHARP

The Sharp JC-K99 is said to be the lightest portable cassette player on the market, weighing only 3 $\frac{1}{2}$  ounces with batteries. Features include autoreverse, Dolby B noise reduction, an antiroll mechanism, and Sharp's X-Bass circuit for extended bass reproduction. Its multifunction remote control includes start, stop, fast-forward, rewind, volume, and autoreverse functions. It comes with a rechargeable AA battery pack, headphones, and a black carbon-fiber case. Price: \$249.95. Sharp Electronics, Dept. SR, Sharp Plaza, Mahwah, NJ 07430.

*Circle 123 on reader service card*

## NEW PRODUCTS



### PHASE TECHNOLOGY

Phase Technology's new Zero-Diffraction series consists of (from smallest to tallest) the PC 40, PC 60, PC 80, PC 6.5, and PC 8.5 speakers. All use the company's Unicell acoustic treatment around the tweeters to reduce diffraction. Rigid Polymer Foam flat-piston bass and midrange drivers launch all frequencies from the same plane to eliminate time and phase distortions. Rated frequency response ranges from 70 to 20,000 Hz for the PC 40 to 35 to 20,000 Hz for the PC 8.5. Dimensions range from 9¾ x 6½ x 5¾ inches for the PC 40 to 39¼ x 13 x 11¾ inches for the PC 8.5. Finishes include wood veneers and black matte. Prices are from \$380 to \$1,200 a pair. Phase Technology, Dept. SR, 6400 Youngerman Circle, Jacksonville, FL 32244.

**Circle 124 on reader service card**

### MISSION

The Mission Cyrus digital AM/FM tuner provides for fifty-nine presets on each band. The tuner incorporates a volume control so that the listener can adjust for different broadcast modulation levels and match the level of other sources within the system. It uses phase-lock circuitry and a double-tuning circuit said to improve signal selectivity and image rejection. Capture ratio is given as 1.5 dB and channel separation as greater than 50 dB. The Cyrus comes with a remote control that performs up/down tuning, preset selection, and direct frequency selection. Price: \$649. Mission Electronics USA, Dept. SR, 18303 8th Ave., Seattle, WA 98148.

**Circle 125 on reader service card**



### MUSEATEX

Museatex Audio's first loudspeaker, the Melior One, uses a large, flat Mylar diaphragm to reproduce the entire musical spectrum. Sound seems to emanate from a virtual point located behind the plane of the diaphragm, the company says, which is accomplished by the use of traveling waves on the surface of the diaphragm. Frequency response is rated as 45 to 20,000 Hz ± 3 dB, sensitivity as 86 dB. Minimum recommended amplifier power is 40 watts per channel, and nominal impedance is 4 ohms, resistive. Available in standard high-gloss black lacquer and high-gloss mahogany, the Melior One measures 45 inches high, 22 inches wide at the bottom, and 3 inches thick. Price: \$2,250 a pair. Museatex California, Ltd., Dept. SR, 28720 Roadside Dr., Suite 199, Agoura Hills, CA 91301.

**Circle 126 on reader service card**



### FINYL

Finyl, from Transparent Audio Marketing, is a CD cleaner that's said to improve sound by reducing aberrant signals from the disc. The company claims that CD's treated with Finyl have better dynamic and transient response, better low-level detail, and less harshness and noise than untreated discs. The Finyl kit comes with a dispenser bottle, a support ring, a buffing pad, and jewel-case stickers to mark "Finylized" discs. A treatment lasts indefinitely, and one bottle treats up to 250 discs. Price: \$30; refills, \$22. Transparent Audio Marketing, Dept. SR, Route 202, Box 117, Hollis, ME 04072.

**Circle 127 on reader service card**



### YAMAHA

The Yamaha CDC-805 five-disc carousel CD changer incorporates Yamaha's S-bit 1-bit digital-to-analog conversion technology and a multistage noise-shaping (MASH) circuit to reduce low-level distortions. Its PlayXchange system enables users to remove up to four discs from the tray while the fifth is playing. Twin Relay Play allows connected CDC-805's to operate sequentially. Digital equalization presets can tailor the changer's output for rock, vocal, jazz, or classical recordings; the

FLAT setting passes the signal through unaltered. Other features include Program File, which can store programming for up to one hundred discs, forty-track random-access programming, five-mode repeat, random play, auto-space, and three-way music search. The remote control also operates other Yamaha RS components. Price: \$499. Yamaha Electronics, Dept. SR, 6722 Orangethorpe Ave., Buena Park, CA 90620.

**Circle 128 on reader service card**

# BLAUPUNKT'S TAMPA. THE HEAT IS ALWAYS ON.



At sundown, the gulf breezes cool down the city, but nothing cools down hot sounds from a Blaupunkt. And the hottest news is that you can own the Tampa SQR 29 FM/AM receiver for under \$250.00.

Blaupunkt's advanced tuner technology lets you program up to 15 presets (10 FM and 5 AM) and scan each station. FM frequency response is an incredible 35 to 15,000 Hz. And Blaupunkt's exclusive Optimum Reception Control ensures maximum listening fidelity.

The Tampa gives you an autoreverse cassette deck. The loudness button with separate bass and treble contour allows a fine tailoring of the sound.

You get a powerful 2 x 7.5 watt internal amplifier and a 4-speaker hookup. Plus a Flex Fader with true 4-Channel, RCA Preamp Output lets you add more power to the system.

What's more, when you head for the beach, you can easily remove the Tampa from your car with the quick-release handle or leave it with the 4-Digit Security Code activated.

The Tampa's not the only Blaupunkt FM/AM receiver under \$300.00. Check out the Boston, Phoenix and Newport. Each becomes part of a system of incomparable sound fidelity when paired with Blaupunkt's BEA 108E Equalizer Amplifier and CB 4500 die-cast enclosed speakers, which are great for your car, home, boat or even portable sound system.

For a dealer near you, call 1-800-237-7999. Wherever you live, Blaupunkt generates the hottest sound under the sun.

**BLAUPUNKT**  
Bosch Telecom  
*The difference is pronounced.™*

## NEW PRODUCTS



### SONY

The CDP-C85ES five-disc carousel CD changer is part of Sony's high-end ES line of components. It features Sony's new High Density Linear Converter system, dual 1-bit digital-to-analog (D/A) converters that operate at a clock speed of 50 MHz, which is said to be almost twice the speed of other 1-bit systems. A Direct Digital Sync antijitter circuit is said to eliminate time-based errors in the final output signal. Operating features include thirty-two-track

programming, Custom File programming for up to 185 discs, peak-level search, six-way repeat (one disc, all discs, one-disc shuffle, all-discs shuffle, program, and selected-disc shuffle), fixed-level and variable-level analog outputs, optical digital output, and a fader. A full-function remote control is supplied. Price: \$520. Sony Corp. of America, Dept. SR, Sony Dr., Park Ridge, NJ 07656.

**Circle 129 on reader service card**

### NUMARK

The Numark AAS-200 is part of the company's Niteclub line of modular car speakers with built-in amplifiers. The amps are rated to deliver 200 watts of continuous power and use Class D switching technology. Each speaker has a 12-inch woofer and a compression-horn tweeter. Rated impedance is 4 ohms, sensitivity 96 dB sound-pressure level at 1 meter with a 1-watt input. Frequency response is rated as 40 to 18,000 Hz. Dimensions are 14 x 34 $\frac{3}{4}$  x 11 inches, and the weight is 60 pounds. Price: \$695. Numark Electronics, Dept. SR, 503 Newfield Ave., Raritan Center, P.O. Box 493, Edison, NJ 08818.

**Circle 130 on reader service card**



### ODEON

Odeon's Point series of loudspeakers includes the Point/Zero Five three-piece system (front) and the floor-standing Point Three speakers and Zero Three subwoofer (rear). The Odeon subwoofers use Straightwire technology in place of crossovers, which is said to result in no crossover-induced phase shift, no loss of damping factor, and a symmetrical pass-band with rolloffs of 12 dB per octave at the top and bottom of its range. The Point/Zero Five, which includes a pair of two-way acoustic-suspension satellites, has a specified frequency response of 38 to 24,000 Hz. Dimensions are 9 x 7 x 4 $\frac{1}{2}$  inches for

the satellites and 14 $\frac{1}{2}$  x 14 $\frac{1}{2}$  x 6 $\frac{1}{2}$  for the subwoofer. Frequency response of the Point Three bass-reflex speaker is 37 to 30,000 Hz. The Zero Three uses four 6 $\frac{1}{2}$ -inch drivers for response down to 22 Hz. The Point Three measures 36 $\frac{1}{2}$  x 19 x 6 $\frac{1}{2}$  inches, the Zero Three 32 x 22 x 17 inches. They are available finished in black or white Zolatone with black grille cloths. Prices: \$489 for the Point/Zero Five system, \$799 a pair for the Point Three speakers, and \$699 for the Zero Three subwoofer. Odeon, Dept. SR, 12461 Tibbetts St., Sylmar, CA 91342.

**Circle 132 on reader service card**

### PRECISE

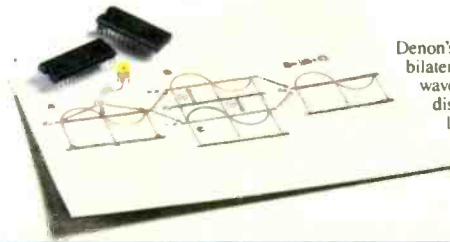
The Model 400BL is part of Precise Acoustics' new Beta line of loudspeakers, which integrate the front baffle with a stand. The two-way bass-reflex speaker has an 8-inch woofer and a 1-inch soft-dome tweeter. The 1 $\frac{1}{2}$ -inch-thick front baffle is made of medium-density fiberboard, which is said to eliminate resonances. Frequency response is rated as 28 to 35,000 Hz, impedance as 6 ohms. Standard finishes are black or walnut with black or gray cloth grilles. Dimensions are 33 x 18 $\frac{1}{2}$  x 11 inches and weight 65 pounds. Price: \$1,100 a pair. Precise Acoustic Laboratories, Dept. SR, Suite B, 200 Williams Dr., Ramsey, NJ 07446.

**Circle 131 on reader service card**





Starting with the first digital recording of music in 1972, Denon has produced an unbroken string of digital audio breakthroughs.



Denon's LAMBDA processor bilaterally offsets the digital waveform to eliminate the distortion that occurs when low-level waveforms cross the zero line.

## The LAMBDA Super Linear Converter: Another significant digital audio first from the first company to record music digitally.



Denon's CD player innovations include the Super Linear Converter, the 20-bit digital filter, the real 20-bit converter and noise-shaping filter circuitry.

Denon's latest digital advancement is the LAMBDA Real 20-Bit Super Linear Converter in the DCD-1560. The LAMBDA system's digital offset processor and dual 20-bit converters eliminate the most common source of distortion in CD players: the zero crossings of low-level signals.

Denon's consistent leadership in digital audio technology may explain why earlier generation

Denons often sound better than current competitors' models. And why a leading hi-fi journal found that a moderately-priced Denon equalled or outperformed all others tested, including machines costing over \$1800.

What makes Denon CD players better? Perhaps it's that Denon performs every step in the music chain from recording artists through pressing CDs. And that Denon has concentrated on one thing and only one thing for 80 years.

Music.

# DENON

DESIGN INTEGRITY

Denon America, Inc., 222 New Road, Parsippany, NJ 07054

DCD-1560 shown with the optional side panels available for most Denon models. Prices quoted are manufacturer's suggested retail prices and may vary.

CIRCLE NO. 27 ON READER SERVICE CARD

by Ken C. Pohlmann



## SMOKE AND MIRRORS

**A**DVANCES in music-reproduction techniques are never boring, that's for sure. The rapid pace of technical evolution guarantees that newer and better products will be introduced with almost clockwork regularity. Big inventions like the cassette and the compact disc come along every twenty years or so. Lesser advances, usually refinements of existing technology, happen about every year. Occasionally, the advance of audio isn't quick enough to keep people fully occupied. That's when our attention is captured by less scientific developments.

A case in point is the series of underground CD remedies that swept the nation this spring. First came the Armor All rumor. This spray-on liquid, of course, is intended for application to automobile tires, seats, and dashboards. According to some audiophile's logic, if it makes your whitewalls look shiny, just think what it will do for CD sound quality. In no time, the testimonials started pouring in. Almost immediately, a copy-cat story popped up. Reports circulated that Turtle Waxed CD's sounded better

than unwaxed ones, and better than Armor All'd ones as well. Soon those big green bottles of Turtle Wax were on stereo shelves everywhere, popping up like Teenage Mutant Ninja Turtles.

Then, just as tremors precede a major quake, the big one hit. Overnight every electronic bulletin board and stereo showroom was abuzz with stories of the "green marking pen" phenomenon. Possessed by wholly unexplained spirits, an audiophile in Oregon had painted the inner and outer rims of a CD—the clear parts that have no data encoded on them—with a green marking pen. He concluded that the ink resulted in an audible improvement in sound quality.

Of course, as with any breakthrough, inquiring minds quickly responded with searching questions. If green is good, how about purple? Or black? Or maybe the inner edge yellow and the outer edge blue? And if a Sharpie pen makes strings sound better, what would Marks-A-Lot do for drums?

Rather than spend billions of taxpayer dollars on government research to probe all the permutations of these questions, it is easier to look at a few facts. In particular, promoters of these home remedies forget that the CD is a *digital* medium. The player recovers data from the disc surface. The data are either valid or invalid. Invalid data can be corrected, up to a rate of approximately 220 errors per second. Beyond that rate, the player is increasingly likely to conceal errors; a concealed error is, in effect, a momentary increase in distortion, which may or may not be audible.

A typical disc may exhibit twenty errors per second, well within the player's ability to perform absolute error correction, with *no* concealment. The output signal from the pickup system does not consist of the same data as on the disc; rather, through error correction, it has the same data as originally present on the master tape at the factory, because the circuitry has corrected any invalid data introduced by the disc. No change in the error rate, up or down, can have any audible effect unless it crosses the threshold between correction and concealment.

Clearly, if a disc has even a moderately low error rate (and most are at least ten times better in this regard than they have to be), any "remedy" could only make things worse by increasing the error rate so much as to overwhelm the player's correction system.

The idea that strings will sound smoother or vocals crisper is clearly fallacious. There is only one hypothesis that could be used to argue otherwise. Somehow, damage to data on the disc might take a form that would not be detected by the error-correction code, and hence it would not be reflected in the error count. But that doesn't seem possible, and no one has provided any supporting evidence.

Unfortunately, the story doesn't end there. There is no question that fads such as these are fun and even help stimulate interest in audio as a hobby. But there's an underlying danger in these kinds of word-of-mouth amusements. They toy with people's lack of understanding and take advantage of their gullibility. They substitute fantasy and wishful thinking for reality. Indeed, they run contrary to the spirit of science that advances audio and all engineering enterprises. Certainly, any science or technology must be open to ideas outside its current realm of thinking, but that does not give free rein to unsubstantiated speculation. In the end, that cheapens fields such as audio and belittles individuals who invest their careers in its advance, as well as those who reap enjoyment from that advance.

So, how do we seek to substantiate unorthodox claims? One approach is to ask experts who know the answers. For example, to evaluate the fad that started it all, Armor All, we might consult a polymer chemist. He would tell us that such a solution is about the worst thing you can put on a CD. The heat from the laser could decompose the compound, which would, over time, form a coating over the playback laser's objective lens, thus disabling it and the player. In that respect, the underground audiophiles' claim is entirely true. The effect of Armor All on CD's could indeed be audible, because it could destroy your CD player. □

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- The Jimi Hendrix Experience: Electric Ladyland** (Reprise) 23362
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# “Model Eleven...Exquisite Sound...Dwarfs Any Portable Stereo...A High Tech Wonder...Thumbs Up.”

Doug Simmons—*The Village Voice*

## MODEL ELEVEN

BY HENRY KLOSS

Cambridge SoundWorks' Model Eleven is the world's first *transportable* full-range, high performance component system. It consists of a powerful 3-channel amplifier and two "satellite" mid/high-frequency speakers—all packed in a rugged "BassCase"™ that, when empty, serves as the system's subwoofer. Model Eleven's performance, when coupled with your portable CD or tape player,\*\* rivals that of the most expensive component systems. And because we market it directly from our factory, it costs hundreds less than it would in stores.



- Fits under airline seats—23 lbs.
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The Ideal "Second Stereo" Use It 52 Weeks A Year

sound virtually identical to our acclaimed Ensemble® speaker system.

Model Eleven can be used virtually anywhere in the world—115- or 230-volt, 50 or 60 Hz AC or 12-volts DC. Because the entire system fits under an airline seat—or can be checked as baggage—you can take it just about anywhere. But Model Eleven's sound is so good, so "big," you may want to keep it home. It's an ideal second (or first) music system for a study, bedroom or kitchen. At \$749† we don't know of any combination of components near its price (transportable or not) that approaches its sound quality.



The drivers used in Model Eleven's two-way satellite speakers are no-compromise, high-performance components—just like you'd expect to find in the finest home speaker systems.

work with a room's acoustics for optimum performance. Remove the satellite speakers, amplifier and your portable CD player from BassCase. Place the satellites where they create a musical "stage" near ear level. Put the BassCase where it reinforces low frequency output—on the floor, even behind furniture. The result is musically accurate



### Performance that rivals the best home component systems.

Until now portable music systems were, at best, a compromise. Even the most expensive ones lack the deep bass necessary for full, natural sound. But Model Eleven delivers the all-out performance previously found only in high quality home component systems. Its three speakers are designed to

Henry Kloss created the dominant speaker models of the '50s (AR), '60s (KLH) and '70s (Avent)—as well as our highly acclaimed Ensemble and Ambiance® speakers. While packing a stereo system into a suitcase before a vacation, he realized that an amplifier, a CD player and two small speakers take up the same space required for an acoustic suspension woofer to reproduce really deep bass. That was the inspiration for BassCase, Model Eleven's bass speaker enclosure which doubles as the entire system's carrying case.

# “We Know Of No Small Speaker That Surpasses The Overall Sound Of Ambiance” —Stereo Review

## Ambiance

BY HENRY KLOSS

Ambiance is an ultra-compact speaker that proves high performance, small size and low cost need not be mutually exclusive. Ambiance is ideal for bedrooms, dens, dorm rooms...or for use as an extension speaker or in surround sound systems. While no speaker of its size can provide the same low bass as our Ensemble and Model Eleven systems, Ambiance has more output in the

40Hz region than any "mini speaker" we've encountered. Stereo Review magazine described Ambiance as "...beautifully balanced, delivering a full-size sound image with not a hint of its origin in two small boxes...very few small speakers we have heard can match the overall sound of Ambiance, and we know of none that surpass it." Available in Nextel or primed for painting for \$109 each†, or in solid oak for \$129 each†—backed by our 30-day money-back guarantee—direct from Cambridge SoundWorks.



Made In U.S.A.

Ambiance is an ultra-compact speaker that proves high performance, small size and low cost need not be mutually exclusive.

# "Cambridge SoundWorks May Have The Best Value In The World. A Winner."

David Clark—*Audio Magazine*

## Ensemble

BY HENRY KLOSS

Ensemble is a speaker system that can provide the sound once reserved for the best speakers under laboratory conditions. It virtually disappears in your room. And because we market it directly, it costs hundreds less than it would in stores.

Ensemble consists of four speaker units. Two compact low-frequency speakers reproduce the deep bass, while two small satellite units reproduce the rest of the music, making it possible to reproduce just the right amount of energy in each part of the musical range without turning your listening room into a stereo showroom.



Ensemble  
With Original  
Black-Laminate  
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Not all the differences are as obvious as our two subwoofers.

Unlike seemingly similar systems, Ensemble uses premium quality components for maximum power handling, individual crossovers that allow several wiring options and cabinets ruggedly constructed for proper acoustic performance. We even gold-plate all the connectors to prevent corrosion.

*Unlike satellite systems which use a single large subwoofer, Ensemble features separate compact bass units for each stereo channel. They fit more gracefully into your living environment, and help minimize the effects of the listening room's standing waves.*

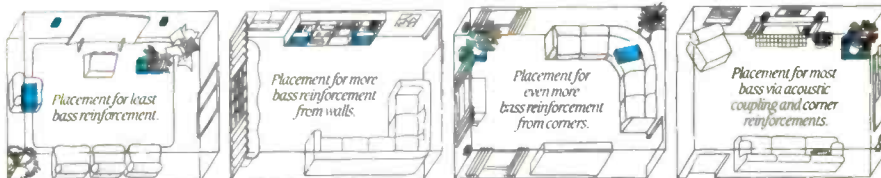
**30-day money-back satisfaction guarantee.**

At only \$599†—complete with all hardware and 100' of speaker cable—Ensemble is *the* value on today's speaker market. *Esquire* magazine describes them by saying, "You get a month to play with the speakers before you either return them or keep them. But you'll keep them." *Stereo Review* said "It's hard to imagine going wrong with Ensemble." For literature, reviews or to order, write us at the address in the coupon, or call 1-800-AKA-HIFI.\*

Your listening room works *with* Ensemble, not against it.

No matter how well a speaker performs, at home the listening room takes over. If you put a conventional speaker where the room can help the low bass, it may hinder the upper ranges, or vice-versa. Ensemble, on the other hand, *takes advantage* of your room's acoustics. The ear can't tell where bass comes from, which is why Ensemble's bass units can be tucked out of the way—on the floor, atop bookshelves, or under furni-

ture. The satellites can be hung directly on the wall, or placed on windowsills or shelves. No bulky speaker boxes dominate your living space, yet Ensemble reproduces the deep bass that *no* mini speakers can.



*You can put Ensemble's low-frequency units exactly where they should go for superb bass. You can't do this with conventional speakers because you have to be concerned about the upper frequencies coming from the same enclosures as the low ones.*

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\*CD player not included in Model Eleven system.

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by Ian G. Masters



## Taping FM Sound

**Q** I do a lot of home recording for playback in my car. I tape from my turntable and CD player and also from a favorite FM station. When I am dubbing from an LP or CD the recording indicators fluctuate considerably, but when I tape from FM they hardly move. These FM recordings sound fantastic in the car, as I can hear even the quiet parts clearly. Is there any way to achieve the same effect recording other sources?

ROBERT F. LOCKHART, JR.  
Hampton, VA

**A** To some degree, practically all radio stations, both AM and FM, use a technique called compression to reduce the dynamic range of their signals. Compression both extends the effective reception range of the stations—that is, it keeps the music well above the noise level in fringe reception areas—and facilitates listening in places with high ambient noise levels. A great deal of radio listening is done in cars, which are notoriously noisy.

Sometimes the signal is so compressed that its dynamic range is only 2 or 3 db. This seems to be the case with the station you mention, which is why the level meters on your tape recorder hardly move. Since the station does this mainly for automobile reception, it's not surprising that tapes made from this source sound good in your car. Few would argue that this is superior for normal listening, however; most audiophiles prefer full dynamics.

If you do wish to duplicate the effect using nonbroadcast sources, dbx is one

manufacturer of outboard compressors, which are usually combined with expansion circuits that increase dynamic range (the combination is called a compander). NAD has included switchable compression circuits in some of its recorders over the years as well; seeking one of these out may be the route for you to go.

## Restoring 78's

**Q** I recently acquired a large number of 78-rpm records, and I am not sure how to care for, clean, or remove warps from these historic treasures, many of which are unplayable on my equipment. I have tried cleaning one or two of the records with alcohol, but I think that damaged the surfaces. How can I make these discs listenable?

LEO JAMES HILL  
Arlington, VA

**A** Definitely not by using alcohol. Most 78's were pressed on shellac, which alcohol will dissolve. For removing decades of dirt, a brush and any good record-cleaning fluid, or even distilled water, may be used, but you may have to do it several times to get the surface clean. Even when you do, there's still likely to be lots of noise, and no amount of scrubbing will get rid of it.

There are several things you might try. First, make sure you are using a stylus designed for 78's, which have much coarser grooves than either LP's or 45's. Several manufacturers offer 78-rpm styli for use with their conventional cartridge bodies; they're expensive, but worth it. Second, always switch your amplifier to mono when listening, as this will tend to cancel out some of the noise without losing any music (for recording, you will have to make a harness that connects the two signal leads together and feeds the combined signal to both inputs of your cassette deck).

Finally, it may be worthwhile to invest in an equalizer that can roll off the high frequencies sharply. Old recordings tend to have almost no musical information above 5,000 Hz (or less if they're really old), but there's lots of noise up there that your modern cartridge is only too happy to pick up. Filtering it out will make things much quieter without sacrificing any of the music. The equalizer will also allow you to create something close to a reasonable balance where there is music.

As for warps, I have rarely encountered one in a 78—those old discs were so brittle that they would snap before they would bend. On the other hand, various experimental materials were tried in the dying days of the 78, and these might well have been prey to deformation. Gentle heating between

two sheets of glass, suitably weighted, might help in such cases, if you do it carefully.

## Identifying CD's

**Q** I would like to mark my compact discs for identification. Is it possible to write with a permanent marker on the back of a CD without affecting the sound?

JOHN BARDEN  
West Chester, PA

**A** Considering the cost of a CD, it's understandable that you might want to put your name on it somewhere, but there are very few safe ways to do that. The ink in most permanent markers is capable of eating through the coating on the label side that protects the aluminum information layer; once air gets in, the aluminum may oxidize. The same, unfortunately, is true of the adhesives in labels that you might want to use. About the only safe thing that occurs to me is a grease pencil, but anyone wishing to purloin your discs could wipe them clean with no trouble.

There is at least one product that allows you to engrave your name permanently in the blank area in the center of the disc, Identadisc from Hi-Pro-Tech in Lansdale, Pennsylvania, and this may be the solution for you. Or simply don't take your discs anywhere they might end up in someone else's hands.

## More on Speaker Surrounds

In the May issue, I replied to a question about the disintegration of the foam surrounds of woofers by suggesting that the only real solution was to buy new speakers. A number of readers have written to point out that there is a cheaper alternative: having the woofers rebuilt (or "reconed") with new surrounds. There are indeed many companies that provide this service, and often the results are very close to the original sound, particularly if parts from the original manufacturer are used. From the point of view of cost, this is obviously preferable to replacing the speakers entirely.

Still, I usually hesitate to recommend reconing. A speaker's sound is a product of everything that goes into its manufacture, including the material the designer chose for the surrounds. Change that, and the sound will be altered, sometimes subtly and sometimes not. The change may be acceptable, but it is still a change—the speaker is very rarely the same as it was when new. If exactly the same materials are used, a perfect restoration may result, but the same deterioration will recur eventually. □

by Julian Hirsch



## STATE-OF-THE-ART MEASUREMENTS

As consumer audio products become more complex and sophisticated, measuring their electrical performance becomes correspondingly more difficult. Laboratory-grade test instruments, which traditionally have had a useful life of many years, can become obsolete as rapidly as last year's TV set or automobile. This does not mean that conventional measurements are no longer valid or required, but rather that advances in instrumentation have kept pace with (and sometimes outstripped) the overall progress of technology.

Our last test-equipment upgrade, less than two years ago, was the addition to our lab bench of an Audio Precision System One. This computer-driven system is able to perform the functions of a wave analyzer, distortion meter, ultrasensitive voltmeter, audio-signal generator, tone-burst generator, square-wave generator, and much more. Furthermore, its range, accuracy, and freedom from distortion far surpass the performance of existing conventional instruments.

It seemed that with the System One we had gone about as far as was

needed to measure the performance of even state-of-the-art audio products, including CD players. No longer was it a problem to measure noise levels in the nanovolt range (thousandths of a *microvolt*) or distortion percentages well below the 0.002 percent or so of a good amplifier or CD player.

It appears, however, that the accelerated, leap-frogging progress of today's technology has made that naïve idea as obsolete as the older hardware the System One replaced. The engineers at Audio Precision have been busily designing a digital measuring capability into their instruments, and a few months ago we had our System One converted into a System One Dual Domain test instrument.

