

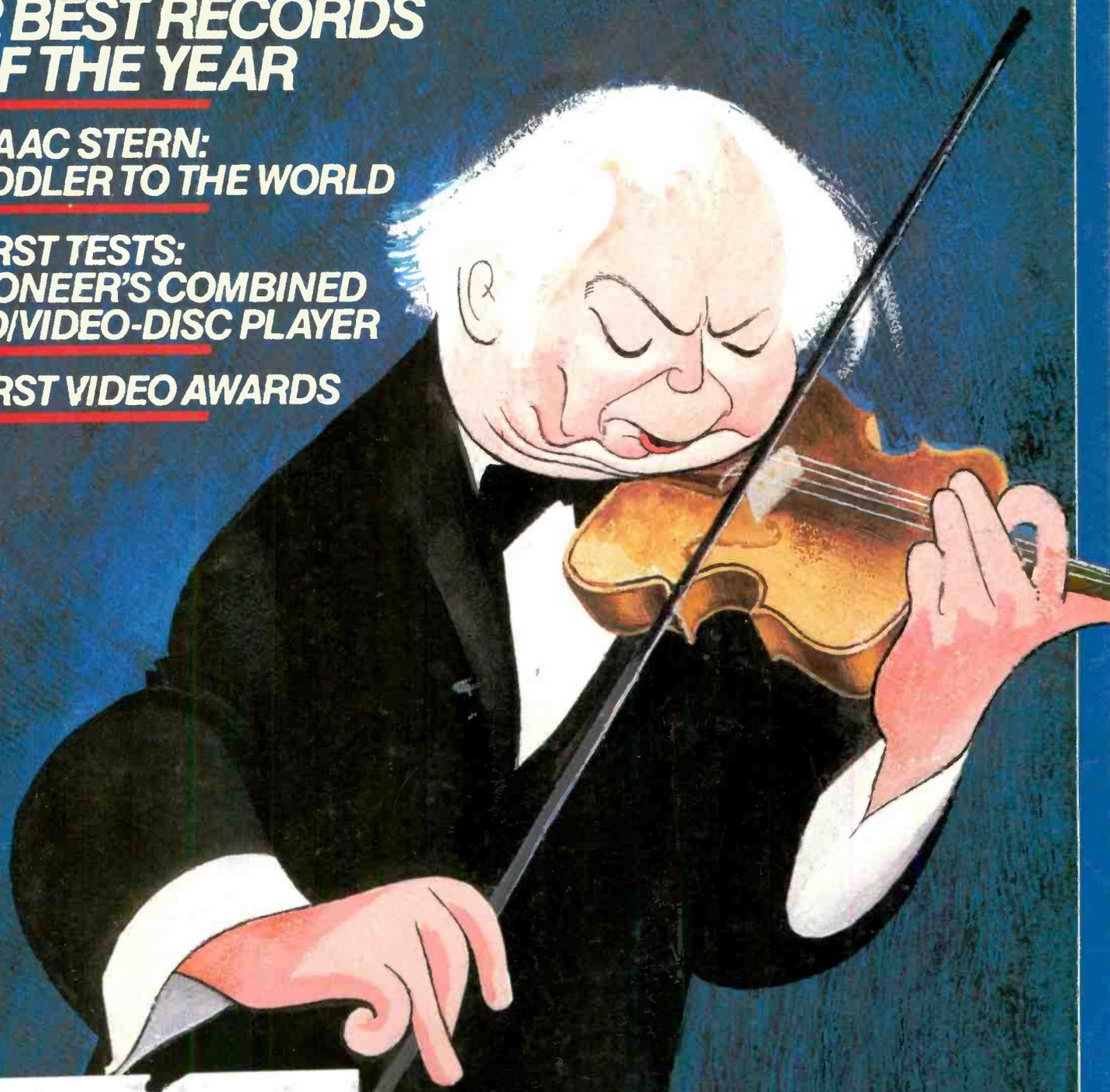
Stereo Review

12 BEST RECORDS OF THE YEAR

ISAAC STERN: FIDDLER TO THE WORLD

FIRST TESTS: PIONEER'S COMBINED CD/VIDEO-DISC PLAYER

FIRST VIDEO AWARDS



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Putting More Pleasure in Sound.

CIRCLE NO. 44 ON READER SERVICE CARD



by Gordon Sell and Christie Barter

RIAA AWARDS

The Recording Industry Association of America has been giving Gold Single and Album awards to best-selling records since 1958. Since 1978 the RIAA has given Platinum Awards to records that sold more than 1 million discs or tapes, and now the organization is recognizing sales of subsequent millions with Multi-Platinum Awards. The first 106 of the new awards were given in December. Tops on the list was Michael Jackson's "Thriller" with U.S. sales of 20 million units. Fleetwood Mac's "Rumours" came in second with 12 million.



CD SUPER-SET

All of Beethoven's piano sonatas, played by Alfred Brendel, have now been released by Philips on eleven CD's. The set of three multiple-disc jewel boxes is housed in a single slip-case, making it the largest CD package yet. It's also a bargain: you can buy the eleven CD's for the price of eight.

STEREO TV

By the time you read this, more than 25 U.S. TV stations should be on the air with regular stereo TV broadcasts, according to a timetable published in *TV Digest*. The Chicago PBS station *WTTW* was the first with regular stereo programming, according to a PBS spokesman who said the network sent out more than 200 hours of stereo in 1984 and should top 500 hours in 1985.

TECH NOTES

Acoustic Research has developed a new series of high-end speakers that have outward-firing side speakers driven via a user-controlled delay line for richer ambience....The David Hafler Company has bought the assets of Acoustat, the bankrupt maker of

electrostatic speakers. Hafler plans to continue Acoustat's operations and also plans a line of car-stereo amplifiers....Shure is offering the owners of old V15 Type III and Type IV cartridges a Micro-Ridge upgrading stylus for \$58 and \$80, respectively....JVC is giving a 30-cassette storage rack to purchasers of four DA7-90 audio cassettes....Nakamichi is selling high-quality prerecorded cassettes recorded in real time on modified ZX-9 tape. Price: \$17.95.

BOSE WAVE-GUIDE SPEAKER

The Bose Corp. has developed a new type of speaker that will provide the bass for the just-announced Acoustic Wave Music System. The 55- to 700-Hz speaker consists of a 4½-inch driver that is mounted one quarter of the way along a folded, 8-foot wave guide. Its first use is in the Acoustic Wave system, which includes stereo tweeters, a tape deck, an AM/FM tuner, and an amplifier for \$650.

FOR LIBERACE LOVERS

Milwaukee has a new way to honor the city's native son and Rhinestone Cowboy of the Keyboard, the pianist Liberace. Near his childhood home stands the century-old Ward Memorial Theater. A drive has been started to raise \$1.6 million to renovate the theater and rename it for Liberace. Contributions for the renovation can be sent to Soldiers' Home Foundation, P.O. Box 820, Hales Corners, Wisc. 53130.



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Cover: Isaac Stern by Al Hirschfeld

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by William Livingstone



With baritone Sherrill Milnes (right)

Quality and Life

THE writers and editors of this magazine are people who are obsessed with quality. We are constantly in pursuit of technical excellence in electronic equipment and artistic excellence in recorded music.

If you know me only from the monthly photographs at the head of this column, you probably think I spend all my time at quality-control points on assembly lines at speaker plants or going to parties for musicians who have won prizes or awards. Well, I want to tell you that being the editor-in-chief of the world's most widely read audio and music magazine is a difficult job. It involves long hours, hard work, and even some sleepless nights.

But it is true that I get invited to a lot of awards parties. I was pleased to be on hand when ASCAP gave a Deems Taylor Award to my colleague Richard Freed for the high quality of his program notes for several American orchestras.

Since Claudio Arrau was one of the first world-class pianists I ever heard, I was moved by the ceremony at which he was made a Commander of the French Legion of Honor. And since I was present at the old Metropolitan Opera House on December 2, 1965, when the baritone Sherrill Milnes made his Met debut, I've always felt that I had a small stake in his career. Consequently, I was especially glad to be at the Players Club the other day when Northwood Institute and the Institute for Advanced Studies in

the Theater Arts gave him their Achievement in the Arts Award.

Every year in our tireless search for quality the editors and critics of this magazine pick what we think are the twelve best records of the year for our annual awards. Some of these Record of the Year Awards go to best sellers, such as Michael Jackson's "Thriller" last year and Prince's "Purple Rain" this year. But it is particularly gratifying to me when we count the votes and discover that an award has been won by a record on a small label or one by a little-known artist. I think it meant a lot to the pianist Cécile Ousset and the singer Susannah McCorkle last year when we gave awards to their records.

Conductor Herbert von Karajan has won so many awards that ours this year may mean little to him. But it should mean a lot to the jazz artist Joe Williams that his first album on Delos is singled out for an award. And I hope it thrills the young guitarists in the Falla Trio that one is going to their Concord debut album.

Our 1985 Mabel Mercer Award for outstanding contributions to the quality of American musical life goes to the great violinist and humanitarian Isaac Stern. Others who have received this lifetime achievement award besides the late Miss Mercer are Jascha Heifetz, Arthur Fiedler, Richard Rodgers, Beverly Sills, Earl Hines, Aaron Copland, Benny Goodman, Eugene Ormandy, and Frank Sinatra.

Musically and personally these artists are very different, but what they have in common is the consistently high quality of the body of work each has produced. If you wonder why an award named for a British-born cabaret singer is being presented to a classical violinist, it is because in their different ways both have sustained in long careers the life-enhancing quality of music.

When the quality of life in various cities is rated, many things are considered—good schools, clean air, low incidence of crime, and high frequency of cultural events. Our awards (listed on page 42) are meant first as recognition to artists, but I hope they serve you readers by calling attention to records that will enrich the quality of your lives. □

Stereo Review

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High Fidelity Magazine

Polk's critically acclaimed, Audio Video Grand Prix Award winning SDA (patented) technology has been called the most important fundamental advance in loudspeaker technology since stereo itself. Listener's jaws drop in amazement when they hear the huge, lifelike, three-dimensional sonic image produced by Polk's SDA speakers. The nation's top audio experts agree that Polk SDA loudspeakers always sound better than conventional loudspeakers. Stereo Review said, "Spectacular... the result is always better than would be achieved by conventional speakers." High Fidelity said, "Astounding... We have yet to hear any stereo program that doesn't benefit." Now the dramatic audible benefits of Polk's exclusive true stereo SDA technology are available in 3 uniquely superb loudspeaker systems, the SDA-1A, the SDA-2 and the SDA Compact Reference System.

The First True Stereo Speakers

Without exaggeration, the design principals embodied in the SDAs could be said to make them the world's first true stereo speakers. When the big switch was made from mono to stereo about 25 years ago, the basic concept of loudspeaker design was never modified to take into account the fundamental difference between a mono and stereo signal.

What is the difference between a mono and stereo loudspeaker? It's quite simple. The fundamental and basic concept of mono is that you have one signal (and speaker) meant to be heard by both ears at

once. However, the fundamental and basic concept of stereo is that a much more lifelike three-dimensional sound is achieved by having 2 different signals, each played back through a separate speaker and each meant to be heard by only one ear apiece (L or R). So quite simply, a mono loudspeaker is designed to be heard by two ears at once while true stereo loudspeakers should each be heard by only one ear apiece (like headphones). The revolutionary Polk SDAs are the first true stereo speakers engineered to accomplish this and fully realize the astonishingly lifelike three-dimensional imaging capabilities of the stereophonic sound medium.

"A new dimension in the sound!"

Stereo Review Magazine

Words alone cannot fully describe how much more lifelike true stereo reproduction is. Reviewers, critical listeners and novices alike are usually overwhelmed by the magnitude of the sonic improvement achieved by Polk's Stereo/Dimensional Technology. You will hear a huge sound stage which extends not only beyond the speakers, but beyond the walls of your listening room itself. The lifelike ambience revealed by the SDAs makes it sound as though you have been transported to the acoustic environment of the original sonic event. Every instrument, vocalist and sound becomes tangible, distinct, alive and firmly placed in its own natural spatial position. You will hear instruments, ambience, subtle musical nuances and other information, (which is normally masked by conventional speakers), revealed for your enjoyment by the SDAs. This benefit is accurately described

by Julian Hirsch in Stereo Review, "... the sense of discovery experienced when playing an old favorite stereo record and hearing, quite literally, a new dimension in the sound is a most attractive bonus..." Records, CD's, tapes, video and FM all benefit equally as dramatically. SDAs allow you to experience the spine tingling excitement, majesty and pleasure of live music in your own home. You must hear the remarkable sonic benefits of SDA technology for yourself. You too will agree with Stereo Review's dramatic conclusion: "the result is always better than would be achieved by conventional speakers... it does indeed add a new dimension to reproduced sound."

The SDA-1A — (\$850) is a beautifully styled, full-sized floor-standing system combining Polk state-of-the-art components with our exclusive true stereo technology for the most lifelike sound possible. It has tremendous dynamic range (120 db output), high efficiency and truly awesome bass performance. While efficient enough to be driven by a small receiver, it will handle a 500 watt per channel super amp.

The SDA-2 — (\$599.95) is very similar in construction and performance to the top of the line SDA-1A, but is scaled down in size and price. High Fidelity said listening to the SDA-2, is "an amazing experience."

The New SDA Compact Reference System — (\$395) is the world's best sounding bookshelf loudspeaker. It combines the exceptionally lifelike sonic performance achieved by Polk's exclusive true stereo technology with a strikingly handsome enclosure of modest proportions, which can be easily and unobtrusively located in any room. A built-in rear mounted 10" subwoofer allows the CRS to achieve remarkably dynamic bass performance, normally impossible for a speaker of its size. They can be placed right up against the back wall, on a stand or on a shelf without compromising the ability of these amazing compact speakers to project a huge sonic image throughout your room.

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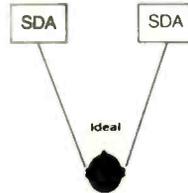
Conventional loudspeakers are designed for monaural operation where one speaker is heard by both ears at once.

Normal Stereo



When conventional speakers reproduce stereo, stereo separation is reduced because each speaker is heard by both ears.

True Stereo



Polk SDA loudspeakers maintain full stereo separation because each ear hears only the one proper speaker.

Polk's True Stereo SDAs Maintain Full Stereo Separation

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“Superior”
Stereo Review Magazine

“Amazing”
Audio Alternatives Magazine



**“Our advice is not to buy
speakers until you’ve
heard the Polks.”**

Musician Magazine

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The Polk Audio Monitor Series (left to right) Monitor 10B, Monitor 5jr, RTA 12C, Monitor 4A, Monitor 5B and Monitor 7C (stands optional).

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CIRCLE NO. 37 ON READER SERVICE CARD

Polk's Remarkable Monitors Redefine Incredible Sound/Affordable Price

"Vastly superior to the competition."

Musician Magazine

"At the price, they're simply a steal!"

Audiogram Magazine

A new generation of Polk Monitors is now available which incorporate the same high definition polymer tweeter and Optimized Flux Density drivers developed for the SDAs. Polk Monitor Series loudspeakers have always had a well deserved reputation for offering state-of-the-art performance and technology usually found only in systems which sell for many times their modest cost. In fact, many knowledgeable listeners consider that outside of the SDAs, the Polk Monitors are the finest imaging conventional speakers in the world regardless of price. They have been compared in performance with loudspeakers which sell for up to \$10,000 a pair and are absolutely the best sounding loudspeakers for the money available on the market. Now they sound even better than ever.

"Open, uncolored, perfectly imaged sound!"

Musician Magazine

All the Polk Monitors regardless of price offer consistently superb construction and sonic performance. They achieve open boxless, three dimensional imaging surpassed only by the SDAs. The Monitor's silky smooth frequency response assures natural, non fatiguing, easy to listen to sound; while their instantaneous transient response results in music that is crisply reproduced with lifelike clarity and detail. In addition, dynamic bass performance, ultra wide dispersion, high efficiency and high power handling are all much appreciated hallmarks of Monitor Series performance.

The consistently superb performance of the Polk Monitors is in large part due to the fact that they all utilize very similar components and design features. However, more importantly, it is the elegant integration of concepts and components which results in the superior sonic performance and value which sets the Monitor Series apart. Audiogram magazine said, "How does Polk do it? We think it is mostly execution. They hear very well and they care." Audiogram is absolutely right. At Polk we take the same care with each and every product we build, whether it is our most or least expensive. We lavish the same lengthy amount of critical listening and tuning on every single Polk speaker because we know that having a limited budget does not necessarily indi-

cate that you have a limited ability to appreciate true musical quality.

"Superior sound at a moderate price."

Stereo Review Magazine

There are six Polk Monitor Series loudspeakers (Plus the LF 14 Add on Subwoofer). As you move up the Monitor Series, the speakers get larger and more efficient, handle higher power, have greater dynamic range and better bass response. They are designed so that a smaller Polk played in a small room will sound nearly identical to a larger Polk in a large room. And, of course, a larger Polk in a smaller room will play that much louder and have even more bass. The RTA 12C also incorporates unique technology which results in improved imaging and clarity. There is a Polk Monitor which is perfect to fulfill your sonic dreams, at a price you can afford.

The RTA 12C — (\$459.95) is the finest conventional (non SDA) speaker system that Polk manufactures. Its extremely high power handling (500 watts) and efficiency (92 db 1 meter 1 watt) result in remarkable dynamic range from large or small amplifiers. It utilizes phase-coherent open air driver mounting in a mirror imaged full-sized floor-standing configuration for superior sonic imaging and clarity. In addition to receiving many rave reviews, the RTA 12C has won the AudioVideo® Grand Prix Speaker of the Year Award and was selected for the prestigious CES Design and Engineering Exhibition was one of the industry's most innovative products!

The Monitor 10B — (\$324.95) is considered one of the world's best sounding loudspeakers and in the words of Audiogram Magazine, "At the price, they are simply a steal." The 10B offers sonic performance almost equal to the 12 at a lower cost in a more compact enclosure. Like the 12, the 10 utilizes dual Polk trilaminar-polymer bass midrange drivers coupled to a built-in subwoofer for an outstanding bass response and dynamic range.

The Monitor 7C — (\$239.95) is basically a smaller, less expensive version of the Monitor 10, utilizing the same 10"

subwoofer and one less bass midrange driver. It can be either shelf or stand mounted with excellent results. How good? Audio Alternatives Magazine said, "It is amazing."

The Monitor 5B — (\$179.95)

Similar in design and performance to the Monitor 7, however, it utilizes an 8" subwoofer (rather than 10"). It is more compact, allowing even more placement options.

The Monitor 5jr. — (\$124.95)

has been called the best sounding speaker of its size in the world (regardless of price). It has also been called the best sounding speaker of its price in the world (regardless of size). It incorporates the same components as the top of the line SDA 1A, and achieves lifelike three dimensional musical imaging which 10 years ago was not available in any bookshelf speaker at any price!

The Monitor 4A — (\$79.95 ea.) Even though the 4A is Polk's least expensive home loudspeaker, one quick look and listen will demonstrate that it shares many of the same high technology components and rewarding musical performance of the more expensive Polks. Audio critic, Lawrence Johnson called it, "an all around star of great magnitude." The 4A's uniquely affordable price means that no matter how small your budget, you can afford the incredible sound of Polk!

The experts agree: Polk speakers sound better. Hear them for yourself!

Contact us for full information and the name of your nearest Polk dealer.

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CIRCLE NO. 37 ON READER SERVICE CARD

Nothing but the Music

The December STEREO REVIEW arrived two days after I had purchased a Sony Discman CD player. Your test report simply confirmed what my ears had already told me. This is what I have been searching for ever since I started collecting records more than thirty years ago. The Compact Discs give me the music, the whole music, and nothing but the music.

I find I get the most satisfying results using a good pair of headphones. With CD's the sound from headphones doesn't seem trapped inside my head; the orchestra seems to be 20 feet in front of me. With my eyes closed it is very hard not to believe I'm sitting on the main floor of a good concert hall. No analog system—and I've heard them all, including the "high end"—has ever done this for me.

CHARLES S. REAVIS
San Antonio, Tex.

Whether *one* person does or does not like the sound of digital recordings is hardly something that I want to see in STEREO REVIEW's "Letters" section. As any regular reader will attest, musical taste is one of the most personal and subjective possessions that one has. Over the years that I have been reading STEREO REVIEW, I have never seen such misguided attention as that given to letters regarding the pros and cons of the digital audio disc.

TIM R. WITORT
Turlock, Calif.

Esoteric Cartridges

I enjoyed reading Dan Sweeney's article on esoteric phono cartridges in November, but I request a correction of a statement attributed to me in the first column of page 72.

The quote attributed to me was taken out of context, the correct context being that uncontrolled resonances outside of the audible range, *e.g.*, above 20 kHz, can have some effects in the audible range. At no time did I intend to state or imply that Dynavector cartridges have uncontrolled resonance problems within the range of human hearing. At no time was any denigration of Dynavector or any of its excellent products intended.

JOE ABRAMS
National Sales Manager
Sumiko, Inc.
Berkeley, Calif.

New Zealand's Pride

The reviews in the December issue of releases by Split Enz and the Drongos were a timely look at New Zealand music, which, like its film-making,

seems to be eclipsed by the output of its brasher cousin across the Tasman Sea, Australia. A closer look reveals superb New Zealand musicians everywhere, including members of Manfred Mann's Earth Band and Uriah Heep, a surprising number of bass-baritones in German opera companies, and the author of the *Rocky Horror Show*.

It was thus embarrassing to note STEREO REVIEW's blooper on page 101 of the same issue. Dame Kiri Te Kanawa is definitely *not* "the great Australian soprano." She is every inch a New Zealander, and it is difficult not to attribute her greatness in large measure to her Maori ancestry.

DAVID CALDER
San Francisco, Calif.

And the Winner Is . . .

I was fascinated by Julian Hirsch's January column, in which he described a direct comparison between the sound of a top-quality analog LP, played by a state-of-the-art cartridge, and a Compact Disc of the same material. Now, how about letting us know the identity of the cartridge that Mr. Hirsch called "the real 'winner' of this demonstration"?

THOR STOCKMAN
Redlands, Calif.

It was the Stanton Epoch II HZ9S, which we tested for the same issue.

No Sex, Please

After reading Alanna Nash's October article on the group Exile, I had to look again at the cover to see if it was STEREO REVIEW or *Hustler*. Her December review of Exile's "Kentucky Hearts" was more of the same. Please ask her to keep her sex life at home. Leave the porn jokes to *Hustler*.

JEFF REID
Kelso, Wash.

Systems vs. Installations

Mr. Lonnie Veal's November letter about your "Systems" feature struck home with me. The old "Installation of the Month" was one of my favorite columns, and I used it to improve my equipment setup. On receiving each new issue I'd promptly check the contents to see if a new "Installation" was included, but that became a problem. There was only one "Installation" each in 1981 and 1982, and two at the end of 1983. In contrast, 1984 offered a flood, with an "Installation" in February and five of the new "Systems" features later in the year.

Like Mr. Veal, I felt that the June, July, and September "Systems" didn't compare with "Installation," but at

least they were there. The October and December installments were tremendously improved. Please try to keep them coming. I'm starting to check the contents again.

TED SANDO
Albuquerque, N.M.

The Video Message

As a communications major at St. John's University, I appreciated William Livingstone's November editorial, "The Video Message." One of the most powerful points he made was that video cassettes give people the freedom to choose, leaving the programming up to us. It's true, and I hope VCR's go on forever.

MICHAEL P. AMBROSIO
Flushing, N.Y.

Realistic Rodrigues

I have been a loyal reader of STEREO REVIEW since my college days. The equipment and record reviews are always excellent and bring me many hours of pleasure. Another source of pleasure for me, and probably many other readers, are the cartoons by Charles Rodrigues. His work is both humorous and, in many cases, accurate in depicting the way *real* hi-fi enthusiasts feel about their hobby. Have you ever considered doing a feature of some of his best cartoons?

OLIVER NELSON
Indianapolis, Ind.

A book-length collection of Rodrigues cartoons from STEREO REVIEW has been prepared and is awaiting a publisher.

ISAAC STERN POSTER

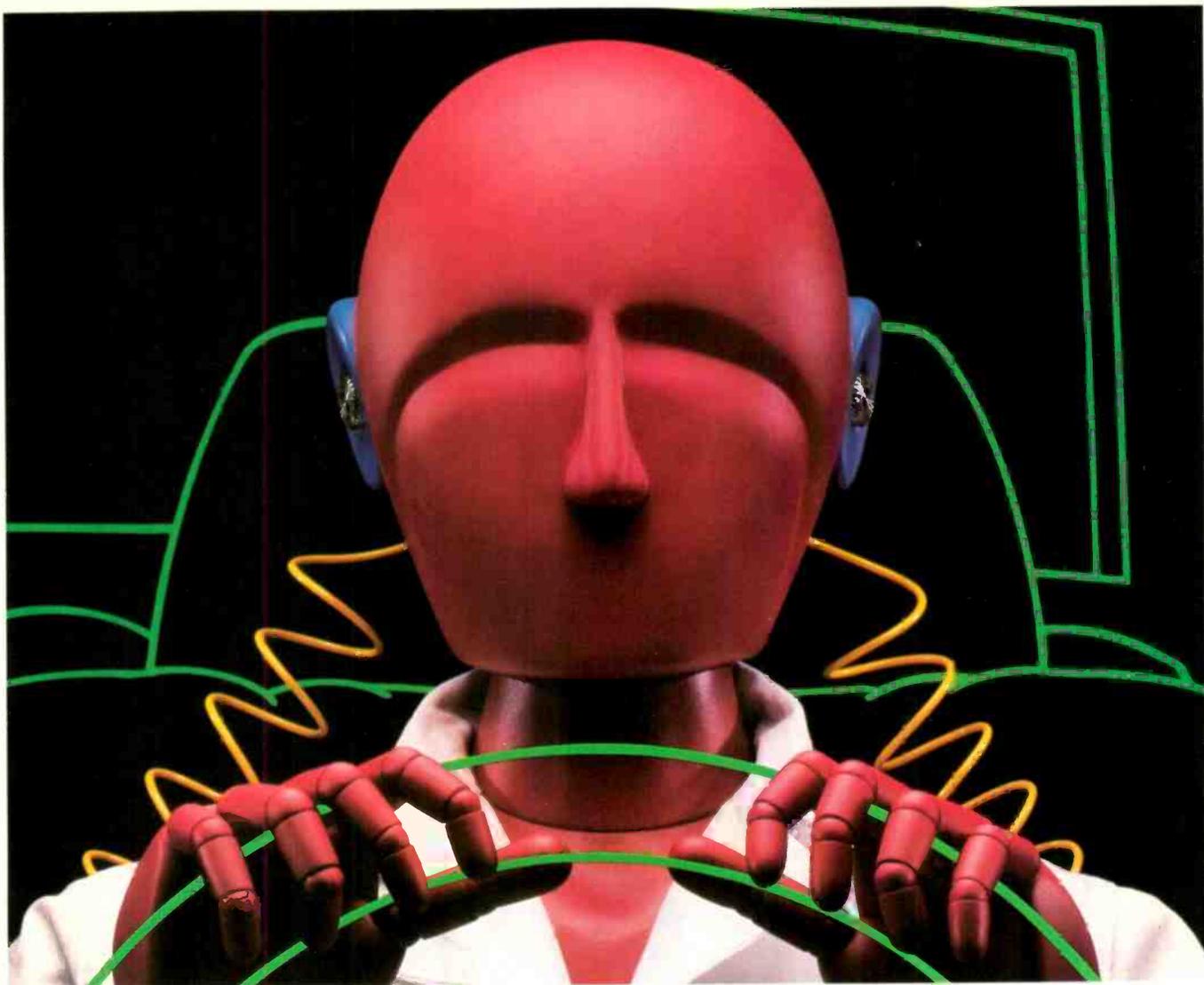
A limited-edition, full-color poster version of Al Hirschfeld's drawing of Isaac Stern on this month's cover is available, while the supply lasts, to STEREO REVIEW readers for just \$4 to cover postage and handling costs.

Commemorating our 1985 Mabel Mercer Award to Stern, the poster can be ordered from Awards Poster, Stereo Review, P.O. Box 1129, Murray Hill Station, New York, N.Y. 10016.

ISAAC STERN



THE MABEL MERCER AWARD 1985
for outstanding contributions to
the quality of American musical life



"Ever since I matched a Delco-GM/Bose Music System to each GM car, nobody calls me a dummy."

Morgan

Born in 1959 at M.I.T.
Morgan is a vital member of the Delco-GM/Bose Design Team.



Morgan helps us design a different Delco-GM/Bose Music System to match the acoustics of specific GM car models, each with four individual speaker/amplifier modules.

"Many people ask me, 'Morgan, why bother to match a different music system to each individual car model? Can it truly improve sound that much?'"

"I don't say a word. I simply point to an ever-growing collection of rave reviews."

"**Stereo Review** characterizes an automobile with a Delco-GM/Bose Music System as a 'sonic paradise.' **Popular Science** says 'the results are fantastic.' And **Motor Trend** calls it 'the one option no one should go without.'"

"Did you know this is the first time a car and music system have been designed as one?"

"That's because until I was created, determining the acoustical differences from car to car was hopelessly complex, and understanding the listening space is an essential ingredient of this music system."

"You see, I've been blessed with an acoustic computer brain that allows me to speak a

language all my own—'INTERVAL' (that stands for Interpretive Visual Analysis Language).

I can draw pictures of sound the way humans hear it. So engineers can design a custom music system for specific models of Cadillac, Oldsmobile, Buick and Chevrolet.

"Does matching music systems to cars really make a difference? I simply refer you to what I recently read in **Popular Mechanics**, 'you have to hear it to believe it.'"

"I invite you to visit your GM dealer and let your ears decide. Mine already have."

Delco **GM** **BOSE**

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You've got what it takes.

Salem Spirit

*Share the spirit.
Share the refreshment.*

Warning: The Surgeon General Has Determined
That Cigarette Smoking Is Dangerous to Your Health.



NEW PRODUCTS



Jamo

Jamo's first car speakers include four panel-mount models for installation in doors or dashboards or on the rear deck. The largest of the panel-mount speakers is the Model 70, which has a 6½-inch woofer and a 2¾-inch tweeter. It produces a 91-dB sound-pressure level with a 1-watt input, and its frequency response is 50 to 20,000 Hz. Price: \$125.90 per pair. The Model 60, a three-way bass-reflex speaker in an enclosure, is intended for shelf mounting. It combines a 4-inch woofer, a 2¾-inch mid-range, and a 1¾-inch tweeter. Its sensitivity is rated at 89 dB with a 1-watt input measured at 1 meter. Frequency response is 70 to 20,000 Hz. The enclosure measures 10 inches x 4½ inches x 6 inches. Price: \$199.90 per pair.

The Model 50 is a two-way model with a 5-inch woofer and a 1¾-inch tweeter. Its rated sensitivity is 89 dB, and frequency response is 60 to 20,000 Hz. Price: \$99.90 per pair. A 4-inch woofer and a 1¾-inch tweeter are combined in the Model 40, which produces 88 dB SPL with a 1-watt input. Its frequency response is 70 to 20,000 Hz. The Model 30 has a single 4-inch full-range driver. Sensitivity is 87 dB, and frequency response is given as 70 to 14,000 Hz. Price: \$69.90 per pair. All the speakers are rated at 4 ohms and are finished in gun-metal gray. Mounting hardware is included. Jamo U.S.A., Dept. SR, 425 Huehl Rd., Bldg. 3A, Northbrook, Ill. 60062.

Circle 120 on reader service card

Nakamichi



The first Compact Disc players from Nakamichi feature a "floating" drive system, quadruple oversampling, digital filters, and independent left and right digital-to-analog (D/A) converters. The Models OMS-7 (shown) and OMS-5 have circuitry that oversamples the digital data at four times the 44.1-kHz

sampling frequency. Digital filters separate the baseband from the high-frequency components without inducing phase shifts. This allows the use of a relatively gentle analog filter after D/A conversion. The channels are separated before conversion, when they are still in digital form.

The drive mechanism is mounted on a die-cast base that is suspended on coil springs so as to float free of the main chassis. As a result, the players are said to be virtually impervious to external shock. The disc is driven by a cog-free linear-torque motor for smooth rotation. Controls select display of elapsed or remaining time and repeat play of the entire disc (or, in the OMS-7, of the programmed tracks). Frequency response is given as 5 to 20,000 Hz ±0.5 dB, signal-to-noise ratio as 92 dB (A-weighted).

The players share the basic features, but the OMS-7 adds a ten-digit keypad that allows direct track search, direct index search, and programmed selection of up to twenty-four tracks. The OMS-7 also has a headphone jack (with level control) and wireless remote control for play, reverse skip, forward skip, pause, stop, fast forward, and fast reverse. Prices: OMS-7, \$1,295; OMS-5, \$995. Nakamichi, Dept. SR, 19701 S. Vermont Ave., Torrance, Calif. 90502.

Circle 121 on reader service card



Magnum

The new Magnum Opus series from Magnum Loudspeakers consists of eight car speakers: a 4½-inch, a 5¼-inch, a 4 x 10-inch, two 6 x 9-inch coaxials, and a 6 x 9-inch three-way as well as 6 x 9-inch and 8-inch subwoofers (not shown). The speakers have nonmagnetic die-cast baskets, high-temperature Kapton voice coils, textured polypropylene woofers, polycarbonate dome tweeters (except for the 6 x 9-inch coaxial, which has a textile dome tweeter), and high-flux-density magnets.

Power-handling capability ranges from 30 to 50 watts rms per channel, and all the speakers are rated for a nominal impedance of 4 ohms. The three-way and coaxial speakers are cooled by ferrofluid and protected against excessive heat. Prices range from \$109.95 to \$249.95 per pair. Magnum Loudspeakers, Dept. SR, 11545 Tuxford St., Sun Valley, Calif. 91352.

Circle 122 on reader service card

Sonex / Illbruck

Sonex acoustic-foam panels, distributed by Illbruck, are designed to reduce the effects in listening rooms of slap echo, noise, room flexure, reflections, and standing waves while smoothing the frequency response by absorbing excessive sound energy. The panels are made of a high-density, open-cell polyester urethane material formed into wedges. Unlike most materials, the foam is said to be very absorptive over a wide range of frequencies and almost totally absorptive from 250 to 20,000 Hz. Previously available only for professional applications, Sonex foam now comes in 24 x 24 x 2-inch "Junior" panels for home use.

The panels may be glued directly to the wall or attached to sheets of plywood or masonite and hung. They are particularly recommended for use on the walls behind loudspeakers and behind primary listening positions. Sonex Juniors are packed four to a box and come in charcoal, brown, or beige. Price per box: \$39.95. Illbruck/USA, Dept. SR, 3800 Washington Ave. N., Minneapolis, Minn. 55412.

Circle 123 on reader service card

JVC

The top turntable in JVC's new line is the automatic QL-Y66F, which features a platter that floats in a magnetic field. The coreless d.c. motor has "magnetic support to allow the platter to float by magnetic attraction," according to JVC. The servo-controlled tone arm is said to improve tracking and to lower distortion. The turntable comes with a straight tone arm and an S-shaped replacement arm. Controls on the front of the chassis select 33⅓ or 45 rpm, start and stop the motor, activate the repeat function, select record size, move the tone arm, and start or stop play. The solid cabinet weighs 27 pounds, and the platter itself is 6.4 pounds. Rated signal-to-noise ratio is 80 dB, wow-and-flutter 0.015 percent weighted rms. Price: \$470. JVC of America, Dept. SR, 41 Slater Dr., Elmwood Park, N.J. 07407.

Circle 124 on reader service card





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Legendary artists.
State of the art
technology.



RCD1-5042



RCD1-5315



RCD1-4962



ECD-88041



RCD1-5035

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DIGITAL AUDIO

ERATO RECORDS & CASSETTES
Distributed by RCA RED SEAL

RCA RED SEAL
Where artists become legends.

NEW PRODUCTS



Koss

Three portable headphones from Koss make up the new KC series. The KC-10 has fixed earcups, a 1/4-inch-plug adaptor, and a 43-inch cord. Its frequency response is 40 to 12,000 Hz. Price: \$9.95. The KC-19 comes with contoured ear cushions and a variable pivot earcup. A 39-inch cord and a plug adaptor are included. Rated frequency response is 20 to 17,000 Hz. Price: \$15.95.

The KC-24 has a volume control, a pair of spare ear cushions, a 6-foot cord, and a screw-on L-plug with adaptor. The frequency response is 20 to 17,000 Hz. Price: \$19.95. Koss Corp., Dept. SR, 4129 North Port Washington Ave., Milwaukee, Wis. 53212.

Circle 125 on reader service card

Mirage

The latest generation of Mirage loudspeakers features a new crossover design. Called the Multi Time-Constant crossover, it is first-order (6 dB per octave) in the pass band and higher-order (12 dB or more) in the stop band. The new design was intended to achieve flat frequency response, uniform phase response, superior transient response, and high power handling.

The top model in the five-speaker line, the 750, employs a 10-inch woofer reinforced with concentric ribbing, a 4-inch midrange, and a 3/4-inch dome tweeter. Both the woofer and midrange drivers have plastic-impregnated fiber cones. For optimal woofer loading, Mirage recommends that the speakers be placed on its Model T-2 floor stands (\$50 per pair). Crossover points are at 300 and 5,000 Hz, and impedance is rated at 8 ohms. The recommended power range is 20 to 200 watts per chan-

nel. Frequency response is given as 39 to 20,000 Hz \pm 3 dB. Dimensions are 31 1/2 inches high, 12 1/2 inches wide, and 9 1/4 inches deep. Price: \$599 per pair in walnut-grain vinyl, \$659 per pair in genuine oak veneer.

The smallest speaker in the series, the Model 200, has a rated frequency response of 60 to 20,000 Hz \pm 3 dB or 90 to 20,000 Hz \pm 1 dB. Price: \$229 per pair in vinyl, \$279 per pair in oak veneer. Mirage Acoustics, Dept. SR, 850 Rear Providence Hwy., Dedham, Mass. 02026.

Circle 126 on reader service card

Concord

AM stereo broadcasts in the Motorola C-QUAM format can be received by the Concord HPL-550 car cassette/receiver. The four-gang quartz digital-synthesis tuner has eighteen FM and six AM station presets and Concord's proprietary FNR switchable FM noise reduction. The tape section features a d.c. servo-drive transport motor and an amorphous-core tape head, with Dolby B, Dolby C, and dbx noise reduction. The



HPL-550's amplifier is rated at 12 watts per channel from 20 to 20,000 Hz into 4 ohms with less than 0.8 percent total harmonic distortion. Price: \$599. Concord Systems, Dept. SR, 6025 Yolanda Ave., Tarzana, Calif. 91356.

Circle 127 on reader service card

JBL

A new titanium hard-dome tweeter is used in all four loudspeakers in the Ti series from JBL. Titanium's combination of high stiffness and low mass is said to enable near-instantaneous transient response and flat frequency response out to 27,000 Hz. The titanium dome is only 25 microns thick, but it is strengthened by molded ribs. Materials for the low-frequency and midrange drivers include Aquaplas laminate and filled polypropylene.

The top model in the Ti series is the four-way 250 Ti, which has a 14-inch woofer, 8-inch and 5-inch midrange drivers, and a 1-inch tweeter. The 240 Ti (shown) has the same complement except that it lacks the 8-inch midrange. The 120 Ti is similar, but with a 12-inch woofer, and the 18 Ti has a 6 1/2-inch woofer paired with the same tweeter as the others.

The speakers produce sound-pressure levels of from 88 to 90 dB with 1-watt





inputs. Maximum amplifier power ranges from 200 to 400 watts. All have a rated impedance of 8 ohms.

The Ti speakers have five-way gold-plated binding posts and floating grilles. The cabinet finish is hand-rubbed teak veneer. Prices range from \$536 to \$3,396 per pair. JBL, Dept. SR, 8500 Balboa Blvd., P.O. Box 1200, Northridge, Calif. 91329.

Circle 128 on reader service card

Sylvania

Two drawer-loading Compact Disc players from Sylvania can each be programmed to play up to twenty selected tracks in any order. The FDD104SL features skip forward, skip back, and three-speed fast forward and reverse. A repeat button allows repeat play of the entire disc or the programmed tracks. Soft muting is said to improve the concealment of drop-outs. The player measures 12½ inches wide, 3½ inches high, and 12 inches deep. Price: \$449.95.

The FDD304SL (shown) has the same features plus infrared remote control, index search to locate sections within a track, and automatic music scan, which samples the first 10 seconds of each selection. Up to twenty-four tracks can be put into memory for programmed playback, or unwanted tracks

can be skipped by entering their numbers and pressing the CANCEL button. A display shows either the time remaining on the disc or the elapsed time of the current track. A headphone jack is included. The FDD304SL measures 16½ inches wide, 3¼ inches high, and 12¾ inches deep. Price: \$599.95.

The specifications are nearly identical for both players. Frequency response is listed as 20 to 20,000 Hz ± 3 dB, signal-to-noise ratio and channel separation (at 1,000 Hz) as 90 dB, and total harmonic distortion as 0.005 percent. Phase linearity is given as ± 0.5 degree. Sylvania, Dept. SR, P.O. Box 6950, Knoxville, Tenn. 37914.

Circle 129 on reader service card

A pair of winners

ADS presents two best-sellers. Some facts. And a smattering of opinion.

The ADS L1290

Woven soft-dome tweeter. Benefit: extended high frequency response with low coloration. **1**

Tweeter uses high-gravity magnetic cooling fluid.

Two-inch soft-dome mid-range. Benefit: exceptional smoothness in critical middle frequencies. Uniform dispersion. Crisp, precise, stereo imaging. **2**

Two 8-inch Linear Drive® woofers for superb bass response and high output. Each driver mounted in its own acoustic suspension enclosure. **3**

Imported walnut cabinet. Also available in matte black. **4**

Inside the cabinet: a crossover network built of computer-grade components.

Below and behind: amplifier recess built into cabinet so the bi-amp option can be installed neatly.

Stiffite® woofer cones, with high rigidity-to-mass ratio produce quick transient response.

The bottom line: "...unusually flat

and smooth response over the full audio range and half an octave beyond, excellent dispersion . . . bass distortion lower than that of any common program source except a digital tape or disc." *Stereo Review*

The ADS 300

Superbly compact minispeaker (ADS invented the "mini" and while others have followed we have yet to be topped.)

Same soft-dome tweeter technology as larger ADS speakers. **5**

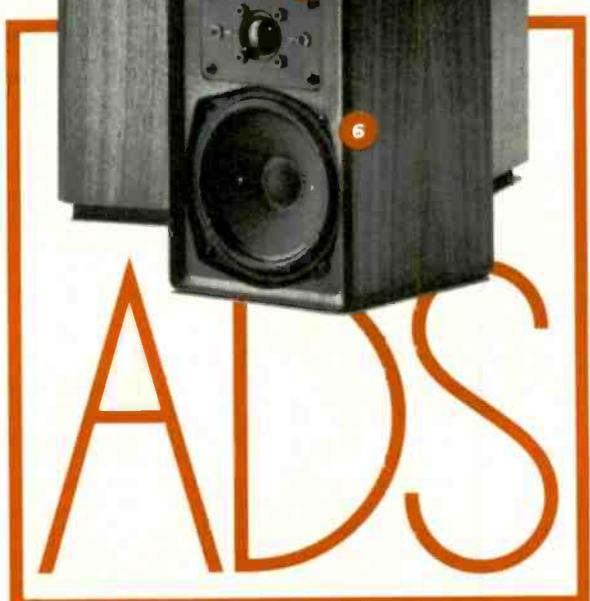
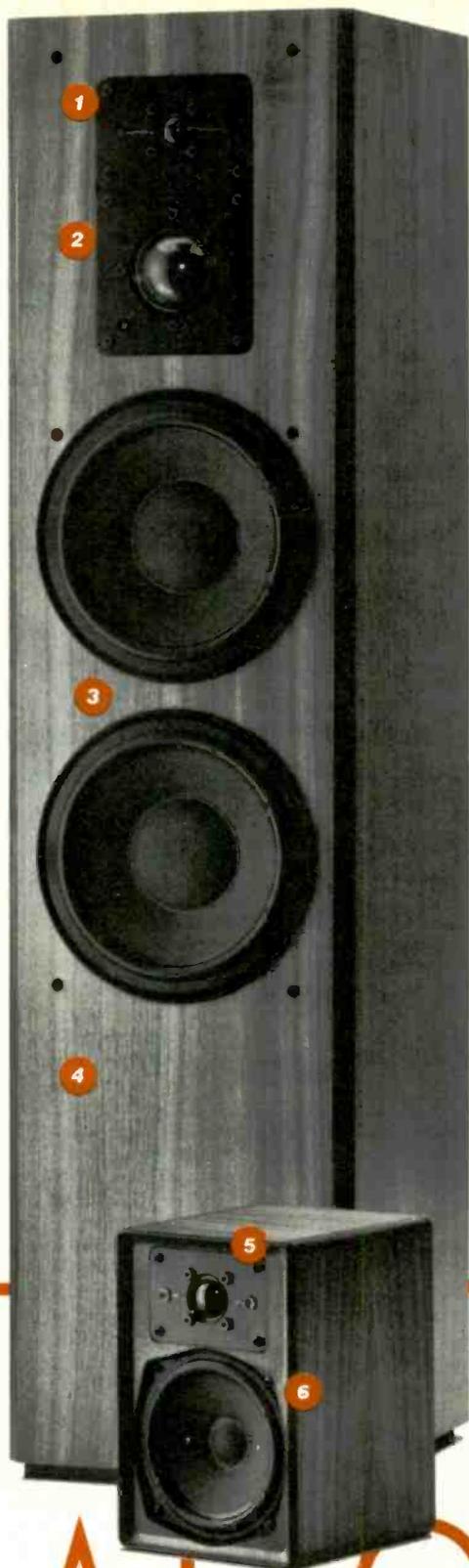
Same woofer technology incorporating butyl rubber surround, Stiffite® woofer cone. **6**

Same high-accuracy crossover technology. Characteristic, uncolored ADS sound.