Much of the added capability of this modification is not (for the time being) applicable to our tests, being devoted to the generation and measurement of digital signals rather than the analog signals that are still the heart and blood of the audio world. But the digital signal processing (DSP) capability of the System One Dual Domain analyzer can also be applied to analog signals. Among the benefits of this feature is a staggering extension of the dynamic range of the system's measurements, normally limited by distortion and noise generated within the test equipment. For example, in a graph of a spectral analysis of the System One's internal signal generator, the second harmonic of its 1,000-Hz output can be measured as  $-125$  dB (0.000056 percent), while the third harmonic is  $-132.5$  dB (0.000024 percent). Even a small

eleventh harmonic component is visible, at  $-145$  dB (0.0000056 percent)!

These remarkable measurements represent the combined residual distortions of the generator and the measuring analyzer. It is hard to imagine any future consumer product whose distortion levels will be even comparable to those figures, let alone lower. Nevertheless, past experience has shown that this is

*It is hard to imagine any future consumer audio product whose distortion levels will be even comparable to those we can now measure, let alone lower.*

almost certain to happen eventually and probably it will not be too far in the future.

The System One Dual Domain is equally capable of measurements in both the time and frequency domains. In other words, it can also serve as a precisely calibrated digital storage oscilloscope. This feature is welcome, though probably less useful than its frequency-domain functions, since many oscilloscopes, both analog and digital, are available at relatively modest prices.

The System One Dual Domain is entirely software driven through an interface with any IBM-compatible personal computer; its only external control is a power switch. This gives the system an extraordinary expansion capability, and Audio Precision promises some intriguing DSP programs in the near future. Among these will be ultrafast (a fraction of a second) frequency-response testing by FFT analysis of a pseudo-random-noise test signal and—most interesting for our purposes—quasi-anechoic FFT measurements of loudspeaker performance. The latter, in particular, should greatly extend and accelerate our current speaker measurements, which include a much more basic and limited FFT response test.

I can hardly wait, but if past experience means anything, it won't be for too long. □

### *Tested This Month*

*Quad 66 Preamplifier and  
Compact Disc Player  
Audio-Technica AT-F5  
Phono Cartridge  
NEAR-40M Speaker  
System  
Harman Kardon  
HK6900  
Integrated Amplifier*

# Do As The

If you share the beliefs of the most serious audiophiles, *Audio* magazine is something you live by. And if you saw the March 1990 issue, you must surely see the wisdom of TDK.

But in case you missed it, allow us to enlighten you.

In that issue, *Audio* revealed the results of a massive test it conducted among 88 blank audio cassettes. And all it could do was praise TDK.

**AUDIO MAGAZINE RATED  
TDK AR-X #1 OVERALL AMONG ALL  
NORMAL BIAS CASSETTES.**

The test began with *Audio* evaluating and comparing normal bias Type I cassettes from virtually every conceivable manufacturer.

After the data was polled, *Audio* concluded TDK AR-X was not only the best Type I tape, but "... close to the best for Type II as well."

A finding that isn't all that surprising considering the technology that goes into AR-X, which results in the



highest high-frequency SOL.

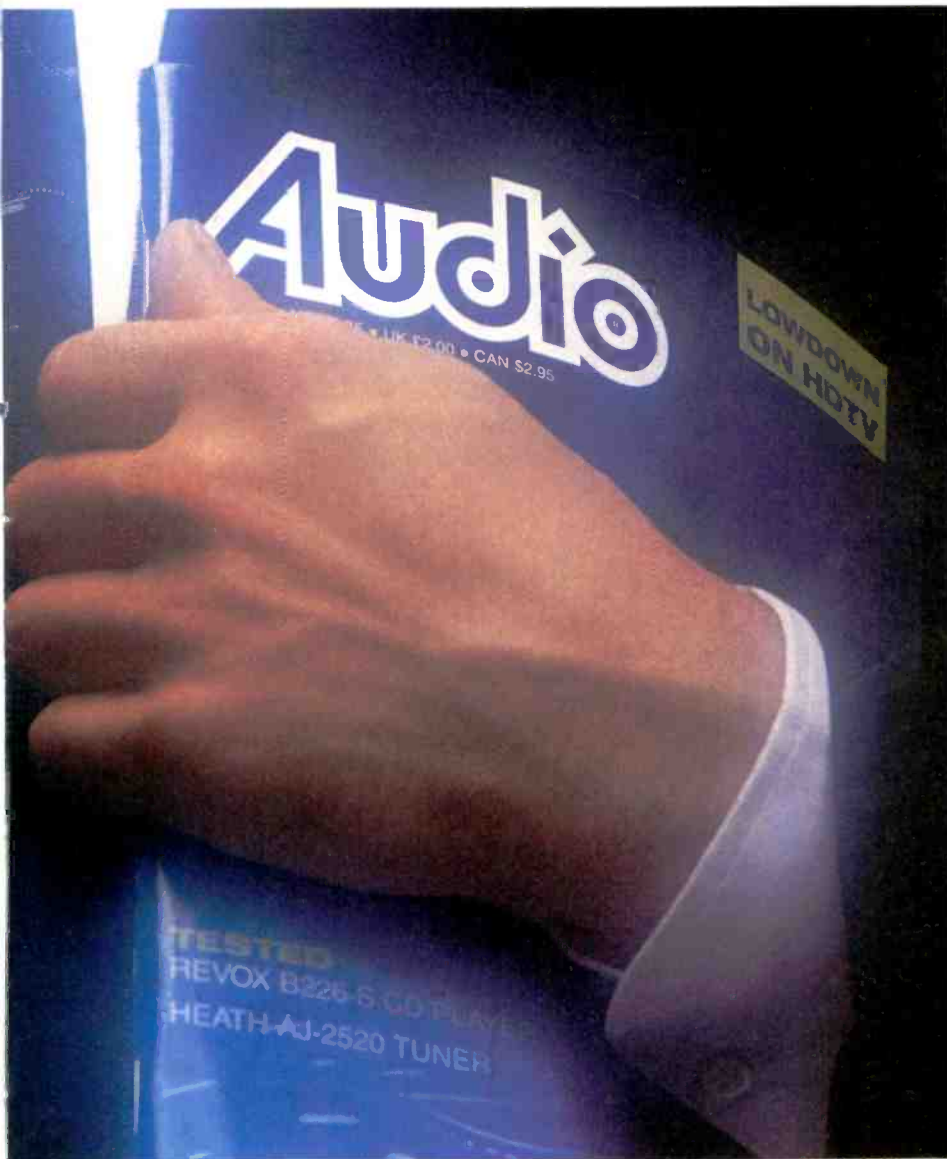
**AUDIO MAGAZINE RATED TDK SA-X  
THE #1 HIGH BIAS CASSETTE IN TERMS  
OF DYNAMIC RANGE (S/N RATIO).**

The next area for review was the high bias Type II segment. And in this highly

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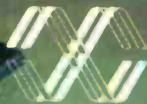
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## QUAD 66 PREAMPLIFIER AND COMPACT DISC PLAYER

*Julian Hirsch, Hirsch-Houck Laboratories*

**Q**UAD products are notable for their combination of superb audio quality and tasteful, though often unconventional, design. These qualities are well illustrated by Quad's new Model 66 preamplifier and CD player. Although both components bear the same model number, which apparently designates a whole series of components, they are separate units. Either can be used with other system components, but they were designed to have a synergistic relationship with each other.

The full name of the Model 66 Preamplifier and Control Panel is a clue to its unusual nature. The preamplifier unit itself has no controls other than an inconspicuous, flush-mounted power button that is normally used only at the time of installation and can thereafter be ignored. The only front-panel identification is the manufacturer's name in small letters at the upper left corner of the panel. A display window, which remains an opaque black until the unit is turned on, occupies much of the panel area. The preamplifier measures 12 $\frac{5}{8}$

inches wide, 3 $\frac{1}{8}$  inches high, and 9 $\frac{1}{2}$  inches deep (not including connectors). Weight is about 7 $\frac{1}{4}$  pounds.

The control panel, as the name implies, is a separate, essentially complete infrared remote control for the preamplifier. The metal-cased unit, designed for placement on a flat surface, weighs 2 pounds and measures 9 $\frac{1}{4}$  inches wide, 6 $\frac{3}{4}$  inches deep, and 1 $\frac{1}{4}$  inches high. The rear part, which slopes downward at about 30 degrees, contains a large infrared transmitting window. The rest of the panel, measuring 9 $\frac{1}{4}$  by 5 $\frac{1}{4}$  inches, contains twenty-two round buttons and two knobs. All of the buttons are the same size (half an inch in diameter), but their functions are distinguished by color (black as well as two shades of gray). Seven are input selectors, for six high-level sources and a moving-magnet phono cartridge; pressing

# TEST REPORTS

any of them also turns the system on. The **STAND-BY** button smoothly fades the volume and shuts off the system, whose settings are restored when it is turned on again.

Like the Model 66 preamplifier and CD player, the control panel is finished in an attractive metallic

gray. The knobs, which control volume and balance, are finished in a darker metallic gray. Indications of their settings appear on the preamplifier in a separate trapezoidal display to the right of the rectangular window. An arc of square, orange fluorescent indicators appears when

the unit is turned on. The number of indicators is proportional to the volume setting. A short line below the volume display indicates center balance, and similar square indicators appear to its right or left as the balance knob is turned.

Previous Quad preamplifiers have been noted for their unconventional frequency-response adjustments. That tradition is maintained in the Model 66. Instead of ordinary tone controls, there is a **TILT** adjustment that slopes the overall frequency-response characteristic up or down, a **BASS STEP** adjustment that introduces a stepped reduction in bass output, and a **FILTER** that slopes off the high frequencies. The Tilt adjustment has three steps of high-frequency boost and three of cut, and the Bass Step and filter circuits have two settings each. A single **CANCEL** button restores flat response.

Although a separate conventional, dedicated remote control is furnished with the Model 66 CD player, eight of the buttons on the preamplifier control panel are devoted to CD player functions. These include selection of the CD input, play, pause, stop, track stepping, and high-speed search with audible sound. The **STORE** button is used to program a playback sequence of as many as ninety-nine tracks, which must be selected by multiple operations of the track button.

Other Quad 66 Series components, such as a tuner and power amplifier, are designed to have their power circuits daisy-chained so that the complete system can be switched from the preamplifier's control panel. The control panel is powered by a 9-volt battery, but since the preamplifier is unusable without it, a back-up system has been provided in case the battery dies inconveniently. In addition, a short power cable (about 2 feet), normally stored within the control panel's battery compartment, can be plugged into a socket under the preamplifier's front panel.

The preamplifier's rear apron contains standard, though gold-plated, phono jacks for the signal inputs and outputs. The unit is also supplied with British standard power-cable connectors, but no power

## FEATURES

### Preamplifier and Control Panel

- All operating controls on separate infrared remote-control panel, including controls for Model 66 CD player
- Six high-level inputs (CD, radio, A-V, tape, AUX 1, AUX 2)
- Phono input for moving-magnet cartridge (can be modified by dealer for moving-coil cartridge)
- Power switched on by input selectors; power-output socket in rear to daisy-chain compatible Quad components for full-system power switching
- Stand-By button to turn power off
- Tape dubbing in both directions (monitoring in only one direction)
- Front-panel display of volume and balance settings, selected source
- Gold-plated rear-panel input and output jacks
- Adaptable for different AC plug standards, voltages, and frequencies
- Tilt buttons to select among six frequency-response slopes
- Base Step buttons to select two

reduced-bass response characteristics

- Filter buttons to select two treble-rolloff characteristics
- Cancel button to restore flat frequency response
- All nonflat frequency responses shown graphically in display window

### CD Player

- Quadruple oversampling (176.4 kHz) and digital filtering
- Dual 16-bit D/A converters
- Remote control through Quad 66 control panel for play, pause, stop, track skip, high-speed search (with audible sound), and store (for programming playback of as many as ninety-nine tracks in any order)
- Separate remote control for same functions plus direct keypad track and index selection
- Also controllable through Philips RC-5 remote interface
- Initial display of total tracks and playing time on disc
- Operating display of current track and index numbers, elapsed time on track

## LABORATORY MEASUREMENTS

### Preamplifier

**Output level at clipping:** 2 volts

**Sensitivity** (for 0.5-volt output): CD, 310 mV; phono, 3.2 mV

**A-weighted noise** (referred to a 0.5-volt output): CD and phono, -86 dB

**1,000-Hz distortion** (THD + N): 0.025% at 1.5 volts

**Phono-input overload** (20 to 20,000 Hz): 53 mV at 1,000 Hz, 63 mV at 20 Hz, 32 mV at 20,000 Hz

**Phono-input impedance:** 47,000 ohms in parallel with 170 pF

**RIAA equalization error:** ±0.1 dB from 30 to 20,000 Hz

**Tilt control range:** ±3 dB

**Bass Step effect:** -6 dB at 20 Hz

**Filter range:** -4 or -8 dB at 10,000 Hz

### CD Player

**Maximum output level:** 2 volts

**Total harmonic distortion** at 1,000 Hz: 0.005% at 0 dB, 0.0025% at -20 dB, 0.0024% at -40 dB, 0.0015% at -60 dB

**Signal-to-noise ratio** (A-weighted): 112 dB

**Dynamic range:** 98.7 dB

**Channel separation:** 125 dB at 100 Hz, 121 dB at 1,000 Hz, 102 dB at 20,000 Hz

**Maximum interchannel phase shift:** 2.6 degrees at 2,000 Hz

**Frequency response:** ±0.03 dB from 20 to 20,000 Hz

**Low-level linearity error:** 0 dB at -70 dB, -0.1 dB at -80 dB, -4.8 dB at -90 dB

**Speed error:** +0.0015%

**Slewing time:** 4 seconds

**Cueing accuracy:** A

**Impact resistance:** top and sides, A

**Defect tracking:** tracked 2,500-micrometer defects on Pierre Verany #2 test disc

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plug is supplied, since standards for this differ from country to country. Presumably the importer or dealer will install the correct plug. The power supply can be switched between 110 and 220 volts on the rear panel. The power-output socket accepts the power plug of another Quad 66 Series component.

The standard phono-preamplifier circuit board is a plug-in unit designed for typical moving-magnet cartridges compatible with its 3-millivolt (mV) input rating and termination of 47,000 ohms in parallel with 220 picofarads (pF). Other phono circuits are available (for dealer installation) with input sensitivities of 1 or 0.2 mV for use with moving-coil cartridges.

The manual lists the specifications for the preamplifier in some detail. Essentially, its rated input level is 300 mV for all the high-level inputs except the tuner input, which is rated at 100 mV to correspond to the lower output normally provided by British tuners, and 3 mV for the phono input (labeled DISC). The various high-level inputs have rated A-weighted noise levels at a maximum volume setting (referred to a 0.5-volt output) of -93 to -99 dB, and the phono noise level is rated at -75 dB. At a minimum setting, the rated noise is lower than -105 dB.

The rated frequency response is 15 to 20,000 Hz  $\pm 0.2$  dB except for the phono input, which is rated to be within  $\pm 0.5$  dB of the RIAA characteristic from 30 to 20,000 Hz. The maximum output is 1.5 volts, and input distortion is rated at less than 0.05 percent.

The Quad 66 CD player closely resembles the Model 66 preamplifier in finish and styling. They are identical in width and height, but the player is somewhat deeper (10 $\frac{7}{8}$  inches) and heavier (8 $\frac{3}{4}$  pounds). Like the preamplifier, the player has no front-panel controls, being designed for operation either from the Model 66 control panel or its own dedicated remote control.

The player's entire display window is the size of the preamplifier's volume/balance display, and it normally shows only the current track and index numbers and the elapsed time on the track. It also shows PAUSE and ERROR indications when

appropriate as well as the letter P beside the track number in programmed operation. Right after a disc is loaded, the display shows its total playing time and total tracks.

The maximum audio output level is fixed at 2 volts into a minimum load impedance of 10,000 ohms. The rated frequency response is 20 to 20,000 Hz  $\pm 0.1$  dB, with a phase linearity of  $\pm 0.05$  degree over that frequency range. The dynamic range, signal-to-noise ratio (S/N), and channel separation are all rated at better than 96 dB, and the total harmonic distortion is rated at less than 0.003 percent (-90 dB) from 20 to 20,000 Hz.

The player's transport mechanism and digital circuits are from

*Instead of ordinary tone controls, the Quad 66 preamplifier has a Tilt adjustment, a Bass Step control, and a low-pass filter.*

Philips, and its remote-control interface (as well as the controller itself) conforms to the Philips RC-5 standard. The digital portion of the player uses quadruple oversampling at 176.4 kHz along with a digital filter and dual 16-bit digital-to-analog (D/A) converters. The rear apron contains a coaxial digital output, the two analog outputs, and input/output jacks for use with an RC-5 multiroom controller. There is no power-output socket, since in a full Quad system the CD player would be at the end of the power chain.

The CD player's remote control is only 6 $\frac{3}{4}$  inches long, 1 $\frac{7}{8}$  inches wide, and  $\frac{3}{4}$  inch thick, but it has all the basic operating functions provided on the preamplifier's control panel as well as index stepping in either direction and a numerical keypad for direct access to any track up to No. 99. Prices: preamplifier and control panel, \$1,500; compact disc player, \$1,200. Quad, Dept. SR, 14120-K Sullyfield Circle, Chantilly, VA 22021.

### Lab Tests

The preamplifier's frequency response through a high-level (CD) in-

put was flat within  $\pm 0.03$  dB from 50 to 20,000 Hz and reached +0.06 dB at 25 Hz. The RIAA phono response was  $\pm 0.1$  dB from 30 to 20,000 Hz, dropping sharply at low frequencies to -11.5 dB at 10 Hz.

The preamplifier response curves agreed exactly with the curves in the owner's manual. The Tilt curves were hinged at about 650 Hz and leveled off below 100 Hz and above 5,000 Hz at  $\pm 1, 2,$  or 3 dB relative to the fixed 650-Hz reference level. The Bass Step's No. 1 setting produced a flat response above 500 Hz and a rolloff to -5.5 dB at 20 Hz. Setting No. 2 reduced the output below 900 Hz to -3 dB at 150 Hz and -6 dB at 20 Hz. The filter's No. 1 position dropped the high-frequency response to -3 dB at 8,500 Hz, and its No. 2 position shifted the -3-dB point to 4,500 Hz.

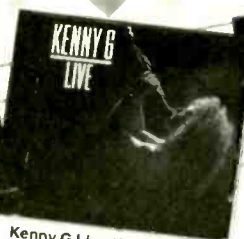
At the reference output level of 500 mV (CD input), the total harmonic distortion plus noise (THD +N) measured 0.03 to 0.04 percent, with the distortion products consisting of a number of low-level odd harmonics. The THD alone (less noise) at 1.5 volts output was 0.023 percent at 5,000 Hz and 0.009 percent at 1,000 Hz, well within the specifications.

The sensitivity for a 0.5-volt (500-mV) output was 310 mV at the CD input and 3.2 mV at the phono input. The corresponding A-weighted noise level, at reference gain settings and referred to a 0.5-volt output, was -86 dB for both inputs. The CD input overloaded at 5.2 volts at 1,000 Hz, far beyond the maximum output of any CD player. The phono preamplifier overloaded at rather low inputs, from 32 mV at 20,000 Hz to 53 mV at 1,000 Hz and 63 mV at 20 Hz (all referred to 1,000-Hz equivalent values). The phono-input impedance was 47,000 ohms in parallel with 170 pF. The preamplifier's output clipped at 2 volts into an EIA standard load of 10,000 ohms in parallel with a 1,000-pF capacitance. This is enough to drive almost any power amplifier to full output, though just barely in some cases. Quad's own power amps are more sensitive than typical American models and therefore require a lower input to achieve maximum output.

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## TEST REPORTS

The output of the CD player from a 0-dB recorded test track was exactly 2.000 volts, the industry-standard value (which is not always so precisely adhered to). Its frequency response was  $\pm 0.03$  dB from 20 to 20,000 Hz. The response error of the de-emphasis circuits was  $\pm 0.05$  dB from 125 to 16,000 Hz. Channel separation was about 125 dB at 100 Hz, 121 dB at 1,000 Hz, and 102 dB at 20,000 Hz. Interchannel phase shift was about 0.7 degree in the 12,000- to 20,000-Hz range and a maximum of 2.6 degrees at 2,000 Hz.

The player's wide-band noise (A-weighted) was about -112 dB, and quantization noise was -94.5 dB. The dynamic range (EIAJ) was 98.7 dB. The speed error was +0.0015 percent, and an FFT spectrum analysis of the wow-and-flutter components (which are virtually unmeasurable by conventional means) showed the major component to be at 120 Hz, with a level of 0.0004 percent. The FFT analysis was made possible by the recent upgrading of our Audio Precision test system (see page 29), and the same measurement technique also showed that the strongest harmonics of a -70-dB 1,000-Hz test tone were the third and fifth, each about 33 dB lower than the -70-dB fundamental (2.2 percent). A spectrum analysis of low-level test signals showed linearity errors of less than 0.3 dB down to -80 dB but a -5-dB error at -90 dB. This represents a fairly typical error in the least-significant bit of the D/A conversion.

The THD + N at 1,000 Hz was a maximum of -86 dB (0.005 percent) at 0 dB, decreasing to -92 dB (0.0025 percent) at -20 dB and -97.5 dB (0.0013 percent) at -80 dB. At a constant 0-dB level, the distortion ranged from -85 to -94 dB (0.0056 to 0.002 percent) at frequencies from 20 to 12,000 Hz.

The Philips mechanism was typically slow in moving the laser across the disc surface, taking 4 seconds to shift from Track 1 to Track 15 of the Philips TS4 test disc. More than compensating for this leisurely movement—which, however, took place in total silence—was the player's impressive immunity to physical shock. A very hard slap or fist blow on its top was required to

induce a momentary skip, and cueing accuracy was excellent.

This player also set a record in our experience in coping with disc defects. It tracked the 2,500-micrometer error track of the Pierre Verany #2 test disc flawlessly, although it did finally mistrack at the 3,000-micrometer level. The test track combining a 2,400-micrometer error with a minimum-tolerance track pitch was also tracked without audible errors, and so was the track containing two 2,400-micrometer errors in immediate succession.

### Comments

The measured and audible performance of these two Quad 66 components was first-rate in almost every respect. The qualifying "almost" results from the preamplifier's inexplicably low phono-overload level in combination with its fairly modest phono sensitivity. Although I doubt that this characteristic will produce audible problems in many installations, it is out of step with the other qualities of these superb products.

*The Quad 66 control panel puts everything in plain view, clearly and logically marked. Nothing could be more obvious or simple to use.*

That aside, everything about these Quad components calls for superlatives. Their ergonomic design is both novel and practical. The problem of installing a preamplifier so that its controls are both accessible and visible has been solved neatly by removing the control panel from the component itself. The clean, understated, functional styling of the Quad 66 preamplifier and CD player is nearly unique among today's audio components, and I, for one, would not wish to conceal them from view. And it is truly a pleasure to be able to sit anywhere in the room and control all system functions through a simple, attractive remote panel, free of wires or complexity.

Unlike some remote-controlled systems, this one lets the user see its

full operating status from any point within eyeshot of the front panels. And unlike most other remote controls, the Quad 66 control panel has a very powerful infrared transmitter. The panel could be anywhere in the room, pointed in any direction, and still give perfect control. Only deliberately covering its infrared window with an opaque object broke the connection. Otherwise, whether it was pointed away from the preamplifier, toward the ceiling or floor, or anywhere else, it never seemed to falter.

In sharp contrast to most remote controls, with their innumerable tiny, identical buttons, the Quad 66 control panel puts everything in plain view, clearly and logically marked. There are no problems with peering and fumbling to find a particular control button—nothing could be more obvious or simple to use. I also liked the smooth way the system shut down, with a fade-out followed by a clickless silence.

Judging from the manuals, which are among the best we have seen, these two components should be very compatible with other Quad products, at least insofar as power switching and source selection are concerned. Although no maximum switching-current rating is given for the daisy-chained AC output from the preamplifier, the manual says that it can handle the 100-watt Quad amplifier as well as a tuner.

Finally, the frequency-response adjustments of the preamplifier must be acknowledged. The Tilt, Bass Step, and filter controls are essentially similar to those used in previous Quad preamplifiers. What is noteworthy is that they can actually make programs sound better (when that is required) but do not seem to be able to make them sound worse. The response modifications are done with such a fine touch that the most heavy-handed user cannot wreak havoc on the system's sound quality. These are truly "tone controls" for people like me, people who hardly ever use conventional tone controls.

In case you are wondering, these Quad components sounded as good as they felt and looked—not cheap, but worth every cent.

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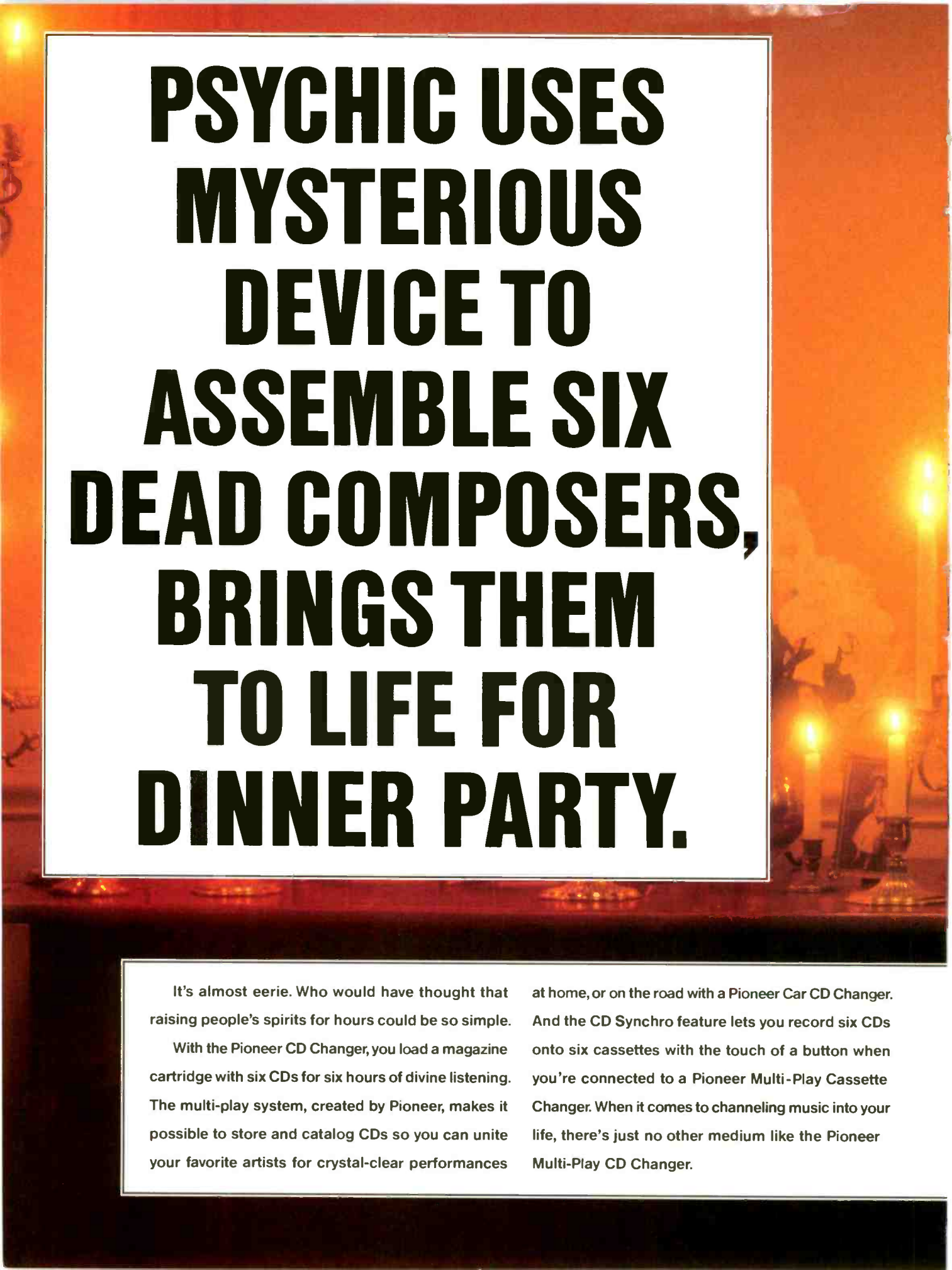
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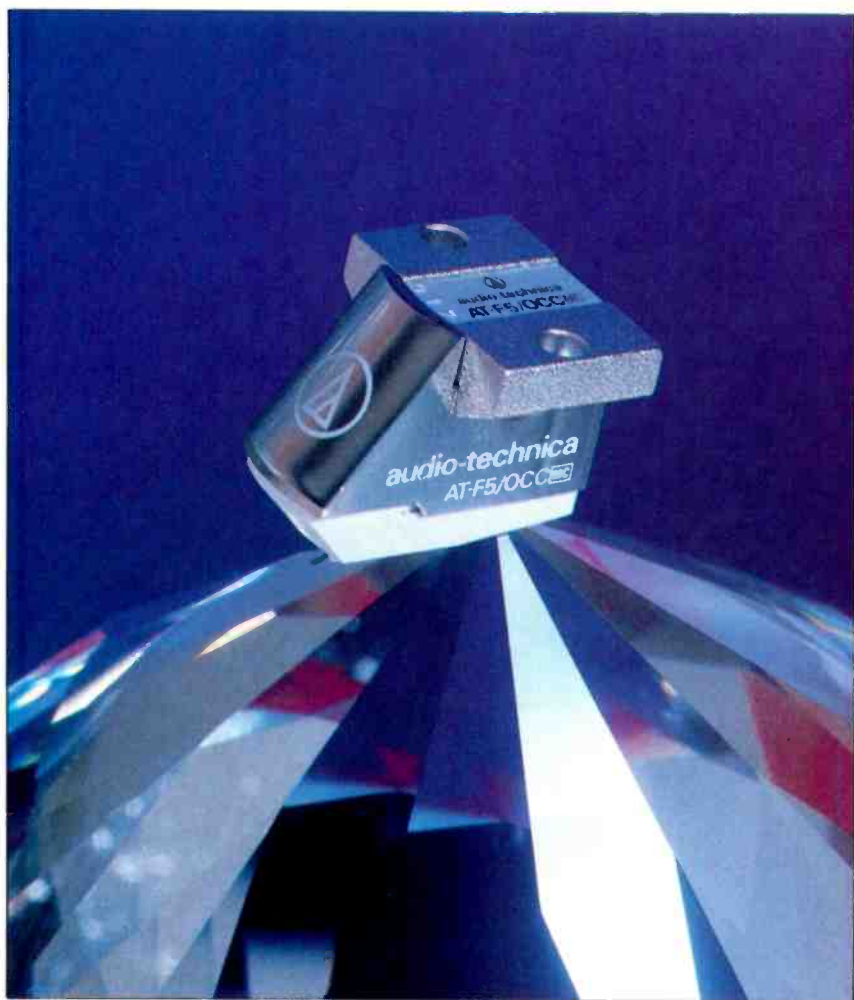
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## TEST REPORTS



### AUDIO-TECHNICA AT-F5 PHONO CARTRIDGE

*Julian Hirsch, Hirsch-Houck Laboratories*

**T**HE Audio-Technica AT-F5 moving-coil phono cartridge, highly regarded by European audiophiles, is now imported and distributed in the United States by Signet. Its dual coils are wound with pure copper by Ohno continuous casting (PC-OCC) wire, which is said to improve the cartridge's sound. The body of the cartridge is made of a special hardened plastic to minimize resonances.