"...best minispeaker I have yet heard. Well worth double the price in sonic excellence alone."

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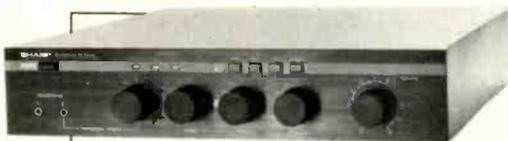


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AUDIO/VIDEO NEW PRODUCTS



Sharp

The AN1000U stereo TV adaptor enables two Sharp televisions, Models 20J580 and 25J307, to receive stereo TV broadcasts. The adaptor also decodes the Secondary Audio Program (SAP), if any, for a second language or alternate material. Lights indicate whether a broadcast is in stereo or has an SAP. There are switches for mono and the SAP and controls to adjust tone and balance. Two headphone jacks, one for the SAP and one for the primary audio program, are located on the front panel. The volume of the second headphone jack is adjustable, as is the line volume. Line-in and line-out terminals can be connected to a stereo system or to stereo VCR's. Price: \$199.95. Sharp Electronics, Dept. SR, 10 Sharp Plaza, Paramus, N.J. 07652.

Circle 130 on reader service card

Heath

A new Heath kit enables you to build a 25-inch television set with stereo amplification and four drivers. With the addition of a decoder soon to be available separately from Heath, the set will reproduce broadcast stereo sound (or the Secondary Audio Program, if any). Video specifications include 330 lines of resolution and 178-channel tuning capability. The picture tube has three focusing actions said to produce a cleaner, brighter image. A Color Sentry feature maintains accurate color levels and compensates for changing room light. The modular chassis is said to offer greater reliability because of fewer interconnections among its modules, which are factory assembled, pretested, and aligned. The remote control governs channel selection, volume control, and on-screen display of channel and time.



Sound is provided by a stereo amplifier rated at 5 watts per channel from 100 to 10,000 Hz into 8 ohms with 2 percent or less harmonic distortion. Controls for bass, treble, and balance are provided. A high-filter switch re-

duces noise and static. There are two 5 x 7-inch woofers and two 2-inch tweeters. Input and output jacks for video and audio as well as left and right stereo input jacks permit use with other video and audio components.

The set may be installed in one of Heath's two optional console cabinets or in a custom design. Price for the 25-inch TV set kit: \$649.95. Optional Heath cabinets are \$149.95 to \$199.95 depending on style. A kit for a 19-inch set with similar features is also available for \$499.95 including the cabinet. Heath Company, Dept. SR, Benton Harbor, Mich. 49022.

Circle 131 on reader service card



Bush

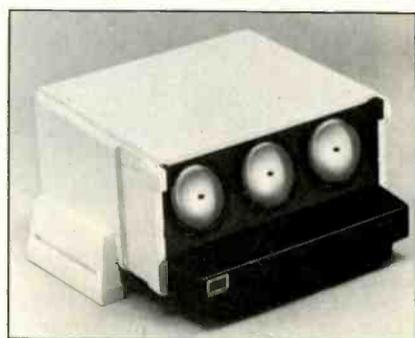
Bush Industries offers two home-entertainment cabinets designed for television and audio components, with storage space for software provided below. Both feature pecan-wood doors on the storage areas, which can be reversed to show either a matching wood grain or a contrasting dark-brown finish. Television sets up to 27 inches wide and 19 inches high will fit on the adjustable TV shelf. The audio compartments have tempered safety-glass doors.

The AV755 has one glass door with two adjustable shelves. It is 48 1/4 inches wide, 39 inches high, and 17 3/4 inches deep. Price: \$279.95. The AV765 (shown) has two glass doors with three adjustable shelves and a pull-out shelf above the TV compartment to accommodate a top-loading VCR. The console measures 48 1/4 inches wide, 47 inches high, and 17 3/4 inches deep. Price: \$329.95. Bush Industries, Inc., Dept. SR, 312 Fair Oak St., Little Valley, N.Y. 14755.

Circle 132 on reader service card

Kloss

The Kloss Novabeam Model Three is a compact color projection monitor designed for ceiling mounting. It comes in two models, one for use with a curved, high-gain screen and the other for projection on a white wall or a conventional flat screen. A 6 1/2-foot image is produced with a curved screen, a 10-foot image with a flat screen. Three Nova-



tron projection tubes are used, with magnetic focusing for sharp detail. A wired video control center, separate from the ceiling unit, contains the video and audio inputs and controls for audio, picture detail, brightness, contrast, color, and tint.

Two built-in loudspeakers with equalized power amplifier are included. This sound system may be bypassed when a separate stereo system is used. The projector is 24 1/2 inches wide, 25 1/2 inches deep, and extends 16 inches down from the ceiling. Price of projector with 6 1/2-foot screen: \$4,000. Price of wall-projection model: \$4,200. Kloss Video Corp., Dept. SR, 145 Sidney St., Cambridge, Mass. 02139.

Circle 133 on reader service card

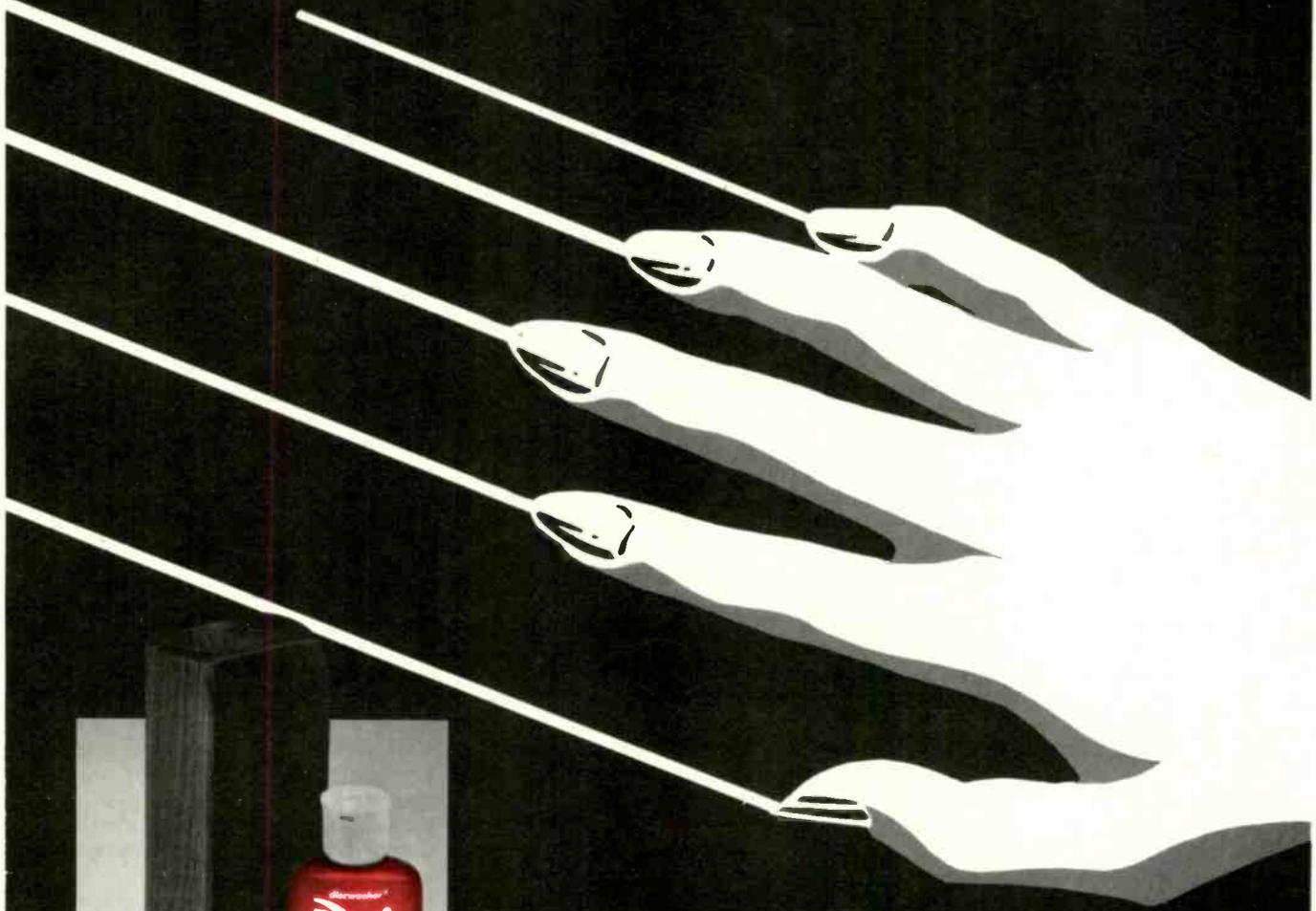
SSK

The SSK Premium Video Headcleaner consists of a standard Beta or VHS shell loaded with a nonabrasive Karetex ribbon. A few drops of cleaning fluid is applied to the ribbon before the cleaning tape is loaded into a VCR. The wet/dry cleaning system is said to clean the entire tape path, including the capstan and pinch-rollers, and should last through forty to fifty treatments. Price: \$24.95. SSK Enterprises, Dept. SR, 31230 Cedar Valley Dr., Westlake Village, Calif. 91362.

Circle 134 on reader service card



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by David Ranada



Scanning, Part I

UNLIKE audio, video is not even potentially a high-fidelity medium. The ultimate goal of high-quality video equipment is not the re-creation of a visual experience but merely the best possible realization of the image contained in a video signal. And that video signal is severely restricted in its ability to re-create visual reality by limitations imposed by the inventors of television. Let's look at some of those basic restrictions.

The fundamental "problem" in video is the breakdown or analysis of an image into something that can be transmitted or recorded electronically. The varying characteristics of an image (brightness, detail, motion, color) have to be represented using the single parameter electronics has available, the change of a voltage or current over time. There are many ways to represent an image electronically. One method is to break it down into an array of "picture elements"—very small areas of light or shade and color analogous to the halftone dots in a printed picture—and then to transmit signals representing the status of all of them simultaneously over a myriad of wires to a corresponding array of light elements, each of which would glow according to the strength of the signal on its wire. This proposal's main drawback is

that the huge number of picture elements required for a reasonably intelligible picture—at least 100,000—requires an equally huge number of wires or communication channels. Early in the development of television a far simpler variation of this method was devised, called *scanning*.

To quote Vladimir Zworykin's classic 1940 textbook on television, scanning is the process of "moving an exploratory element or spot over the image to be transmitted in a periodically repeated path covering the image area." The exploring spot generates a changing signal representing the brightness and color of the image at each point. At the receiving end there is a reproducing spot that moves over the viewing screen in a similar path in exact synchrony with the exploring spot. The reproducing spot reconstructs on the screen both the brightness and color distribution of the original image.

Essentially, scanning is the process of reproducing picture elements serially, one at a time, rather than in parallel, or all at once, as we described first. With scanning a tradeoff is made between circuit complexity and circuit speed. In order to send the required number of picture elements over only one channel or wire fast enough to permit reproduction of a moving image, a scanning system has to operate very rapidly, and the signals it creates thus have a very wide frequency range, or bandwidth.

There were many types of scanning proposed at the beginning of the television age, all named after the path the exploring spot would take (spiral scanning, sinusoidal scanning, etc.). The system that has been with us for more than forty years is *straight-line scanning*, in which both the exploring spot and the reproducing spot scan an image following roughly the same path the eye takes when reading a printed page (see the accompanying figure). This method of scanning was chosen for, among other reasons, the simplicity of the circuits required to produce the scanning path.

The present-day NTSC television standard used in the U.S. and Japan calls for 525 scan lines across a single video *frame*, with 30 such

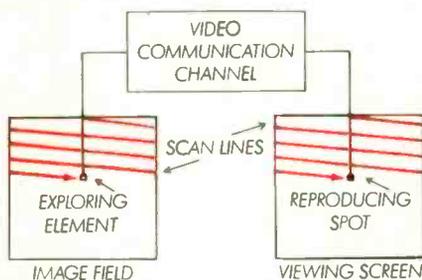
frames per second. (A frame is the basic unit of video information and is directly analogous to a frame in motion pictures. A moving video image is a series of 525-scan-line frames just as a motion picture is a series of still frames.) The choice of 525 lines tells much about the basic assumptions and limitations underlying our current video system, for that choice was a relatively arbitrary engineering decision deriving from a compromise between optimal picture quality and technical restrictions. As the second edition of Zworykin's book states, "Many of the requirements are met with minimal rather than optimum figures."

Some of the limitations that video's founding fathers put on television's picture quality were determined by an examination of the requirements for picture size and sharpness. From visual experiments and motion-picture experience—and remember that television was developed before the widespread use of wide-screen motion-picture techniques—it was determined that a picture whose aspect ratio (ratio of width to height) was 4:3 (approximately the same as 35- and 16-millimeter film) should subtend a vertical angle of no more than about 15 degrees. This translates to a picture about 19 inches high and 25 inches wide viewed at a distance of 6 feet. These dimensions allow for simultaneous viewing of all parts of the picture as well as closer examination of details simply by moving the eyes and not the head.

Adequate sharpness of details is also one of the basic requirements of a good picture since a fuzzy picture is difficult and tiring to watch. The viewer has to work too hard to make out what it shows. A ballpark figure, based on the resolving power of the human eye (its ability to separate closely spaced details), is that a picture subtending 15 degrees vertically (as would a 19 x 25-inch screen viewed at 6 feet) should have at least 600 picture elements in the vertical dimension.

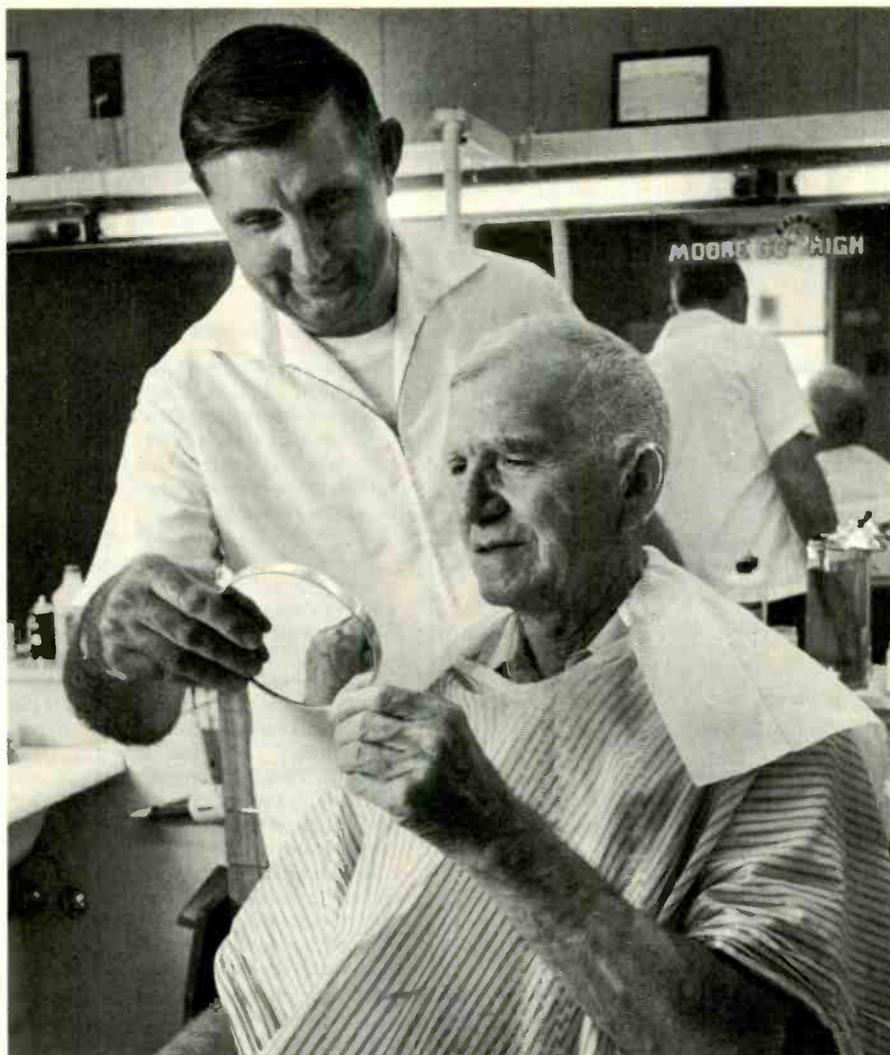
But the NTSC standard calls for at most 525 vertical picture elements (one per scan line), and that number is actually lower in practice since some of the scan lines are not part of the image; they occur while

the spot returns to the top-left corner of the screen. This is where practical considerations came to the fore. Increasing the number of picture elements transmitted would have also required increasing the bandwidth of a video signal and thus the broadcast bandwidth that would have to be allotted to each television station. For the sharpest picture with the least bandwidth, 525 lines was the best compromise. A subjectively significant increase in sharpness beyond that afforded by 525 lines would require a disproportionately large increase in video-signal and television-channel bandwidth. This tradeoff is the major obstacle confronting today's inventors of HDTV (high-definition television) systems.



When the present system was first introduced (in black and white, of course), there was some doubt whether its compromises would be accepted. Some thought that more picture elements would be demanded. What the early television audiences wanted, however, was not more detail, or "information content," but larger pictures. Zwoykin speculated, but perhaps not seriously, that "Possibly some as yet unformulated psychological law is involved here which states that there is an upper limit to the rate at which any recreational instrument should supply information to the observer's brain."

As we will see in future columns, however, those limits have not yet been reached in video. Most modern consumer video and television receiving equipment still doesn't come close to providing the full information content of an NTSC video signal. While true video "high-fidelity" may remain beyond our reach, we can always try to get the most out of our equipment, and that should be the goal of a high-quality home video system. □



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by Larry Klein



Channel Balance

Q With several receivers I have noticed that when the volume control is turned below a certain point, nearly all the output comes from one channel. Is this an individual problem or typical of most receivers?

W. RANDAL GIVEN
Romulus, Mich.

A Stereo volume controls have separate sections that control the volume of each channel individually. Unless the sections of the control track each other properly—feeding exactly the same amount of signal voltage to the following stage at every point in their rotation—the ear will hear the voltage difference as a volume/balance difference between the two speakers. The better the equipment, the more precise the tracking between the control sections is likely to be.

A complication arises because volume controls work best (most smoothly) when they are designed for a nonlinear “taper” (attenuation rate), simply because the ear responds nonlinearly to changes in sound-pressure level. The more or less standard “audio taper” used in volume controls provides about 15 percent of full volume with a 50-percent control rotation (12 o’clock), and half of full volume with an 80-percent control rotation.

For electromechanical and psychoacoustic reasons it’s hard to achieve accurate stereo tracking at the very bottom end of the control—which easily accounts for some left- or right-channel emphasis at very low volume settings. But that’s why we’ve got balance controls.

Incidentally, there’s been a deplorable trend away from audio tapers in an effort to appeal to neophyte audiophiles impressed by a receiver’s ability to

achieve loud volumes with minimum control rotation. The fact that a receiver will tear your ears off with its volume set at 9 o’clock has *no, repeat no*, bearing on its available power output.

Do the Karaoke?

Q Japanese sing-along machines called “karaoke” have been shown by several major companies at Consumer Electronics Shows. I’m curious as to how they are used in Japan and how popular they are. Are they likely to be successful in the U.S.?

ALLAN POLLARD
Lime Rock, Conn.

A My first thought was that the term “karaoke” was a Japanese version of carioca, a Thirties dance popularized by Fred Astaire and Ginger Rogers. However, it is a recently coined Japanese word compounded of *kara*, meaning “empty,” and *oke*, meaning “orchestra.” This is a somewhat poetic reference to the music-minus-vocalist tapes used in the machines and to the machines themselves.

The karaoke machine is designed to provide a combined musical back-up and sound-reinforcement/recording system for amateur vocalists. If it seems a little strange to have dozens of major electronics companies producing gear for a sing-it-yourself market, that’s only because Westerners don’t appreciate how big that market is in Japan. Something like 350 million dollars’ worth of karaoke machines were sold in 1982, the last year for which I have data.

The essential ingredient of the karaoke boom is a venerable social institution deeply embedded in Japanese culture; in English it might be described as “Let’s unwind after work with a few drinks *and songs*.” Bar owners found that a karaoke machine could supply the music for the variety of popular songs the customers wanted to sing much less expensively than live musicians. And the Japanese record industry continues to be happy to provide the hit songs—minus the hit singers—needed to feed the machines.

There are several types of karaoke bars in Japan. At the bottom rung, there’s the karaoke juke-box bar, where for about 40 cents (the price of a video game) a customer can sing a favorite song through the supplied microphone. As a step-up, there are the bars where the hostess, manager, or owner doubles as an MC and introduces each song. And then there are the posh night clubs where the amateur performer gets the full treatment—including a spotlighted stage, a curtain that rises and falls, and a TV monitor with videotape replay.