A polished elliptical nude-diamond stylus is mounted on a beryllium cantilever only 0.3 millimeter

in diameter. As with almost all moving-coil cartridges, the stylus of the AT-F5 is not user-replaceable, requiring that the entire cartridge be returned to the factory when the stylus is damaged or worn out.

The AT-F5 is designed to operate at vertical tracking forces between 1.25 and 1.75 grams. Its frequency response is specified as 15 to 50,000 Hz, with a channel balance within 1.5 dB. Rated output at 1,000 Hz is 0.3 millivolt (mV), and the recommended load impedance is 20 ohms or greater. The cartridge mounts on standard 1/2-inch centers, and its

weight of 5 grams is compatible with the balancing systems of virtually all tonearms. The AT-F5 carries a three-year limited manufacturer's warranty against defects in material or workmanship. Price: \$250. Signet, Dept. SR, 4701 Hudson Dr., Stow, OH 44224.

#### *Lab Tests*

We installed the AT-F5 in the medium-mass tonearm (about 15 grams) of a good midprice turntable. All measurements except output voltage were made through a high-quality moving-coil step-up transformer (Technics SH-305MC), which presented a 30-ohm load to the cartridge.

Tracking force was set to 1.5 grams, the center of the AT-F5's rated operating range, for our response measurements. When we played the CBS STR 100 test record, the cartridge's frequency response exactly matched the response curve enclosed with it by the manufacturer, varying +2, -1 dB from 40 to 20,000 Hz. Output at 1,000 Hz from a 3.54-centimeter/second (cm/s) recorded velocity was 0.358 mV, with an imbalance of 0.02 mV (less than 0.5 dB) between channels. Our channel-separation readings were about 30 to 33 dB below 1,000 Hz, 19 or 20 dB at 10,000 Hz, and 10 to 12 dB at 20,000 Hz. These readings closely matched those on the supplied test curve above 2,000 Hz and slightly surpassed them at lower frequencies.

The cartridge's stylus system resonated at about 10 Hz in the test arm, indicating an ideal match between stylus compliance and the fairly typical total effective mass of the arm and cartridge, which helps insure good behavior when playing warped or eccentric records. The vertical stylus angle was 20 degrees, the current industry standard. At the 1.5-gram setting, the AT-F5 could barely handle the 30-cm/s 1,000-Hz tones on the Fairchild 101 test record, but increasing the vertical force to 1.75 grams resulted in clean tracking. The higher force also enabled it to track the 80-micrometer level of the 315-Hz tones on the DIN 45549 test record and the high-level 32-Hz portions of the Cook Series 60 test record.

### Comments

Our listening tests and measurements of the Audio-Technica AT-F5 cartridge showed it to be a good example of a high-quality moving-coil cartridge, with the usual characteristics of the genre. It sounded as good as most other premium cartridges we have used. To its credit, the AT-F5 had no audible vices we could detect.

The low output of a moving-coil cartridge typically requires special attention to ground paths and the physical spacing between the turntable and other system components in order to keep hum at inaudible levels. And the delicate, nonremovable stylus demands extra care in the installation process, where it is easy

*The AT-F5's stylus system resonated at about 10 Hz, indicating an ideal match between its compliance and the total effective mass in a fairly typical tonearm, which helps when playing warped or eccentric records.*

to make an expensive mistake. Assuming you have made your way successfully past those obstacles, the AT-F5 will have to be operated at its maximum rated force of 1.75 grams to match the tracking ability of even a moderate-price moving-magnet cartridge. Fortunately, few records will ever require greater tracking ability than this cartridge provides, and a 1.75-gram vertical tracking force poses no threat to the longevity of your records.

Actually, these reservations apply to almost any moving-coil cartridge, and I mention them only to put the matter into perspective. For those people (and there are many) who are convinced of the superior sound quality of moving-coil cartridges, the AT-F5 appears to be an excellent choice, particularly since it is priced far below the stratospheric range of some of the most exotic models.

**Circle 141 on reader service card**



## NEAR-40M SPEAKER SYSTEM

*Julian Hirsch, Hirsch-Houck Laboratories*

**N**EW England Audio Resource, Inc. (NEAR) has developed a line of loudspeakers designed to provide high-quality reproduction at affordable prices. The NEAR-40M, a floor-standing columnar two-way system, is representative. It contains a single 8-inch woofer operating in a vented enclosure, with the port on the back of the cabinet. The woofer cone is formed of plastic-laminated metal with a compliant rim suspension. Its center is 18 inches from the floor, about halfway up the front panel. A 1-inch metal-dome tweeter is located near the top of the panel. The cabinet, attractively finished in oak-grain veneer,

measures 35 inches high, 10½ inches wide, and 10¾ inches deep, excluding the removable black cloth grille, which adds about ⅝ inch to the depth. Two heavy-duty, multi-way binding posts, which accept dual banana plugs as well as stripped wires, are recessed into the back panel. The system has no level controls. The NEAR-40M weighs about 40 pounds. Price: \$800 a pair. NEAR, Dept. SR, 1450 Hanover Ave., Meriden, CT 06450.

### Lab Tests

We placed the speakers 2 feet in front of a wall and at least 4 feet from the side walls. Their averaged room response, at a distance of

## TEST REPORTS

about 15 feet on the axis of the left speaker, was impressively smooth and flat. The low-frequency room effects on the response were minimal, although there was a distinct response hole of about 5 dB at 600 Hz and a shelved overall response at that frequency (higher frequencies were 3 to 5 dB lower in level than the frequencies below 600 Hz).

*The NEAR-40M sounded well balanced and smooth, with a slight trace of warmth and excellent deep bass. It was an easy speaker to listen to.*

The close-miked woofer response, combined with its port response, was  $\pm 2$  dB from 25 to 500 Hz. The woofer output rolled off gradually from 500 to 1,500 Hz and steeply above the latter frequency. (NEAR specifies the crossover frequency between the two drivers as 2,500 Hz.) When we spliced the woofer response to the room curve, the composite frequency response was within  $\pm 3.5$  dB from 20 to 20,000 Hz. Above and below 600 Hz the response was much smoother than that, but the dip and slight shelving at that frequency could be seen in all of our response measurements: room, close-miked woofer, and quasi-anechoic FFT.

The FFT response at 1 meter showed a 12-dB tweeter resonance at 28,000 Hz, well above the audible range. From 1,500 to 26,000 Hz, the axial frequency response varied only  $\pm 3$  dB. The horizontal dispersion was very good up to 8,000 Hz, with an increasing difference at higher frequencies between the response measured on-axis and 30 degrees off-axis.

The system's impedance was at a minimum, 5.3 ohms, at 150 to 200 Hz, and it measured 5.5 to 6 ohms from 2,000 to 20,000 Hz. The upper-bass resonance was at 50 Hz, where the impedance reached its maximum of 17 ohms (the lower resonance point appeared to be at 20 Hz or below), and there was also a peak of 14 ohms at 1,100 Hz, possibly related to the tweeter crossover. The

system's sensitivity was 87 dB sound-pressure level (SPL) at 1 meter with a 2.83-volt input of pink noise.

We measured the woofer distortion with a 4-volt input (corresponding to a 90-dB SPL in our sensitivity test). At 50 Hz (the crossover between the cone and port outputs) the distortion was 3 percent, and it fell to 1 percent at 83 Hz and 0.75 percent between 100 and 400 Hz. The distortion in the port output was 1.5 percent at 50 Hz and a maximum of 6 percent between 30 and 20 Hz. In our single-cycle power-handling tests, the woofer cone rattled with a 280-watt input (into its 6-ohm impedance) at 100 Hz. At 1,000 Hz, the amplifier clipped before the speaker distorted, at 510 watts into 14 ohms, and at 10,000 Hz the amplifier also clipped first, at 1,100 watts into 5.7 ohms.

### Comments

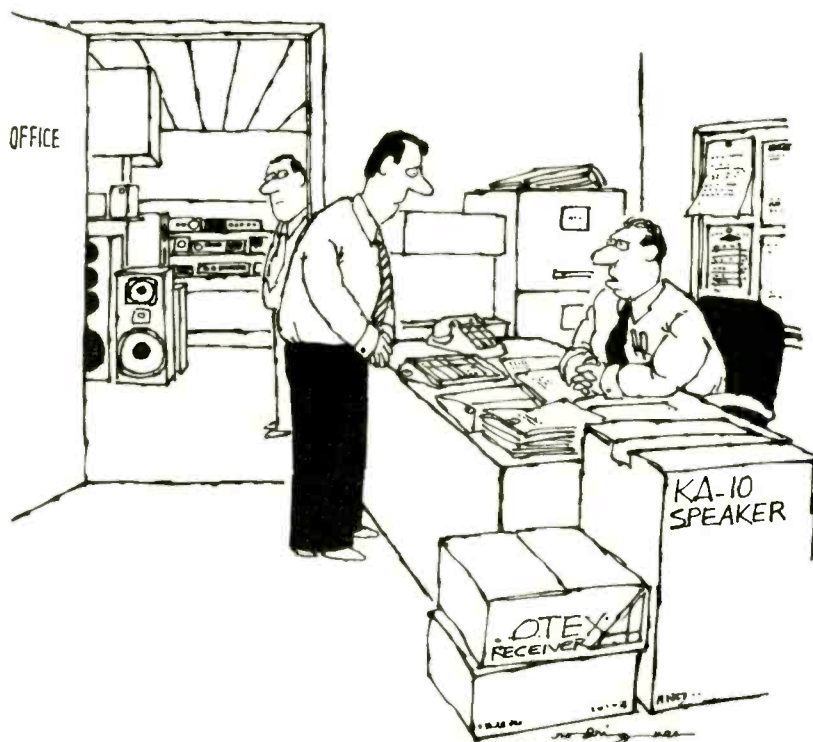
The NEAR-40M sounded well balanced and smooth, with a slight

trace of warmth. The deep bass was excellent, especially considering the speaker's modest driver complement. It was an easy speaker to listen to with any type of program material.

Although the installation instructions were adequate for their purpose, we were surprised at the lack of information on the speaker's performance or special design features. For instance, there was nothing about the system's unusually rigid woofer cone. Considering the excellent performance of this single bass driver, the manufacturer would be well justified in elaborating on its design (we have often seen far more publicity attached to much less worthy developments).

Still, the most important quality of any speaker is its sound, and the NEAR-40M certainly ranks high in that respect. It is also a very attractively styled unit, with or without the grille in place.

*Circle 142 on reader service card*

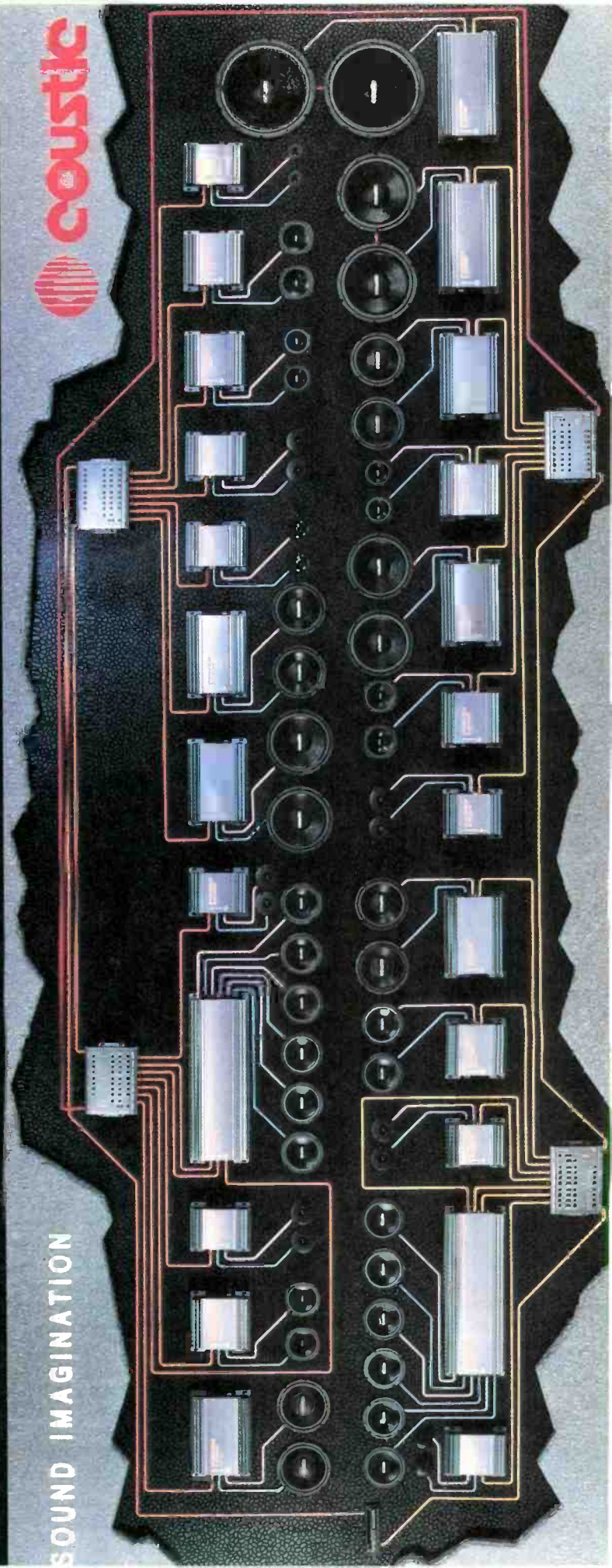


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SOUND IMAGINATION





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## HARMAN KARDON HK6900 INTEGRATED AMPLIFIER

*Julian Hirsch, Hirsch-Houck Laboratories*

**T**HE HK6900, rated at 170 watts per channel into 8-ohm loads from 20 to 20,000 Hz with less than 0.08 percent harmonic or intermodulation distortion, is Harman Kardon's most powerful integrated amplifier. Among its design and circuit features are the use of discrete (as opposed to integrated) electronic components throughout, low overall negative feedback (only 12 dB), and a wide bandwidth, extending far beyond the audio range. It is also designed to deliver high instantaneous peak currents into low-impedance loads. According to the manufacturer, the HK6900 can supply as much as 90 amperes of instantaneous output.

The HK6900 is a large, heavy amplifier, measuring 17<sup>3</sup>/<sub>8</sub> inches wide, 16 inches deep, and 6<sup>1</sup>/<sub>4</sub> inches high and weighing 37<sup>1</sup>/<sub>2</sub> pounds. Its

full-size control knobs operate with a strikingly smooth and positive feel, and their functions are clearly labeled in gold characters on a black panel. Bar knobs select the speaker outputs for one or two pairs of speakers, monitor the playback from either of two audio or video tape recorders, and connect the amplifier to any of five input sources: phono, CD, tuner, A/V, and auxiliary. The tuner input can be switched to either set of tape outputs independently of the listening selection, and the two decks can be connected for dubbing in either direction.

At the bottom of the panel are two small pushbutton switches. One turns off the amplifier's video-preamplifier circuits (the manual says, without elaboration, that this is "for purest possible sound quality"), and the other selects between the moving-magnet (MM) and mov-

ing-coil (MC) phono-preamplifier inputs (there are separate rear-panel jacks for the two types of cartridges).

There are four flat, rectangular switches at the lower left of the control panel for power, tone-control bypass, loudness compensation, and the SUBSONIC (infrasonic) filter. Another switch, MAIN DIRECT, bypasses the preamplifier stages, routing the selected signal directly (but through the volume control) to the power-amplifier input. All of the front-panel controls use high-quality electronic switches.

According to Harman Kardon, the HK6900's loudness-compensation circuit has been designed to correct for the midrange phase errors normally associated with low-frequency equalization. It is said to be free of the coloration or stereo-imaging degradation said to occur with conventional loudness-compensation circuits.

In addition to the various signal input and output phono jacks, the rear apron of the HK6900 has video input/output jacks for the two tape loops, which are designed to switch VCR's as well as audio tape decks.



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## TEST REPORTS

There are also monitor outputs as well as audio and video inputs for use with a laserdisc player. The speaker terminals are large, heavy-duty binding posts; unfortunately, they are spaced too widely to accept dual banana-plug connectors.

A somewhat unusual feature is a pair of jacks labeled "pre-out"—without the usual accompanying main-amp-in jacks. After some investigation, we determined that these jacks simply provide a separate line-level feed from the preamp section. They *could* be used to drive an external amplifier, although with no provision for disconnecting the HK6900's own power amplifier that would be a waste. A more likely use for these jacks is to feed a signal to a surround device, a tape deck, or a mixing board.

A rear-panel pushbutton labeled SPEAKER OPERATING MODE adjusts the power-supply voltage on the output transistors for safe operation with either 4- or 8-ohm speakers. The instructions suggest normal use of the 4-ohm setting, which insures

the coolest and safest operation of the amplifier. If only a *single* pair of 8-ohm speakers is used, however, the 8-ohm setting provides the maximum possible power output. Two of the three AC outlets are switched. Price: \$1,299. Harman Kardon, Dept. SR, 240 Crossways Park W., Woodbury, NY 11797.

### Lab Tests

During the 1-hour preconditioning at one-third rated power (57 watts) into 8-ohm loads, the top of the amplifier (over the internal heat sinks) became quite warm, though never too hot to touch. The unit's thermal-protection system shut the amplifier down a number of times during this period. During extended normal operation, the top of the cabinet became only slightly warm.

We measured power levels at clipping and distortion levels using several combinations of load resistance and speaker-mode settings. With the recommended setting, the 1,000-Hz output clipped at 225 watts per channel with both chan-

nels driving 8-ohm loads and at 227 watts into 4 ohms. The respective clipping-headroom numbers were 1.22 and 1.26 dB. When 8-ohm loads were used with the amplifier's 4-ohm switch setting, the clipping level was reduced to 140 watts, but with a 2-ohm load (not recommended) the output clipped at an impressive 300 watts per channel. Finally, using 4-ohm loads with the 8-ohm switch position produced a clipping output level of 312 watts.

Dynamic power measurements were made with the same combinations of load resistance and switch settings. Using the recommended setting, the 8-ohm power was 272 watts (dynamic headroom of 2 dB). The 4-ohm output was 190 watts, slightly lower than the clipping power under the same conditions, for a dynamic headroom of 0.5 dB. The combinations of 2-ohm loads with the 4-ohm switch position or 4-ohm loads with the 8-ohm switch position produced truly enormous dynamic outputs, 462 and 465 watts, respectively.

The total harmonic distortion plus noise (THD + N) was comfortably within the amplifier's ratings. The 8-ohm load-and-switch combination produced readings that decreased from 0.05 percent at 1 watt to 0.013 percent in the 40- to 60-watt range, rising to 0.023 percent at 170 watts and 0.053 percent at 200 watts. The corresponding 4-ohm readings were 0.08 percent at 1 watt, 0.018 percent at 100 watts, and 0.056 at 200 watts.

At the rated 170 watts into 8 ohms, the distortion measured 0.025 percent from 20 to 3,000 Hz, rising to a maximum of 0.06 percent at 20,000 Hz. At half power and one-tenth power, the distortion curves were similar to the full-power measurements but with lower readings: in the 0.013 percent range up to 3,000 Hz and 0.04 to 0.046 percent at 20,000 Hz.

The amplifier's frequency response was flat within  $\pm 0.2$  dB overall from 10 to 30,000 Hz, and down 1 dB at 100,000 Hz. A power-bandwidth measurement, at a constant distortion of 0.1 percent into 6 ohms, showed an output of 200 watts at 20 Hz and 210 watts from 100 to 20,000 Hz. The tone controls

### FEATURES

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- Inputs for moving-magnet and moving-coil phono cartridges (switch-selectable) and four high-level audio/video sources
- Video monitor output
- Connections and switching for two audio or video tape recorders
- Allows recording of tuner input while listening to another source
- All switching done by electronic circuits
- MAIN DIRECT switch to bypass preamplifier circuits
- Bass and treble tone controls with bypass switch
- Phase-corrected loudness compensation
- Line-out jacks (labeled PRE-OUT)
- Switchable infrasonic filter

### LABORATORY MEASUREMENTS

**Output power at clipping** (1,000 Hz): 225 watts into 8 ohms, 227 watts into 4 ohms (see text)

**Clipping headroom** (relative to rated output): 1.22 dB into 8 ohms, 1.26 dB into 4 ohms

**Dynamic power output:** 272 watts into 8 ohms, 190 watts into 4 ohms (see text)

**Dynamic headroom:** 2 dB into 8 ohms, 0.5 dB into 4 ohms

**Harmonic distortion** (THD + N at 1,000 Hz into 8 ohms): 1 watt, 0.05%; 10 watts, 0.018%; 170 watts, 0.023%

**Maximum full-power distortion** (20 to 20,000 Hz into 8 ohms): 0.06% at 170 watts (20,000 Hz)

**Frequency response:** +0, -0.1 dB from 20 to 20,000 Hz

**Sensitivity** (for a 1-watt output into 8 ohms): CD, 19.3 mV; phono, 0.2 mV (MM), 0.01 mV (MC)

**Phono-input overload** (MM): 130 to 146 mV

**A-weighted noise** (referred to a 1-watt output): CD, -78 dB; phono, -77 dB (MM), -75 dB (MC)

**Phono-input impedance** (MM): 47,000 ohms in parallel with 112 pF

**RIAA equalization error:** +0.03, -0.1 dB from 20 to 20,000 Hz

**Tone-control range:**  $\pm 8$  dB at 100 Hz,  $\pm 10$  dB at 10,000 Hz

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## TEST REPORTS

had conventional response characteristics, with a sliding bass-turn-over frequency (from below 100 Hz to about 300 Hz) and treble curves hinged at 2,000 Hz. The infrasonic filter, specified as having a 15-Hz cutoff with a 6-dB-per-octave slope, had no significant effect within the audible frequency range.

The loudness compensation was the same at all level settings from -10 to -60 dB, providing a mild bass boost (about 4 dB between 20 and 100 Hz) and no effect on frequencies above 600 Hz. Because of Harman Kardon's claims for the phase accuracy of this loudness circuit, we also measured its phase shift versus frequency. Phase shifting was, as claimed, extremely low, ranging from -0.2 degree at 20 Hz to +0.7 degree at 20,000 Hz.

The phono-preamplifier section's equalization response was within  $\pm 0.03$  dB of the RIAA characteristic from 20 to 8,000 Hz and only -0.1 dB at 20,000 Hz. The amplifier's sensitivity, for a standard reference output of 1 watt, was 19.3 millivolts (mV) through the CD input, 0.2 mV for MM phono, and a very good 0.01 mV for MC phono. The respective A-weighted noise levels (referred to 1 watt) were -78, -77, and -75 dB. The phono-preamplifier input overloaded at 145 millivolts (mV) at frequencies

of 1,000 and 20,000 Hz and at 130 mV at 20 Hz. Its impedance (MM) was 47,000 ohms in parallel with a 112-picofarad capacitance.

### Comments

The Harman Kardon HK6900 is unquestionably one of the most powerful integrated amplifiers on the market, and its overall quality is as impressive as its sheer power. Despite the operating flexibility of the HK6900, its front panel presents a relatively simple, uncluttered appearance. We would have preferred to have visible index lines on the tone-control and balance knobs, whose settings were very difficult to see or to feel (their center detents are much too light).

For all of its formidable size, weight, and power, the HK6900 is a comfortable amplifier to use. It doesn't have to be coddled or treated with kid gloves. Its bulk and weight encouraged us to throw caution to the winds in our power and distortion measurements, during which we violated just about every one of the manufacturer's recommendations. Nothing untoward happened, not even a blown fuse (we even ventured to drive both channels during the 2-ohm measurements).

The HK6900 does have a few peculiarities, though. The pair of

"pre-out" jacks are puzzling, and the owner's manual incorrectly describes their function (we had to call Harman Kardon's engineering department to find out what they are for). A conventional combination of preamp-out and main-amp-in jacks would have been more flexible and less confusing. Harman Kardon's engineers defend the unusual design, however, which they say provides the HK6900 with the shortest, cleanest possible internal signal path. The RECORD OUT selector provides only two choices of a recording source (source and tuner) in addition to the tape-dubbing positions. A completely independent choice of listening and recording program sources, a feature of many good amplifiers and preamplifiers, would have been more useful. Finally, we cannot understand why the speaker binding posts have been spaced to exclude the use of dual banana plugs, which we find to be by far the most convenient method of connecting speakers to amplifiers.

Aside from these quibbles, the HK6900 proved to be as fine an amplifier as one could wish for. The loudness compensation was mild enough to be useful without excessive coloration of the sound. And though we had never been concerned about the phase shifts associated with conventional loudness-compensation circuits (which we rarely use in any case), it is undeniable that this one is free of phase-shift effects.

The noise level of the amplifier was very low, especially in view of its very high gain. Its input sensitivity was unusually high, yet even when phono was selected, only the faintest hiss could be heard from the speakers at a maximum volume setting—and there was *no* crosstalk from the tuner input.

If you are one of those who believe that every amplifier has its own special sonic qualities, you will have to judge the HK6900 for yourself. I do not find such special characteristics in most amplifiers, especially not in any as good as this one, and have no reservations about my enthusiasm for this versatile, ruggedly constructed, and handsomely styled amplifier.

**Circle 143 on reader service card**



*"Madam, if you won't close your eyes to forget you're listening to speakers, I'm going to have to ask you to leave the demonstration room."*

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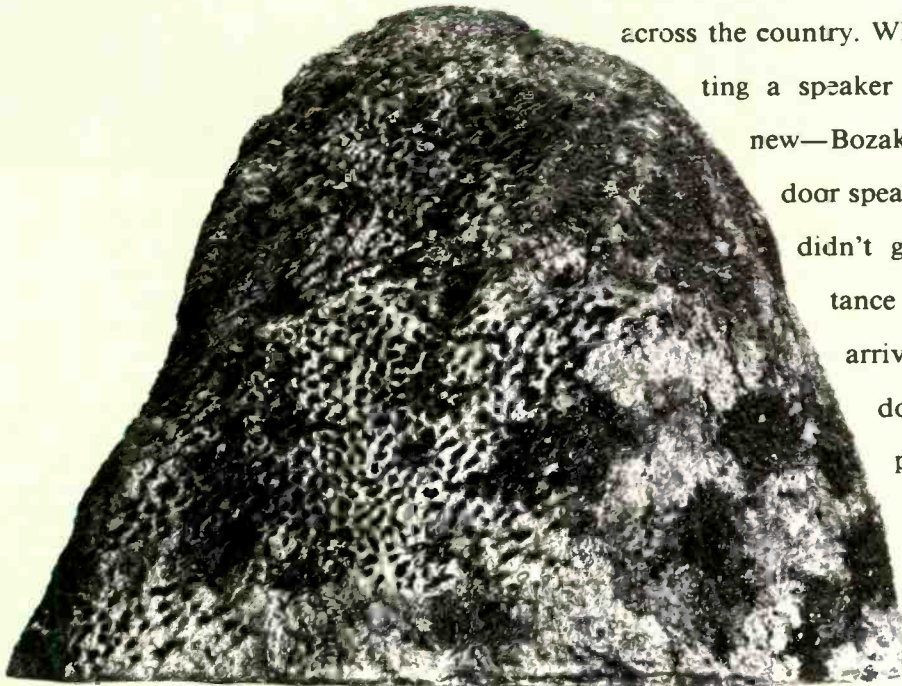
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FORGET the hills: This summer, the *yards* are alive with the sound of music. Jazz is emanating from the branches of trees, classical music from beneath the bushes, rock from behind the rocks. Rest assured, it's not your imagination—if you follow the sound to its source, what you'll probably find is a compact outdoor loudspeaker.

The Rockustics Rocky Jr. (\$699 a pair) is an 8-ohm, two-way speaker sculpted to look like a natural rock.



As the weather begins heating up this year, outdoor speakers will sprout up in backyards across the country. While the concept of putting a speaker outside isn't radically new—Bozak has been making outdoor speakers for many years—it didn't gain widespread acceptance until recently, with the arrival of a new wave of outdoor speakers. Now shoppers can choose from a dozen brands of weatherproofed speakers in a variety of styles and designs, all of

# OUTDOOR

Sinéad under the stars?  
A little Prokofiev on the patio?  
Well, why not?

BY WARREN BERGER

# SPEAKERS



NEAR's AES-2 (\$660 a pair) has an 8-inch metal-alloy woofer and a 2-inch metal-dome tweeter.

An omnidirectional dispersion pattern is offered by the Design Acoustics DA-350 (\$240 a pair).



them delivering enough sonic quality and kick to please just about everyone—except, perhaps, the neighbors.

**T**HE sudden popularity of outdoor speakers may be a by-product of the ongoing custom-installation craze. "With custom installers placing speakers throughout the house, people have come to expect good music everywhere—and the next step was to extend it to the outdoors," said David Donald, sales manager for Sonance. On the other hand, the phenomenon may stem from Americans' becoming "more active, with life styles that are continuing to move outdoors," according to Doug Landfield, marketing manager at Bose. In any case, outdoor speakers are showing surprisingly broad appeal. Speaker companies say they're as hot in Minneapolis as in Miami, and, in the words of one manufacturer, "they appeal to the hot-tub owner as well as the hibachi crowd."

Clearly, you don't have to be a hot-tubber to be able to afford outdoor speakers, most of which are priced in the range of \$150 to \$300 a pair. The price tends to run slightly higher than that of comparable-sounding indoor speakers, but in return you're getting durability. The cabinets, the grilles, and even the drivers of outdoor speakers must be designed to withstand the elements,

including high and low temperatures, moisture, and the rays of the sun. Manufacturers achieve this using a variety of materials; cabinets may be made of stainless steel, tempered plastics, or odd synthetic blends, while gaskets and surrounds may be made of rubber, treated foam, or other materials.

An outdoor speaker should be capable of delivering good, strong bass, which is needed when the speaker is played outdoors in wide-open spaces. According to Richard Schram, president of Parasound, "You shouldn't have to compromise on sound with an outdoor speaker." Parasound's AWM outdoor speakers are equipped with powerful woofers that drive the bass response down to a claimed 48 Hz. "The speaker has been equalized to compensate for what you lose outdoors," Schram said. Similarly, Altec Lansing's chief engineer, Tommy Friedman, said his company's outdoor speaker, the Model 55 acoustic-suspension system, has "a tonal balance that is slightly different from an indoor speaker. To get the sound right, the speaker had to be listened to outdoors during the design process."

Perhaps the greatest problem associated with speaker performance outdoors is the absence of walls and floors, which makes it harder to "feel" the sound unless your speak-

er manages to shake the earth (and some of these speakers can do just that). Some experts say that bass can be enhanced, however, by mounting the speaker against the side of the house or garage.


If you choose not to mount the speakers against a wall, proximity to the ground can provide bass reinforcement—though it's not necessarily a good idea to lay a speaker flat on the ground because puddles could form around it. Instead, you could place the speakers on boards. If you want to forgo the issue of bass reinforcement—and some experts say it doesn't make that much difference anyway—then you can be more imaginative in your speaker placement. "I like the idea of mounting the speaker on the branch of a tree," said Altec Lansing's Friedman. "It really impresses people because they don't know where the sound is coming from." The speaker wires can be concealed as well, simply by running them underground (use extra-heavy-duty wire for this).

**S**ELECTING from among the broad assortment of outdoor speakers now on the market is not easy. Obviously, the first step is to compare the way the different models sound—but keep in mind that this should be done in an appropriate listening environment. Listen to the speakers outdoors if





The Altec Lansing Model 55 (\$250 a pair) is an acoustic-suspension system made for indoor and outdoor use.



The Granite 377B from Paramount Pictures (\$299 each) uses drivers from the famous Bozak outdoor-speaker line.

possible; to do that, you may have to take them home for trial.

It's also important to examine the design, construction, and materials used in outdoor speakers; since durability is such a critical issue, look for a good warranty. You'll find that each company seems to have its own formula for weatherproofing. Parasound's AWM-360, priced at \$200 a pair, features polycarbonate diaphragms and cabinets made of die-cast aluminum with stainless-steel screws. Altec Lansing's Model 55, \$250 a pair, has woven carbon-fiber woofer cones and a thick-walled cabinet made of high-temperature, glass-filled ABS plastic; each cabinet is acoustically sealed with eight separate rubber gaskets.

The AES line of outdoor speakers from New England Audio Resource (NEAR), starting at \$500 a pair, features metal-alloy cones instead of paper or plastic and a neoprene-rubber surround instead of foam. The cabinet is made of the kind of material you might find on a surfboard—a blend of fiberglass and foam. Sonance's SB30 and SB10 (\$150 and \$300 a pair, respectively) are finished in high-solids polyurethane with a structural-foam baffle and enclosure, and Jamo's Outdoor speakers (\$238 a pair) have specially treated water-resistant woofers with a reinforced plastic-laminate enclosure. AudioSource's LS Two/A's

(\$260 a pair) feature specially treated polypropylene woofers and die-cast aluminum enclosures.

**A**DVENT'S Indoor/Outdoor Mini (\$200 a pair) features a high-impact black plastic enclosure and a polypropylene woofer cone; an optional mounting bracket lets you easily move the speaker from outdoors to inside. The same is true of the Bose 101 (\$219 a pair), which comes with mounting brackets that can be unscrewed for easy removal. "It's important to look for versatile mounting hardware in an outdoor speaker," said Bose's Landfield, who pointed out that many people may feel uncomfortable about leaving their speakers outside overnight or during a weekend when they're away from home.

Of course, if you buy Rockustics speakers, you probably won't have to worry about theft; they're designed to resemble rocks. Rockustics offers nine different rock-like models, each one hand-crafted from natural minerals, oxides, and cementitious materials; inside the "rock" is a polypropylene-cone woofer and a soft-dome tweeter. Prices start at \$500 a pair.

For simplicity's sake, some buyers may prefer using a single speaker outdoors. Two companies offer outdoor omnidirectionals: The Design Acoustics DA-360 is a 10-

inch-high cylindrical omnidirectional speaker, priced at \$119 a pair, that can be mounted against a wall or on top of a post (the bottom of the speaker is threaded so it will screw onto a standard fence post). Another company taking the single-speaker approach is Paramount Pictures Corp.—yes, the movie company—which offers four models of omnidirectional speakers ranging from \$129 to \$299 apiece. The speakers can be buried so that only a few inches protrude.

One advantage of a single omnidirectional loudspeaker is ease of placement. You can get good, uniform coverage of an area simply by putting the speaker near the center. This may also prove less disturbing to neighbors than a conventional speaker near the periphery.

Maintaining good will with the neighbors is, by the way, not a consideration to be taken lightly. Cranking up the volume on outdoor speakers can start a neighborhood war; the smarter approach is to use more speakers and less volume to "sound-blanket" a larger area.

The fact is, you won't find any big blasters available in this category, anyway. Almost all outdoor speakers are 9 inches high or smaller. Indeed, the beauty of nature can hardly be enhanced by a bulky box. Wouldn't you prefer, say, a great-sounding tree branch? □

# AUDIO FOR VIDEO

BY E. BRAD MEYER

*How to improve  
the sound of  
your video  
system without  
spending  
a fortune*

**I**N the early days of television, sound quality was an afterthought at best. Even the most expensive early sets typically had a single 3-inch loudspeaker driven by a 2-watt amplifier, and, given the quality of most broadcasts, that was enough.

The situation is very different today. Hi-fi VCR's, laserdiscs with digital soundtracks, network broadcasts with surround encoding, and stereo cable transmissions offer rich sonic rewards to those who can assemble the best video and audio equipment into a single system. The performance of a good home video setup with multiple speakers and surround sound can surpass all but the very best theater systems, adding tremendous dramatic impact to both movies and music. Unfortunately, many of us are still listening to that 2-watt amplifier and 3-inch speaker.

But while everyone can hear the benefits of a topnotch video sound system, few have the money, the time, or the living space to assemble one. Fortunately, you needn't settle for stale ginger ale just because you can't afford champagne; there are many ways to improve your video sound that are both cost-effective and reasonably compact.

How you should attack the problem of poor video sound depends on what kind of television set you have, so we'll start by assuming you have the oldest and simplest set and work our way upward. We're trying to keep it simple, so we will confine ourselves almost exclusively to solutions that don't require the addition of an integrated amplifier or receiver.

## *Old Television Sets*

If your TV has a single small speaker and no audio output of any kind, you might assume that the only way to improve its sound is to replace the set.

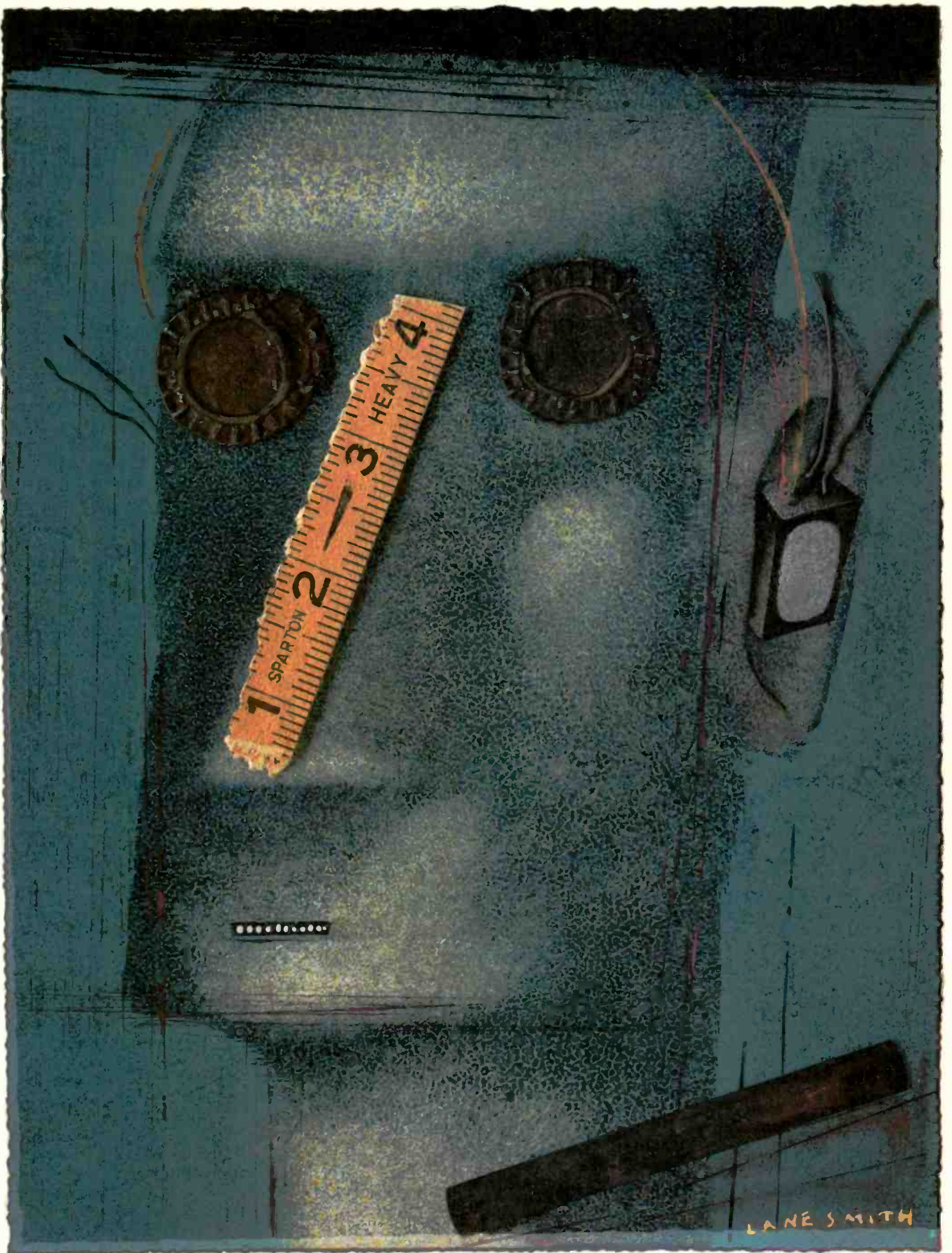
But it is possible to extract stereo sound of reasonable quality from your old set without modifying its circuits or even opening the cabinet.

The secret of this trick is hidden in the way TV tuners work. The signal coming in from the antenna or cable system is amplified; then, to simplify the circuits that separate the video and audio signals, the selected channel is shifted downward in frequency into a specific range that is the same in all sets. This range, being lower than that of the incoming signals but higher than that of the final audio and video outputs, is called the intermediate frequency, or IF. The IF circuitry in the set emits its own radio-frequency (RF) signals, which are too weak to interfere with other equipment but still strong enough to be picked up by an antenna tuned precisely to the IF range.

Such IF antennas are found in a family of products made by Recoton Corporation and known collectively by the acronym FRED (which stands for Friendly Recoton Entertainment Decoder). The top of the line is the V622, also known as FRED III; it sells for \$99.95. Like all its cousins, the FRED III comes with an IF probe that you tape to the outside of your set (the instructions tell you how to find the best location). The FRED III picks up the sound from whatever channel the set is tuned to, decodes the stereo information—still present at the IF stage even in a mono set—and sends the right and left signals to a pair of built-in 12-watt amplifiers. You can add a pair of Recoton's speakers (not included) or supply your own. The V622 also has an auxiliary audio input for use with a stereo VCR or other audio source and an input for signals coming from a cable box.

The FRED II (\$69.95) and FRED I (\$49.95) omit the auxiliary input and the

ILLUSTRATION BY LANI SMITH



power amplifiers, so both require some kind of external amplifier or receiver. But either can be used with the products in the next category to generate stereo sound from a mono TV set.

### Powered Loudspeakers

Many TV sets less than ten years old have a headphone output that is regulated by the set's volume control. This output gives you another way to improve the sound quality: an amplified speaker system.

The first add-on amplified speakers were designed as supplements to "personal stereos"—small portable cassette or CD players—to permit people to share their music with friends. Nowadays, many powered systems are configured especially for use with video.

**T**HE Bose Video Roommate system (\$339 complete; all speaker prices given are per pair) was an early entrant into this market. It consists of two molded plastic cases, each about the size of a loaf of bread and each containing a single 6-inch equalized driver. One of these is an ordinary passive speaker system, while the other contains a small stereo power amplifier. The module containing the amplifier has an AC line cord that plugs into a wall socket and an 8-foot cord with a miniature (1/8-inch) headphone plug that fits the headphone jacks on most TV's. The two speaker cases are connected by a piece of supplied lamp cord. The Video Roommate also comes with adaptors for the larger 1/4-inch headphone outputs found on preamps and receivers and a mono-to-stereo plug so that a single channel of audio can be played through both speakers. Also included are mounting brackets for desk, table, or shelf. The Video Roommate system has no balance control and only a two-position switch to adjust the volume; like most products of this type it is designed for use with equipment having a separate volume control.

Somewhat larger in size and price are the Acoustic Research (AR) Powered Partners (\$400). Each two-way Powered Partner has an amplifier in its case; you have to plug both speakers into the wall instead of just one and run separate cords for the input signals. This slight inconvenience is offset by two-way



A pair of NHT Model Zero shielded minispeakers (\$89.95 each) flank a matching SW-1 subwoofer (\$249.95). The company's VA1 amplifier (foreground, \$129.95) is designed for adapting hi-fi loudspeakers to a stereo television set or surround-sound processor.



The Boston Acoustics A40V Series II (\$190 a pair) is a magnetically shielded version of the company's popular A40 Series II loudspeaker. It is a two-way acoustic-suspension system with a 6 1/2-inch woofer and a 3/4-inch tweeter.

speakers, individual volume and tone controls, and greater low-frequency extension.

Full-range powered speaker systems are available from several manufacturers, including Infinity, Allison Acoustics, Triad Design, Atlantic Technology, and Recoton. Some of these are three-piece systems, with two small speakers, known as satellites, containing the midrange and treble drivers and a separate, larger cabinet for the am-

plifiers and woofers. The bass drivers in these systems are habitually, though erroneously, called subwoofers, leading to the convenient designation "sub/sat system" for the entire package. Sub/sat systems are ideal for video use because the satellites are small enough to fit on either side of the set in most installations. The large woofer cabinet can sit unobtrusively on the floor near a wall, or even under a couch; most or all of the bass will appear to be coming from the satellites.

### "Shielding"

Be warned that some speaker systems won't work in all video setups. Loudspeakers contain permanent magnets whose external fields are strong enough to smear the colors on a TV screen when the speaker is next to the set. Designers of small video speaker systems now include a secondary magnet on the back of each driver that effectively cancels this external field without affecting performance. The phrase most often used to describe such speakers is "magnetically shielded." (The description isn't literally true—actual shielding would be too bulky and expensive—but it is now firmly entrenched in place of the more accurate "magnetically compensated.")

**H**OW serious is the problem? In practice, shielded speakers can be placed right next to any set without affecting the picture, whereas most unshielded models will cause obvious color distortion. On the other hand, moving the speakers 9 to 12 inches away from the set is enough to insure peaceful coexistence of virtually any combination of TV and speakers and tends to give a more satisfying stereo image anyway. Only when your space requirements demand close placement need you worry about shielding.

### Speaker Outputs

Many modern TV sets come equipped with modest speakers that fasten onto the sides of the cabinet. These externally mounted speakers connect to ordinary power-amplifier terminals on the back of the set, so it's a simple matter to replace them with better ones. (Remember, if you must put the replacements right next to your set, restrict your choices to magnetically shielded speakers.)

My recommendation of a few specific models should be taken as mere suggestion, not gospel. There are many good speakers for this purpose, and your personal preferences should govern in the matter of tonal balance. The one restriction will likely be size, as replacement speakers should be small to fit easily near the screen. The dialogue, which is the most important part of any movie or television program, should appear to come from the screen for maximum realism.

**F**ORTUNATELY, manufacturers have anticipated this need and have spent increasing amounts of time and money in the past five years developing small speakers of high quality. Models like the Boston Acoustics A40 Series II (\$180), the Allison AL 110 (\$340), the PSB 30 Mk II (\$300), the Celestion SL 6Si (\$950), the Pinnacle PN8+ (\$399), and the NHT Model One (\$350) all show a degree of sonic refinement unheard of in speakers of similar size ten years ago.

The field of passive sub/sat systems is an extremely busy one as well. Henry Kloss's Cambridge SoundWorks Ensemble system (\$499), which uses a separate woofer module for each channel, works well for most video applications, though the satellites are unshielded. Other well-known and respected brands in the sub/sat field include Boston Acoustics, NHT, Altec Lansing, Allison Acoustics, DCM, Polk Audio, Parasound, Triad Design, Cerwin-Vega, Fostex, Bose, Revox, and Infinity—and the list is growing.

### Better Built-In Sound

The TV manufacturers too have noticed that consumers want better video sound, and they are working harder to persuade you that there's no need for additional equipment. Zenith has addressed the issue of basic sound quality by incorporating the Bose Acoustic Wave technology for enhanced bass performance in some of its sets. Toshiba, in order to expand the stereo image obtainable from a single cabinet, has licensed a special version of Carver Corporation's Sonic Holography circuit. And Sony is using a different image-expansion technique, called SRS (Sound Retrieval System, developed by Hughes Elec-



Toshiba's CX-3288J monitor receiver (\$3,000) features a 32-inch screen, an MTS stereo TV tuner, and a Carver Sonic Holography sound system with a built-in subwoofer.



The Bose Video RoomMate system (\$339) comprises two small, powered loudspeakers designed for use in a video system. Each molded enclosure houses a 4½-inch, full-range, magnetically shielded driver.



Recoton's F.R.E.D. III (\$100) can add MTS stereo sound to most mono-only television sets without any modification to the set itself. It includes an amplifier rated at 12 watts per channel.

tronics), in some of its top models.

Surround sound is another enhancement, previously found only in the largest and most expensive audio/video systems, that is coming within reach of people with less ambitious setups. Laserdisc and videocassette releases of many movies, as well as some broadcasts and cable transmissions, carry the four-channel matrixed soundtracks used in theaters to feed left, center, right, and surround speakers. Many

large TV sets now include a simple version of the theater matrix decoders made by Dolby Labs; the basic consumer version, called Dolby Surround, provides a fair amount of separation between the four channels. (Most external decoders now use the more sophisticated Dolby Pro Logic system, which closely approximates the performance of professional theater decoders.)

Some of these sets come with small surround speakers. If you are replacing the front-channel speakers, it is best to replace these, too, for consistent performance in all corners of the room. If the set does not provide outputs for rear surround-channel speakers, it does not deliver true surround sound.

### Separates, After All

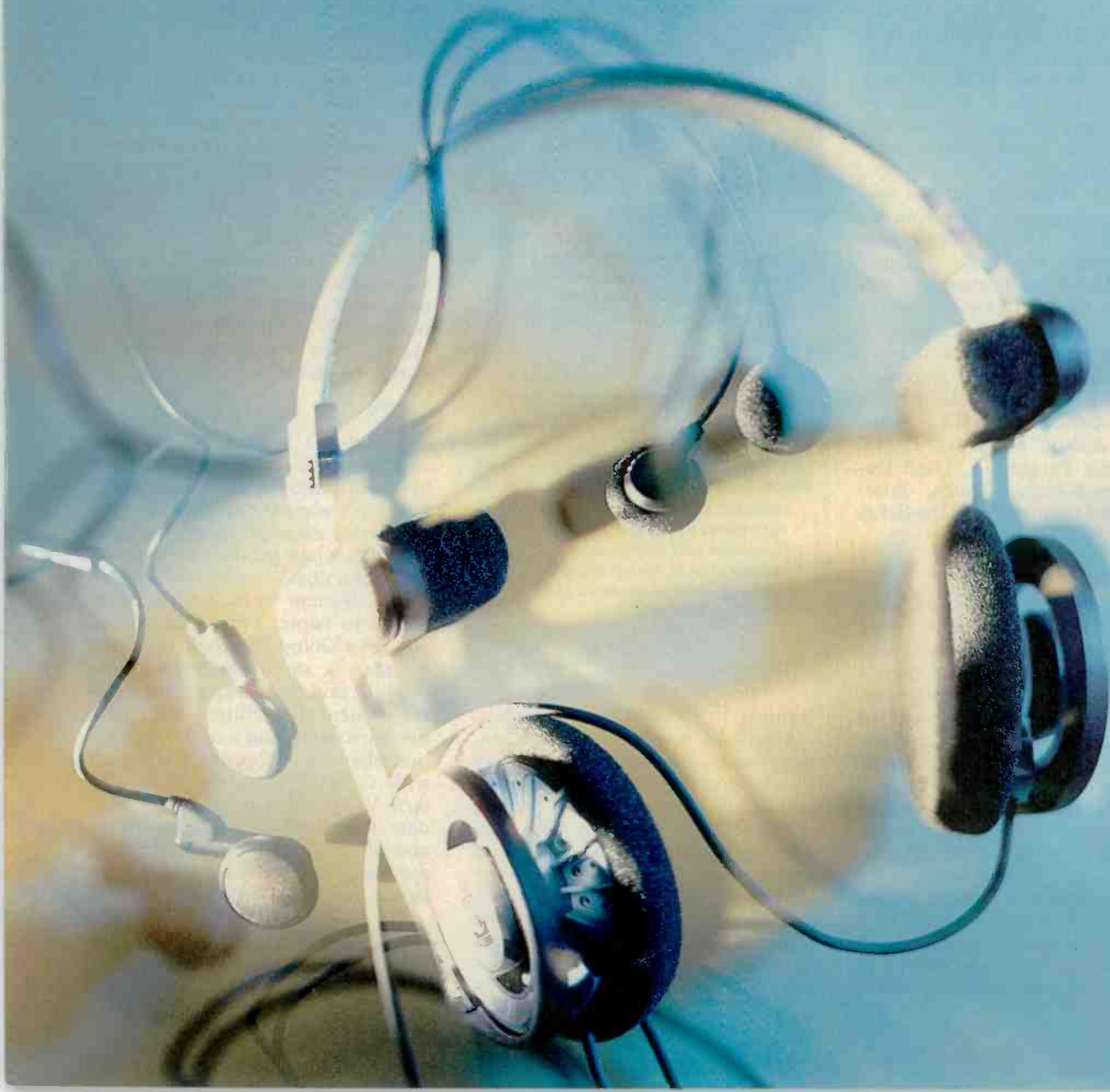
Until now we have avoided adding to our setup any external amplification not already contained in a loudspeaker enclosure. But *if* your set sits on a cabinet that has shelves, and *if* there is extra room on the shelves, you might consider adding a separate amplifier or receiver to give you more output power than the TV's amps, which are likely to provide about 10 watts per channel at the very most. Some modern receivers contain switching for both audio and video equipment, so you can hook up a VCR, a laserdisc player, and your cable box to the system even if your TV lacks such switching facilities.