You don’t have to be a bar-fly to savor the joys of karaoke—I understand

they are in some bath houses, and over 200,000 compact home units have been sold for family songfests and/or for private practice for that big moment in the public spotlight. All this at-home action has encouraged some Japanese companies to try marketing the karaoke in the U.S. I wish them luck, but I don’t think that the average American is that heavily into public singing.

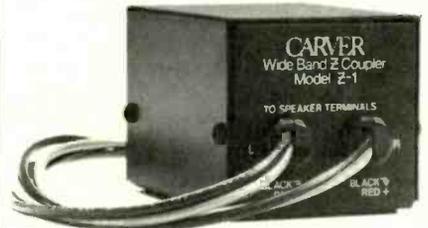
Power Adaptors

Q I currently own a good 35-watt receiver that has an excellent FM tuning section and all the features I need. I intend to get a CD player and also upgrade my speakers. The speakers whose sound I particularly like have rather low efficiency, which, in conjunction with the wide dynamics of the CD player, leads me to believe that I could also use a more powerful amplifier.

I have heard about the Carver Z-Coupler, a device that allows you to connect the output of a low-powered receiver to the input of a power amplifier. Do you think it’s a good idea, and will it work with non-Carver equipment?

IRVING FALBERG
Los Angeles, Calif.

A Yes, to both questions. When a receiver has nothing wrong with it except low power, the Carver Z-Coupler offers a fine, inexpensive way to add more power to the system. And the Z-coupler is usable with other brands of receivers and power amplifiers. Moreover, Soundcraftsmen makes a similar power adaptor, the PC-1, that will work with other brands of power amplifiers.



A power adaptor connects to the speaker terminals of the low-powered component and plugs into the input jacks of the high-powered one. It provides a non-taxing load to the low-powered amp while simultaneously attenuating its output signal to a suitable level for the input sensitivity of the high-powered amplifier. The speakers, of course, are connected only to the output of the high-powered amplifier.

Be aware that the same ground rules hold when using a power adaptor as with any power upgrade: aside from possible improvements in its other specifications, the power of the new amplifier must be at least double or triple that of the original in order to achieve an audible benefit. □

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by Julian Hirsch



Updating Our Test Equipment

OVER the more than thirty years that I have been testing hi-fi equipment, there has been continual improvement in the "state of the art," as longtime readers of STEREO REVIEW are well aware. As a result, the laboratory test equipment we use to measure the performance of audio components has periodically become obsolete. The effect is a kind of technological leapfrog: as the equipment we test gets better, there comes a point when we can no longer verify all of its specifications or make meaningful measurements of certain aspects of its performance; then it's time to upgrade our test equipment so we can stay ahead once again—for a while, anyway.

In the past year or so it has become painfully clear that our formerly state-of-the-art Sound Technology signal generator could not be used to measure FM tuner noise levels of -90 dB or better, especially in stereo, even though only a few tuners were so rated. Our generator had a noise floor of perhaps -78 dB in mono and -75 dB in stereo, and it was sufficiently microphonic that reaching even those levels called for

heroic measures, including switching off humming fluorescent lights, shutting down furnace or air-conditioner blowers, and speaking only in whispers.

We have now made the next jump in the game of technological leapfrog, and this time I feel fairly confident that tuners will not soon outstrip our new generator's capabilities (like President Reagan, I hesitate to say "never"). The new instrument is a Panasonic VP-8179P digital-synthesis generator with its companion modulator. The Sound Technology 1000A has been relegated to the status of our second unit for measurements requiring two generators (such as capture ratio and selectivity). Our venerable Boonton 202B signal generator (nearing forty years of age and still working very well) has gone into well-deserved retirement on the "archaic test equipment" shelves in the attic.

Our new instrument covers a wide frequency range of 10 kHz to 240 MHz, with far more output capability than the Sound Technology unit (more than 2 volts compared to 30 millivolts). Its rated noise level is better than -90 dB (-96 dB on one specific frequency), and its distortion is specified as less than 0.01 percent over most of the audio range. Its 66-dB channel separation should not be challenged by many tuners either. Moreover, like all good laboratory-grade test instruments, the actual performance of this generator should easily surpass its ratings (one reason such equipment is so costly).

Such niceties as a six-digit numerical frequency readout enable us to set the generator frequency unambiguously and repeatably within 1 kHz anywhere in the FM band (and within 10 Hz at most lower frequen-

cies, including the AM broadcast band). Another digital readout shows the output level over a range of more than 150 dB with 1-dB resolution, and there's a vernier to interpolate to within about 0.1 dB. We anticipate that using this generator will eliminate much of the uncertainty associated with measuring capture ratio and selectivity.

It seems that, for the moment at least, we are ahead in FM leapfrog. What about amplifier measurements? Many years ago, it was plain that the amplifier designers of the world were not going to stop at 0.1 percent distortion and rest on their laurels—even though it was widely recognized, even then, that further reductions were most unlikely to produce commensurate, or even detectable, improvements in listening quality. Therefore, our venerable Heathkits were retired and replaced by a low-distortion oscillator and a distortion analyzer, both from Radford. These British-made instruments had a distortion floor of better than 0.002 percent, which we naïvely felt would suffice forevermore. Not long afterward we added a Hewlett-Packard 3580A spectrum analyzer to the lab gear, and then we *knew* we had gone about as far as we would ever have to go in order to measure ultra-low distortion.

Well, nothing lasts forever, and over the years the Radford oscillator (a vacuum-tube design) began to show its age, so we replaced it with a Hewlett-Packard 239A. Now we had a signal source whose distortion was less than 0.0002 percent, although measurement in this range was a painstaking process requiring the use of both the Radford analyzer and the H-P spectrum analyzer. Manipulating the Radford's six nulling adjustments (plus the initial tuning operation) called for the light touch of a safecracker and the patience of a saint, and I am neither!

When the Radford distortion analyzer recently developed internal problems, we bit the bullet and added a Hewlett-Packard 339A distortion analyzer to our test gear. Measurements formerly requiring a minute or so of painstaking adjustment of the test instrument, plus a considerable degree of art and technique, can now be made in a few seconds by the Hewlett-Packard

Tested This Month

Onkyo TA-2090 Cassette Deck

Jamo PP3000 Speakers

Kenwood KA-828

Integrated Amplifier

Panasonic PV-1730 VHS

Hi-Fi VCR

339A's automatic nulling and frequency-tracking circuits.

Some amplifiers do not take kindly to full-power operation at 20,000 Hz, and testing them at this level was a risky process in the past. Now that the test procedure is so much faster, we expect such tests to be much more feasible. The only sacrifice required by this automated instrument is an increase to nearly 0.002 percent in the lower limit of measured distortion. To measure distortion levels lower than 0.002 percent, we must once more use the spectrum analyzer and distortion analyzer together.

Another area in which we have been unhappy with our test gear has been in measuring the low noise levels of many amplifiers. The actual measurement is straightforward, but our Ballantine 303 a.c. voltmeter—an extremely accurate, reliable, and wide-band instrument—cannot measure a voltage of less than 100 microvolts. Often the noise output of a good amplifier (or any CD player) is no more than a few microvolts, leaving us no alternative except to add an external amplifier with lower noise content than the unit we are measuring. This is not always feasible, especially when a weighted measurement is desired and an external CCIR or A-weighting filter must also be inserted in the signal path. With each added component the risk of unwanted noise pickup is increased, and the entire process is awkward at best.

We have completed our latest leapfrog jump by acquiring a Sennheiser UPM 550-1 level meter, which can readily measure audio voltages of 10 microvolts or less over the full audio bandwidth and much lower voltages in limited bandwidths. It also contains a number of commonly used weighting filters that are selectable by pushbuttons on the panel. A further benefit of having three different metering systems on hand (Sennheiser, H-P, and Ballantine) is that we can now measure noise or other non-sinusoidal signals with our choice of average, true rms, or peak-responding meters. As an adjunct to the Sennheiser meter, we are now testing moving-coil phono cartridges through a Technics SH-305MC moving-coil step-up transformer, an

impressively heavy and well-shielded unit whose response characteristics far surpass those of any cartridge and which increases even a signal of less than a microvolt to a useful and measurable level.

At this point we are once again

equipped to test all current state-of-the-art hi-fi electronic components. Although I would not say that our measurement capabilities will never again become inadequate, they certainly should suffice for the foreseeable future. □

RODRIGUES CARTOON CAPTION CONTEST

WHAT is crotchety old Mr. Tweakingham saying to his faithful retainer Manchester? Charles Rodrigues has drawn the cartoon, and *Stereo Review* is holding a contest to discover who can supply the funniest caption for it.

The winner will receive the original signed drawing shown here and a cash prize of \$100. Anyone may enter, and there is no limit to the number of times you may enter, but each caption submitted must be on a separate sheet of paper that also contains the clearly legible name and address of the person who enters it. All entries must be received

by *Stereo Review* no later than March 1, 1985.

The panel of judges will include members of the editorial staff of *Stereo Review* and Rodrigues himself. Entries will be judged on the basis of originality, appropriateness, and humor. The decision of the judges will be final.

The winning caption (and a selection of near misses) will be published in the June 1985 issue. The usual restrictions and disclaimers are printed below. Send entries to:

Rodrigues Cartoon
STEREO REVIEW
One Park Avenue
New York, N.Y. 10016



No purchase is necessary. Anyone may enter except the staff of *Stereo Review* and its parent company (and their immediate families). All entries become the property of *Stereo Review* and none will be returned. If you wish to be notified of the results of the contest by mail, send a stamped self-addressed envelope to the above address.

In the unlikely event of duplicate entries, the one first received will be considered the winning entry. The names of the winner and a dozen runners-up

will be published in *Stereo Review* and may appear in promotional literature for the magazine. Submitting an entry will be deemed consent for such use.

Stereo Review will arrange the delivery of the prize; any tax on it will be the responsibility of the winner. The judges have every intention of reaching a decision in time for the publication of the results in the June 1985 issue, but *Stereo Review* reserves the right to delay the announcement until July if the response is overwhelming.



**THE EXPERTS SAID THEY HEARD EXCELLENT FREQUENCY RESPONSE,
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BUT NOT IN THOSE WORDS.

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Music sounds better when it's recorded
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IT'S WORTH IT.

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ONKYO TA-2090 CASSETTE DECK

Craig Stark, Hirsch-Houck Laboratories



PHOTOS BY ROY SCHNEIDER

FEATURES

- Three-motor, dual-capstan drive
- Separate record and playback heads for instant off-the-tape monitoring
- HX-Pro and automatic bias-optimization circuits
- Dolby B, Dolby C, and dbx noise-reduction systems
- Tape counter showing elapsed or remaining time
- Bidirectional music-selection search
- Multiple repeat facilities (single selection, full side, user-defined excerpt)
- Timer-activated record or playback switch
- Switchable rear-panel microphone or line inputs
- Separate record-balance controls
- Switchable FM-multiplex filter
- Autospace button (inserts 5-second pause)
- Headphone jack

THE Onkyo TA-2090 is a three-head, dual-capstan cassette deck with an unusually complete list of useful features. It has dbx as well as both Dolby B and Dolby C noise-reduction systems. Along with the usual bias and equalization selector it has both automatic bias adjustment and Dolby HX-Pro bias-optimizing circuits. In addition to conventional rewind/repeat functions, its controls permit the user to define any segment of the tape for continuous automatic replay. And, while many decks today have eliminated microphone inputs and most use a simple hub-rotation tape counter, the TA-2090 provides both mike jacks and a convenient remaining-time indicator.

The transport of the TA-2090 is solenoid operated, and it uses three

d.c. motors in a closed-loop, dual-capstan drive. One motor is directly coupled to the main capstan, a second supplies power to the reel hubs, and the third is used to operate the head assembly and hub brakes. This configuration, shared by several top recorders, is doubtless responsible for the extremely low wow and flutter we measured on the TA-2090. The separate record and playback heads are made of Sendust to ensure long life and high performance.

Sensors within the illuminated cassette well select the factory-set bias and equalization for the different tape types. Although the sensors cannot be overridden, users can fine-tune the recording bias for a specific tape by using the Accubias feature, which takes about 10 seconds to record and play back an internally generated test signal, ad-

just the bias accordingly, rewind the tape to the test's starting point, and leave the deck in record-pause mode. An additional refinement is a switch-selectable REC CAL adjustment for tape sensitivity. Tapes of differing sensitivity play back at different levels when recorded with the same input levels. Uncompensated for, this can cause frequency-response errors in the Dolby noise-reduction process.

Yet another switch-selectable option in the TA-2090 is the HX-Pro bias-control system jointly developed by Dolby Labs and B&O. HX-Pro is a method of improving a tape's high-frequency storage capacity. According to the HX-Pro designers, when audio signals contain a large treble element, the upper frequencies of the music produce a "bias" component of their own. This self-bias is added to the conventional ultrasonic recording bias, thus *overbiasing* the tape and thereby reducing its capacity for high-frequency (technically, short-wavelength) storage. The HX-Pro circuit monitors the audio signal going to the record head and lowers the conventional bias current when the music's treble content provides an adequate self-biasing signal, thus keeping the total bias level constant.

A button entering the length of the cassette being used enables the tape counter in the TA-2090 to indicate the approximate time remaining on the side in minutes and seconds, which is a great convenience. Record levels are shown on two sixteen-segment-per-channel peak-indicating displays calibrated from -30 to +8 VU. Additional front-panel displays show the status of nearly every switch setting on the deck, including which noise-reduction system and repeat feature have been selected and the tape speed and head positions during the automatic search process. The long-throw master record-level slider control is supplemented by two channel-balancing knobs and a separate output level control.

Overall dimensions of the TA-2090 are 17¾ inches wide, 4¼ inches high, and 14¾ inches deep. Its weight is slightly under 20 pounds. Price: \$800. Onkyo U.S.A. Corp., Dept. SR, 200 Williams Dr., Ramsey, N.J. 07446.

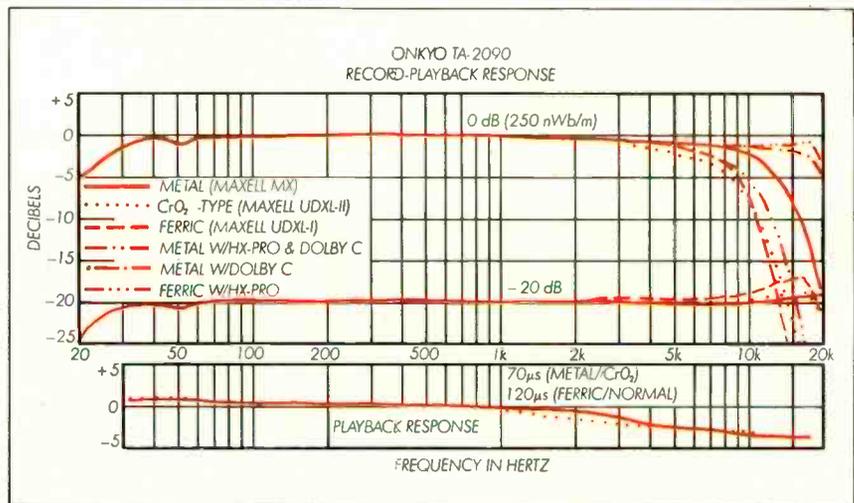
Lab Tests

With our ferric and chrome IEC-standard calibrated test tapes, the TA-2090 showed a gradual, smooth treble rolloff above 1,000 Hz, reaching 4 dB down at the 18,000-Hz upper limit of the tapes. While this rolloff could be detected audibly in direct comparisons with our reference deck, the difference was very slight, and the Onkyo's response could easily be flattened with our amplifier's treble control. We suspect that Onkyo simply set up the deck with a different test tape.

For our overall measurements of record-playback response and signal-to-noise ratio (S/N) we used the same cassettes for which the machine had been adjusted: Maxell UD XL-I (ferric), Maxell UD XL-II (chrome-equivalent), and Maxell MX (metal). As shown by the -20-dB traces in the accompanying graphs, response was within +1, -2.5 dB from 25 to 20,000 Hz with the metal and chrome tapes. The ferric tape had a slight (3-dB) peak at about 17,000 Hz, but this could be eliminated (at the cost of slightly lower response at the highest frequencies) by using the Accubias feature. The effect of switching in the HX-Pro system is shown in the 0-dB-level curves for the ferric and metal tapes. With the metal tape and both the Dolby C and HX-Pro systems enabled, 0-dB response reached 20,000 Hz at -2.5 dB. Since the HX-Pro system operates independently of the three noise-reduction systems, it can be used to make extended-headroom tapes without noise reduction (for portable use) or very-wide-dynamic-range dbx-encoded tapes.

The TA-2090's signal-to-noise ratios were very good. The limiting factor with the dbx system appeared to be the output amplifier, and it is possible that an even higher measured S/N could have been obtained by careful trimming of the playback level. On the other hand, one of the advantages of using the dbx system is that it provides greater headroom, thus lowering distortion, so the +12-dB level we selected may be near optimum in practice.

Wow-and-flutter measurements were excellent, as were the fast-forward and rewind times. Dolby



HIRSCH-HOUCK LAB MEASUREMENTS

Fast-forward time (C-60): 64 seconds
Rewind time (C-60): 64 seconds
Speed error: +0.3%
Dolby B tracking error: +0, -2.0 dB
Dolby C tracking error: +1.0, -3.0 dB
Wow-and-flutter: 0.02% wrms, 0.03% DIN peak-weighted

Line input for indicated 0 dB: 63 mV
Line output at indicated 0 dB: 1.0 volt
Meter indication at IEC-standard 0 dB: 0 dB, ±1 dB

■ **Tape used: Maxell UD XL-I (Type I, ferric)**
IEC 0-dB distortion: 0.44% [0.11% with dbx at equivalent output level]
Meter indication at 3% third-harmonic distortion: +4.6 dB [0.62% at +12 dB with dbx]
Signal-to-noise ratios (in decibels):

	Unwtd.	A-wtd.	CCIR
NR off	54.0	58.7	56.2
Dolby B	59.5	66.9	66.2
Dolby C	61.8	72.3	74.1
dbx	78.0	86.2	86.0

■ **Tape used: Maxell UD XL-II (Type II, chrome-equivalent)**
IEC 0-dB distortion: 1.9% [0.33% with dbx at equivalent output level]
Meter indication at 3% third-harmonic distortion: +1.4 dB [2.1% at +12 dB with dbx]
Signal-to-noise ratios (in decibels):

	Unwtd.	A-wtd.	CCIR
NR off	53.8	58.9	56.6
Dolby B	58.2	66.4	66.4
Dolby C	59.5	71.6	73.3
dbx	78.1	87.3	87.3

■ **Tape used: Maxell MX (Type IV, metal)**
IEC 0-dB distortion: 1.6% [0.38% with dbx at equivalent output level]
Meter indication at 3% third-harmonic distortion: +2.2 dB [1.8% at +20 dB with dbx]
Signal-to-noise ratios (in decibels):

	Unwtd.	A-wtd.	CCIR
NR off	54.6	59.8	57.4
Dolby B	58.5	67.1	67.3
Dolby C	60.4	72.8	74.6
dbx	76.9	88.9	88.9

tracking error was also low. Because of the segmented indicators, the 0-dB point on the record-level display (200 nanowebers/meter) or as the IEC-standard 250 nWb/m. In either case, it is a much more realistic reference record level than the old 165-nWb/meter setting still used on most decks.

Comments

Using either Dolby C or dbx, we were able to make superb dubs of digitally recorded material with the TA-2090. The audible difference between the SOURCE and TAPE switch positions was so slight that we would judge it for all intents and purposes inconsequential. No small

part of this excellent performance, we feel, is the deck's very low wow-and-flutter. The dbx system rolled off the lowest organ pedals slightly (below approximately 40 Hz), but there is so little recorded material and speaker response in this area that that can hardly be taken as a significant fault.

In terms of handling, we found the TA-2090's buttons and knobs somewhat small and occasionally hard to see (black against a black background), but this was our only human-engineering caveat. Tape handling was sure and quiet, bespeaking an excellent design that is well worth careful consideration by anyone looking for a full-featured deck in this price class.

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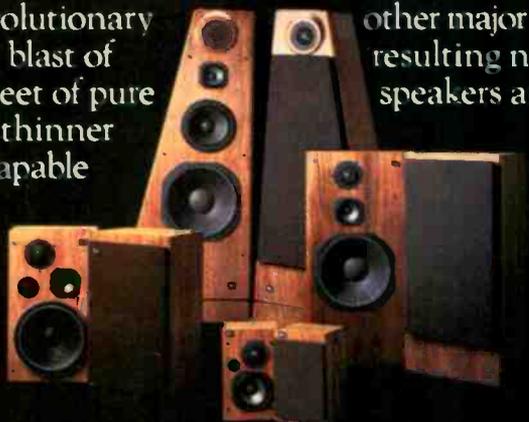
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Pictured above: JBL's new pure titanium high frequency driver with patented diamond surround

CIRCLE NO. 28 ON READER SERVICE CARD

JAMO PP3000 SPEAKER SYSTEM

*Julian Hirsch,
Hirsch-Houck Laboratories*

JAMO'S "Push-Pull" speakers are named for the configuration of their twin "subwoofers." These deep-bass drivers are mounted face to face in a separate enclosure at the bottom of the cabinet and radiate through a 3-inch-high slot around the periphery of the speaker base.

In the four-way PP3000, the top of the Push-Pull line, the two 10-inch deep-bass drivers cross over at 180 Hz to a forward-facing 8-inch cone driver. This "woofer" operates up to 850 Hz, and its enclosure is vented through a port in the rear of the cabinet. Above the 8-inch bass driver is a 5-inch cone midrange driver for frequencies up to 4,500 Hz, where it crosses over to a 1-inch dome tweeter.

The arrangement of the deep-bass drivers in the PP3000 is said to enable them to reproduce the lowest musical notes as well as a 15-inch driver in a cabinet four times as large. The 10-inch and 8-inch bass drivers are constructed as matched, parallel-connected bass-reflex systems with complementary impedance characteristics. Otherwise unavoidable impedance variations are said to be practically neutralized, enabling the amplifier to deliver its full power to the bass units. Rated overall system impedance is 8 ohms.