**F**INALLY, if you have fallen in love with movie surround sound but don't want the complication of a separate decoder, amplifiers, and speakers, a new product from Atlantic Technologies called the Pattern Video System is a harbinger of things to come. For about \$1,200 you get a Dolby Pro Logic surround decoder, a small woofer/amplifier module, and five compact, magnetically shielded satellites—left, right, two surrounds, and a center speaker that shares the top of your TV set with the Dolby decoder. The Pattern Video System can accommodate three line-level stereo inputs and offers a relatively unobtrusive, remote-controlled surround installation in a single package. □

*E. Brad Meyer is an audio consultant, writer, and occasional recording engineer and producer.*

# HEADPHONES ON THE GO

Portable performance, comfort, and convenience



**S**TEREO headphones have been with us for a little more than three decades, and their predecessors go back to the very beginnings of sound reproduction. Long before anyone came up with a really practical dynamic loudspeaker, radio listeners of the 1920's huddled over their crystal sets with primitive headphones securely clamped to their heads.

The first commercial stereo headphone appeared in 1958—somewhat before most hi-fi enthusiasts had abandoned mono—when the granddaddy of all headphone manufacturers, Koss, introduced its first model. From that time to the present, a dedicated few in the audio world have preferred to do their listening on phones, although speakers remain the preferred reproducer for most listeners.

Still, special applications were particularly suited to headphone use from the beginning. Listeners used phones to block out noisy surroundings or to keep their music from disturbing the neighbors, and they were widely used in broadcasting and recording studios as well. But even though some very fine phones were developed over the years, popularity was elusive. For one thing, they made listening a solitary pursuit; for another, they were mostly bulky and vaguely claustrophobic.

The change came with the introduction of Sony's first Walkman in 1979. The miniaturization of cassette mechanisms that the Walkman represented was a remarkable achievement. The thing that made the portable revolution possible, however, was the development of suitable headphones, light and comfortable to wear but sensitive enough to produce adequate listening levels without draining a player's batteries in minutes.

Earlier phones required a lot of power compared with today's, although that didn't matter very much as they could draw whatever power they needed from a regular hi-fi system. The new headphones feature much stronger magnetic materials (often samarium-cobalt, although there are others), which can turn tiny electrical signals into remarkably robust sounds without requiring a lot of mass.

Just as other manufacturers jumped on the Walkman bandwagon and instantly flooded the market

## BY IAN G. MASTERS

with a bewildering array of similar devices, they also embraced the new headphone technology. Today over three hundred models are available, more than half of which are lightweight phones designed primarily for portable use. Even many phones aimed primarily at the home and professional markets use more powerful magnets and could therefore work in portable applications as well. Prices tend to fall in the \$15 to \$60 range, although one or two models sell for less than \$4 and quite a few cost \$100 or more.

Headphones come in a variety of forms. Many of those for home and professional use have foam pads that surround the ear without deforming it, a configuration called "circumaural." Some, but by no means all, circumaural phones are sealed to keep ambient sounds out, and they are generally too large to be convenient when you're running or bicycling. The alternative is the "supra-aural" phone, in which the sound-producing element is covered with a foam pad that sits directly on the ear. Supra-aural phones typically block out little ambient sound, and early models tended to be somewhat deficient in bass response compared with their circumaural cousins. Today's versions produce enough output to override intruding noises, and their response can be shaped to provide considerable quantities of bass, so a great many portable phones are supra-aural. Increasingly popular, however, is an even smaller type that sits right in the ear. Such "earbud" or "in-ear" phones couple closely to the ear canal and therefore can be much smaller than the other types without sacrificing listening level or bass performance.

A few high-end phones use electrostatic or electret transducers to convert the audio signal into sound, but these require external power sources to work and, usually, connection to an amplifier's loudspeaker outputs, so they are not suitable for portable use. (Stax offers an adaptor that enables its electrostatic models to be used with a portable player, but it'll cost you a minimum of \$500 to take advantage of the system.) All portable phones are dynamic: They use a moving-coil transducer.

Although measuring methods vary somewhat from brand to brand, most headphone makers specify the sensitivity of their models by stating the acoustic output (in decibels of sound-pressure level, or SPL) with an input of 1 milliwatt. Older phones, and many current models designed for nonportable use, tend to have sensitivities of about 95 dB; portable phones usually have sensitivities of at least 100 dB, and there are lots in the 106- to 108-dB range (a 100-dB phone requires four times as much power as a 106-dB phone to produce the same acoustic output). One model, the K45 from AKG, puts out a staggering 117-dB SPL—just the thing if you want to conserve battery life. Usually any sensitivity greater than 100 dB will give adequate sound levels without seriously compromising playing time. But remember that a portable tape or CD player can drive high-sensitivity headphones to levels capable of causing permanent hearing loss. It's easy to do, so be careful.

One aspect of performance can be safely ignored, at least when it comes to published specifications: frequency response. It's important, but most companies only specify a range, giving no clue as to the flatness of the response curve. In any event, the headphone is one component that should not really have a flat response. It's the combination of the phone's response with the acoustic influence of the ear that should approach something like flatness, but that's very hard to specify (not least because every ear is different!). Listen to any phones you are considering buying; if they sound good with high-quality material, trust your ears and buy them.



**A** CRITICAL matter with portable phones is weight, because you are likely to have them clamped on your head for fairly long periods. The upper limit should probably be about half a pound, although even that might become fatiguing after a while. Fortunately, many companies offer extremely lightweight models, and many of these perform as well as heavier ones. A number of companies have phones that weigh in under 3 ounces, which should be light enough for all practical purposes. If you want a true featherweight, how-



GEOFF SPEAR



GEOFF SPEAR

Clockwise from top left, the Koss Porta Pro collapsible headphones with adjustable earcup pressure (\$59.95); Pickering's OA-88 earbud phones (\$25); and Sony's MDR-E484 phones (\$80) with adaptor plug and reel-type carrying case.

ever, the Panasonic EAH-Z9 is only 0.7 ounce. Or consider earbuds, which weigh almost nothing.

Many companies have given some thought to what becomes of their headphones when you are not actually using them. A pair of phones can be awkward to store, so more and more models have collapsible headbands that enable you to fold up the phones and carry them in your pocket or in a box usually no larger than a cassette case. (Be careful if you carry extra tapes

around with you, however, as the strong magnets in the phones are quite capable of erasing the tapes if brought too close.) Other companies provide cases that enable you to wind up the cord rather than leaving it tangled up in your pocket. And almost all headphone makers assume you will use their products at home occasionally and provide adaptors that let you insert the normal mini-plug into the quarter-inch phone jacks on home hi-fi gear. A few even offer adaptors for use with

components that have mono outputs, such as portable TV sets or camcorders.

Whether or not it really matters in portable applications, a few manufacturers have begun to include some of the niceties usually associated with high-end home systems. Gold-plated mini-plugs are increasingly common (along with gold-plated phone-jack adaptors), and a couple of phones even come with oxygen-free copper (OFC) cables. And the latest generation has taken





Recoton's Go-Lite ST108 earbuds (\$9.49), which come in a case that fits into a tape player for storage; Stanton's lightweight ST-1 circumaural phones (\$24.95); and Panasonic's 0.7-ounce EAH-Z9 phones (\$18) with folding headband.

transducer design a step further with such materials as Sony's sapphire drivers and Signet's high-polymer film diaphragms. Pickering's PC2+2 earbud phones even contain two drivers per bud, enabling them to achieve an output of 106 db.

However compact they are, portable headphones must normally be connected to something, and that something may be fairly bulky. For truly unconnected listening, however, a number of companies have

built radio receivers into the headphones themselves. Panasonic, Sanyo, and Sony all have models in this category, ranging in price from \$25 to \$55. The most elaborate, however, is Toshiba's RP-2068, an \$80 headphone radio with five FM and ten AM presets and a built-in alarm clock as well.

The variety just keeps growing. You can now buy portable phones with all user-replaceable parts (from Sennheiser), in a selection of six colors (from Recoton and others),

with litz-wire phone cords (from Sony), with replaceable earpads (from many companies), with cords 4 to 22 feet long, and on and on.

The headphone has had a huge amount of technology lavished on it in a very short time, and its evolution shows no sign of stopping. Phones have definitely become fixtures in portable audio, and it doesn't take a lot of prescience to predict that they will find their way into more and more home systems too. They're a worthy addition. □



# SYSTEMS

A surround-sound solution



by Rebecca Day

**S**TEPHEN PRATT had a lot to juggle when he designed the surround-sound system for his San Francisco apartment. As an audio enthusiast, he insisted on having a fabulous-sounding system. As a professional designer, he wanted to create a cohesive visual element that would unify the installation in his Victorian flat. He also wanted the system to be transportable in any future move.

In order to get the best possible sound out of the fewest components in his 11 x 16-foot living room, Pratt used a Lexicon CP-1 signal processor as a line-level preamplifier controlling a Tandberg 3001A FM tuner, Yamaha YV-1000 hi-fi VCR, and Pioneer Elite CLD-91 CD/laserdisc combi-player. He concealed three Bryston 2B power amplifiers in the installation's gray Formica base, which serves as the design thread that ties the system together.

Adopting one of the fourteen speaker configurations suggested by Lexicon, Pratt used pairs of front- and side-channel speakers plus front and rear center-channel speakers. The Yamaha NS-1000 main front speakers sit on movable 11-inch-high stands

constructed of Formica-covered plywood. The front center speaker, an Acoustic Energy AE-1, is nestled in a space Pratt carved within the Formica-over-plywood TV stand, which holds a Proton Model 602M monitor. Side-channel sound is delivered by a pair of B&W CM-1 speakers mounted in the rear corners of the room.

The rear center-channel speaker, another AE-1, gives the sound "more of a three dimensional effect," Pratt said. It sits on the floor between two chairs in the back of the room. All interconnects are Monster Cable M-1000's, and Monster Cable M-1 speaker cable is used throughout the system. Pratt stores his four hundred CD's, three hundred tapes, and sixty laserdiscs in a cabinet in the adjacent dining room.

Now that the installation juggling act is over, Pratt can transform his room into a small, medium, or large concert hall at any time just by changing the settings on the Lexicon processor—and he likes the way it all looks. At the end of a long day he relaxes in his custom media room and enjoys a Vivaldi concerto. "I love this hobby," he said. □



MUSIC OF  
  
BRAZIL

An explosion of  
creativity from Rio to Bahia

BY GERALD SELIGMAN

**T**HE song that first introduced Brazilian music to most foreign audiences, *The Girl from Ipanema*, loses some of its glamour when you learn that "ipanema" means stinking swamp. In Tupi Indian, anyway. But then, image and reality often clash in Brazil, especially in Rio de Janeiro. A city graced with the most spectacular setting imaginable—crescent beaches, impossibly jutting peaks, dense semitropical jungle—Rio is also home to rampant inflation, frightful poverty, and violent crime amidst all its splendor. Yet it is the center of a culture extravagantly rich in variety and impact. Ironies abound.

And here's one more: Just as the U.S. and Europe are reawakening to the splendors of Brazilian music, Brazilian musicians themselves are struggling in a quagmire. How to modernize the music without losing the very qualities that make it so exceptional? How to stay contemporary and yet Brazilian at the same time?

In Rio a few months ago, I met Brazilian singer-songwriter Caetano Veloso at a bar around the corner from where Antonio Carlos Jobim wrote *The Girl from Ipanema* in the early Sixties. We discussed Veloso's latest album, "*Estrangeiro*" (Elektra

Musician), and the state of Brazilian music in general. First, though, I asked what he thought it was that made Brazilian music unique.

"The samba," he answered. "In Cuba and elsewhere in the Caribbean, you can find wonderful rhythms and percussion, but in Brazil we have the samba, which is more difficult to grasp. It is at the same time subtler and, in a way, richer. It is also less formalized, which makes for a kind of freedom."

Another popular artist, who goes simply by the name of Joyce, thought that the country's sheer size was a factor. Brazilian music, she said, "is not just one kind of music, but many kinds of music, because it's so rich and so full of changes. Brazil is such a big country. Each region has its own music, so it's like a big Amazonian forest, a big jungle of music, like a big music resort for the planet.

"We Brazilians are a product of three different races," she continued. There were the Indians, who were "the first Brazilians," the Portuguese, and the blacks, who came from Africa as slaves and have "deeply influenced Brazilian music." Though she spoke of many other elements woven into the national tapestry, Joyce emphasized

the ethnic ones as "fundamental for the understanding of Brazilian music." The Indians, the Portuguese, and the Africans "brought their traditions, their instruments, and their feelings, too. The Portuguese, for instance, are very nostalgic and melancholic people, so they brought a kind of sadness to Brazilian music. But mixed up with African music, it becomes a very sensuous and happy sadness. So it's all changed."

Among Brazilian artists, João Gilberto is widely credited as being the most revolutionary technician in the creation of Brazilian popular music. He is, for one thing, the principal creator of bossa nova. Even Jobim, the best-known composer of this music, lays the wreath of invention at Gilberto's door. "There were many guys involved in taking off the excess of percussionists in Brazilian music," Jobim told me, "but João Gilberto appeared as a light, as a big star in the firmament."

In interviews Veloso always speaks of Gilberto as his mentor and major influence: "Everything he did, and does, illuminates the past and the future of the music in Brazil. What he did during the bossa nova period shows how to understand rhythm, how to understand melodic sensibility, how to understand tone, feeling, phrasing, mod-

ernity, how to understand everything in Brazilian music.”

Just as Gilberto and Jobim incorporated into their work the music they were exposed to, from the impressionism of Debussy to the cool jazz of Miles Davis, so musicians of the generation that followed them, Veloso's generation, have incorporated—and transformed—what they heard. Radio has had far-reaching impact, Veloso said, because “new artists were hearing the broadest range of material.” Veloso himself, for instance, was drawn to the angularity of Thelonious Monk's music and the phrasing of Chet Baker—as well as traditional Brazilian music, Cuban and American popular music, “a little Argentinian tango, [and] a lot of *fado*,” the mournful music of Portugal that's akin to the blues. And, he hastened to add, “I was smashed by Ray Charles.”

Veloso and Gilberto Gil changed the face of Brazilian popular music with *tropicalismo* in the mid-Sixties. As described by Veloso, *tropicalismo* “involved electric guitars, violent poetry, bad taste, traditional Brazilian music, kitsch, tango, Caribbean things, rock-and-roll... all these noises together, and also our so-called serious music.” It was a testament to the artistry of both Veloso and Gil that they made a coherent mixture out of all this, though perhaps it was not all that coherent at first.

They got booted off a stage in São Paulo in 1968, mainly by leftist students who “hated all the rock-and-roll and mass-media connections.” But they didn't exactly endear themselves to the right either. *Tropicalismo* emerged after the right-wing military coup of 1964 and at the height of a severe repression that lasted into the early Seventies. Rightists “found it anarchic, and they got suspicious. They thought it could be dangerous for the balance of society. They also thought we could be communists.” As a result, Veloso spent two months in prison in Rio followed by four years under house arrest in Bahia, then two and a half years in exile in London.

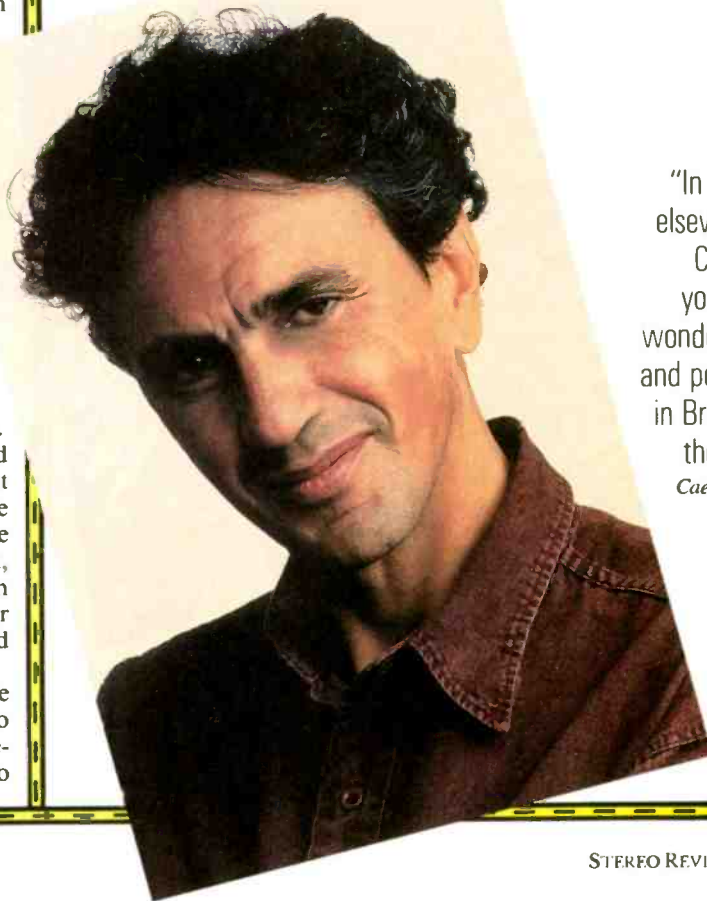
That sense of adventure and the self-confidence that allows one to take risks whatever the consequences is something that Veloso

“The Portuguese brought a kind of sadness to Brazilian music. But mixed up with African music, it becomes a very sensuous and happy sadness.”

Joyce



DAVID SPAGNOLO/POLYGRAM



“In Cuba and elsewhere in the Caribbean you can find wonderful rhythms and percussion, but in Brazil we have the samba.”

Caetano Veloso

GREG WATKIN/POLYGRAM



Among the Brazilian musicians who have been most popular with U.S. audiences are João Gilberto (top), Milton Nascimento (center right, with Wayne Shorter), and Antonio Carlos Jobim.

has never abandoned. He remains one of the few artists of his generation who has enjoyed consistent artistic success and who manages to stay "contemporary" without severing his roots.

João Bosco is another, and he and Veloso have brought Brazilian rhythmic sensibility into the Nineties. Veloso's "*Estrangeiro*" and Bosco's new album, simply called "Bosco" (CBS), are both thrillingly modern. Bosco once told me, "I was always a composer of street music, like an alley cat, with the fusion of things from the street about me." And now that cat is picking up on music from the Caribbean and Central Africa without losing sight of his origins.

One of the many marvels of Brazilian music has been this ability to incorporate so many outside forms and yet maintain its own identity. As Joyce said, "Every time that Brazilian music has been revolutionized by someone, this someone had some influence from abroad. At the same time, ours is such a strong culture that other cultures are adapted and become Brazilian."

Until now, that is. For in Brazil, as elsewhere, an international form of rock-and-roll has all but taken over the airwaves. National boundaries have dissolved into a panglobal pop that, at its worst, jettisons individuality for the lowest common denominator. At its best, as with groups like Paralamas in "Bora Bora" (Intuition), the musical vocabulary is new but the essence remains Brazilian. But many of the artists best known here—Milton Nascimento, Gal Costa, Simone, Ivan Lins, and others—have stumbled.

Nascimento, for instance, tried to incorporate rock, but the form failed to bring out his abundant strengths, his ability to stretch out in songs that often seem more like tone poems or suites than the standard verse and chorus of contemporary rock. Happily, in his latest album, "Miltons" (Columbia), a welcome and marvelously jazzy excursion, he has chucked rock altogether. And his next album, still unreleased at the time of this writing, is a collaboration with Amazon Indians—good news indeed. Nascimento always shines brightest when he takes the greatest risks.

BEATRIZ SCHILLER/ELEKTRAMUSICIAN

POLYGRAM

MCA

Gal Costa, the diva of *tropicalismo*, and Simone seem determined to squander their abundant talent in sentimentally romantic Euro-style pop, and Ivan Lins, often singing in English and with a harder edge since leaving his long-time arranger Gilson Peranzetta, is sometimes all but unlistenable. Along with Djavan, Lins leans toward slick Los Angeles jazz fusion, working with producers like Ronnie Foster and players like Dave Grusin. The vitality that was Brazilian pop-jazz is shellacked into shiny, sterilized musical surfaces.

In the midst of all this assimilation, however, there is more than a little hope for renewal, and certainly more than there was even last year. A whole new generation of musicians from the northeastern state of Bahia has been mixing its Afro-Brazilian heritage with Caribbean inflections to create exciting new music: Margareth Menezes, who toured last year with David Byrne (her first domestic release will be on Mango), and a host of other young musicians have injected new life into the Brazilian music scene. And a few older artists are once again turning in work every bit as good as they have in the past, Maria Bethânia foremost among them (her latest, *Memória da pele*, is on Philips). She and others are once again pointing a clear path through the current musical impasse.

Chances are, the natural vitality of Brazilian music will insure its salvation. As Beth Carvalho said of samba, "Always in Brazil there is a campaign that seems like a musical stock market: Samba fell today, samba rose, samba fell, samba rose. When in reality samba doesn't fall, doesn't die, isn't more or less—samba *is*. It's here and will never die because it's such an important expression of our culture." She might have said the same for popular music in general.

"I don't think Brazilian music got lost," Joyce said. "It was sleeping, like the bears in winter." In several recent releases, and in the explosion of creativity from Bahia, Brazilian music is once more stirring from its slumber. □

Gerald Seligman has produced or co-produced Brazilian compilations for Rykodisc, Rounder, and PolyGram.



NORMAN SPOFF/ELEKTRA

Exponents of the tropicalismo style of the mid-Sixties included Gilberto Gil (above) and Gal Costa.



RCA ARISTA

## RECOMMENDED RECORDINGS

**Maria Bethânia:** *Maria*. RCA. *Memória da pele*. PHILIPS. *Simplesmente*. PHILIPS.

**João Bosco:** *Bosco*. CBS.

**Chico Buarque:** *Chico Buarque*. PHILIPS.

**Beth Carvalho:** *Saudades da Guanabara*. PHILIPS.

**Gal Costa:** *Gal tropical*. PHILIPS. *Meu nome e Gal*. PHILIPS.

**Martinho da Vila:** *Festa da raça*. CBS.

**Djavan:** *Bird of Paradise*. COLUMBIA.

**Gilberto Gil:** *Aguas de Marco*. VERVE. *Realce*. WEA.

**Joyce:** *Music Inside*. VERVE.

**Milton Nascimento:** *Anima*. VERVE. *Clube de esquina*. EMI. *Geraes*. EMI. *Miltons*. COLUMBIA.

**Paralamas:** *Bora Bora*. INTUITION/CAPITOL.

**Elis Regina:** *Essa mulher*. WEA. *Fascinação*. PHILIPS.

**Elis Regina and Tom Jobim:** *Elis & Tom*. VERVE.

**Simone:** *Padaços*. EMI.

**Caetano Veloso:** *The Art of Caetano Veloso*. PHILIPS. *Caetano Veloso*. PHILIPS. *Estrangeiro*. ELEKTRA/MUSICIAN.

**Zil:** *Zil*. VERVE.

**O Samba.** Collection compiled by David Byrne. BUG/SIRE.



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The Sound of Quality



## BEST RECORDINGS OF THE MONTH

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

### JOHN HIATT'S "STOLEN MOMENTS"

WELL, kids, here's one record that's definitely worth saving your lunch money for. John Hiatt's "Stolen Moments" is the third superb album in a row from a guy who's become something of a celebrity after too long a career as one of rock's most undervalued natural resources. By now, of course, this isn't particularly newsworthy—anybody who's heard the recent Geffen retrospective of Hiatt's late-Seventies stuff, for example, knows that long before producing "Bring the Family" and "Slow Turning" and writing *Thing Called Love* for Bonnie Raitt, he was one of the sharpest singer/songwriters around, a sort of unlikely cross between Elvis Costello and Howlin' Wolf.

But what's particularly gratifying about Hiatt's latest (aside from its being likely to make him a household name at last) is that in every respect—songcraft, production, vocal authority—it's a genuine advance on anything he's done before. Just about every song here not only has a reason to live, but it's rendered about as flatteringly as you can imagine.

Part of the credit for this happy turn of events must be laid at the feet of hero producer Glyn Johns, who seems increasingly incapable of making a record (with anybody in any genre) that doesn't sound like a million bucks. His approach here is an extension of his work on "Slow Turning"—a live-sounding, traditional rock-and-roll band served up in an aural perspective that's so realistic it could be described as holographic. But for whatever reasons (a bigger budget? slicker back-up players?), this time out the effect is like "Slow Turning" only more so. In other words, "Stolen Mo-

ments" is so deceptively natural sounding that you'd swear it was the work of a band that (1) had been playing together for years and (2) just happened to be fronted by a world-class songwriter.

Still, production will only get you so far, and in the end it's Hiatt's songs and singing that make "Stolen Moments" so winning and memorable. The new tunes run the usual stylistic gamut—a little blues, country, and what might be called L.A. retro—but they're as hooky as anything anybody's come up with yet in the Nineties (pick to click: the opener, *Real Fine Love*, which recalls the Stones at their peak). They're often very funny, too, in Hiatt's trademark wonderfully distanced manner (*Child of the Wild Blue Yonder*) and at times as sharply observed as a Barry Hannah short story (*Rock Back Billy*). And as for the singing—well, Hiatt's Delta bluesman's voice has always been an acquired taste for some people (not me), but here he's in such total control, the vocal effects so sparing and used so effectively, that he's all but impossible to resist. When people talk about Hiatt's being a soul singer in the old-fashioned sense, this is what

they mean, and it's good to have it so gorgeously documented for posterity.

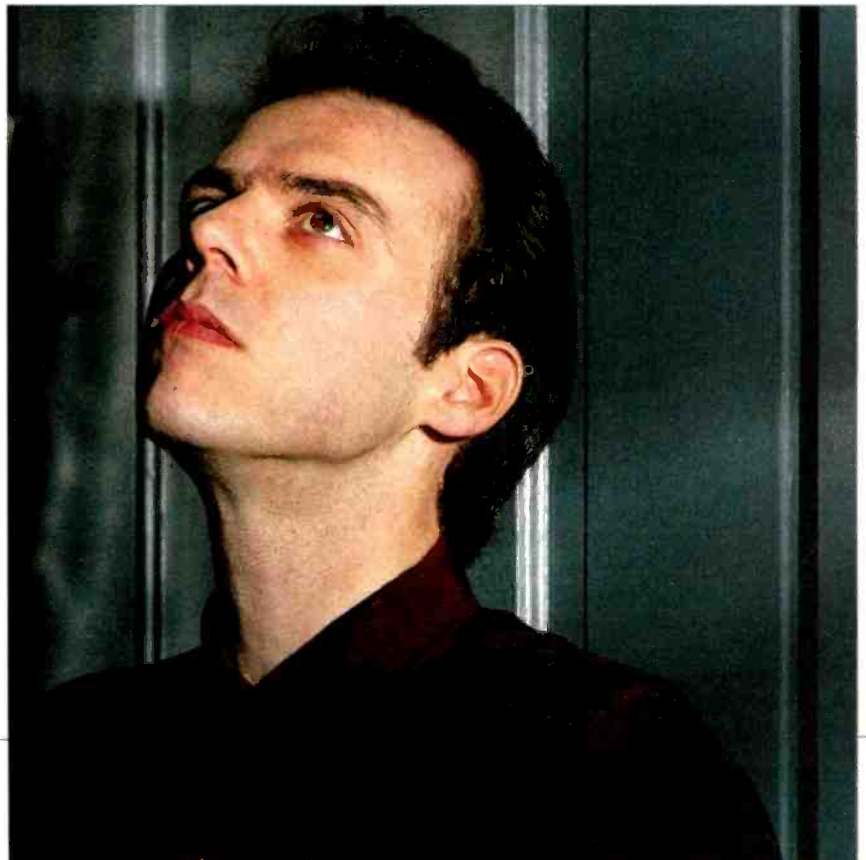
In short, this is rock-and-roll musicmaking at its most intelligent, passionate, and accessible, and an early candidate for any sane list of records of the year. *Steve Simels*

**JOHN HIATT: *Stolen Moments*.** John Hiatt (vocals); other musicians. *Real Fine Love*; *7 Little Indians*; *Child of the Wild Blue Yonder*; *Back of My Mind*; *Stolen Moments*; *Bring Back Your Love*; *The Rest of a Dream: 30 Years of Tears*; *Rock Back Billy*; *Listening to Old Voices*; *Through Your Hands*; *One Kiss*. A&M 5310-1, © 5310-4, © 5310-2 (53 min).

### THE DEBUT OF VIOLIN PRODIGY GIL SHAHAM

OH my, yet another pairing of the Bruch and Mendelssohn violin concertos? Another teen-age fiddler? Another young Israeli studying at Juilliard? Well, yes, but by no means

*John Hiatt: in control*



## BEST RECORDINGS OF THE MONTH

just "another." Nineteen-year-old Gil Shaham is something different, as Anne-Sophie Mutter was when she made her first recording with Herbert von Karajan, and, more recently, as the young Soviet pianist Evgeny Kissin was when RCA Victor introduced him to us less than two years ago. What sets these performers apart from other alleged *Wunderkinder* is their maturity. Many youngsters can play in tune and produce a handsome tone without making music on a very exalted



Gil Shaham: something different

level. The emotional and intellectual response Mutter and Kissin showed in their earliest recordings made them more than remarkable youngsters, and in his debut recording on Deutsche Grammophon, with Giuseppe Sinopoli conducting the Philharmonia Orchestra, Gil Shaham is every bit as impressive. I didn't think of comparing these performances with those of other adolescents but with those of Kreisler, Milstein, Grumiaux, and Stern at the top of their form.

The pacing in both concertos is extremely unhurried—not, one feels, because Shaham is being cautious, but simply because this is the way he feels and expresses the music. The line is always clean and flowing, intonation is dead-on, and every note, as well as every phrase, is beautifully shaped, yet never in a way that impedes the momentum. There is nothing episodic here. The

solo and orchestral elements are not only fully integrated but exceptionally responsive to each other, and the engineering team has achieved a near-ideal sonic perspective, as warm and well balanced as the performances themselves.

These concertos have been played in almost as many different ways as there are different violinists who have played them, and individual listeners, too, have their own ideas about how they ought to go. Not everyone will warm to Shaham's expansive interpretations, but surely everyone whose ears are in working order must admire and enjoy such musicianship in its own right. What he makes of that burnished tone and those sure fingers is a wonderful promise in the process of fulfilling itself.

Richard Freed

**BRUCH:** *Violin Concerto No. 1, in G Minor, Op. 26.* **MENDELSSOHN:** *Violin Concerto in E Minor, Op. 64.* Gil Shaham (violin); Philharmonia Orchestra, Giuseppe Sinopoli cond. DEUTSCHE GRAMMOPHON © 427 656-2 (55 min).

### RICHARD BARONE, RAW AND POLISHED

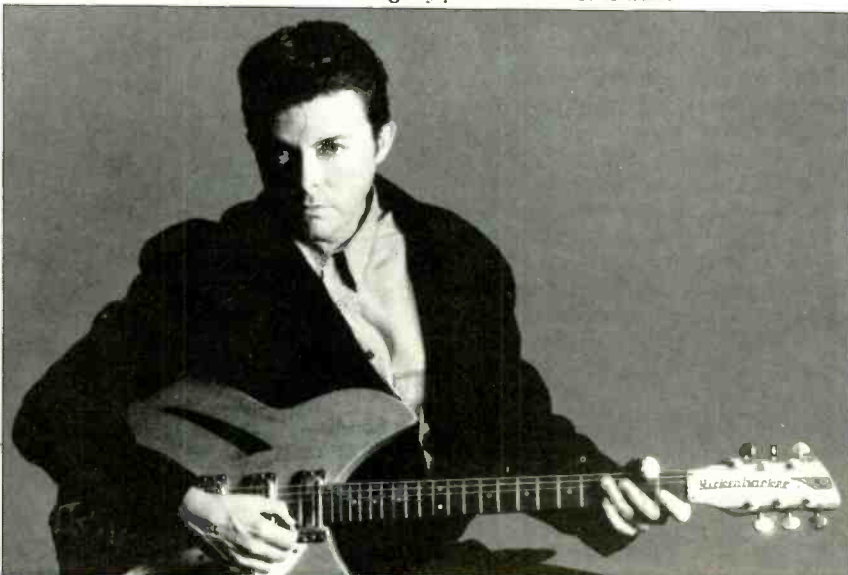
**R**ICHARD BARONE'S "Primal Dream" represents a fruitful cross between the urgent, electric power pop of his old band, the Bongos, and the more acoustic, folkly chamber music of his solo debut, "Cool Blue Halo."

Half of the new album was produced by Richard Gottehrer (the Go-Go's, Blondie), the other half by Don Dixon (Smithereens, R.E.M.). The Gottehrer numbers tend toward polished pop, with a lush backdrop of acoustic strumming, heavenly harmonies, and delicious melodic turns, but the Dixon tracks are raw and elemental, with less vocal adornment, more rhythmic agitation, and a dash of studio experimentation to spice up the proceedings.

The approaches are different enough to have warranted segregating the two halves into separate albums-within-an-album, but their integration actually plays into a theme that recurs throughout "Primal Dream," which is that of different rivers or cultures coming together. The theme is nicely encapsulated in *Native Tongue*, which tells of two Brazilian rivers, the Amazon and the darker-hued Negro, that meet and flow as one while retaining their distinctive colors within the channel for a great distance. Another evident dichotomy is the split between reason and instinct in the two tracks that follow, *To the Pure . . .* and *Roman Circus*.

The contrasts create a tension that gives these songs power and momentum. It's almost forbidden for a popular musician to write in minor keys, because pop is supposed to be bright, cheerful, happy. Barone breaks the rules, but because his songs soar so purposefully toward a higher ideal of truth and beauty (just listen to *Where the Truth Lies*, *River to River*, or *I Only Took What*

Richard Barone: songs of power and momentum



## BEST RECORDINGS OF THE MONTH

*I Needed*), they are hypnotic and enthralling. "Primal Dream" is both exotic and familiar, like something divined in sleep that continues to haunt one's waking hours.

Parke Puterbaugh

**RICHARD BARONE:** *Primal Dream*. Richard Barone (guitar, vocals); other musicians. *Where the Truth Lies; Before You Were Born; Something Happens; River to River; Opposites Attracting; I Only Took What I Needed; Mr. Used-to-Be; Native Tongue; To the Pure...* *I'll Be Your Mirror* (CD only); *Roman Circus*. MCA MCA-6370, © MCAC-6370, © MCAD-6370 (46 min).

### A HOROWITZ VALEDICTORY

**V**LADIMIR HOROWITZ'S date of birth is given in all reference sources as October 1, 1904, but he spoke of his last birthday, five weeks before his death last fall, as his eighty-sixth. You'd expect a musician still active at such an age to be reliving his old triumphs rather than exploring new repertory, but that, of course, would not have been Horowitz. What turned out to be "The Last Recording" (and is so labeled) exemplifies the inquisitiveness, exploration, adventurousness, and renewal that characterized his temperament as much as any of the physical elements we associate with his performing style. It is no mere souvenir but a program distinguished by its freshness in terms of both repertory and performance.

Horowitz was impelled, or persuaded, from time to time to change his recording affiliation. Over the years he moved from what is now EMI to RCA Victor to Columbia, back to RCA Victor, then to Deutsche Grammophon, and, only last year, back again to Columbia, which in the interim had renamed itself CBS Masterworks and now, renamed again, has made this recording part of the first release on the new Sony Classical label.

The hour-long recital, all the pianist was able to do for Sony, is made up entirely of music he had never recorded before, and the final piece,

Liszt's transcription of Isolde's *Liebestod* from Wagner's *Tristan und Isolde*, is something he had never performed in public either. It is preceded by a big Haydn sonata, six pieces by Chopin, and another by Liszt, the prelude on a theme from Bach's Cantata No. 12, "*Weinen, Klagen, Sorgen, Zagen*." While the Haydn performance makes a persuasive case for Horowitz's frequently cited view that "all music is Romantic," the Chopin playing evokes Classical standards in its poise and elegance. There's no slowing down for chasing rainbows in this aristocratic view of the *Fantaisie-Impromptu*, and the lyric impulse gains in credible sentiment as well as nobility. The magnificent E-flat Nocturne, Op. 55, No. 2, is a marvel of evocative poetry, and so, in their way, are the two Liszt pieces.

All nine items are valuable additions to Horowitz's already remarkable discography, and it is not merely awareness of the valedictory connotation that suggests these final

performances are among the most beautiful he ever recorded. Not the most dazzling or driven, but absolutely the most radiantly beautiful, filled with a sense of joy and continuing discovery that may be more electrifying than mere pyrotechnics after all.

The recording itself, made in the pianist's living room, is exemplary in its realism and perspective, and in place of the expected notes on the music or biographical review there is a thoughtful appreciation by Murray Perahia.

Richard Freed

**VLADIMIR HOROWITZ:** *The Last Recording*. Haydn: *Sonata in E-flat Major* (Hob. XVI:49). Chopin: *Mazurka in C Minor, Op. 56, No. 3; Nocturne in E-flat Major, Op. 55, No. 2; Fantaisie-Impromptu in C-sharp Minor, Op. 66; Etude in A-flat Major, Op. 25, No. 1; Etude in E Minor, Op. 25, No. 5; Nocturne in B Major, Op. 62, No. 1*. Liszt: *Prelude on Bach's "Weinen, Klagen, Sorgen, Zagen."* Wagner/Liszt: *Tristan und Isolde, Liebestod*. Vladimir Horowitz (piano). SONY CLASSICAL © SK 45818 (58 min).

Vladimir Horowitz: a sense of joy and continuing discovery



CHRISTIAN STUTNER V&P



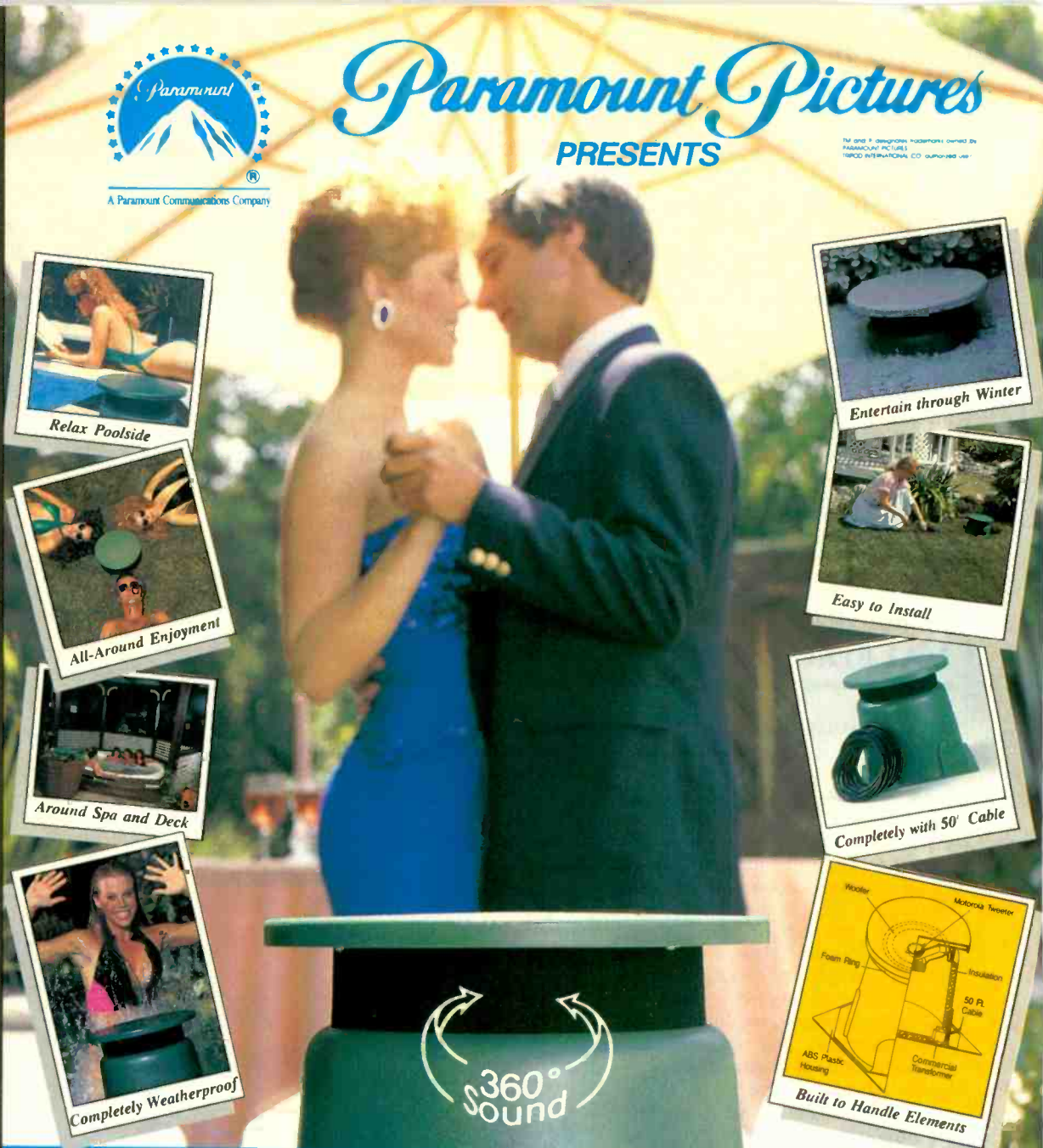
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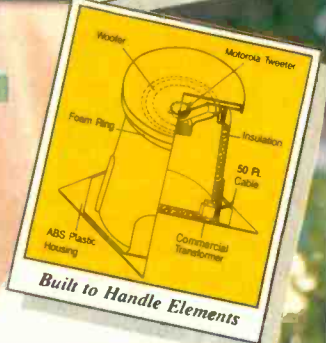
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# THE OUTDOOR WEATHERPROOF SPEAKER

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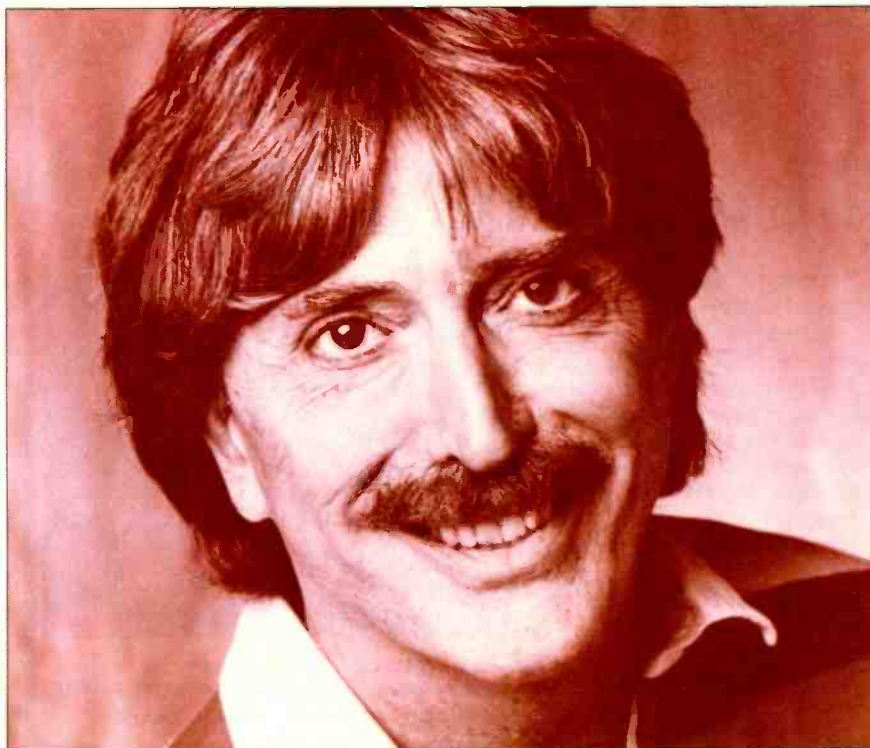
**RICHARD BARONE:** *Primal Dream*  
(see Best of the Month, page 72)

**TONY BENNETT:** *Astoria: Portrait of the Artist.* Tony Bennett (vocals); Ralph Sharon Trio; U.K. Orchestra Limited, Jorge Calandrelli cond. *When Do the Bells Ring for Me; I Was Lost, I Was Drifting; A Little Street Where Old Friends Meet; The Girl I Love; It's Like Reaching for the Moon; Speak Low;* and eight others. COLUMBIA C 45348, © CT 45348, © CK 45348 (47 min).

Performance: *Another winner*  
Recording: *Very good*

As most singers get older, they start to fall apart. Not Tony Bennett. His voice is a bit craggier now, but also richer, and his interpretations are deeper and his choice of material more imaginative than ever. If, like me, you figured he'd have a tough time ever topping his album "The Art of Excellence" of a few years ago, then you figured wrong. He's done just that in "Astoria: Portrait of the Artist," which is, incredibly enough, his forty-first album on Columbia (his first was exactly forty years ago, in 1950).

All of the songs have some thematic connection to Bennett's life, dating back to his roots in the Astoria section of New York's Borough of Queens. But this is no nostalgia set, nor is it an attempt at a literal autobiography in song. Instead, there's a refreshing mixture of old and new songs that, both individually and cumulatively, manage to present a perceptive emotional portrait of the singer. There's not a bummer in the set. Best are a couple of songs by New York composer-singer-pianist Charles DeForest that get right to the heart of the conflicts between professional dreams and personal-life realities: *When Do the Bells Ring for Me* and *Where Do You Go from Love*. Bennett is not afraid to let the stops out in either one—or in the moving alternative version of George and Ira Gershwin's *The*



**MARK MURPHY**

**I**N his superb new recording, "Kerouac, Then and Now," Mark Murphy makes his second elegiac journey back to the moods and music of the Beat Generation of the Fifties. In every way, from his choice of material to his sinuous, sensitive vocal interpretations, this is a worthy sequel to Murphy's similarly inspired concept album of 1979, "Bop for Kerouac." As in that album, he interpolates spoken excerpts from Jack Kerouac's writings between songs.

Backed by a consistently responsive combo, Murphy establishes a mood of almost unbearable poignancy in the very first moments of the opening number, Billy Strayhorn's *Blood Count*, which Duke Ellington's gifted alter ego wrote just before his death of leukemia in 1967. Now recognized as one of Strayhorn's finest works, it has been fitted out here with thoughtful lyrics by M. B. Stillman. What makes Murphy's interpretation so unforgettable is his way of seizing, bending, and shaping the notes into haunting, shadowy forms.

Next there's a tribute to scat master and jazz vocalist Eddie Jefferson, which segues into a rousing rendition of Strayhorn's *Take the A Train*. And this in turn leads into memorable performances of such treasures as *Lazy After-*

*noon* and *If You Could See Me Now*, the Tadd Dameron gem that was such a favorite of the late Sarah Vaughan. Nostalgia is etched into every moment of this disc, and nowhere is it more palpable than in the concluding medley of *The Night We Called It a Day* and *There's No You*. Torch songs don't come any better than these, and few singers put them across quite as convincingly as Murphy does here.

Given his extraordinary talent and the consistent excellence of his recordings, it's odd that Mark Murphy isn't better known. Perhaps it's because he deals in subtlety in a raucous era when loud is equated with good. When the tumult subsides, as it eventually must, Murphy will be considered one of the major artists of our age. *Phyl Garland*

**MARK MURPHY:** *Kerouac, Then and Now.* Mark Murphy (vocals); Bill Mays (piano, synthesizers); John Goldsby, Steve LaSpina (bass); Adam Nussbaum (drums). *Blood Count; Eddie Jefferson/ Take the A Train; Ask Me Now; San Francisco; Lazy Afternoon; If You Could See Me Now; November in the Snow; Lord Buckley; The Night We Called It a Day/There's No You.* MUSE MR 5359, © MC 5359, © MCD 5359 (47 min).

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*Man I Love*, recast as *The Girl I Love*. Also particularly poignant is Bennett's rendition of Johnny Green's *Body and Soul*, recorded on the day the composer died last year. R.H.

**THE BLUE AEROPLANES: Swagger.** The Blue Aeroplanes (vocals and instrumentals); instrumental accompaniment. *Jacket Hangs; World View Blue; Weightless; . . . And Stones; Love Come Round; Your Ages; What It Is*; and five others. CHRYSALIS © F4 21752, © F2 21752 (53 min).

Performance: *Arresting*  
Recording: *Good*

"Swagger" has the smoky, conversational feel of early Dire Straits records, as if set in a coffeehouse where some guy is casually reciting poetry. With lead vocalist Gerard Langley speaking wordy, detailed vignettes over the textured strumming and pub-rock beat of a band that includes no fewer than three guitarists, "Swagger" is an arresting oddity. It is the seventh album by Britain's Blue Aeroplanes, though only their third to be released in the U.S. (and their first ever on a major label).

Good as it is, a few qualifications are in order: Langley's verbosity grows wearying over the course of 53 minutes, particularly since his nonstop recitations intrude on some swell music. This being poetry with a capital P, it's rather more abstract than literal-minded pop fans are accustomed to—and it is pretty tortuous (for example, "Half the world's floating in space/Like diagrams with consequence/And how much falls to anyone else," from *Weightless*). Still, the Blue Aeroplanes are onto something new and unusual, and their respect for the written (and spoken) word is worth cheering. When it works, as it does in a driving, almost conventional pop song called *Love Comes Around* and an insightful character study with suitably elegiac music entitled *Anti-Pretty*, it works spectacularly well. "Swagger" is an acquired taste, but you might find it addicting. P.P.

**FLEETWOOD MAC: Behind the Mask.** Mick Fleetwood (drums, percussion); John McVie (bass); Christine McVie (vocals, keyboards); Stevie Nicks (vocals); Billy Burnette (guitar, vocals); Rick Vito (lead guitar, vocals); other musicians. *Skies the Limit; Love Is Dangerous; In the Back of My Mind; Do You Know; Save Me; Affairs of the Heart*; and six others. WARNER BROS. 26111-1, © 26111-4, © 26111-2 (54 min).

Performance: *Solid but cautious*  
Recording: *Airy, well-balanced*

The professionalism with which "Behind the Mask" was produced is sufficient evidence that Fleetwood Mac has landed on its feet after losing its creative mainstay, Lindsey Buckingham. It is at



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least as much of a group effort as anything the notoriously unstable Mac has turned out to date. Behind the mask, however, some essential spark is missing. New guitarists Rick Vito and Billy Burnette add fluid solos and lively chording, respectively, but they're reined in by spotless, homogenized arrangements that leave precious little room for expression. Even Stevie Nicks's out-there personality has been sanded down and subsumed into a conservative, democratic mix.

After many years of willful experimentation from Buckingham, the suddenly rudderless band has played it safe and paddled closer to shore. The air of caution is compounded by an aura of melancholy that invades nearly every song, Christine McVie's *Skies the Limit*, the opening cut, being a notable exception. It's as invigorating as a spring breeze, featuring gorgeous, billowy group vocals and some lovely guitar work from Vito. But this exuberant outburst quickly yields to songs of an autumnal cast—all of them attractive, to be sure, if somewhat muted in temperament. McVie, singing of unfulfilled desire and wary attraction, provides the most memorable songs (*Do You Know* and *Save Me*) and seems to have the surest handle on a consistent direction for the band. By no means a bad album, "Behind the Mask" is instead a tentative and probably transitional one: smooth on the outside, uncertain on the inside. *P.P.*

**JOHN HIATT:** *Stolen Moments* (see *Best of the Month*, page 71)

**LITTLE FEAT:** *Representing the Mambo*. Little Feat (vocals and instrumentals). *Texas Twister; Daily Grind; Representing the Mambo; Woman in Love; Rad Gumbo; Teenage Warrior*; and five others. WARNER BROS. 26163-1, © 26163-4, © 26163-2 (51 min).

Performance: *What's wrong with this picture?*

Recording: *Excellent*

Their chops are awesome, their musical vocabulary is extensive, and they cross-pollinate rhythms and genres with ease. Nevertheless, something about Little Feat leaves me cold, and I think it's more than a matter of taste. "Representing the Mambo" is technically impeccable but lacks much in the way of conviction and warmth. Whether they're playing a Cajun shuffle, a Texas barroom blues, or a Caribbean mambo, the music comes a little too easily (almost academically) to them.

Glib to a fault, they exhibit signs of Steely Dan-itis on the title track (a more charitable reviewer would call it "ambitious") as well as in *The Ingenue* and *Silver Screen*. The rest of "Representing the Mambo" is material of a rootsier cut, performed in syncopated, slow-burning rhythms much beloved by the Panama-hat, facial-hair, and spreading-



DAVID LYNCH/WARNER BROS.

## CRUISE SINGS LYNCH

**H**OW do you describe an album written and produced by the eccentric film and television director David Lynch (*Twin Peaks*, *Blue Velvet*, *Eraserhead*) and performed by a young Iowa actress who describes herself as a pilot, a lifeguard, a gambler, a golfer, and a cook—a woman who says she's obsessed with mass murderer John Wayne Gacy ("You know, because he was a clown and everything") and whose husband edits Norman Vincent Peale's *Guideposts*?

Well, you start by mentioning that the record, "Floating into the Night," grew out of Cruise's performance of *Mysteries of Love*, a most unorthodox love song, on the *Blue Velvet* soundtrack, and then you say that it contains songs from both *Blue Velvet* and *Twin Peaks*, Lynch's compelling, perverse TV murder-mystery series. Next you quickly add that Cruise thinks of herself as an actress who happens to sing.

That's the key. This is mood music of a different kind, a sort of pure whispering correctly described by Cruise as "white, white sound—a white angel sound," with no variation in emotion, volume, or tone and not the first hint of vibrato or traditional vocal technique.

The point, of course, was not to showcase a singer but to capture the dreamy, stream-of-consciousness air of Lynch's cinematic work. With composer Angelo

Badalamenti providing the ghostly synth track and adding piano, guitar, sax, and clarinet in various feathery combinations, Lynch's "lyrics" describe what he hears in his head. Sample: "Shadow in my house/The man he has brown eyes/She'll never go to Hollywood/Love moves me." And no, that's not taking things out of context.

Like most of Lynch's work, "Floating into the Night" is at once transfixing and tedious, profound and pathetic, mind-expanding and nonsensical. As for his choice of singer, a Midwesterner who fancies Orange Julius drinks from a shopping mall, it is well to remember that Lynch delights in finding the bizarre and macabre in what appears to be the most normal of circumstances—the body of the high-school homecoming queen, for example, washed up on a lake shore in the idyllic town where "pies go when they die." With huckleberry pie as the entrée, can an Orange Julius be far behind? *Alanna Nash*

**JULEE CRUISE:** *Floating into the Night*. Julee Cruise (vocals); instrumental accompaniment. *Floating; Falling; I Remember; Rockin' Back Inside My Heart; Mysteries of Love; Into the Night; I Float Alone; The Nightingale; The Swan; The World Spins*. WARNER BROS. 25859-1, © 25859-4, © 25859-2 (48 min).

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waistline set who discovered Tequila and blow in the Seventies and never looked back. A wordy, country-flavored number, *Those Feat'll Steer Ya Wrong Sometimes*, recalls an encounter with the law in Texas for speeding, invoking the band's name in self-reverential tones. The Lone Star State crops up again in *Texas Twister*, a hard-charging boogie about a wild, woolly woman. *Rad Gumbo* pays tribute to Creole cooking, the band jostling along like a drunk stumbling into a pool table on his way to the men's room. You've heard it all before, and if you're a Little Feat fanatic, you'll probably want to hear it all again. If not, "Representing the Mambo" may have you wondering, as I was, what all the fuss is about. P.P.

**KIRSTY MACCOLL:** *Kite*. Kirsty MacColl (vocals and instrumentals); other musicians. *Innocence; Free World; Mother's Ruin; Days; No Victims; Fifteen Minutes; Don't Come the Cowboy with Me Sonny Jim!; Tread Lightly*; and four others (seven others on CD). CHARISMA © 91323-4, © 91323-2 (49 min).