Unsnapping the cloth grille covering the forward-facing drivers in the PP3000 reveals a cross-hatch-patterned front panel and flush-mounted control knobs next to the midrange and tweeter. The controls permit continuous adjustment of these drivers' response over a ± 4 -dB range. Next to the treble control is a red overload light; the tweeter is protected by an automatic-reset system, and the light flashes when the input level is excessive.

The insulated connectors recessed into the rear of the cabinet accept



the stripped ends of speaker wires but not any of the other types of speaker-terminal connectors. Other specifications for the PP3000 include a sensitivity of 92.8 dB sound-pressure level at 1 meter with a 1-watt input and a maximum power input of 200 watts (380 watts of music program).

The wooden cabinet of the Jamo PP3000 is finished in dark rosewood and measures 45½ inches high, 13½ inches wide, and 12¼ inches deep. Each system weighs about 68 pounds. Price: \$499.95 each. Jamo Hi-Fi U.S.A., Inc., Dept. SR, 425 Hugel Rd., Bldg. 3A, Northbrook, Ill. 60062.

Lab Tests

Our live-room frequency-response measurements, whether made with a frequency sweep of a warbling sine wave or an FFT computer analysis of the speaker's pulse

response, do not unambiguously show a speaker's response in the bass range or its correct relationship to the response at higher frequencies. Indeed, there can be no one "correct" overall response specification for any speaker since actual response is influenced so profoundly by the room in which a speaker is located.

Nonetheless, the FFT response of the Jamo PP3000, measured either 1 or 2 meters away from the speaker, varied only about ± 3 or 4 dB from 200 to 15,000 Hz. The most prominent and consistent variation was an upward "jog" of about 4 dB around 5,000 Hz, which was possibly due to a crossover anomaly between the midrange and the tweeter. The averaged room response showed the usual amplitude irregularities but maintained a reasonably uniform average level from a few hundred hertz to 20,000 Hz. It also showed some evidence of a

5,000-Hz peak, though at a much lower level than in the quasi-anechoic FFT response.

These measurements were made with the balance controls centered. The midrange control varied the output by up to ± 4 dB between 600 and 7,000 Hz, and the treble control had a range of $+4$ to -9 dB and affected frequencies above 2,000 Hz. The speaker output was relatively directional in the horizontal plane, with an angular change of 45 degrees having an appreciable effect on the response above 3,000 Hz. This effect is consistent with Jamo's use of a fairly large (5-inch) cone driver over much of the high-frequency range.

Normally we measure the response of a woofer with a close-up microphone to eliminate room effects, summing the result with a measurement made at the port (if any) after scaling for the relative areas of the cone and port. That technique was only partially successful with the Jamo PP3000. The inclusion of two separate and quite different bass systems, each having its own port and particular phase relationship with the other, made it impractical to combine our measurements of them into a single bass frequency-response curve. We were able to deal with the forward-facing woofer in our usual manner, and its response could be combined with the higher-frequency curve to form a single frequency-response curve whose shape was generally consistent with what we heard from the speaker. The measured subwoofer response, however, consisted principally of a peak at 70 Hz, with its port radiating a flat output response down to at least 25 Hz about 10 dB below the maximum at 70 Hz.

The same factors affected our bass distortion measurements, since we obtained different readings from each source (two drivers and two ports) at each frequency. Fortunately, our ears told us that the low-bass output was strong and clean, once more emphasizing the superiority of the human ear to laboratory measurements for determining how something *sounds!*

As claimed, the speaker's actual impedance was very uniform over the frequency range, averaging about 7 to 8 ohms, with a minimum

HIRSCH-HOUCK LAB MEASUREMENTS

Frequency response: 50 to 20,000 Hz ± 4 dB (see text)

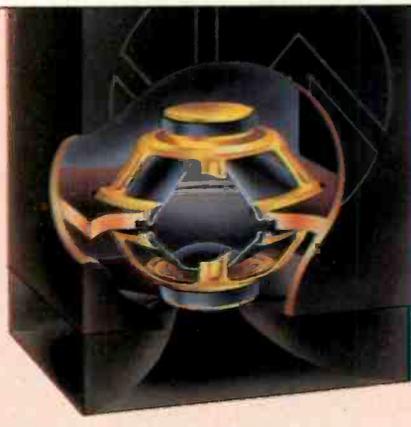
Sensitivity: 90 dB SPL at 1 meter with 2.83 volts input (1 watt into 8 ohms)

Impedance: 7 to 8 ohms average from 20 to 20,000 Hz; 5-ohm minimum at 150 Hz; 11-ohm maximum at 500 Hz

Group-delay variation: ± 0.4 millisecond from 1,000 to 20,000 Hz

Bass distortion: see text

Maximum power input: 40 watts at 100 Hz, 535 watts at 1,000 Hz



reading of 5 ohms at 150 Hz and a maximum of 11 ohms at 500 Hz. The short-term power-handling capability of the PP3000 was measured with tone bursts of 3 or 4 cycles, the level of which was increased until distortion was apparent either in the speaker's acoustic output or in the amplifier's electrical output. At 100 Hz there was an audible rasp when the input reached 40 watts. Since this is a relatively sensitive speaker, the 40-watt input

produced a very high sound level (well over 100 dB). At 1,000 Hz the speaker did not distort until we applied a 535-watt burst.

Comments

Listening to a pair of Jamo PP3000's, we found the most obvious characteristic of their sound to be an unusually powerful bass. Although by no means "tubby," the bass was certainly heavier than we are accustomed to hearing. And the effect was no psychoacoustic illusion, since at reasonably high listening levels the speakers induced mistaking in a Compact Disc player elsewhere in the room! (The effect is similar to acoustic feedback in an analog turntable.) Perhaps this was a byproduct of the speakers' apparent peak around 60 to 70 Hz. In any case, while we would expect the low-bass response to be somewhat room-dependent, Jamo's Push-Pull driver system certainly seems to do what is claimed for it.

Bass aside, the PP3000 system sounded very smooth and well balanced with its midrange and treble controls centered. Adjusting these controls could make a distinct change in the sound character of the speaker, but it was gratifying to find that their indicated center positions gave both the flattest overall measured response and the most pleasing sound. It would not surprise us if these speakers were a first-rate solution for a thin-sounding listening room. Their size and weight discouraged us, however, from any thought of moving them around the house to verify that supposition.

Circle 141 on reader service card



KENWOOD KA-828 INTEGRATED AMPLIFIER

Julian Hirsch, Hirsch-Houck Laboratories



FEATURES

- Dynamic Linear Drive output circuitry for high-power reproduction with low heat dissipation
- Low-noise phono preamplifier accepts moving-coil or moving-magnet cartridges
- Inputs for a tuner and a CD player
- Front-panel input jacks for an auxiliary or video-derived audio signal
- Connections and switching for two pairs of loudspeakers, a headphone, and two tape decks
- Preamp-out/main-amp-in jacks on rear panel
- Center-detented bass, treble, and balance controls
- Switches for tone-control defeat, muting, and loudness
- Three a.c. outlets, one unswitched

KENWOOD'S KA-828 integrated stereo amplifier, despite its modest size and weight, is rated to deliver 130 watts per channel into 8-ohm loads from 20 to 20,000 Hz with no more than 0.007 percent total harmonic distortion. It employs a number of design techniques typical of limited-production high-end amplifiers, such as elimination of internal ground loops and common ground impedances through extensive use of one-point grounding within the amplifier's key circuit blocks.

The KA-828 also features several unusual circuit configurations. Its output stages employ what Kenwood calls Dynamic Linear Drive

(DLD). The output stage for each channel consists of separate low-power and high-power amplifiers, each with its own power supply. The low-power section operates when the amplifier is called on to deliver up to about a third of its maximum power, and the high-power section takes over when more output is needed. The rationale for the DLD system is provided by tests conducted by the Japanese broadcasting system, NHK, which showed that the difference between peak and average power levels required to reproduce various types of recorded music was about 15 to 16 dB, a ratio of roughly 20 to 1. This means that an amplifier should be able to put out peaks twenty times

higher than the average power used.

The choice of the transition level between the low- and high-power amplifier sections in the KA-828 was based on Kenwood's own experiments, which indicated that a power output greater than one third of the peak level was required less than 2 percent of the time. It is obviously wasteful and inefficient for an amplifier to be designed to deliver a high-power output on a more or less continuous basis when that much power is required less than 2 percent of the time. But that is how most amplifiers are built, and it entails large penalties in size, weight, and cost. Kenwood's DLD circuit makes it possible to use smaller heat sinks and power-supply components, which nevertheless are very conservatively designed for a 40-watt amplifier—the approximate rating of the low-power section in the KA-828—in order to be able to support the full output of the amplifier for the relatively brief periods when it is required.

Kenwood contends that the DLD system enables an amplifier to provide superior reproduction of low-level sounds, with less heat dissipation, than a conventional amplifier, yet also to deliver the high peak-power levels that are becoming increasingly important in the age of digital audio. The separate power supplies used for the two sections of the KA-828's power-output stage are said to have better regulation than those in a typical Class B or Class AB amplifier, another factor Kenwood believes improves the sound quality of the amplifier. Although the KA-828 is fully protected against incorrect output loading or excessive drive levels, with a relay to disconnect the speakers if necessary and thermal devices to shut the amp off entirely if it becomes too hot, it does not use conventional current-limiting circuits and is thus able to drive low load impedances without loss of power or undesirable side effects.

Other features of the Kenwood KA-828 include a phono-input amplifier whose gain and input impedance can be switched from the front panel for either moving-magnet (MM) or moving-coil (MC) cartridges. The tone-control section is designed to have very small changes

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TEST REPORTS

in overall negative feedback (and distortion) as settings are varied.

Although the KA-828 has all the control features most people will ever need or want in an integrated amplifier, it is relatively free of the meaningless or purely cosmetic frills found on many of today's hi-fi components. Flush-mounted push-buttons switch the a.c. power and select the input source. Oddly, the audio-muting button is about three times the size of the input selectors—for quick use if the telephone rings, perhaps. Smaller buttons activate the loudness-compensation and tone-control circuits, select the high-level VIDEO/AUX input (whose jacks are on the front panel), and switch the phono stage between its MM and MC modes. Knobs are used for the bass and treble tone controls and channel balance control, with a larger knob for volume. Other front-panel knobs select the speaker outputs and control tape-recorder monitoring or dubbing.

The Kenwood KA-828, finished entirely in black, has its heat sinks inside the cabinet, which measures 13 $\frac{3}{8}$ inches wide, 14 $\frac{1}{2}$ inches deep and about 4 $\frac{1}{4}$ inches high. The amplifier weighs about 20 $\frac{1}{4}$ pounds. Price: \$450. Kenwood Electronics, Dept. SR, 1315 E. Watsoncenter Rd., Carson, Calif. 90745.

Lab Tests

The FTC-required preconditioning at one-third rated power into 8 ohms for 1 hour made the top of the KA-828 quite hot, but no hotter than most amplifiers under those conditions. Although the KA-828 is only rated for 8-ohm operation, it gave an excellent demonstration of its hidden capabilities by driving 4-ohm and 2-ohm loads to impressive levels. The 2-ohm tests heated the output stages (presumably their high-power portions) sufficiently to trigger the thermal protection system, which shut down the amplifier. After 10 to 15 minutes, it had cooled enough to return to operation. To avoid such interruptions, we made our 2-ohm distortion measurements with only one channel driven (it delivered 300 watts at the clipping point!). The dynamic headroom was better than usual.

The total harmonic distortion

(THD + noise) increased smoothly at lower power levels because of the relatively greater contribution of the small amount of noise present in the amplifier's output, reaching 0.02 percent at 1 watt. The distortion curves for 4-ohm and 2-ohm loads were similar, differing only in their slightly higher maximum outputs and distortion levels. But even under worst-case conditions (2 ohms), the maximum 1,000-Hz THD + N was only 0.04 percent at 1 watt. Driving 8-ohm loads, the amplifier's distortion was 0.004 to 0.01 percent over most of the audio range at power outputs from 13 watts to the rated 130 watts, reaching 0.017 percent at 20,000 Hz and 13 watts output. The amplifier was stable with simulated speaker loads at low and high frequencies.

In the preamp section, the phono RIAA equalization was not affected by cartridge loading. The tone controls had conventional response characteristics, with the bass turn-over frequency sliding between 300 and 500 Hz and the treble curves hinged at 2,500 Hz. The loudness compensation introduced only a moderate boost of the low frequencies as the volume was lowered.

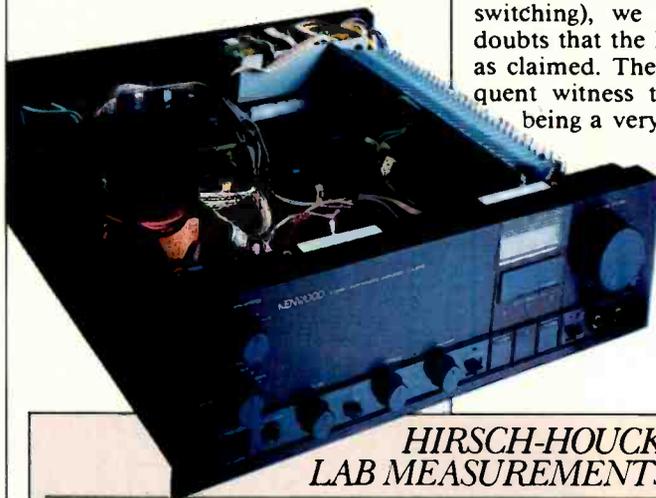
Comments

While we cannot comment on any identifiable sonic contributions of the DLD and other design features of the Kenwood KA-828, since it sounded fine under any drive or load conditions at our disposal, we can say that it delivered an audible "punch" out of all proportion to its size, weight, and price. It looks and feels much like any of a number of good 50- or 60-watt amplifiers, and it doesn't cost much more either, but it surely didn't behave like any of them when it was driving low- to medium-efficiency speakers at high volume. Its power is demonstrably real, whether judged by test-bench performance or by listening. We turned the volume high enough to cause acoustic feedback from some of our speakers to turntables and even CD players (!) across the room, but there was never a sign of clipping or other distortion.

While the precise method by which the KA-828 splices the low- and high-power sections of its output stages is not particularly obvious, even from its schematic (it appears to be done by a rather complex system of diode or transistor switching), we certainly have no doubts that the DLD system works as claimed. The KA-828 is an eloquent witness to its effectiveness,

being a very impressive amplifier in a modest and unassuming package.

Circle 142 on reader service card



HIRSCH-HOUCK LAB MEASUREMENTS

1,000-Hz output power at clipping: 166 watts into 8 ohms; 222 watts into 4 ohms; 253 watts into 2 ohms

Clipping headroom (relative to rated output): 1.06 dB (8 ohms)

Dynamic output power: 193 watts into 8 ohms; 340 watts into 4 ohms; 400 watts into 2 ohms

Dynamic headroom: 1.72 dB (8 ohms)

Maximum distortion from 20 to 20,000 Hz: 130 watts output, 0.013% (8 ohms)

THD + noise at 1,000 Hz: 0.004% from 50 to 150 watts (8 ohms)

Slew factor: 2.25

Sensitivity (1-watt output): high-level inputs, 13.5 mV; phono (MM), 0.185 mV; phono (MC), 20 μ V

Signal-to-noise ratio (referred to 1-watt output, A-weighted): high-level inputs, 78 dB; phono (MM), 85 dB; phono (MC), 69 dB

Phono (MM) input impedance: 48,000 ohms in parallel with 150 picofarads capacitance

Phono (MM) input overload level: 200 mV

RIAA equalization accuracy: ± 0.5 dB from 50 to 20,000 Hz; +1.5 dB at 20 Hz

Tone-control range: 100 Hz, ± 10 dB; 10,000 Hz, ± 10 dB



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PANASONIC PV-1730 VHS HI-FI VCR

Julian Hirsch, Hirsch-Houck Laboratories



FEATURES

- Front-loading VHS-format video-cassette recorder with SP, LP, and SLP speeds providing up to 8 hours uninterrupted recording with a T-160 cassette
- VHS Hi-Fi frequency-modulated stereo audio recording system for high-fidelity sound with or without video
- Supplied remote control will also operate with selected Panasonic television sets
- Programmable for unattended recording of up to eight programs over a two-week period
- Frequency-synthesis TV tuner covers 139 VHF, UHF, and cable channels
- Connections for optional PV-CT2 CATV adaptor to restore channel programmability with cable stations
- Tape-motion and special-effect modes include fast search, still frame, frame advance, slow-motion forward and reverse, reverse play, and triple-speed playback
- Automatic index search locates the beginning of any taped program segment in forward or reverse with the aid of a specially recorded signal
- Simultaneous VHS Hi-Fi and "normal" longitudinal-track audio recording, with stereo capability in both modes
- Dolby B noise reduction on longitudinal audio tracks
- Manual or automatic audio recording-level control with peak-hold record-level display
- Capable of audio and video overdubbing (audio dubbing recorded on longitudinal tracks only)
- Inputs for a video camera and two microphones
- Headphone output on rear panel
- Connection for optional PV-R500 video editing controller
- Display panel shows complete VCR tape status and transport operating modes, day and time, tape counter, TV channel, etc.
- Remaining-time indicator shows time left on cassette to nearest 5 minutes; flashes 5 minutes before end of tape
- One Touch Recording instantly places VCR into record mode for multiples of 30 minutes (up to 4 hours)
- Adjustment to eliminate vertical jitter from still frames
- Picture-sharpness control

audio signals with or without an accompanying video signal. Frequency-modulation techniques are used in the process to give low noise, low distortion, and negligible wow and flutter. The FM audio signals are recorded on the video tape by an extra set of heads mounted on the spinning video head assembly.

All VHS Hi-Fi recorders also record audio through conventional fixed heads that lay down longitudinal tracks as in an audio-cassette recorder. These longitudinal tracks are recorded simultaneously with the VHS Hi-Fi signals for playback compatibility with VCR's lacking the hi-fi feature. Also, of course, the conventional audio tracks on older VHS recordings can be played back by the fixed audio heads on VHS Hi-Fi decks.

In some VCR's, including the PV-1730, the longitudinal audio track is divided into two narrower tracks so that even low-fidelity film or TV soundtracks can be recorded in stereo. As a rule, Dolby B noise reduction is included to provide an acceptable signal-to-noise ratio (S/N) from the longitudinal tracks. Dolby circuits are not needed for the VHS Hi-Fi audio tracks since their S/N is closer to that of digital recordings than the output of even the best home audio cassette decks.

The PV-1730 offers a remarkable assortment of operating conveniences and features in a compact, attractively styled package. It can accept video and mono or stereo audio inputs from a camera, a TV receiver, or another VCR. It can also be used with a PCM adaptor for making true digital tape recordings from any sources, and its audio inputs can be driven from any line-level source, such as an AM/FM tuner or the tape outputs of a stereo receiver, to dub stereo simulcasts or to make audio-only recordings.

The low-profile Panasonic PV-1730 measures about 17 inches wide, 14 inches deep, and less than 4 inches high. It weighs only 17 pounds. The basic color is silver, and a large black loading panel contains the video-cassette loading slot and a multicolored (orange and blue) display area. Price: \$1,400, including wireless remote control. Panasonic Company, Dept. SR, One Panasonic Way, Secaucus, N.J. 07094.

PANASONIC'S PV-1730 VHS-format video-cassette recorder is so versatile that we cannot even begin to cover all its features in this report. Most

interesting for audiophiles, however, is its VHS Hi-Fi recording and playback capability. VHS Hi-Fi enables a video recorder to record two channels of very high-quality

AUDIO/VIDEO TEST REPORT

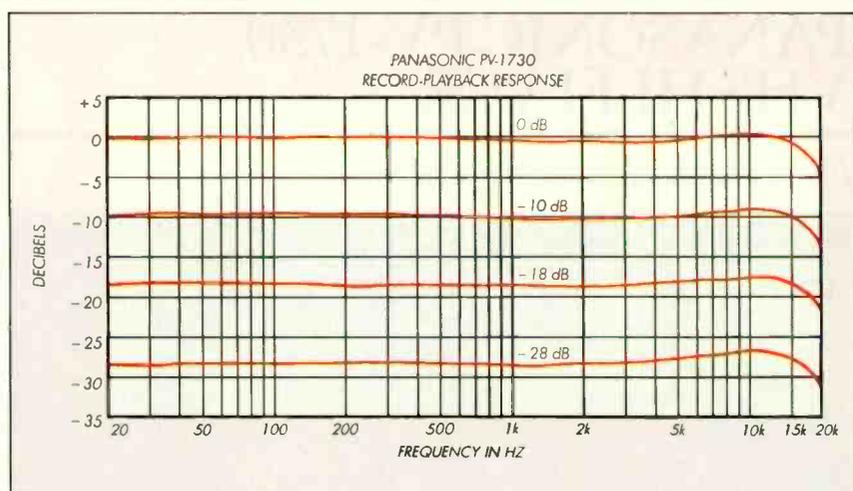
Lab Tests

We tested the PV-1730 with a Panasonic NV-T60 cassette that was supplied with the machine. The input signals were applied to the rear audio inputs, and the playback signals were taken from the audio outputs. The video features of the machine were not measured.

At maximum recording gain, about 80 to 100 millivolts at the audio inputs produced an indicated 0-dB level on the front-panel fluorescent display. The fixed playback level from a 0-dB recording at 1,000 Hz was about 0.6 volt. The calibrations of the level indicators on the PV-1730 are only approximate, and their hysteresis makes it somewhat difficult to check their calibrations. However, they do have a peak-hold feature that retains maximum readings for a few seconds after the signal level has dropped.

Even when the recording-level control settings were reduced, we found that the inputs overloaded at only 1.55 volts, which raises the possibility of overload and distortion in recording from the tape outputs of an amplifier when the program source has a high and fixed output level. For example, all CD players deliver about 2 volts output from a CD recorded at the maximum level (0 dB), and such an output is sufficient to overdrive the PV-1730's inputs. Fortunately, 0-dB peaks are rare and very brief, and the PV-1730 can handle anything up to a CD player's -3-dB output level without distortion. The PV-1730 also has an AUTO recording-level mode in which an automatic gain-control circuit takes over at an indicated -2 dB and prevents the level from exceeding that reading, but this circuit's action follows the input stage, which can still be overloaded under the stated conditions.

Since the VHS Hi-Fi system does not record in the same manner as ordinary tape machines, it is free from the nonlinearities inherent in conventional recordings. The playback distortion is low at any level up to the limits of the modulation and demodulation process instead of rising steadily as the distortion of ordinary tape decks does. With the PV-1730, we could not accurately determine the recorded level corre-



HIRSCH-HOUCK LAB MEASUREMENTS

Audio input sensitivity for indicated 0-dB recording level: 80 to 100 millivolts

Audio input overload level: 1.55 volts

Audio output from 0-dB recorded level: 0.6 to 0.65 volt

Rewind time (T-60 video cassette): 60 seconds

Hi-Fi Audio Mode

Frequency response (referred to 1,000 Hz): ± 1 dB from 20 to 15,000 Hz (negligible change over level range of 0 to -40 dB)

Playback THD + noise (1,000 Hz): 0.27% at -10 dB, 0.41% at 0 dB approximately 3% at +9 dB

Signal-to-noise ratio referred to 3% distortion level (A-weighted): 75 dB over full audio range, 89 dB from 400 to 30,000 Hz

Flutter: 0.008% weighted rms (JIS);

$\pm 0.012\%$ weighted quasi-peak (CCIR)

Normal (longitudinal) Audia Mode

Frequency response at -20-dB level (referred to 1,000 Hz): SP speed, 70 to 11,500 Hz +0.5, -3 dB; SLP speed, 65 to 6,400 Hz +1.5, -3 dB

Recorded level for 3% third-harmonic playback distortion at 1,000 Hz: -3 dB

Distortion at 0 dB: 4.5 to 6% depending on speed

Signal-to-noise ratio referred to 3% distortion level (A-weighted): SP speed, 48 dB without Dolby B, 53 dB with Dolby; SLP speed, 44 dB without Dolby, 50.5 dB with Dolby

Flutter: SP speed, 0.11% weighted rms (JIS), $\pm 0.18\%$ weighted quasi-peak (CCIR); SLP speed, 0.26% JIS, $\pm 0.45\%$ CCIR

sponding to 3 percent playback distortion, a measurement on which the signal-to-noise ratio (S/N) of a tape is usually based, since the distortion increased abruptly from less than 1 percent to 7 percent as the level was raised from an indicated +8 to +10 dB. Although the S/N readings were very good under any conditions, they improved dramatically when we excluded frequencies under 400 Hz, suggesting that a low-level hum or similar effect might have constituted most of the measured noise.

The combined record-playback flutter, like that of all hi-fi VCR's, was very low, although it slightly exceeded the PV-1730's ratings. Still, a flutter reading of ± 0.012 percent weighted peak (0.008 percent weighted rms) is superb by any standard. The A-weighted noise level, referred to the +9-dB recorded level that approximately corresponded to 3 percent distortion, was

-75 dB when the entire audio range was included and improved to -89 dB when we removed noise components below 400 Hz.

Also like other hi-fi VCR's, the PV-1730's performance was essentially independent of tape speed. We used the fastest speed (SP) for most of our tests for convenience in returning to the beginning of a test segment, but there was no detectable performance difference at the slowest speed (SLP), which provides up to 8 hours of uninterrupted recording with a T-160 cassette. The PV-1730 goes into rewind automatically when the end of the tape is reached, and it rewound a T-60 cassette in exactly 1 minute.

The recorder's playback distortion rose very gradually from 0.27 percent at -10 dB to 0.41 percent at 0 dB and 0.92 percent at +8 dB. The waveform became clipped between +8 and +10 dB, but these levels are far off scale on the indica-

tors and are not likely to be exceeded unknowingly. The record-playback frequency response was identical at all levels from 0 to -40 dB, with a 1-dB overall variation from 20 to 15,000 Hz and a fall to -3.5-dB at 20,000 Hz. This level of performance is rare among even the best audio cassette decks.

We also measured the performance of the longitudinal ("normal") soundtracks at both the slowest (SLP) and fastest (SP) tape speeds. Considering the very low linear tape speed at either setting, the frequency response was quite creditable. At the higher speed, it ranged from 50 to 10,000 Hz, and at the slow speed the response extended above 6,000 Hz—not high-fidelity, to be sure, but listenable nonetheless. However, the limitations of direct magnetic recording were only too apparent

The Panasonic PV-1730 is a superlative audio recorder, outperforming any home-type audio-only deck, open-reel or cassette, that we know of.

in the form of distortion, which reached the 3 percent reference value at -3 dB and never became really negligible at any measurable level. The S/N without Dolby, referred to -3 dB, was 44 and 48 dB for the SLP and SP speeds, respectively, improving to 50.5 and 53 dB when we used the Dolby system. But the most important weakness of the longitudinal recording was its flutter at the SLP speed, which measured 0.26 percent weighted rms (JIS) and ± 0.45 percent weighted peak (CCIR). At the SP speed, the flutter measurements were much more appealing, 0.11 and ± 0.18 percent, respectively.

Comments

There can be no question from the test results that the PV-1730 is a superlative audio recorder, outperforming any home-type audio-only tape deck, whether open-reel or cassette, that we know of. To test this conclusion, we dubbed music from Compact Discs and played back the recordings in direct A/B compari-

sons with the CD's. It came as no surprise that we could not tell which recording we were hearing without looking at the tape-monitor switch of the preamplifier. There was a minute difference in the mid-bass response, but neither the CD player nor the PV-1730 had a playback-level control, and we had a slight level mismatch that could have accounted for this difference.

While the PV-1730 is not an exact listening equivalent of a digital Compact Disc player, it comes so close that we could hear no significant degradation of the recorded sound in a critical comparison. The tape playback had none of the compression to be expected from even a high-quality cassette deck, no flutter or modulation noise, no detectable distortion even at peak levels (which did not, in fact, ever reach the PV-1730's rather low overload limit), and no noise in the absence of program material even at very high volume settings.

It would have been a waste of time to use a CD source to check the lower-fidelity longitudinal audio tracks, so we recorded FM music broadcasts and made A/B comparisons between HI-FI and NOR (normal) playback. This was easy to do thanks to the front-panel selector buttons and the internally matched levels, as well as the feature of having both signals appear at the same output jacks. The NOR sound at the SP speed was tolerable (actually, surprisingly good), but high levels of wow and flutter made the slowest speed (SLP) quite useless for recording any musical programs on the longitudinal tracks.

When we compare the human-engineering aspects of the PV-1730 with those of other VCR's we have used, it is plain that the Panasonic engineers have done their job well. For example, the display window not only shows an amazing amount of status information (some nineteen items in all by our count), but it is done in such a way as to minimize confusion on the part of the user. Irrelevant video information is not shown during audio-only recording, but the tape-transport status is always displayed in large orange letters ($\frac{5}{8}$ inch high) that are clearly visible at a considerable distance. The bright REC, PLAY, FF, or

REW indications leave no doubt about what the machine's transport is doing even when you are using the remote control from across the room. In addition, the take-up hub of the video cassette can be viewed through a window on top of the cabinet to verify that a cassette has been loaded and is moving correctly (this information is also displayed in the front-panel window).

The wireless remote control duplicates most of the front-panel control functions of the PV-1730. It also has a small switch that converts most of its buttons to controls for certain Panasonic TV sets, which is surely the most effective use of a really small control unit (about $7\frac{3}{4} \times 2\frac{1}{2} \times \frac{5}{8}$ inches) that we have seen.

The large (fifty-two-page) instruction manual is extremely detailed and well illustrated, but the unit's complexity makes extensive practice imperative, especially if more than the most basic operation of the recorder is required. We counted some fifty-four buttons, knobs, and switches on the PV-1730, though fortunately most of them are normally concealed from view behind the two hinged doors on the front and top of the cabinet. The switch for the audio-only recording mode is located on the back of the unit, which hardly makes for quick and easy access to it.

The display window shows an amazing amount of status information in such a way as to minimize confusion.

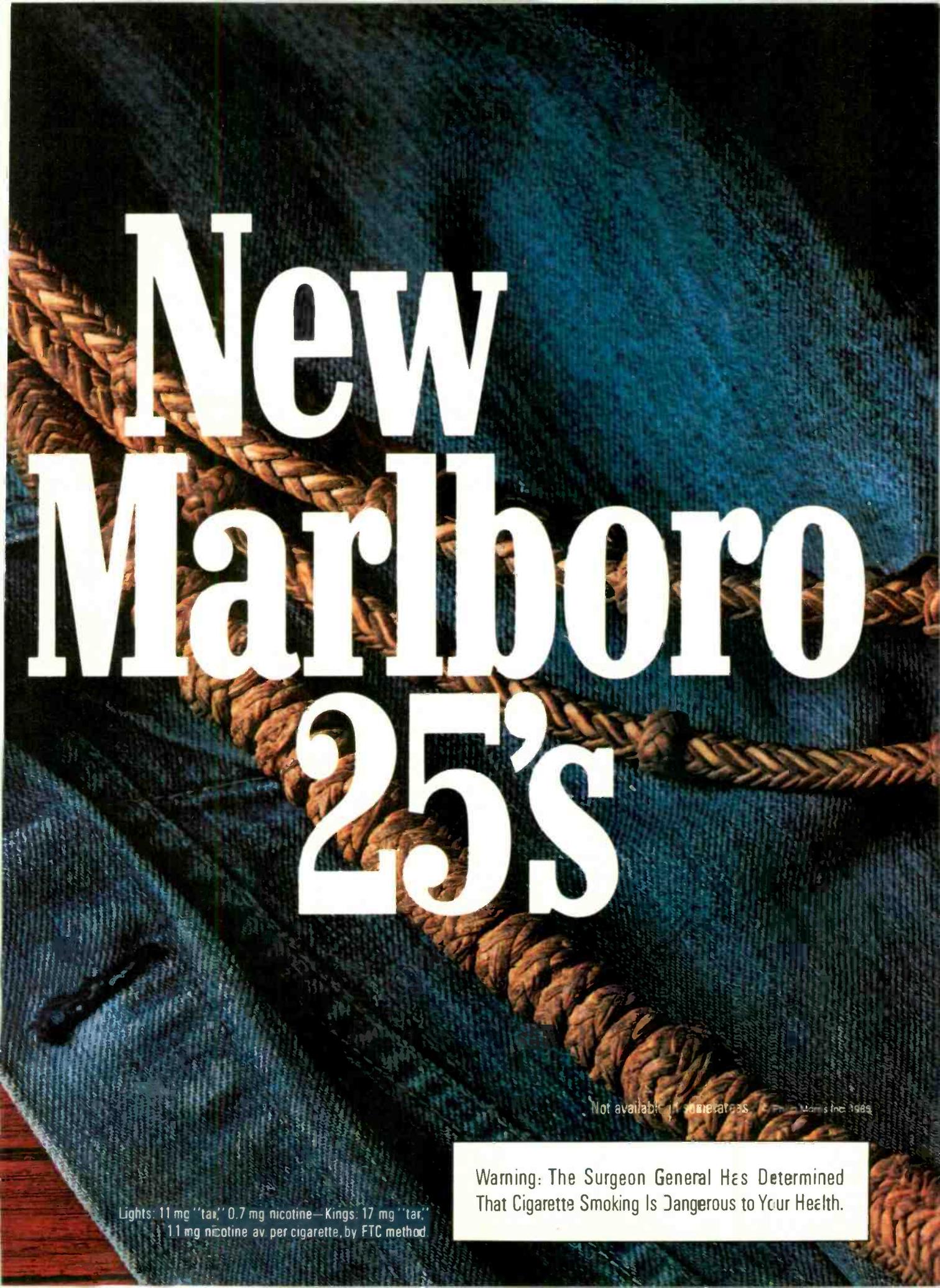
If you want to dub musical or operatic TV broadcasts, especially with the audio portion coming from an FM simulcast, the PV-1730 should be an ideal addition to your home entertainment system. And when stereo TV sound becomes common, this machine will be even more useful. Its video performance was at least as good as that of any other top-of-the-line VCR we have seen, and when that is combined with its exceptional audio quality and advanced styling and operating features, the Panasonic PV-1730 is an audio/video component that is truly hard to beat.

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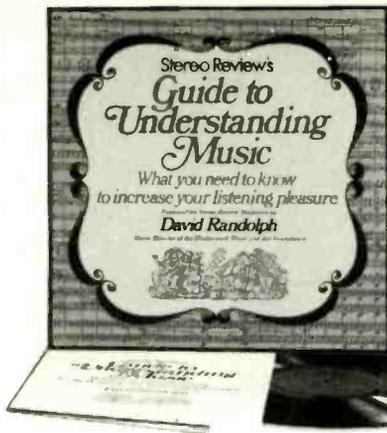


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STEREO REVIEW'S RECORD OF THE YEAR AWARDS FOR 1984



THE twelve records chosen by our editors and critics as the best of 1984 are listed on the following pages, and, in addition to the award winners, we also list twenty-three others for honorable mention. In the eighteen years we have been giving these awards our criteria have not changed. We vote strictly on the basis of artistic quality, including the quality of the sound.

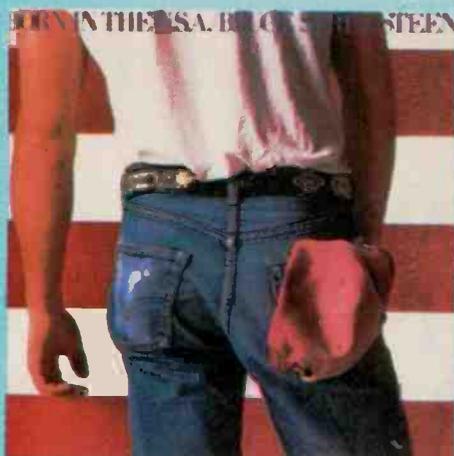
But in the last eighteen years there have been many changes in the tastes and listening habits of record buyers. For the first time this year we are giving a special award to a recording that is available *only* on Compact Disc. It is Mahler's Ninth Symphony conducted by Herbert von Karajan for Deutsche Grammophon. To reflect our readers' broadening interests we are also giving video awards for the first time.

The violinist Isaac Stern is this year's recipient of the Mabel Mercer Award for outstanding contributions to the quality of American musical life. Portrayed by Al Hirschfeld on this month's cover, Stern is the subject of an article by Herbert Kupferberg on page 45. This lifetime achievement award was first presented to the British-born cabaret singer Mabel Mercer (1900-1984). Subsequent recipients were Jascha Heifetz, Arthur Fiedler, Richard Rodgers, Beverly Sills, Earl Hines, Aaron Copland, Benny Goodman, and Eugene Ormandy. Last year the honor was renamed the Mabel Mercer Award when it was presented to Frank Sinatra.

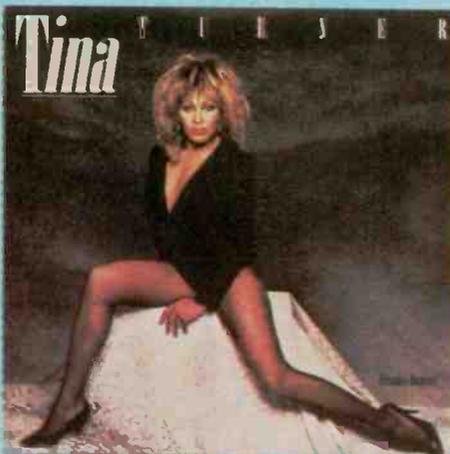
Christie Barter, Music Editor



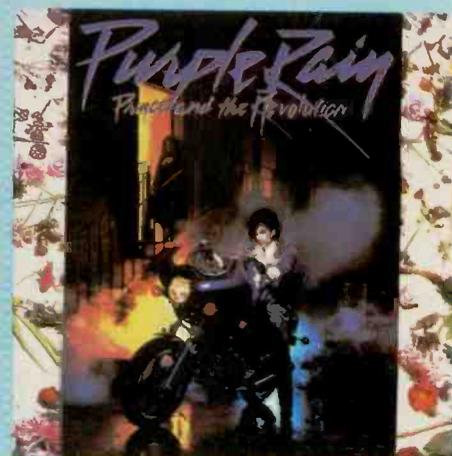
RECORD OF THE YEAR AWARDS



BRUCE SPRINGSTEEN:
Born in the U.S.A.
COLUMBIA QC 38653.



TINA TURNER:
Private Dancer.
CAPITOL ST-12330.



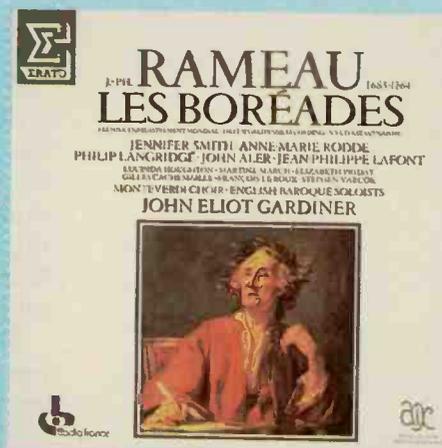
PRINCE AND THE REVOLUTION:
Purple Rain.
WARNER BROS. 25110-1.



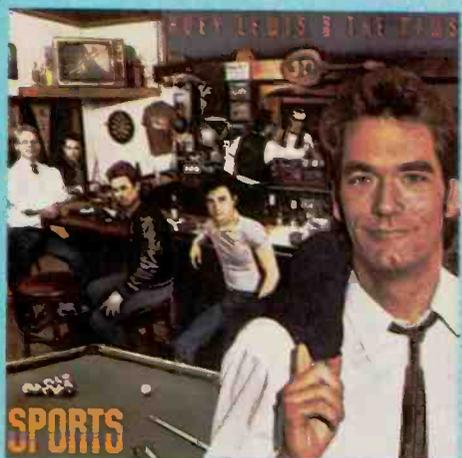
MENDELSSOHN: *Violin Concerto in E Minor.* **SAINT-SAËNS:** *Violin Concerto No. 3, in B Minor*
(Cho-Liang Lin; Philharmonia Orchestra, Michael Tilson Thomas conducting).
CBS IM 39007.



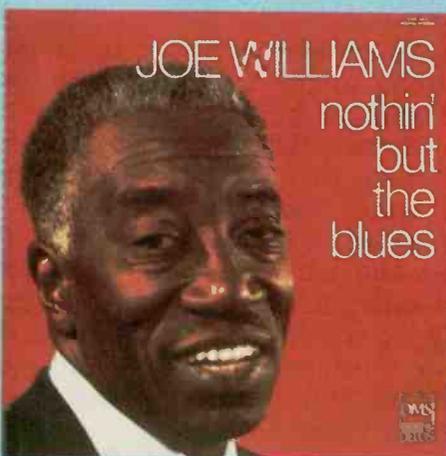
THE NATURAL
(Randy Newman).
Original-soundtrack recording.
Randy Newman conducting.
WARNER BROS. 25116-1.



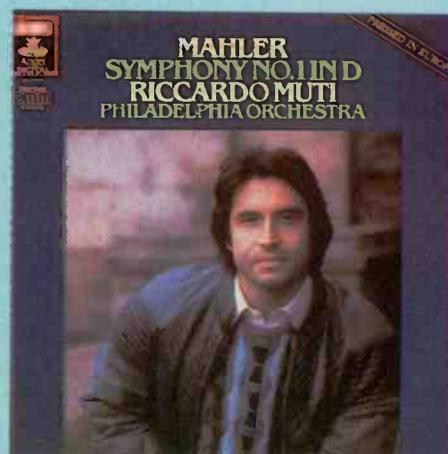
RAMEAU: *Les Boréades*
(Jennifer Smith, Philip Langridge, Jean-Philippe Lafont; English Baroque Soloists, John Eliot Gardiner conducting).
ERATO/RCA STU 715343.



HUEY LEWIS AND THE NEWS:
Sports.
CHRYSALIS FV 41412.



JOE WILLIAMS:
Nothin' but the Blues.
DELOS DMS 4001.



MAHLER: *Symphony No. 1, in D Major*
(Philadelphia Orchestra, Riccardo Muti conducting).
ANGEL DS-38078.

FOR 1984



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R. STRAUSS: Four Last Songs; Six Songs with Orchestra (Jessye Norman; Gewandhaus Orchestra, Leipzig, Kurt Masur conducting).
PHILIPS 6514 322.



R. STRAUSS: Der Rosenkavalier
Anna Tomowa-Santow, Agnes Baltsa, Janet Perry, Kurt Moll; Vienna Philharmonic, Herbert von Karajan conducting).
DEUTSCHE GRAMMOPHON 413 162-1.



HONORABLE MENTIONS

BACH: Suites for Solo Cello (Yo-Yo Ma). CBS 13M 37867.

BEETHOVEN: Piano Concertos Nos. 1-5 (Alfred Brendel, Chicago Symphony, James Levine cond.). PHILIPS 411 189-1.

BIZET: Carmen (Julia Migenes-Johnson, Faith Esham, Placido Domingo, Ruggero Raimondi; Orchestre National de France, Lorin Maazel cond.). ERATO/RCA NUM 751133.

BRITTEN: War Requiem (Elisabeth Söderström, Robert Tear; City of Birmingham Symphony, Simon Rattle cond.). ANGEL DSB-3949.

RAY CHARLES: Friendship. COLUMBIA FC 39415.

EVERLY BROTHERS: EB84. MERCURY 422 822-1.

CHARLIE HADEN AND CARLA BLEY: Ballad of the Fallen. ECM 23794-1.

EMMYLOU HARRIS: White Shoes. WARNER BROS. 23961-1.

HOWARD JONES: Human's Lib. ELEKTRA 60346-1.

CYNDI LAUPER: She's So Unusual. PORTRAIT BFR 38930.

MOZART: Quintet for Clarinet and Strings, K. 581; Trio for Clarinet, Viola, and Piano, K. 498 (Les Musiciens). HARMONIA MUNDI HM 1118.

NAZARETH: Brazilian Tangos and Waltzes (Arthur Moreira Lima). PRO ARTE PAD 170.

POINTER SISTERS: Break Out. PLANET BXL1-4705.

PRETENDERS: Learning to Crawl. SIRE 23980-1.

RAVEL: Ma Mère l'Oye; Pavane pour une infante défunte; Le Tombeau de Couperin; Valses nobles et sentimentales (Orchestre symphonique de Montréal, Charles Dutoit cond.). LONDON 410 254-1.

RAVEL: Songs (Jill Gomez, Heather Harper, Jessye Norman, José van Dam; Ensemble InterContemporain, BBC Symphony, Pierre Boulez cond.). CBS M 39023.

LOU REED: New Sensations. RCA AFL1-4998.

SCHUBERT: Piano Sonatas, D. 575, 625 (Sviatoslav Richter). VOX CUM LAUDE 9026.