Performance: *Sturdy*  
Recording: *Bright*

Kirsty MacColl has been a fixture on the British folk-rock scene for a long time, but she is only now making her long-overdue American debut. "Kite" takes a tough-as-nails look at life, mostly from a working-class point of view. Things are hard, and a woman must do what she must do: Tell a deceitful boy friend to get lost, walk the streets to make ends meet, hold tight to the only friend and lover she's got. MacColl's strong, clear voice matches the straightforwardness of her material, which wraps its folkiness in the trappings of rock. (I like to think of the ringing guitars as colorful needlepoint upon the sturdy sweater that is MacColl's performance.) Her iron will and thrust-jaw determination give this album a sense of hope. Only in the tender songs does she reveal the vulnerability that hides within her heart. The more you listen to "Kite," the more you will appreciate its charms. R.G.

**HOLLY NEAR:** *Sky Dances*. Holly Near (vocals); John Bucchino (keyboards); Michael Manning (bass); other musicians. *Sun Won't Stop; To Raise the Morning Star; Testimony; They Are Falling All Around Me; Sky Dances*; and six others. REDWOOD RR-8902, © RRC-8902, © RRD-8902 (41 min).

Performance: *Celebratory*  
Recording: *Very good*

In her last album, "Don't Hold Back," feminist/humanist/singer/songwriter Holly Near broke out of her activist mold with an upbeat collection of original love songs, with only one mention of social struggle muddying her universally appealing lyrics. Designed to give her audience "a record they could dance

to," as well as to court pop-radio airplay and large-scale exposure, the album ranged from edgy, striding rhythms to Broadway show tunes and Fifties rock-and-roll. In an interview, Near said she thought her next album would follow the same path.

Instead, over two years later, she has returned to more serious topics in her new album, "Sky Dances." Inspired by those who live and die in the struggle with AIDS, those who succumbed to the earthquake in Armenia, the hurricane in Nicaragua, and the Pan Am plane crash over Scotland, "Sky Dances" is a spiritual quest toward understanding the life cycle and a celebration of survival.

In eleven moving songs, including three originals, Near explores the broad and complex range of emotions experienced by those left to cope with the death of a loved one and carry on their legacy. She is particularly poetic in her own *Sun Won't Stop*, which pairs vivid imagery and pop sensibilities, and *Nicaragua Night*, which is both a surging, hypnotic political anthem and a lullaby for mothers who have lost children to violence.

Appropriately, Near has abandoned the shiny synthesizer-based sound of her last effort in favor of a stark framework constructed by pianist John Bucchino and Windham Hill bassist Michael Manning. These musicians, with the occasional addition of imaginative percussion, guitar, and viola, leave plenty of open spaces for Near's glorious soprano to ring with a natural and unforced quality, allowing it to shimmer with feeling, color, and depth.

Death is, of course, hardly an uplifting topic, but it's the one against which we have to balance the convictions and sacrifices that fuel the dreams of the living. "Sky Dances" is indeed a celebration, a confirmation of the power of love, faith, and humankind itself. A.N.

**SHENANDOAH:** *Extra Mile*. Shenandoah (vocals and instrumentals). *Next to You, Next to Me; Ghost in This House; She Makes the Coming Home (Worth the Being Gone); She's a Natural; I Got You*; and five others. COLUMBIA © CT 45490, © CK 45490 (35 min).

Performance: *Better than expected*  
Recording: *Very good*

Shenandoah is primarily a radio act, a cross between Alabama and Restless Heart. Its country-pop melodies, sutured vocal harmonies, and wistful lyrics recall lazy afternoons and magical nights in the Deep South. The stories told in these songs of true love and old-fashioned values reflect the lower-middle-class experience—with references to pickup trucks, the "romance" of poverty (pretty girl chooses poor boy over rich suitor), and "Barbeque chicken in aluminum foil/Just enough money for my gas and oil." Nonetheless, little



seems false or contrived: The songs may be unflinchingly commercial, but they are also well-crafted fantasies (*The Moon over Georgia*) based on honorable human emotions.

*Ghost in This House* is a sophisticated and affecting (if not particularly original) ballad about adjusting to living alone after the dissolution of a near-perfect union. Lead singer Marty Raybon is a fine, emotive vocalist for this sort of material, and the band leaves no rough edges unfixed—a plus or minus, depending on your taste. But the biggest problem here is the sequencing: Four ballads in a row is bound to slow the pace. At any rate, Shenandoah proves itself more than another shallow, rip-off group, and although the members have written almost none of its songs, the group outshines its mentors a good deal of the time. Nice surprise. *A.N.*

**THE SUNDAYS:** *Reading, Writing and Arithmetic.* The Sundays (vocals and instrumentals). *Skin & Bones; Here's Where the Story Ends; Can't Be Sure; I Won; Hideous Towns;* and five others. DGC/WARNER BROS. 24277-1, © 24277-4, © 24277-2 (39 min).

Performance: *Bracing*  
Recording: *Very good*

The Sundays' vocalist, Harriet Wheeler, sings like a neurotic Rickie Lee Jones. David Gavurin's metallic guitar ranges from flinty to chimy. The songs they write together for the quartet, which also includes bassist Paul Brindley and drummer Patrick Hannan, are quirky, oblique, smart. You can listen to what Wheeler sings and be intrigued even though you don't quite know what it means. A penetrating insight is taglined with a verbal twist, resulting in a kind of intellectual slapstick that isn't even funny if you think about it. If you don't want to think, you can still appreciate the sound of Wheeler's knife-edge voice. It dips and soars like a kite on a windy day, occasionally stabbing out a phrase with the sharpness of an icpick. Meanwhile, Gavurin embroiders upon the icy melodies in this album with steely determination. If the Sundays were a trio, without a vocalist, you might think he was playing jazz of an intense, high-minded sort. "Reading, Writing and Arithmetic" sounds more difficult than it really is, but the Sundays don't want you to think so. *R.G.*

**TRAVIS TRITT:** *Country Club.* Travis Tritt (vocals); vocal and instrumental accompaniment. *Country Club; I'm Gonna Be Somebody; Put Some Drive in Your Country; Help Me Hold On; Sign of the Times;* and five others. WARNER BROS. 26094-1, © 26094-4, © 26094-2 (44 min).

Performance: *Energetic*  
Recording: *Good*

Travis Tritt, a Georgia boy smitten with the sound of the Allman Brothers and

## LOCAL BAND MAKES GOOD

THEY call themselves Human Radio, perhaps not the best name in the history of rock but one that's quite possibly destined to be remembered. They hail from Memphis, the town that birthed Stax/Volt and sheltered Elvis from a healthy sense of reality, and their vision lies not in r-&-b, rockabilly, country, or jazz but in a creative synthesis of sound. For two years running, they've won all kinds of regional awards.

Human Radio—made up of singer/keyboardist/songwriter Ross Rice, guitarist Kye Kennedy, string player Peter Hyrka, bassist Steve Arnold, and drummer Steve Ebe—includes perhaps some of the most brilliant synthesizers in the history of American pop. For while their debut album, "Human Radio," packs a powerful wallop with its bold and eloquent storytelling, its caustic, cutting humor, its unpredictable time signatures and meter changes, and the precision of its musicianship, it is also a landmark of artistic absorption. The amazing thing is how seamlessly the myriad influences are integrated into the whole and how *listenable* it is.

What really counts, though, is the impact of the words and music, both on the conscience and on the soul. And nowhere does Human Radio strike harder than in the opening cut, *Me & Elvis*, a perfectly convincing fantasy about hanging out with pre-fame Elvis in small-town Memphis—cashing in Coke bottles for spending money, blowing it on a quart of wine, sneaking off to smoke his daddy's cigarettes, and dragging home long after dark after riding "up and down the river in a brand-new Cadillac."

For this part of the narrative, the beat is the steady, anxious thump of restless youth. But as soon as Elvis starts flirting with the seductive lure of fame, the melody escalates into a fast, dreamy wave of sound, the perfect aural accompaniment for a fast-forward view of life, as Presley meets Colonel Parker and gets sucked down in the whirlpool of his fate. The final lyrics, in which Presley's old buddy declares that "now his picture's on my mantel sitting next to Jesus Christ," is the perfect, chilling capper.

The remaining songs in this remarkable first album never quite work up that much sweat, although almost every one has its moments, either in the arty but accessible instrumental collage or in songwriter Rice's unorthodox lyrics. In *My First Million*, for example, he muses on what he'd do with money, and in NYC, "a lousy place to be alone," he chronicles an attempt to maneuver around the city in a cocaine haze.

There's enough going on here, then, both lyrically and instrumentally, to keep even the most demanding listener glued to the album for several hours at least. For those who care to pick out which Sixties, Seventies, and Eighties artists inspired which passages, the pleasurable chore should take considerably longer. "Human Radio" is perhaps a fitting name after all. *Alanna Nash*

**HUMAN RADIO.** Human Radio (vocals and instrumentals). *Me & Elvis; I Don't Wanna Know; Hole in My Head; These Are the Days; Monkey Suit; My First Million; Electromagnetism; NYC; Another Planet; Harsh Light of Reality.* COLUMBIA C 45432, © CT 45432, © CK 45432 (38 min).

*Human Radio: from left, Kennedy, Rice, Arnold, Ebe, and Hyrka*



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Hank Williams, Jr., and possessing a honky-tonk voice akin to Joe Stampley's, struts his black-leather stuff on this debut album, a handsome sampler of Southern Rock Meets Country. The rough-voiced Tritt knows how to nail his notes, but he's better still at attitude, whether dressing down a society girl who snubs his advances (*Country Club*) or issuing a rallying cry for disenfranchised Southern males (*Son of the New South*). Too much of what Tritt sings about is pure country formula (trains, trucks, getting drunk, lost love, hard times, and going home), but he puts it all across with plenty of energy and panache, and he's not afraid to show his vulnerability (*Drift Off to Dream*). Tritt is no major talent, but he'll be around for a while. *A.N.*

**UNDER NEATH WHAT: *What Is It.*** Under Neath What (vocals and instrumentals). *Like an Animal; Straight Ahead Money (Peace Out); Eggs, Bacon, Coffee and Suicide; Bad Karma Chameleon; Bad Star; Firebomb Telecom;* and five others (six others on cassette, seven others on CD). ATLANTIC 91357-1, © 91357-4, © 91357-2 (52 min).

Performance: *A throwback*  
Recording: *Okay*

Do you really want to relive the Sixties again, even musically? Under Neath What was too young to know what happened way back then, which may explain why this trio seems determined to recapture the decade's free-form, acid-tinged highs. With its crunchy guitars harking back to yesteryear, Under Neath What sounds exciting in a hard-rock kind of way, but the lyrics in this set have all the casual nihilism of adolescence. If only these guys could think as well as they can play. *R.G.*

**STEVE WARINER: *Laredo.*** Steve Wariner (vocals, guitar); vocal and instrumental accompaniment. *I Can See Arkansas; Precious Thing; Where Fools Are Kings; L-O-V-E, Love; She's in Love; The Domino Theory;* and four others. MCA MCA-42335. © MCAC-42335, © MCAD-42335 (34 min).

Performance: *Solid work*  
Recording: *Nice*

Steve Wariner, who filled the country-pop niche Glen Campbell vacated when he ran off to chase Tanya Tucker (and later God), never quite gets the respect he deserves as a vocalist, instrumentalist, and songwriter. That's mainly because of his nice-guy persona, and the fact that as a sensitive romantic he rarely sings about anything deeper than the thrill and disappointment of love or the virtues of country life. But Wariner is a first-rate purveyor of this line of goods, whether he's writing or performing rhythm numbers (*Precious Thing*), country-jazz (*L-O-V-E, Love*), or sentimental autobiography (*I Wanna Go Back*).

In "*Laredo*," as before, Warner adds occasional scat singing to his warm and convincing tenor, and if George Benson doesn't exactly rush to mind—on record, Warner's lead-guitar solos never come close to his sparkling concert performances—he nevertheless holds his own in the continually changing arena of modern country music. *A.N.*

**DAVID WILCOX: *How Did You Find Me Here.*** David Wilcox (vocals, acoustic guitar); vocal and instrumental accompaniment. *Eye of the Hurricane; Language of the Heart; Rusty Ole American Dream; How Did You Find Me Here; Leave It Like It Is;* and six others. A&M SP-5275, © CS-5275, © CD-5275 (41 min).

Performance: *Not for prime time*  
Recording: *Okay*

David Wilcox, much in the mold of early James and Livingston Taylor, brings a Sensitive Romantic persona to this low-key, folkie debut, filled with songs of quiet joy and everyday life. At times, his repertory sounds like Mac Davis on a late-night TV show, making up songs on the spur of the moment to oddball audience requests, such as a tune about a bright blue enamel paint stain (*Leave It Like It Is*). But even if Wilcox can be touching in relating the death of a friend in a motorcycle accident (*Eye of the Hurricane*), his songs are largely ordinary, derivative, and not very interesting, often, as in *Jamie's Secret*, dangling a tease without a payoff. Coupled with a perfunctory voice, routine guitar work, and a production style straight out of 1972, it all makes for a most unchallenging performance. *A.N.*

**ZIL. Zil (vocals and instrumentals).** *Song for the Rainforest; For You; Suite Gaúcha; Jequiê (Jek-ê-ay); Zabatana;* and three others. VERVE © 841 929-4, © 841 929-2 (41 min).

Performance: *Dynamic*  
Recording: *Bright*

If pop groups were sports cars, Zil would be a Ferrari Testarossa—bright red, sleek, ready to go from 0 to 60 in the blink of an eye. Recorded in Rio de Janeiro by a septet of veteran Brazilian musicians, this album combines jazz and rock with great energy. High, clear male voices float over sharp bursts of electric guitar, soprano saxophone, and assorted keyboards. The rhythms are not as fluid and swaying as one might expect; at the center of most of these tunes is a sharp, metronomic backbeat. The melodies are sweet and joyful, and they spin out of the band with a profusion that is both exciting and wearying. These guys romp through an initial melody, then quickly shift to a second one, then hurtle back to the first or on to a third. The technique is breathtaking, but how much more satisfying it would be if the audience, and the music itself, were allowed to breathe. *R.G.*

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## JAZZ

**STANLEY JORDAN: *Cornucopia.*** Stanley Jordan (guitar); Kenny Kirkland (piano); Charnett Moffett (bass); other musicians. *Impressions: Willow Weep for Me; Autumn Leaves; Still Got the Blues; Fundance*: (CD only); *What's Goin' On; Always Know; Asteroids; Cornucopia*. BLUE NOTE ● 92356-1, © 92356-4, © CDP-92356-2 (70 min).

Performance: *Mixed blessing*  
Recording: *Very good*

If you have heard Stanley Jordan play live, you have probably been dazzled by his unusual tapping technique, which can make him sound like two guitarists. For obvious reasons, that sort of thing is less effective on records, but Jordan does get in some memorable licks in "Cornucopia." In *Impressions* and *Autumn Leaves*, he cooks impressively with pianist Kenny Kirkland, drummer Jeff Watts, and Charnett Moffett, an extraordinary bassist who recently made a terrible album on his own. Jordan is equally stunning going it alone in *Willow Weep for Me* and *Fundance*, but the rest of this album, in which he plays with various other musicians, is an aimless run-of-the-mill trek into New Age, which veils the young guitarist's talent and suggests a lack of self-confidence. Jordan is doing fairly well now, but he won't really make his mark unless he finds a clear direction and pursues it. His best bet, I think, is to follow up on the work he does here with Kirkland, Moffett, and Watts. C.A.

**CHARLES MINGUS: *Epitaph.*** Orchestra, Gunther Schuller cond. COLUMBIA © C2T 45428 two cassettes, © C2K 45428 two CD's (127 min).

Performance: *Interesting*  
Recording: *A mite muddy*

The packaging of this album is somewhat misleading. You have to remove the sealed outer wrapping to see that it is not an album in which Charles Mingus performs but an album of Mingus compositions and arrangements recorded last year, ten years after his death. When these scores were discovered in 1985, it became clear that Mingus had intended the compositions to form a suite entitled *Epitaph*. The manuscripts were in poor physical shape and woefully disorganized, so conductor Gunther Schuller had to assemble the pieces with a detective's eye for detail. The result is perhaps close to what Mingus had in mind, but if he had lived to do the work himself, he would most likely have altered a shape here and there in the process.

Remember, this is not like discovering a lost Haydn symphony or a Liszt piano concerto. Mingus's notes indicated that he had certain musicians in mind when he composed, and, like

Ellington, whom Mingus greatly admired, he obviously relied on these individuals to give him a sound that cannot be annotated. When this performance was recorded, at a 1989 concert that was also videotaped by England's Channel Four, only four of the composer's hand-picked musicians—Eddie Bert, Snooky Young, Jerome Richardson, and Don Butterfield—were on hand, although many more were still performing and might have been available. What is really missing, though, is Mingus himself. He had such an expressive face that when his band performed each note danced across it, sending a message out to the performers and often providing them with an extra spark. I don't hear any evidence of that kind of spark here.

Schuller's recording of *Epitaph* is nevertheless interesting as a varied mosaic of music by Mingus performed by a star-studded thirty-piece orchestra. You might recognize some of the pieces, such as *Better Get It in Your Soul*, *Peggy's Blue Skylight*, and *Wolverine Blues*. The last, written by Jelly Roll Morton, is the only non-Mingus composition included, but its treatment takes it a giant step from Morton's era. The restoration of *Epitaph* was obviously a monumental task, and the recording offers an intriguing summation of musical thoughts that lingered in the back of Charles Mingus's mind, but I think I would prefer to hear the music in smaller doses. C.A.

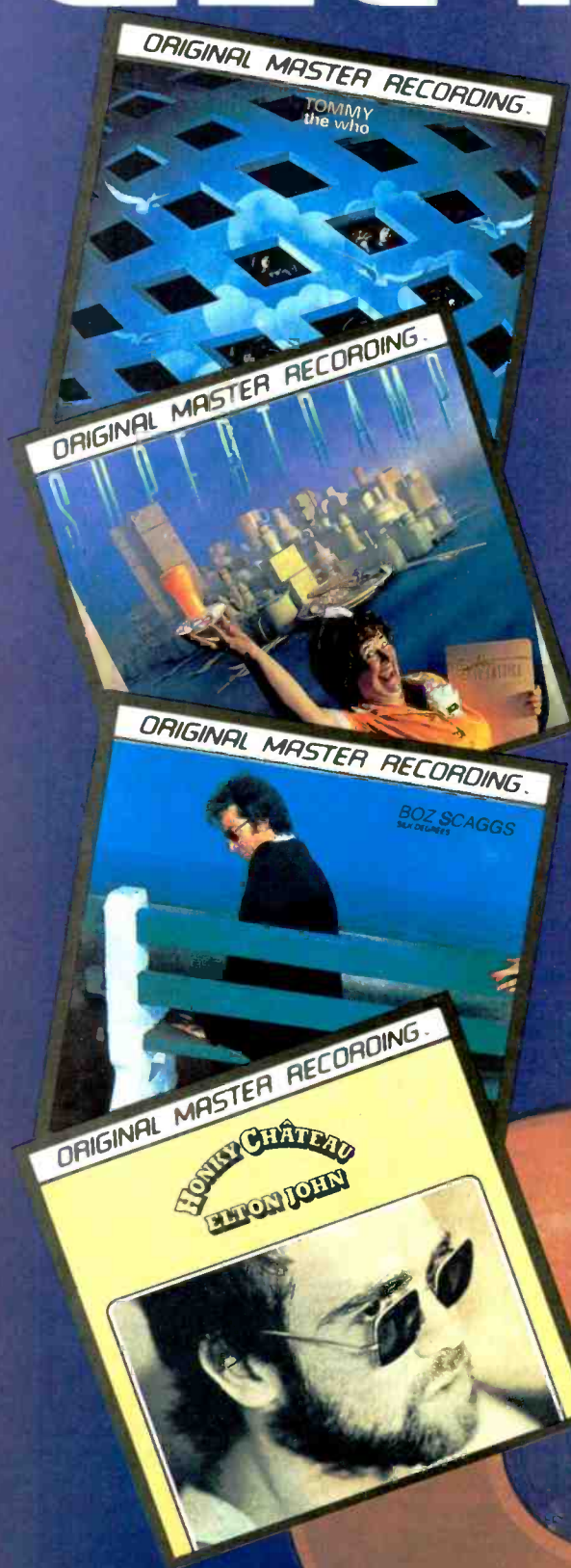
**DENNY ZEITLIN: *In the Moment.*** Denny Zeitlin (piano); Joel DiBartolo, David Friesen (bass); Peter Donald (drums). *Celebration; Blues in the Night; It Won't Take Us Any Time at All; Monk-y Business; Just Passing By; I-Thou; Underlying*; and two others. WINDHAM HILL WH-0121, © WT-0121, © WD-0121 (64 min).

Performance: *Flamboyant*  
Recording: *Excellent*

I first became aware of pianist Denny Zeitlin in 1963, when his recording with the Jeremy Steig Quartet dazzled me with his florid technique. The following year, he was featured on his own in the Columbia album "Cathexis," in which he seemed even flashier. And today, as he demonstrates in his latest album, he can still whip up fanciful surprises with stunning flair. With so many great jazz-piano recordings on the market, I cannot in good conscience recommend this album to jazz devotees, but it will serve the fans of another Windham Hill artist, George Winston, as a splendid bridge to such musicians as Bud Powell, Thelonious Monk, Art Tatum, and Earl Hines. Unlike Winston's recordings, Zeitlin's music is more than just dazzling technique. C.A.

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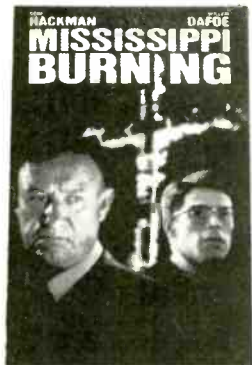


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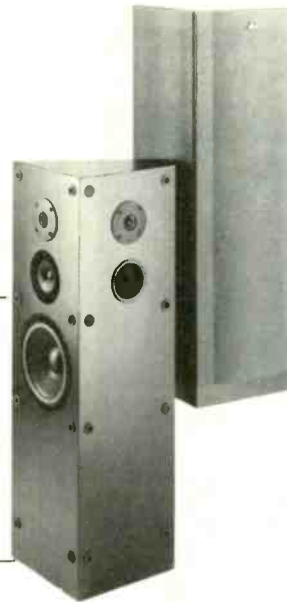
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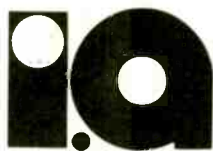
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*Discs and tapes reviewed by Robert Ackart, Richard Freed, David Hall, Stoddard Lincoln, Eric Salzman, and David Patrick Stearns*

**BARBER: Cello Concerto, Op. 22; Cello Sonata, Op. 6; Adagio for Strings.** Ralph Kirshbaum (cello); Roger Vignoles (piano, in sonata); Scottish Chamber Orchestra, Jukka-Pekka Saraste cond. VIRGIN © 91083-2 (55 min).

Performance: *Muscular*  
Recording: *Excellent*

Samuel Barber himself conducted the first recording of his 1946 Cello Concerto, with Zara Nelsova as soloist, and it was released as a 10-inch London LP in 1950. In 1966 we had the concerto's dedicatee, Raya Garbousova, in the first stereo version, with Frederic Waldman conducting on Decca. Not until 1983 did the work receive another recording, this time with Rafael Wallfisch and the English Chamber Orchestra on the British Chandos label. But just within the past year we have had a recording from Yo-Yo Ma on CBS, which received a 1989 Grammy Award, and now this one with Ralph Kirshbaum and Jukka-Pekka Saraste on Virgin Classics.

It is pleasant to see a splendid and unjustifiably neglected score receive its due on records. The music has both brilliance and passion, contrasting the preemptory and the lyric in the opening movement, giving way to vintage Barber lyricism in the slow movement, and culminating in a powerfully gestural finale. As a virtuoso vehicle, the concerto is up there with the best of this century.

Kirshbaum's reading is on the muscular and extroverted side, though it is by no means lacking in tenderness where called for. The same holds for his approach to the last of Barber's student works, the 1932 Cello Sonata, which is skillfully crafted but lacks an individual character. The Brahmsian tinge to the finale is fully brought out in the virile pianism of Roger Vignoles.

The inclusion here of the much-recorded Adagio for Strings, which Barber adapted from his 1936 String Quar-



*The conductor Gerard Schwarz*

## SCHWARZ'S PISTON

**W**ALTER PISTON (1894-1976) was the classicist par excellence among the mainstream American symphonists of the mid-twentieth century. The early works reflect his period of study in France with Paul Dukas and Nadia Boulanger. The mature ones, from 1943 on, add the element of broad-scale lyricism and American touches clearly derived from his youthful experience playing in dance bands and theater orchestras.

The earliest of the works on a new all-Piston disc from Delos is the *Sinfonietta* of 1941, scored for woodwinds in pairs, two horns, and strings. For all its modesty of title, it's substantial fare. Lyrical polyphony dominates the first movement, which is decidedly woodwindy in coloration. The slow movement is astringently bittersweet, and the finale is a quasi-gigue replete with contrapuntal interplay. The somewhat dry acoustic of the 92nd Street YMHA in New York, where Gerard Schwarz and the New York Chamber Symphony made this première recording, is ideally suited to the nature of the music, which represents the transition between early and mature Piston.

The composer's Second Symphony, from 1943, is a classic of the American symphonic repertory. The reading here by Schwarz and the Seattle Symphony

Orchestra has the benefit of superb digital sonics and is both warm toned, with ample bass, and satisfyingly brilliant. Its high point is the eloquent slow movement, whose frankly Romantic rhetoric has a kinship with the music of Howard Hanson.

Piston's Sixth Symphony, a four-movement score from 1955, represents the composer at the top of his form. It was written for Charles Munch and the Boston Symphony, who gave the first performance and recorded the work for RCA (the recording is still available on a New World cassette). Schwarz and the Seattle Symphony give Munch and the Bostonians a real run for their money, even if they don't quite match the senior orchestra's preternatural nimbleness in the scherzo. The new recording's state-of-the-art sound, however, as well as the vigor and warmth of the performance, makes it the one to have.

Just as Schwarz intends to record all seven of the Hanson symphonies for Delos, he plans to record a complete Piston cycle, including all eight symphonies. He's gotten off to a fine start here.

*David Hall*

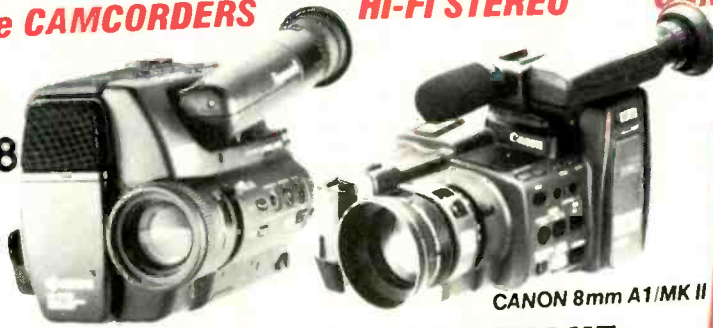
**PISTON: Symphony No. 2; Symphony No. 6; Sinfonietta.** Seattle Symphony Orchestra, New York Chamber Symphony (in *Sinfonietta*), Gerard Schwarz cond. DELOS © DE 3074 (67 min).

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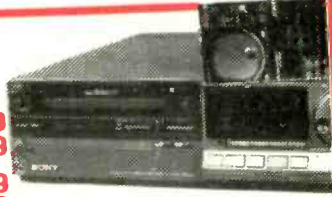
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tet for a performance by Arturo Toscanini and the NBC Symphony in 1938, might well be questioned as unnecessary. But after all the lugubrious interpretations I have heard in recent years, averaging about 9 minutes' playing time, I was delighted to hear Saraste's beautifully poised reading, which comes in at a little over 7 minutes. He also provides thoroughly alert and warmhearted support in the concerto. *D.H.*

**BRUCH: *Violin Concerto No. 1*** (see Best of the Month, page 71)

**COPLAND: *Music for Two Pianos*** (see GOULD)

**F. COUPERIN: *L'Apothéose de Lully; L'Apothéose de Corelli; Concert "Dans le goût théâtral."*** English Baroque Soloists, John Eliot Gardiner cond. ERATO © 245 011-2 (70 min).