SCHWANTNER: Magabunda. SCHUMAN: American Hymn (Lucy Shelton; St. Louis Symphony, Leonard Slatkin cond.). NONESUCH 79072.

FRANK SINATRA: L.A. Is My Lady. QWEST 25145-1.

THAT'S HOW I FEEL NOW: A Tribute to Thelonious Monk. A&M SP-6600.

VERDI: Ernani (Mirella Freni, Placido Domingo, Renato Bruson, Nicolai Ghiaurov; Orchestra of La Scala, Riccardo Muti cond.). ANGEL DSCX-3942.

VIVALDI: Concerti Grossi, Op. 8 (Academy of Ancient Music, Christopher Hogwood cond.). L'OISEAU-LYRE D279D.

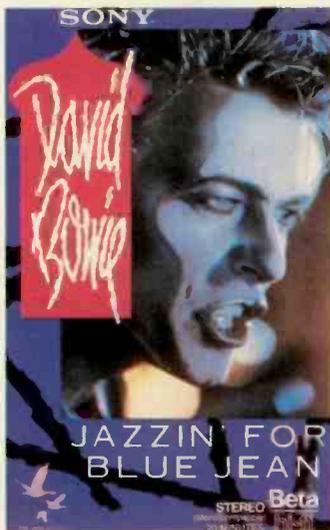


SPECIAL CD AWARD

MAHLER: Symphony No. 9, in D Major (Berlin Philharmonic, Herbert von Karajan cond.). DEUTSCHE GRAMMOPHON 410 726-2.



STEREO REVIEW'S VIDEO AWARDS FOR 1984



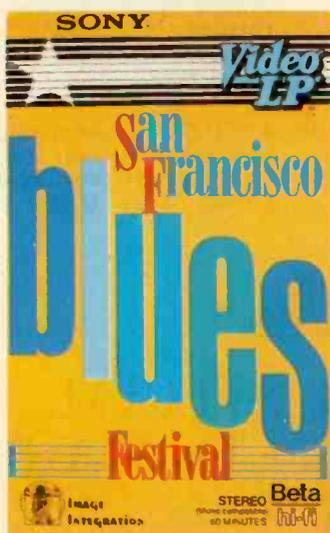
DAVID BOWIE:
Jazzin' for Blue Jean.
SONY MINI-MOVIE.



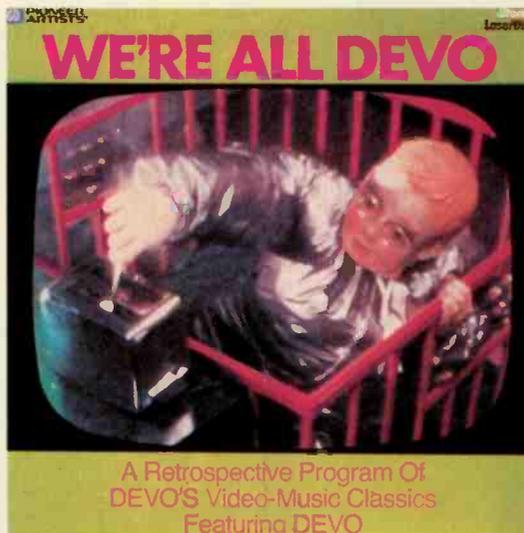
VERDI: Don Carlo
(Metropolitan Opera).
PIONEER LASERDISC PA 84-075.



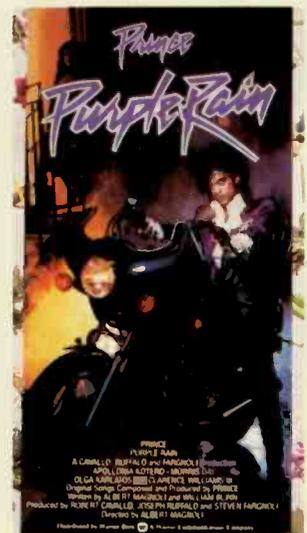
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PACIFIC ARTS VIDEO
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**PRINCE AND
THE REVOLUTION:**
Purple Rain.
WARNER HOME VIDEO 11398.





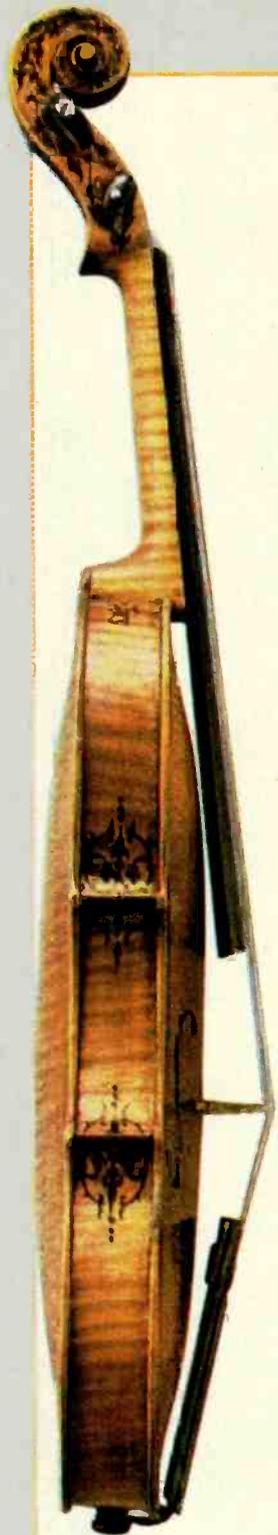
ISAAC STERN

*This year's recipient
of the Mabel Mercer
Award is truly a
fiddler to the world*

by Herbert Kupferberg

THE conductor George Szell once told Isaac Stern that he could be a truly great violinist if only he stopped doing so many other things. Isaac Stern has kept right on doing them and has become a truly great violinist at the same time. Now, as a result of his many roles in the life of his community and his world, in addition to his remarkable musical accomplishments, he has been named this year's recipient of STEREO REVIEW's Mabel Mercer Award for outstanding contributions to the quality of American musical life.

The *perpetuum mobile* quality of Stern's musical life is reflected in a dizzying variety of activities—as solo violinist, chamber musician, savior of Carnegie Hall, cultural ambassador to the Soviet Union, China, and other countries, tireless worker on behalf of Israel, educator, and father figure to a generation of young violinists. ▶



Short, chubby, accessible, and loquacious, he is a supremely human figure in a milieu where aloofness and glamour are too often the rule. One might, indeed, call him the quintessence of the American virtuoso, deeply rooted in the great performing traditions of the past, yet thoroughly at home in the media and electronics age. If there ever was a musician involved with and committed to the world in which he lives, it is Isaac Stern.

"I have never been able to live in a cocoon," he has declared. "More than anything else, an artist wants to feel needed. To have received as much as I have from music and not to have given something back would be criminal."

Stern's career as a concert performer stretches back some fifty years, starting with his debut at age fifteen in San Francisco, where he grew up. In 1980 his sixtieth birthday became the occasion for a series of worldwide observances, including a sequence of anniversary recitals in the United States, a huge party in Tel Aviv at which the Israel Philharmonic played a set of variations on *Happy Birthday* composed by Noam Sheriff, and an unusual two-month residency in Paris during which he became a kind of playing adviser to the musicians of two French orchestras.

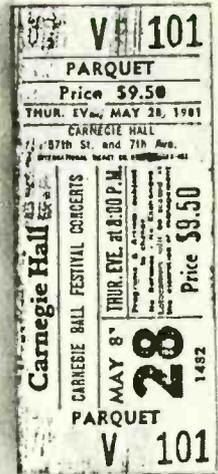
Yet, for all the special events involved, a Stern celebratory year seems little busier or more hectic than his ordinary year. Statistics are hard to come by, but it seems likely that Stern travels more miles, gives more concerts, and makes more records than any other living violinist. He has about a hundred LP's to his credit, almost all for CBS, which has proclaimed him its first Artist Laureate and signed him to what is, in effect, a lifetime contract. The company will also henceforth adorn all his releases with a special "laureate" gold sticker. Probably the violinist who is his closest competitor in total number of records—and in public affection—is his protégé and friend Itzhak Perlman.

Although Stern is a paragon of American cultural values in his combination of musicianship, humanitarianism, and commercial success, he wasn't born in the United States. But he came close, arriving in San Francisco at the age of ten months in the arms of his parents, who had chosen to emigrate

from Russia in the wake of the Bolshevik Revolution.

He was born July 21, 1920, in Kreminiec in the Ukraine, an area that produces an uncommon number of violin virtuosos. Stern, indeed, once defined the U.S.-U.S.S.R. cultural exchange program, at least so far as it concerns violinists, in these terms: "They send us their Jews from Odessa, and we send them our Jews from Odessa"—Odessa, of course, being the Ukraine's port on the Black Sea.

Isaac's parents, Clara and Solomon Stern, settled in San Francisco and started him on piano lessons at age six. But when Isaac was eight, the boy across the street took up the violin, and he asked to do the same. "So my friend became an insurance agent, and I became a fiddler," is the way he describes what happened. At ten, he was registered in the San Francisco Conservatory and in his teens began making appearances with the San Francisco and



Among the many distinguished conductors Stern has played and recorded with is the late George Szell. Their album of Mozart violin concertos, dating from the Sixties, is still available on CBS.

The photo of Isaac Stern on the preceding page is used courtesy of CBS Masterworks.

ISAAC STERN



ICM ARTISTS, LTD.

T

wo hundred concerts a year were routine for Isaac Stern in the years following the Second World War. He plays less now but is always on hand to lend his support to a worthy cause.

Los Angeles Symphony Orchestras. Stern and his fellow San Franciscan Yehudi Menuhin, four years older, are undoubtedly the two foremost violinists ever produced by the United States. But Stern never was a child prodigy in the Menuhin sense, nor for that matter did he, like Menuhin, study in Europe and settle abroad. His principal teacher was Naoum Blinder, concertmaster of the San Francisco Symphony, and his progress as pupil was steady rather than spectacular.

As Stern remembers it, his New York debut at Town Hall on October 12, 1937, drew respect rather than raves from the critics. He also recalls that the event cost \$1,500 to put on and that he held three rehearsals with the accompanist hired for the occasion. "I should have had a tested program that I'd played on the road and embedded in my fingertips," he observed in later years. "The reviews were of the 'yes-but' variety. The consensus, however, was that I should go far. I did. I packed up my violin and went back to California."

Actually, the review in the New York *Herald Tribune* described the seventeen-year-old Stern as "an unusually promising young musician whose talent seems to be following a normal and judicious course of development. . . . He should become an artist of exceptional consequence." By 1939 the New York

Times was reporting that Stern had "established his title to mature artistry," and five years later Virgil Thomson pronounced him "one of the world's master fiddle players."

Like many another up-and-coming young American performer, Stern made much of his progress under the promotional wing of Sol Hurok. By the time the post-World War II era arrived he was playing a hundred concerts a year and traveling to Europe, South America, and the Pacific (which he had already toured three times as part of a USO war-time troupe). He also went briefly to Hollywood, where he was a musical ghost—he fiddled for John Garfield, who acted the role of a violinist in the film *Humoresque*. In another film, called *Tonight We Sing* and loosely based on the life of Hurok, Stern himself played the role of the Belgian virtuoso Eugène Ysaÿe, an experience which he says convinced him he was no actor. Years later Stern, unseen, performed the violin music for the screen version of *Fiddler on the Roof*.

But Hollywood glamour has never been part of the Stern mystique or, as he might say himself, *schtick*. With his rotund figure, fluff of gray-white hair, and horn-rimmed spectacles, the figure he presents on stage is homey looking rather than charismatic. So far as looks are concerned, he might be the neighbor

next door playing the fiddle rather than one of the concert world's most famous virtuosos. There is a famous Stern story about the time he was playing a recital for which stage seats had been sold. Turning to the people behind him as he was about to begin, he said, "Pardon my back." Then, as he faced the main part of the audience, he added, "Pardon my front."

But for Stern, it's only a small step from informality to artistry. Itzhak Perlman, whose career Stern has done much to foster, describes him as a violinist who never gets lost in mannerisms and who plays "like a musician instead of like a virtuoso." Daniel Barenboim, the pianist-conductor who is another of Stern's young admirers and associates, says that he "makes the bow seem five miles long." Stern himself compares proper violin playing to the "natural rise and fall of the human voice," with a continuous flow in which every line or phrase is linked to the one before it. "You sing in your head and play what you hear," he says.

However he achieves it, there is a brilliant alertness and aliveness to Stern's playing that give it a distinctive quality: he's a person-to-person player rather than a soloist-to-audience performer. He is also a musician eager to tackle almost anything that he thinks is musically worthwhile and basically violinistic.

He has recorded everything from Bach and Beethoven to Bartók and Barber. Among the living composers whose works he has premiered are Leonard Bernstein, Krzysztof Penderecki, George Rochberg, and William Schuman. He has also made recordings with pianist Eugene Istomin and the late cellist Leonard Rose, his partners in one of the country's most distinguished trios.



HOREWELL FOUNDATION, INC.

A by-product of Stern's first trip to China in 1979 was the film From Mao to Mozart, in which he is shown coaching Chinese students in violin techniques.

But to live exclusively as a concert artist, giving recitals and making records, has never been part of either the Stern personality or the Stern philosophy. He has always been a mover and shaker in areas that many musicians would consider peripheral, and even inimical, to their own careers.

Perhaps the most tangible of Stern's extracurricular successes was his campaign to save Carnegie Hall in 1960. Landmark-wrecking is a favorite New York City pastime, with victims ranging from the old Pennsylvania Station to the old Metropolitan Opera House at 39th Street, and there is no doubt that Carnegie Hall would also be only a memory today were it not for Stern and assorted friends.

The hall, dating back to 1891, was scheduled to be demolished and replaced by a red ceramic-faced office building in the wake of the New York Philharmonic's move to Lincoln Center. Stern's opposition was an act of courage as well as commitment, for some powerful interests were promoting the destruction. Lincoln Center was not eager for competition on 57th Street, and the

Rockefeller family, deeply involved in the new cultural complex, also displayed no interest in preserving the old hall. For a fiddler, no matter how eminent, to spearhead the preservation campaign was no casual matter. Today, thanks to Stern and those who worked with him, Carnegie Hall continues to flourish with some of the most varied and innovative programming in town, as well as superior acoustics and accessibility.

Stern, who was installed as president of the hall, for years played an active role in running the operation. (There were some who said it was *too* active.) Lately he has curtailed his personal involvement in its administration, with a professional management team taking over. But no concerts at Carnegie Hall are more popular than those he gives himself.

Stern's involvement with causes goes far beyond the municipal level; it exists on a scale that can only be called planetary. Like his late mentor, Sol Hurok, Stern sincerely believes that music can be a bridge between nations, cultures, and peoples. He was the first major instrumentalist to visit the Soviet Union during the Cold War, going there in 1956, two years before the formal Cultural Exchange Program was initiated. He established warm personal relations with the late David Oistrakh (an Odessa native) and other Soviet violinists. In fact, more than one musical visitor from Russia has made Stern's capacious Manhattan apartment his home and headquarters while in the U.S.

Stern, who speaks five languages—English, French, Russian, Hebrew, and Yiddish—has played in virtually every major country except Germany, which he steadfastly refuses to enter. In 1979 he undertook his first visit to China at the invitation of the Chinese government, not so much to give concerts (though he did that, too) as to advise on the integration of its musical life with that of the West. A U.S. film crew went with him, the result being a ninety-minute movie called *From Mao to Mozart*. Actor he may not be, but Stern never seems so natural as when he is demonstrating or playing the fiddle, and this movie, which showed him sharing the art of the violin with Chinese boys and girls, proved to be an endearing lit-

tle masterpiece. It won an Academy Award as the best full-length documentary of 1981.

The foreign nation that above all engages Isaac Stern's sympathies and support is the land of Israel. He heads the America-Israel Cultural Foundation and directs the Jerusalem Music Center, a training institute. It is thanks to Stern's support and encouragement that an entire generation of young Israeli violinists have been able to make international careers for themselves, many centered in the United States. He has cleared the way for, among others, Itzhak Perlman, Pinchas Zukerman, Shlomo Mintz, Miriam Fried, and Sergiu Luca. In 1967, following the Six-Day War, Stern joyously performed the Mendelssohn Concerto with the Israel Philharmonic Orchestra atop Mount Scopus—perhaps the most spectacular of the seemingly innumerable concerts he has given in Israel.

Not all of Stern's protégés have been Israelis, nor are they all violinists. Pianist Yefim Bronfman and cellist Yo-Yo Ma are among those members of the younger generation in whom he has taken an interest. Wherever he goes, he has an uncanny knack of discovering and encouraging new talent.

Of all of the finds he made in Israel, the greatest has assuredly been his wife, Vera. Stern had been married to and divorced from ballerina Nora Kaye when, at a Jerusalem concert in 1951, he was introduced by his longtime accompanist, Alexander Zakin, to Vera Lindemblit, an admirer of his playing. Vera, born in Berlin of Lithuanian parents, had spent the war years first in Paris, then in Stockholm, and after the war she had come to New York. In 1951 she emigrated to Israel, and there, on August 1, she met Isaac. Exactly sixteen days later they were married in Ramat Gan, and today they are the parents of a daughter and two sons, all in their twenties.

Vera Stern is, like Isaac, vigorous, articulate, and personable. She handles many of her husband's business matters and has been deeply involved with his activities on behalf of Israel and in the Carnegie Hall campaign. The Sterns have two residences, a duplex apartment on Central Park West and a country house set among the wooded hills of west-

ern Connecticut, two hours from Manhattan.

The Sterns' New York home is a hotbed of musical, family, social, and business activities, many of which are carried out on the telephone. If the fiddle is the most important instrument in Isaac Stern's life, the telephone runs it a close second. His Manhattan home has a dozen phones scattered around, and on the road he generally likes to have three in a hotel suite. Connecticut is a different story, however. There he limits himself to one telephone.

His principal athletic activity is tennis, at which he is said by opponents to play a vigorous game. A few summers ago at a luncheon party he gave for a friend's birthday in his country home, he was nowhere to be found in midafternoon until a guest discovered him alone in front of the television set watching a championship tennis match.

Stern's favored violin is the Guarneri (he owns two), whose robust tone he prefers to the somewhat more elegant Stradivari. In transit he invariably carries his own fiddle. Once when a helpful hotel manager reached for his case, Stern clutched it to his chest and said with a laugh, "When I give you my violin, that'll be the day you give me your hotel!"

Will Isaac Stern, now nearing sixty-five, slow down? Can Isaac Stern slow down? Don't count on it—at least not too much. CBS will shortly issue his first recording, with Eugene Istomin, of the complete Beethoven violin-piano sonatas. There are other recordings in the works, and plenty of concerts too.

T rue, Stern no longer performs nearly two hundred concerts a year as he once did, and he takes from time to time what he calls a "sabbaticlette"—a small sabbatical—during which he performs only at well-spaced intervals. He's already said that he envisions no large-scale celebration of his sixty-fifth birthday such as accompanied his sixtieth. As for his seventieth—that he isn't even talking about.

So it's entirely possible that some discernible reduction of pace may

Herbert Kupferberg is a senior editor of Parade magazine. His Basically Bach: A 300th Birthday Celebration, will be published in March by McGraw-Hill.

occur. But it seems even more obvious that Isaac Stern has no intention of hanging up either his fiddle or his phone. As long as God gives him strength, if there is a good cause to espouse, or a good student to encourage, or—most important of all—some good music to play, he will be there. □

ISAAC STERN

RECORDINGS BY ISAAC STERN

T HE new 1985 Artist Issue of the Schwann catalog has fifty-two entries under the name Isaac Stern, and all but one of them are on CBS labels. That one exception is a two-record Deutsche Grammophon album documenting the week-long Huberman Festival held in Tel Aviv in December 1982 to honor Bronislaw Huberman, the founder of what became the Israel Philharmonic. Stern was the senior violin soloist among the six invited to perform at the festival.

The remaining currently available Isaac Stern records listed in Schwann are the fruits of a forty-year contrac-

tual relationship with CBS Masterworks that has yielded more than a hundred recordings. In recognition, CBS has named Stern its first Artist Laureate and created a new logo that will appear on all his future releases. Some of what to expect from Stern in the months ahead is noted in "Record Makers" (page 59). For a selective list of Stern recordings on dealers' shelves right now, see below. And note the extraordinary number of distinguished colleagues he's recorded with. (All numbers are CBS Masterworks numbers or, in the case of some of the Compact Discs, CBS Sony numbers.) Christie Barter

- **BACH: Violin Concertos Nos. 1-2.** With Alexander Schneider, English Chamber Orchestra. MY 38487, © MYT 38487.
- **BACH, VIVALDI: Concertos for Two Violins.** With Pinchas Zukerman, St. Paul Chamber Orchestra. © IM 37278, © IMT 37278, © IMT 37278.
- **BARBER, HINDEMITH: Violin Concertos.** With Leonard Bernstein, New York Philharmonic. MS 6713.
- **BARTÓK: Violin Concerto; Two Rhapsodies.** With Leonard Bernstein, New York Philharmonic. MP 38886, © MPT 38886.
- **BEETHOVEN: Violin Concerto in D Major.** With Daniel Barenboim, New York Philharmonic. M 33587, © MT 33587, © 35 DC-55.
- **BEETHOVEN, BRAHMS, MENDELSSOHN, SCHUBERT: Piano Trios.** With Eugene Istomin, Leonard Rose. D3S 799.
- **BRAHMS: Violin Concerto in D Major.** With Zubin Mehta, New York Philharmonic. M 35146, © MT 35146, © 35 DC-108.
- **COPLAND: Violin Sonata.** With Aaron Copland. M 32737.
- **DVORÁK: Violin Concerto in A**

- Minor; Romance.** With Eugene Ormandy, Philadelphia Orchestra. MS 6876.
- **HAYDN: "London" Trios Nos. 1-4; Divertimentos, Op. 100, Nos. 2 and 6.** With Jean-Pierre Rampal, Mstislav Rostropovich. © IM 37786, © IMT 37786, © MK 37786.
- **MENDELSSOHN: Violin Concerto in E Minor. BEETHOVEN: Two Romances.** With Seiji Ozawa, Boston Symphony. © IM 37204, © IMT 37204, © MK 37204.
- **MOZART: Violin Concertos Nos. 3-5.** With George Szell, Cleveland Orchestra. M2 36936.
- **PROKOFIEV: Violin Concertos Nos. 1-2.** With Zubin Mehta, New York Philharmonic. © IM 37802, © IMT 37802.
- **SIBELIUS: Violin Concerto in D Minor.** With Eugene Ormandy, Philadelphia Orchestra. M 30068.
- **STRAVINSKY: Violin Concerto; Symphony in Three Movements.** With Igor Stravinsky, Columbia Symphony. MS 6331.
- **TCHAIKOVSKY: Violin Concerto in D Major.** With Mstislav Rostropovich, National Symphony. XM 35126, © XMT 35126, © 35 DC-49.