Performance: *Graceful*  
Recording: *Fine*

Though the idea of writing a suite of descriptive pieces characterizing the heavenly ascent of a dearly beloved composer may be a little embarrassing to most of us nowadays, François Couperin's tributes to Corelli and Lully seem surprisingly durable in these attractive performances conducted by John Eliot Gardiner. The music in these two works seems all the more deeply felt for its outward sense of poise, manifested by wistful melodies beautifully set off with discreet counterpoint and austere harmonies. They are secular Requiems of a sort, oozing a melancholy that's soothing to the soul.

The same pieces are heard as played on two harpsichords in a recent Harmonia Mundi recording by William Christie and Christophe Rousset, but Gardiner's recording with the English Baroque Soloists offers a completely different listening experience. It is impossible to recommend one over the

other. While surface color is important to Couperin's music and both colors and textures are more clearly defined in the Erato recording, Christie's seductive phrasing in the Harmonia Mundi is irresistible.

Unfortunately, the filler piece on the Erato disc, a suite from Couperin's *Nouveaux Concerts*, is hardly a tie-breaker. Believed to be music for a lost theater work, the piece is presented here in a reconstructed orchestration. It's pleasant enough, but it's the sort of thing that gave Couperin an undeserved reputation for generic musicmaking. *D.P.S.*

**GOULD: *Dance Variations*. PISTON: *Concerto for Two Pianos*.** Joshua Pierce, Dorothy Jonas (pianos); Royal Philharmonic Orchestra, David Amos cond. **COPLAND: *Danzón cubano; Rodeo, Two Dances; El salón México*.** Joshua Pierce, Dorothy Jonas (pianos). KOCH INTERNATIONAL CLASSICS © 3-7002-2 (69 min).

Performance: *Lively*  
Recording: *Effective*

Morton Gould is the president of ASCAP, an excellent conductor, and all-around good guy. He is also one of the most underrated American composers, generally relegated to the somehow inferior category of pops, but he is, in fact, one of the best and most durable creators of musical Americana. The Dance Variations, commissioned by the duo-pianists Gold and Fizdale, is a kind of sly concerto. Words like "deft" and "witty" come to mind.

The Piston, a first recording, is a solid work even if, like many pieces by that estimable composer, it fails to arouse anything like real enthusiasm. Copland's *Danzón cubano* for two pianos without orchestra is a slightly cubist portrait of Latin music. The *Rodeo* excerpts (*Hoedown* and *Saturday Night Waltz*) and *El salón México* are effective in two-piano arrangements by, re-

spectively, duo-pianists Whittemore and Lowe and, of all people, Leonard Bernstein.

These are excellent and, as they say, idiomatic performances by Joshua Pierce and Dorothy Jonas, who are better known—to me, at least—for their recordings of John Cage than for the pops side of American music. I liked the two-pianos-and-orchestra recordings a lot; the two pianos alone in the Copland pieces seemed a little confined. *E.S.*

**GRIEG: *Peer Gynt, Incidental Music, Op. 23*.** Mari-Anne Haeggander (soprano); Urban Malmberg (baritone); San Francisco Symphony Chorus and Orchestra, Herbert Blomstedt cond. LONDON © 425 448-4. © 425 448-2 (73 min).

Performance: *Top-drawer*  
Recording: *High-powered*

On a single compact disc, Herbert Blomstedt and his San Francisco forces give us twenty of the twenty-six numbers in Grieg's incidental music for Ibsen's great drama, including spoken material (read by actors in the original Norwegian) where appropriate. Backed up by Michael Steinberg's excellent program notes, the result is a stunning production.

Baritone Urban Malmberg comes across as a wholly credible Peer Gynt in both his acting and singing, and soprano Mari-Anne Haeggander is both a touching and full-blooded Solveig. The chorus and the incidental actors do themselves proud, though the speaker in the Arabian Dance seems a bit strident in her delivery. Among the most gripping numbers are Peer's abduction of the bride and the whole sequence of scenes beginning with his encounter with the Herd Girls and culminating in the terrifying scene with the Boy. I have never heard the opening pages of "In the Hall of the Mountain King" done to more sinister effect.

For those who want every note of Grieg's original, there is a splendid Neeme Järvi recording on two Deutsche Grammophon CD's, combined with the composer's less interesting incidental music to *Sigurd Jorsalfer*. But if you just want the essential *Peer Gynt* music, you can't do better than with this superbly recorded Blomstedt performance. *D.H.*

**MENDELSSOHN: *Violin Concerto in E Minor*** (see Best of the Month, page 71)

**MESSIAEN: *La Nativité du Seigneur; Le Banquet céleste; Apparition de l'église éternelle*.** Marie-Claire Alain (organ). ERATO © 2292-45470-2 (66 min).

Performance: *Vivifying*  
Recording: *Splendid*

These are all early works. *Le Banquet céleste* was composed in 1926, when

John Eliot Gardiner: graceful, well-defined Couperin





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Messiaen was only seventeen, and two years later it became the first of his works to be published. *Apparition de l'église éternelle* was composed in 1932, and the grand-scale *Nativité du Seigneur*, whose nine sections add up to more than 50 minutes of music, came three years later. The same three works have been recorded together before on CD, by Louis Thiry for Calliope, by Susan Landale for Adda, and by Jenni-fra Bate for Unicorn-Kanchana. Messiaen himself has given glowing approval to the Thiry and Bate performances of *La Nativité du Seigneur*, and I'd be interested in having his comments on Marie-Claire Alain's, which is accompanied by his own annotation. It is clearly the most vivid-sounding recording of the work so far, and I would say it's the most vivid realization interpretively as well.

Thiry, playing the Metzler organ of the Cathedral of St. Pierre in Geneva, adopted very deliberate tempos and made much of silences, reverberation, and the sheer allure of the instrument, which sounds impressive in the 1972 recording. Alain plays the organ of the Hofkirche in Lucerne, built by Johannes Geisler in 1650, restored by Friedrich Haas in 1860, and thoroughly reconditioned during the 1970's. It is a fine, flexible-sounding instrument, and it seems especially well chosen for this material. And well chosen for Alain's interpretive approach, too, which is not only conspicuously more animated than Thiry's but somewhat lighter of texture and more forward-moving than the other versions. So vast and varied a work is surely capable of sustaining, and benefiting from, more than a single interpretive approach, but Alain's is the sort of performance that is more likely than any other I have heard to win new friends for the music—and even for the organ itself. There is as much ecstasism in her constant movement as in Thiry's defiance of momentum, and she exhibits a more stunning range of colors, which the new recording projects with breathtaking immediacy.

The conclusion of the remarkable sequence is so utterly grand that one might wish Erato had placed the two shorter works first on the disc, but there is quite a decent pause preceding the meditative calm of *Le Banquet céleste*. A sort of fantasy on the symbolism of the Eucharist, it is really just what is needed to bring one down gently from the emotional high of *La Nativité*, and the *Apparition de l'église éternelle*, "dense and compact, like a block of stone," according to the composer, and laid out in a dramatic crescendo-diminuendo representing a vision in which the eternal church appears majestically and then vanishes, satisfies the craving for a more stimulating conclusion. A splendid production on all counts. *R.F.*

**MONTEVERDI:** *L'incoronazione di Poppea*. Arleen Augér (soprano), Pop-

pea; Della Jones (mezzo-soprano), Nerone; Linda Hirst (mezzo-soprano), Ottavia; Gregory Reinhart (bass), Seneca; James Bowman (countertenor), Ottone; others. City of London Baroque Sinfonia, Richard Hickox cond. VIRGIN © VCI 90775-2/4 three CD's (195 min).

Performance: *Moving*  
Recording: *Delicate*

This is a very delicate and pure version of Monteverdi's late masterpiece, and it is particularly distinguished by the exquisite and moving performance of Arleen Augér in the title role. I don't believe for a moment that this great landmark score sounded so pure or



Marie-Claire Alain: majestic Messiaen

ethereal in 1643. Conductor Richard Hickox sticks to the absolute minimum in instrumentation—mostly two violins plus continuo instruments like lute, guitar, harp, and harpsichord. Ornamentation and improvisation are almost completely avoided. Just the notes in the score, please. This, of course, is musical nonsense. But to complain about such a beautiful performance is churlish. Augér may be the greatest *Poppea* of our time—a model of vocal beauty, flexibility, and expressivity.

The rest of the cast is somewhat uneven, mostly excellent but sometimes defeated by the usual gender problems of these old operas: male roles intended for castrati, old women sung by young men. Also the bite and humor (surprisingly, there is quite a bit of both in this work) are almost completely missed. Nevertheless, the set is most worthwhile—above all for Augér's performance—and the recorded sound is exceptionally attractive. *E.S.*

**PISTON:** *Concerto for Two Pianos* (see GOULD)

**RACHMANINOFF:** *Piano Concerto No. 2* (see TCHAIKOVSKY)

**ROSSINI:** *Guglielmo Tell*. Giorgio Zancanaro (baritone), Tell; Chris Merritt (tenor), Arnoldo; Franco De Grandis (bass), Melchthal; Luigi Roni (bass), Gessler; Cheryl Studer (soprano), Matilde; others. Chorus and Orchestra of La Scala, Milan, Riccardo Muti cond. PHILIPS © 422 395-2 four CD's (227 min).

Performance: *Arresting*  
Recording: *Good*

Recorded live during several performances in December 1988, this production of Rossini's *Guglielmo Tell* was the first over which Riccardo Muti had total artistic control following his appointment as La Scala's musical director. I saw one of those performances and found the staging unrewarding: Most of the action took place in what resembled a debating hall, and local color was supplied by photographs of Swiss scenery thrown against neutral backgrounds. The blowups, however, were so huge that any movement of the projectors set all of Switzerland atremble, and Mont Blanc quivered like *blanc mange*.

Nevertheless, the evening offered an exciting cast, and Muti, in the pit, fired the difficult score with dramatic tension and emotional power. The orchestra played beautifully, as it does on this live recording, and the chorus responded to the conductor's every wish. Baritone Giorgio Zancanaro, as Tell, though a rather pallid figure on stage, here sings accurately and with an often handsome tone. American tenor Chris Merritt, as Arnoldo, comes across as the kind of singer whose voice apparently will do anything the artist demands of it, including repeated C-sharps and breath-taking vocal leaps. As Matilde, American soprano Cheryl Studer further fulfills the promise of her recently released recording as Elisabeth opposite Plácido Domingo's Tannhäuser. Hers is a big, warm, rich voice, but young enough in timbre and more than sufficiently agile to capture Matilde's romantic ardor; she seems to delight in the sureness of her vocalism. As Melchthal, Arnoldo's father, Franco De Grandis uses his full, sympathetic bass to make the plight of the old man pitiable. His archenemy—indeed, the enemy of everyone concerned—is Gessler, tyrannic governor of two Swiss cantons; this unsavory character is sung by bass Luigi Roni with implacable imperiousness. The remaining members of the La Scala cast acquit themselves laudably, and the recorded sound is fine throughout. *R.A.*

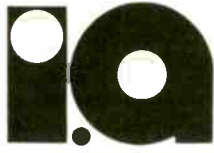
**SCHUBERT:** *Symphony No. 9, in C Major* ("Great," D. 944). Hanover Band, Roy Goodman cond. NIMBUS © NI 5222 (61 min).

Performance: *Ingratating*  
Recording: *Vivid and warm*

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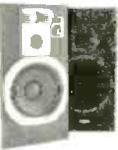


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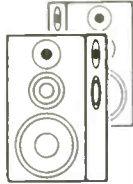
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## AUGUST

sical Players, Roger Norrington cond. EMI/ANGEL © CDC 49949 (58 min).

Performance: *Brisk*  
Recording: *Good*

The Hanover Band has a fetching sound that makes it instantly distinguishable from the various other period-instrument orchestras. Its crisp horns and trumpets in particular, with their unabashedly raspy edge, add appreciably to the feeling of vitality that characterizes all of this ensemble's recorded performances, and conductor Roy Goodman sees to it that their sound cuts through the strings just enough to be brilliantly effective, without giving them undue prominence. This exhilarating character serves Schubert's "Great C Major" Symphony very well indeed, as does Goodman's by now familiar method of settling on a sensible tempo, balancing his choirs judiciously, and making sure he does not get in the music's way. Repeats are taken in all four movements. The opening movement is agreeably brisk, due notice is taken of the "con moto" appended to the marking of the andante, and the songful quality of the scherzo is brought out fully without impeding its momentum. The sound, like the performance, is robust, warm, and well defined.

Nimbus does not identify the work as the "Great C Major" but, in common with too many other presenters, as simply the "Great," as if the term were a value judgment instead of a reference to the work's dimensions in respect to Schubert's earlier and shorter symphony in the same key (known as the "Little C Major," not as the "Fair-to-Middling"). No one, of course, would suggest that the term is misplaced as a value judgment in reference to this magnificent work, and most *great* symphonies are subject to more than a single valid interpretation.

Roger Norrington is just as generous with repeats as Goodman but is conspicuously brisker in his pacing of the first two movements. Norrington's tempos never become headlong, but the one he takes for the opening movement does give the big theme a somewhat different character. Listeners committed to the old "majestic" approach may find it hard to adjust to this half of the performance, but it is a stimulating realization overall, supported by the conductor's customary written explanation of his sources and objectives. The sound is handsome but lacks the exceptional clarity and vividness of the Nimbus disc, which would be my choice between these two. Among all period-instrument recordings of the "Great C Major," however, my first choice is Charles Mackerras's performance on Virgin with the Orchestra of the Age of Enlightenment, which is also splendidly recorded. R.F.

**R. STRAUSS:** *Also sprach Zarathustra, Op. 30; Don Juan, Op. 20.* London

Philharmonic Orchestra, Klaus Tennstedt cond. EMI/ANGEL © 4DS-49951, © CDC-49951 (54 min).

Performance: *Passionately lyric*  
Recording: *Good*

If Klaus Tennstedt's projection of Strauss's Nietzschean blockbuster is not as overtly brazen and spectacular as Herbert Blomstedt's Dresden recording on Denon, it has much to recommend it in terms of lyrical impulse and the care with which detail is limned—tellingly but without exaggeration. But it is the accompanying *Don Juan* that I found especially striking, both for its dash and for its lyrical intensity, and the acoustic focus is just right. D.H.

**TCHAIKOVSKY:** *Piano Concerto No. 1, in B-flat Minor, Op. 23.* **RACHMANINOFF:** *Piano Concerto No. 2, in C Minor, Op. 18.* Alexei Sultanov (piano); London Symphony Orchestra, Maxim Shostakovich cond. TELDEC © 2292-46281-2 (69 min).

Performance: *Very good*  
Recording: *Spacious, well-lit*

When I heard Alexei Sultanov's playing in Teldec's recording of performances from last year's Cliburn International Piano Competition, in which he took first prize, I suggested (in the May issue) that the then nineteen-year-old Soviet pianist had "bushels of technique, but little . . . in the way of subtlety or refinement." Those qualities are hearteningly evident, though, in the Tchaikovsky and Rachmaninoff concertos Sultanov has recorded with Maxim Shostakovich (who, incidentally, was a member of the Cliburn jury). Here we have more than just a volatile young pianist eager to strut his stuff; these are broad-scale, expansive performances, with plenty of unforced drama. Because the basic tempos, once set, are maintained steadily, the more voluptuous episodes in both works can be caressed without being squeezed, and the more irruptive ones generate real excitement without threatening to run away with themselves.

Lyricism, vitality, and spontaneity are the key words here. There is a fairy-tale atmosphere in the slower, quiet sections, a twinkle in the eye, one imagines, in the rumbustious finale of the Tchaikovsky, and not the slightest hint of banality in the dangerous concluding movement of the Rachmaninoff. The playing of the London Symphony under Shostakovich is especially lovely and fully meshed with Sultanov at all points, and the spacious, well-lit recording presents the two elements in near-ideal balance. Neither performance, perhaps, displaces existing favorites, but both are more than satisfying in their own right. R.F.

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by Christie Barter  
& Maryann Saltser

**A** MUSICAL about Martin Luther King, Jr., titled simply *King*, that ran briefly last spring in London's West End featured two prominent American opera singers—Simon Estes and Cynthia Haymon. Estes, a bass, sang the title role, and Haymon, a soprano, the role of Coretta Scott King. Now London/Decca has released the original-cast album in the U.S. The score for *King* was written by the British composer Richard Blackford to lyrics by Alistair Beaton (another Brit) and the American Pulitzer Prize-winning poet Maya Angelou. □

**B** ELIEVE it or not, the Ramones turn sweet sixteen this summer. A serious cele-



*The Ramones: sweet sixteen*

bration being in order, something special has been cooked up for the occasion by Sire/Warner Bros. The label is issuing the band's entire catalog on CD in a series entitled "The Ramones . . . All the Stuff Plus More." Scheduled to be released periodically over the course of this year, each CD will contain two complete albums. The first one out includes "Ramones," "Ramones Leave Home," and some previously unreleased tracks, B sides, and outtakes. The series will culminate with the release of a video, rumored to contain footage from drummer Marky Ramone's personal collection, toward the end of the year. □

**V** IOLINIST Isaac Stern is celebrating his seventieth birthday July 21, only a month ahead of the inauguration of the season-long centennial salute to Carnegie Hall—which he helped save from the wreckers' ball. The kick-off is a concert by the New York Philharmonic under Zubin Mehta in Central Park on August 20, with Stern as the soloist.

Stern observes another major anniversary this year—his forty-fifth as a CBS Masterworks/Sony Classical recording artist, the longest association with one company that any artist has enjoyed in the history of classical-music recording. Accordingly, this year Sony Classical is releasing six albums featuring Stern. Among the first, released in the spring, was a

Schubert set with pianist Daniel Barenboim. In other recordings, Stern is joined by pianist Emanuel Ax, cellist Yo-Yo Ma, and violinist Cho-Liang Lin. □

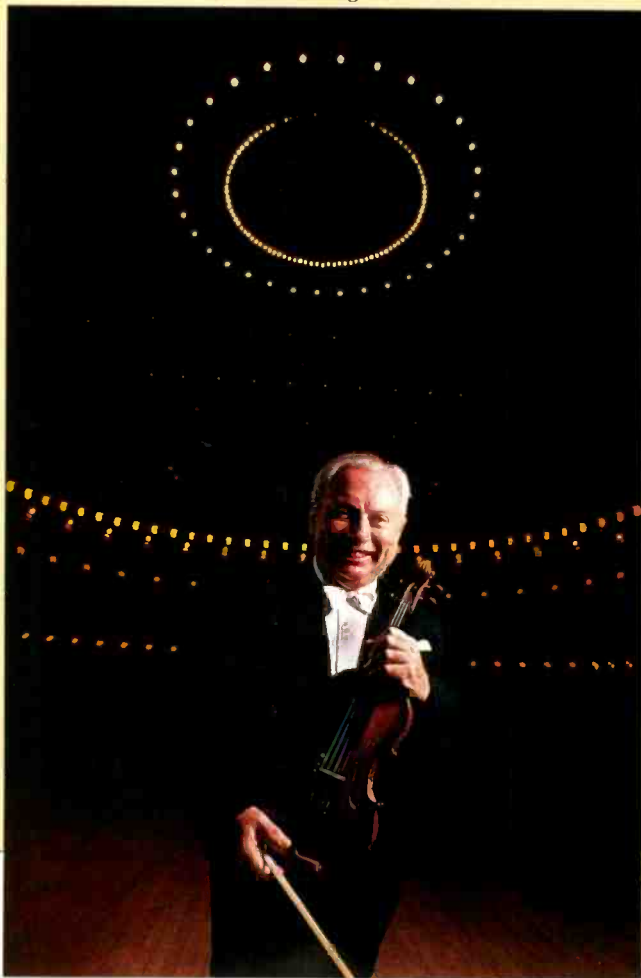
**M** EMBERS of the Atlantic recording group INXS have regrouped after some well-deserved time off and have begun working on a new

album in Sydney, Australia. It's record No. 7 for the six-man band from Down Under. The producer is Chris Thomas, who also produced the band's quadruple-Platinum "Kick" in 1987. Look for release this fall. □

**V** IDEOCASSETTES of the legendary Voice of Firestone telecasts, which from the late Forties to the early Sixties presented some of the greatest names in opera—Licia Albanese, Eileen Farrell, Nicolai Gedda, and Leontyne Price among them—have just become available on the Video Artists International label. The black-and-white kinescopes from which the tapes derive have been enhanced for optimum visual and sonic quality. □

**I** T was a starry night indeed when Arista Records celebrated its fifteenth anniversary earlier this year with an AIDS benefit concert at New York's Radio City Music Hall. Named after the 1985

*Stern's seventieth, Carnegie Hall's hundredth*



*Estes and Haymon: stars of King*

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benefit single *That's What Friends Are For*, which raised over \$1.5 million for the American Foundation for AIDS Research (AMFAR), the concert featured performances by nearly two dozen major Arista recording artists. Veterans such as **Barry Manilow**, **Melissa Manchester**, and **Burt Bacharach**, associated with Arista's pioneering days, shared the stage with some of the industry's brightest newcomers, including **Milli Vanilli**, **Kenny G.**, **Taylor Dayne**, and the **Jeff Healey Band**. **Jennifer Holliday** dedicated a song from *Dreamgirls* to its director, **Michael Bennett**, who died of AIDS in 1987. And **Patti Smith** gave her first live performance in ten years. More than \$2 million was raised for New York's Gay Men's Health Crisis and other AIDS organizations nationwide. □



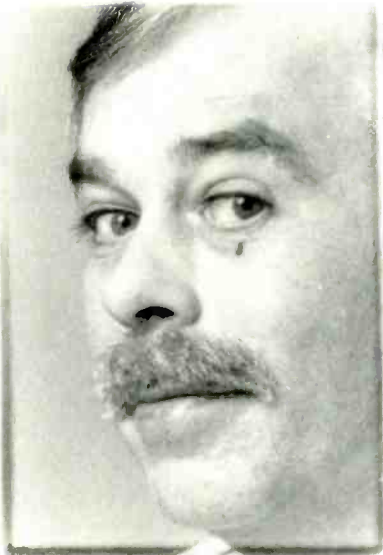
**G**RACENOTES. Former Pink Floyd member **Roger Waters** is planning a full-scale live production of the band's classic "The Wall" in the shadow of what remains of its Berlin namesake. The July 21 concert is a benefit for the Memorial Fund for Disaster Relief. . . . **Eric Clapton** was recognized as a Living Legend at the second annual International Rock Awards show, televised by ABC on June 6. . . . *Down All the Days* from the Kinks' latest album, "U.K. Jive," has been adopted by the European Common Market as an unofficial anthem promoting its plan for a barrier-free Europe in 1992. . . . **Peggy Lee** has received ASCAP's lifetime-achievement Pied Piper Award. . . . **Janet Jackson** has been honored with a star on Hollywood's Walk of Fame. . . . Opening ceremonies for the Alabama Music Hall of Fame in Tusculumbia are scheduled for July 26. The museum will house memorabilia from the careers of Alabamans **Tammy Wynette**, **Emmylou Harris**, **Hank Williams, Sr. and Jr.**, the **Commodores**, **Alabama**, and **W. C. Handy**. . . . **Linda Ronstadt** kicks off her late-summer tour in Dallas on August 9. □



*Arista recording stars at the label's fifteenth-anniversary concert, an AIDS benefit, included Milli Vanilli (top), Jeff Healey (center left), Dionne Warwick and Whitney Houston with Burt Bacharach (above), and Patti Smith with her husband, Fred Smith (left). Photos by Ebet Roberts.*

## THE HIGH END

by Ralph Hodges



### HI-FI SHOWS AND DEMO SOUND

**T**HE Second New York High End Hi-Fi Show, hosted by *Stereophile* magazine, has just come and gone as I write, and I have praise for the organizers. Despite an unexpectedly high attendance, the staggeringly difficult elevator situation in the hotel was solved by several ingenious stratagems, such as paying qualified personnel to run the things. By spacing exhibitors several rooms apart, the organizers both controlled crowding and afforded a measure of acoustical isolation to those attempting to demonstrate subtle sonic effects. In a relatively short time the show's sponsors have shown considerable professionalism—which, regrettably, cannot be said of all high-end enterprises.

I am a little cooler when it comes to the exhibitors. Many of the anticipated big names stayed away, content to let their local dealers handle the traffic. This, I believe, is not a wholly satisfactory approach to audio promotion. Perhaps more than any other hobbyists, audiophiles value contact with the designers of their acquisitions, and as intense as their attentions can sometimes get,

it is probably good policy to oblige them once in a while—particularly if they paid the show's full \$25 entry fee at the door, as the majority did. (Others obtained discount coupons from dealers and similar sources.)

Most of the rooms I visited were using LP's as demo material, and it was odd indeed once again to hear familiar foibles such as surface noise and warp-induced modulation effects in a show setting. I wondered whether this program source had been chosen so as not to jeopardize the exhibitors' high-end credentials in the eyes of audiophiles who reject the CD, so I asked around a bit. The usual answer, however, was simply, "Orders from the top were to play LP's."

Another unexpected development was in the music selected, much of which was polite jazz or even New Age, and played at very moderate levels. It was a far cry from past shows, where everyone took his turn filling the corridors with the roar of the Sonic Spectacular of the Month, pulling the crowds in with sheer sound energy. (That's still the way Dick Shahinian does it. He was there in person, very much determined that anyone in even the remote vicinity of his room *hear* his loudspeakers. He neatly dodged the LP-vs.-CD issue by using robust analog open-reel tapes.)

After the show, it occurred to me to call Ken Nelson, a public-relations specialist who serves as one of the show's operators, to inquire about the high end's sudden shift in musical preferences. I learned, as I half expected, that at the show's opening a plea had gone out to the exhibitors to keep levels down to a 92-dB maximum, presumably in the interest of ear endurance and, well, public relations. The degree of compliance must have been gratifying, to say the least, and evidently a number of exhibitors deliberately selected types of music appropriate to those levels.

My feelings on the matter are mixed, however. True, it is heartening to see the most aggressive segment of the industry cooperate on a good-neighbor policy in the face of great marketing pressure. On the other hand, that is not what it's all about. Futile as it may be to try to

make buying decisions in a strange room with strange speakers, among many strange people, there are at least some things that can be determined, such as whether the equipment can stand up to what you intend to dish out. Buyers of gear this expensive are bound to flog it a bit in their enthusiasm, and 92 dB hardly amounts to a proper thrashing. It is, in fact, abnormally quiet to those accustomed to listening to live music.

In a typical good hall, a large symphony orchestra with its bass drum active tops out at about 102 dB (slow meter response, C-weighting). I have made the measurement many times, and this number keeps coming up. (The acoustically refurbished Carnegie Hall might be a bit louder, but the management has not yet admitted my meter for confirmation. I suspect they are a trifle gun-shy, having been sniped at by a few music critics. They have little to fear from me, actually. At a recent concert I thought the hall sounded opulent and glowing.) A level of 102 dB is satisfyingly loud but certainly not shattering. It should be well within the limits of any high-end equipment deserving of the name, and yet it does have the advantage of introducing a little periodic stress into the reproducing situation, and I consider this important.

At such a level, indications of compression and limiting effects might become discernible with certain loudspeaker drivers. Heating of voice coils may influence crossover-network behavior. I would not expect to hear any gross breakup at such a level, but it is worth knowing that it *isn't* there. In the case of a mere 92-dB level, by contrast, nothing much is really happening or is likely to happen.

Finally, I think that 102 dB, if kept to religiously as a maximum, is something the exhibitors could live with, especially spaced out as they were in the New York Penta hotel. So I commend the experiment to the organizers, without wishing to put pandemonium in the place of orderliness and without at all meaning to carp. Taken all together, it was a pretty decent and civilized show. All I've been left to pick at are the small details. □



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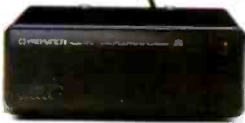


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