New York Mayor Edward I. Koch (left) and Frank Sinatra, last year's Mabel Mercer Award recipient, flank Stern at a recent Carnegie Hall benefit.



Special Test Report by Julian Hirsch

PIONEER

CLD-900 LASERDISC/CD PLAYER

*Digital audio and video
on the same machine—
it's as easy as
flicking a switch.*

BECAUSE of the very similar formats of laser-type video discs and digital audio discs (Compact Discs), there has been considerable speculation about the possibility of combining the playback hardware of the two systems. That conjecture has now become reality with the announcement of the Pioneer CLD-900. Heretofore available only on the Japanese market (as the CLD-9000), where it costs just over \$1,000, the player is about to be introduced in the United States at \$1,200. We have had the opportunity to test and use one of the early American models.

The CLD-900 is a true multimode player, accepting both 12-inch and 8-inch LaserDiscs and standard 4¾-inch Compact Discs, with completely automatic internal switching to accommodate their quite different playback requirements. The switching is somewhat analogous to an LP record player that sets its playing speed and arm-indexing diameter automatically by sensing the record diameter. At the time of our test little specific information about the novel circuitry and mechanical

features of the CLD-900 was available to us other than what appeared in an unusually detailed and informative instruction manual for the Japanese model—written entirely in Japanese, of course!

Most of the key features of the machine are listed elsewhere in this report, but the CLD-900's most unusual property is its ability to play special digitally encoded soundtracks that will be provided on future Pioneer LaserDisc video releases. The LaserDisc digital-audio encoding system occupies the frequency spectrum below about 2 MHz, where it does not interfere with the video program. Since the standard LaserVision analog (FM) audio channels are also used, the new disc format is compatible with playback on existing LaserVision players in a manner analogous to the "hi-fi" VCR's, whose tapes also contain the standard longitudinal soundtracks and are thus playable on machines lacking the hi-fi feature. (The box on page 52 contains more technical information on the digital soundtrack system.)

Automatic Operation

The Pioneer CLD-900 is a large (16½ x 17½ x 6⅝ inches), heavy (35 pounds), all-black unit with relatively few external operating controls or indicators. Almost all of its functions must be controlled from a

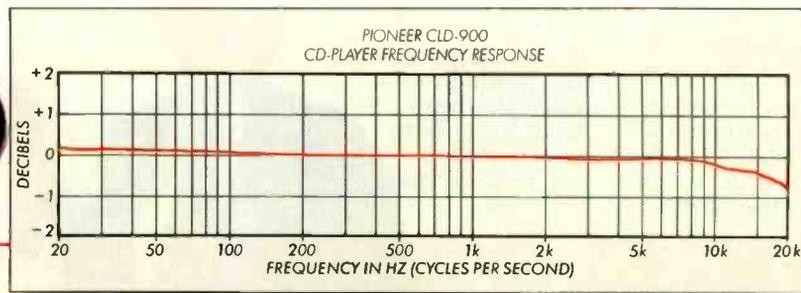
hand-held wireless (infrared) remote unit, and its operating status is displayed on the screen of a connected TV set or video monitor.

After the CLD-900 has been turned on by a pushbutton power switch, pressing a large rectangular eject button causes the horizontal disc drawer to emerge about 1½ inches from the front panel. The drawer must then be withdrawn further manually, exposing a plastic disc-supporting surface with concentric rings and recesses to contain any of the three standard disc sizes for which the player is designed. After the disc is loaded, the drawer must be closed by hand.

During play, a digital numerical readout on the panel shows the current track number (for a CD) or the chapter number (for a video disc). The indicator has a range from 0 to 99. Red LED's indicate the assignments of audio channels to the output jacks. If the audio is a dual-channel recording (with a different language in each channel, perhaps), either channel may be switched into both audio outputs. If the two channels contain a conventional stereo program, that can also be supplied to the output jacks.

Pressing the play button causes the disc to play from its beginning. A certain amount of whirring and other mechanical sounds can be heard while the mechanism is indexing and attaining the correct

PHOTO BY JOOK LEUNG





speed (CD's rotate at a rate of between 200 and 500 rpm, LaserDiscs between 600 and 1800 rpm). Nothing else is necessary to play a complete disc, assuming that the appropriate connections have been made between the CLD-900 and the video and audio portions of the system. At the end of play, the mechanism shuts off and the drawer opens slightly to allow removal of the disc (unless the front-panel AUTO REPEAT switch has been set to repeat, in which case the disc is played again indefinitely).

Absolute Control

For anything other than viewing or listening to a disc from beginning to end, the remote-control unit *must* be used. Some of its twenty-eight buttons are used only for video, others only for audio discs, but most serve a dual function. Where appropriate or necessary, green or blue labeling identifies the control function in the respective modes (the two functions are usually similar, such as CD track or video-disc chapter selection, even if differently named).

A sliding cover on the remote unit conceals different groups of buttons depending on which detented position it is in. It is not always obvious why certain functions are hidden and others exposed by this cover.

Most of our tests of the Pioneer CLD-900 dealt with its audio per-

formance as a Compact Disc player, for which we used our regular CD test records. The Pioneer F2 LaserDisc test record supplied to us is designed primarily for video testing. Although it was useful in testing certain specific aspects of video-disc audio performance, principally in the areas of noise reduction and correct CX-decoder operation, it was of limited value in our overall audio evaluation. However, we did watch and listen to several commercial Pioneer LaserDisc classical-music releases as well as one of the new digital-soundtrack LaserDiscs, viewing them on a 25-inch video monitor while listening to the audio through our regular lab system.

As a CD player, the Pioneer CLD-900 held its own with the best of the current generation of CD players we have tested. Its frequency response was flat within ± 0.1 dB from 20 to 7,000 Hz, falling off only slightly to -0.8 dB at 20,000 Hz. The two channels had identical responses. Their outputs from a signal recorded at a 0-dB level (the maximum possible) were slightly higher than we have measured from dedicated CD players, measuring 2.46 and 2.41 volts from the two channels. The phase shift between the channels at 20,000 Hz was nearly 90 degrees, indicating the use of a single digital-to-analog (D/A) converter multiplexed between the left and right channels.

The reproduction of a 1,000-Hz

square wave had the leading edge "ringing" at about 20,000 Hz, which is characteristic of analog low-pass filtering. The total harmonic distortion (THD) at 1,000 Hz was barely measurable at 0 dB, about 0.0005 percent, and unmeasurable at lower levels. The intermodulation (IM) distortion reading was the residual of our test equipment, 0.003 percent, at 0 dB and 0.01 percent at -20 dB. The A-weighted signal-to-noise ratio (S/N) was 94.5 dB on one channel and 97.5 dB on the other. The channel separation was 100 dB or greater at 1,000 Hz and below, decreasing to 90 dB at 20,000 Hz. The flutter was unmeasurably low, as is usual with CD players.

The CLD-900 was among the most stable CD players we have used. Even fairly heavy pounding on the cabinet failed to induce a skip, perhaps because of the player's considerable mass. Almost all of the calibrated flaws on the Philips TS4A test disc were played without error. Only with the largest of the black dots painted on the outer surface of the playing side was there any audible loss of tracking (a "stuttering" repetition of some notes). The mechanical functioning of the optical servo system was excellent, as evidenced by its flawless transition between Track 17 and Track 18 of the Philips TS4 test disc, which have no silent interval between them. Cueing time (as we measure it) was about average at 4 seconds.

A HAPPY ACCIDENT

AMONG its other unique and unprecedented abilities, Pioneer's CLD-900 can play back video discs with digitally encoded soundtracks. That this is possible at all is more of a happy accident than the result of careful planning and design. As you will see, it didn't have to work out so well. To understand why requires a basic comprehension of how signals are recorded on a video disc.

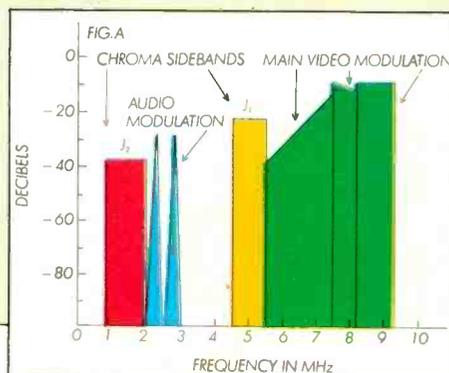
Both the Compact Disc system and the LaserDisc video-disc system record information in the form of submicroscopic "pits" impressed on a plastic substrate. But this and a few other physical characteristics (both types of disc are scanned from the inside to the rim by a laser, etc.) are just about the only connections the systems have with each other; electronically they are very different.

The video and audio signals on a LaserDisc pressing are recorded as frequency-modulated analog signals. The frequency-modulation technique accounts for much of the LaserDisc's inherently high-quality picture and audio. Frequency-modulated signals are less vulnerable to noise and distortion resulting from the defects and limitations of the transmission "channel," in this case an optically scanned disc. FM signals are also easily turned into the variable-length pits on a video disc.

The video-disc FM recording system uses three carrier signals: a

video carrier of 8.1 megahertz and two audio carriers, 2.301136 MHz and 2.812499 MHz, for the left and right channels, respectively. The spectrum these signals create when actually carrying program material is shown in Figure A. The video signal, in particular, has a wide spectrum as a result of the frequency-modulation process. Note the frequency band labeled J_2 (technically, the lower second-order chroma sideband). This portion of the video spectrum can be removed with a negligible effect on the picture quality, leaving space for a digital audio signal.

The digital audio signal on a Compact Disc is a straightforward digital-to-digital modulation of a digital-audio master tape's data. It receives no amplitude or frequency modulation. A digital-audio signal, essentially a stream of pulses, is recorded on a Compact Disc as alternating pits and "lands," just as in the LaserDisc system. The spectrum of the digital audio is concentrated below 2 megahertz, exactly where the J_2 sideband of a LaserDisc lies (see Figure B).





FEATURES

- Combination optical-disc player for Compact Discs, ordinary LaserDiscs, and LaserDiscs with digitally encoded soundtracks
- CX noise-reduction system automatically switches on with CX-encoded video discs
- Digital-audio decoding automatically switches on with digital-audio soundtracks or with CD's
- Display indicates play and pause modes, video-disc or CD operation, chapter or track number, repeat modes, CX operation
- Rear-panel connections for VHF output (Channels 3 or 4), TV antenna, audio out (gold-plated phono jacks), and remote control [for use with specialized Pioneer devices]
- Supplied wireless remote control duplicates most front-panel controls and adds additional search and cueing features
- Special video features include still-frame, choice of forward or reverse playback speeds, fast scanning in either direction, and chapter and frame search
- Special CD features include track skipping in either direction, pause, fast scan in either direction with audible program, index or track cueing
- Cueing location and time status displayed on attached video monitor or TV set
- Repeat modes include entire track (CD) or chapter (video disc), entire disc, and user-selected phrase
- Two-motor disc drive: standard LaserVision motor for video, low-cogging motor for CD's
- Six servo systems: laser positioning, spindle speed, focus, tracking, tangency (to eliminate time jitter for videp), and tilt (compensating for warped discs)
- Front-panel headphone output with slider level control

The only measurements we were able to make in the video-disc playing mode were of the 1,000-Hz audio output, which was 0.63 volt at 100 percent modulation, and of the A-weighted S/N relative to that level without CX noise reduction, which was 61 dB. The CX decoder cannot be switched on unless the inserted disc is CX-encoded, and the portions of the Pioneer F2 test

disc with CX encoding were too brief for us to make measurements. However, in listening to tests with CX-encoded musical LaserDiscs, turning on the CX system produced the expected large drop in hiss level (we would estimate it to be at least 10 to 15 dB).

The development of a multipurpose digital audio/video player with the sophistication and performance

quality of the Pioneer CLD-900 cannot be dismissed lightly. It is a most impressive achievement, and—aside from the obtrusive mechanical whirring sound when it was playing video discs—we found absolutely nothing in its performance that was less than ideal given the current state of the art in consumer audio and video products.

(Continued on page 89)

[Incidentally, the difference between the digital-audio and FM-video bandwidths explains why a LaserDisc must spin so rapidly—or, conversely, why a CD can afford to spin relatively slowly. The more rapidly a storage medium moves past its readout device, in this case a laser, the wider the bandwidth of signal it can store. A familiar example of this principle is the performance difference between high- and low-speed analog audio tape recording.]

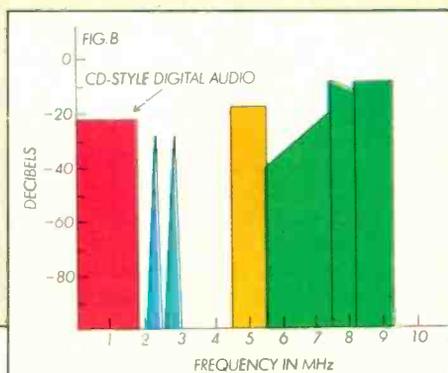
It's not difficult now to see how digital audio gets encoded onto a video disc: a digital-audio signal that's encoded just as it would be for a Compact Disc is mixed directly into the FM-encoded video/audio signals from which the J₂ band has been stripped. The combination digital-audio/video signal is then fed to the master-disc laser modulator. For playback, the disc player needs only the standard playback circuitry for a video disc and the standard circuits for CD playback. Both are fed with the output from the same scanning laser. The video-disc circuits

will believe they are playing a normal video disc, and the CD-decoding circuits will think a CD is being played. The result is a high-quality picture, two channels of high-quality analog sound (when CX noise reduction is applied to the FM-audio soundtracks), and two channels of audio with a potential sound quality identical to that of a CD.

But it didn't have to work out this easily. The encoding parameters for the video-disc and CD systems were arrived at separately and were optimized for the respective systems. The video-disc system needed wide

bandwidth; the CD system needed long playing time on a small disc. It's just a fortunate accident that the CD spectrum (which was established later) fits into a convenient "hole" in the video-disc spectrum. It's an even greater coincidence that performance need not be sacrificed for either video or digital audio. For once the much-maligned American system of color-TV encoding has a technological advantage: only the American NTSC color-TV signal has a convenient gap in its video-disc spectrum. The PAL system used widely in Europe has no such gap. A combination PAL video/digital-audio disc must sacrifice its analog soundtracks to the digital ones and thus loses its compatibility with non-digital PAL video-disc players. With the Pioneer CLD-900 combination digital-audio/video player and the new stereo-TV broadcasting system, the NTSC standard—sometimes nastily referred to as "Never Twice the Same Color"—can stand instead for "Now with Tremendous Sound Capability."

David Ranada



JAZZ ON CD

*The beat goes on,
with a little
help from digital
technology*

by Chris Albertson



If you hear a tinkling piano in the next apartment, and you think Keith Jarrett is trying out your neighbor's new concert grand, think again. These days, what you are hearing is more than likely a Compact Disc. The extraordinary clarity and frequency range of CD's—not to mention durability and size—are winning converts to this new medium every day, and even some die-hard analog advocates are now turning their ears to digital sound.

As was the case when long-playing records revolutionized our home listening, almost forty years ago, jazz was at the bottom of the list when it came to showing off the new CD technology, but that situation is quickly being rectified as even the smallest independent labels contemplate CD releases and some of the majors dig deep into their vaults. So far, producers of reissues on CD's have not reached back beyond the Fifties for material, but that reflects a sonic rather than an artistic judgment. Compact Disc technology offers such spectacular reproduction that recordings that are acceptable when veiled by the

shortcomings of analog discs and tapes often sound excruciating when reproduced digitally.

"We will eventually find an acceptable way to convert even very old material," says PolyGram Classics president Gianfranco Rebulla, "but our object right now is to make the acceptance of Compact Discs as widespread as possible, so we tend to go with the best-sounding material first."

At PolyGram, jazz material is handled by the company's classical division, which accords the music and its makers a respect that is rare coming from a major record company. And, since its catalog includes such major jazz-oriented post-war labels as Emarcy and Verve, PolyGram was able to launch its CD jazz program with an impressive roster of artists.

There is, for example, "Sonny Rollins Brass/Trio," a 1958 Verve set that does indeed feature the saxophonist in those two contexts, but the track that best demonstrates the aural magic of the CD is *Body and Soul*, a superb, unaccompanied tenor-saxophone solo that could easily make you believe Rollins was play-

ing in the very same room with you. Less startling, but no less magnificent, is the Emarcy album "Clifford Brown with Strings." Recorded a year and a half before his death at age twenty-five, it features Brown's trumpet at its lyric best, breezing with characteristic bite through a program of familiar ballads against a lush background. In the mid-Fifties, when it became prestigious for a jazz horn player to have a string album, this was one of the best, and it has never sounded better.

The grand divas of jazz, Fitzgerald, Holiday, Vaughan, and Washington, are also represented on CD's that go back to 1954. That was the year when Dinah Washington, at her peak, spent a good part of a summer day jamming informally before a small audience with instrumental stars like Clifford Brown, Clark Terry, Maynard Ferguson, Harold Land, Junior Mance, and Max Roach. If your collection is a comprehensive one, you probably already have the standard vinyl pressing of "Dinah Jams," but—improved sound aside—to have this gem of an album in permanent form is a joy in itself.

Billie Holiday was not in top shape in 1957, when she recorded "Songs for Distinguished Lovers," but even at her worst moments (and this is far from being one of them) she had a haunting quality that could not easily be dismissed. Here she gets topnotch support from an excellent rhythm section headed by Jimmy Rowles, Harry Edison's sensitive trumpet, and the formidable, buttery tenor of Ben Webster. Again, the sound belies the age of the recordings.

"Gershwin Live!" is of more recent vintage, 1982, but that's all for the best, because Sarah Vaughan continues to sound better with each year. I experienced a Vaughan concert in a small eighteenth-century opera house in Perugia, Italy, last summer, and I have rarely been so moved by a singer. Here she is, on a CBS release, at the Hollywood Bowl with the Los Angeles Philharmonic conducted by Michael Tilson Thomas. To hear this set is to understand why they call Vaughan "the Divine One." Every track is impressive, and even *Swanee*, a tune I detest, has its merits as Vaughan treats it. But my favorite is *The Man I Love*, which takes on a variety of colors in Marty Paich's brassy band arrangement.

SAD to say, Ella Fitzgerald has not sounded very well lately, but she was in fine form in 1963, when she recorded a Verve album entitled "On the Sunny Side of the Street." Now, with splendid digital remastering on CD, you hear every breath as the supreme scatter winds her way through twelve Quincy Jones arrangements with an ease that befits her accompaniment: Count Basie's orchestra.

Apropos Basie, there is also a Verve CD release of 1963's "Li'l Ol' Groovemaker . . . Basie!" on which the band swings characteristically through nine so-so Quincy Jones tunes. CD really brings out the crispness of Basie's piano and the feathery quality guitarist Freddie Green gave his rhythm section.

Not surprisingly, ECM, long known for the technical quality of its recordings, has also started releasing material in the CD format.

Excellent sound and performance combine to make Oregon's self-titled album and "Changes" with Keith Jarrett, Gary Peacock, and Jack DeJohnette stunning listening experiences, whether you like the music or not. Of the three ECM CD releases I have heard so far, my absolute favorite is "The Ballad of the Fallen," a musical political statement by bassist Charlie Haden and pianist Carla Bley, with considerable help from such sympathetic colleagues as trumpeter Don Cherry, saxophonist Dewey Redman, and drummer Paul Motian.

Finally, there is Delos, a small label that has heretofore been dedicated to classical music but has now entered the jazz arena with some excellent releases. My favorite is a Joe Williams album (see January "Best of the Month" and the Record of the Year Awards in this issue), but I also like "Trumpets No End," a boppish quintet set by West Coast trumpeters Bobby Shew and Chick Findley, and "It's a Good Day," a pleasant program of sixteen standards sung by Mavis Rivers (who recorded for Capitol in the late Fifties) with a quintet led by her son, Matt Catingub. Sixteen songs on one disc? Yes, because Delos has taken advantage of the CD's long-playing capacity by putting an hour of music on each disc—a commendable move.

While we may have to wait quite a while before Ma Rainey or the Louisiana Toe Ticklers appear in CD splendor, the future for jazz on CD looks good. As the players drop in price, so will the discs, and as demand increases, more and more small labels will join the CD revolution. Concord Jazz is already preparing to make its initial entry with Mel Tormé and George Shearing. The tiny Biograph label has announced a forthcoming release of Scott Joplin piano rolls on CD, and, as this is written, PolyGram Classics is launching its "Silver Collection" of extended CD albums by such artists as Wes Montgomery, Louis Armstrong, Billie Holiday, Oscar Peterson, and George Benson, each with a minimum playing time of one hour. The beat will not only go on, but on and on. □

COUNT BASIE: *Li'l Ol' Groovemaker . . . Basie*. Count Basie and His Orchestra, Quincy Jones arr. and cond. VERVE 821 799-2.

CLIFFORD BROWN: *Clifford Brown with Strings*. Clifford Brown (trumpet); instrumental accompaniment. EMARCY 814 642-2.

ELLA FITZGERALD AND COUNT BASIE: *On the Sunny Side of the Street*. Ella Fitzgerald (vocals); Count Basie and His Orchestra, Quincy Jones arr. VERVE 821 576-2.

CHARLIE HADEN/CARLA BLEY: *The Ballad of the Fallen*. Charlie Haden (bass); Carla Bley (piano, glockenspiel); Don Cherry (pocket trumpet); Dewey Redman (tenor saxophone); Paul Motian (drums); others. ECM 23794-2.

BILLIE HOLIDAY: *Songs for Distinguished Lovers*. Billie Holiday (vocals); Harry Edison (trumpet); Ben Webster (tenor saxophone); Jimmy Rowles (piano); Barney Kessel (guitar); others. VERVE 815 055-2.

KEITH JARRETT, GARY PEACOCK, AND JACK DEJOHNETTE: *Changes*. Keith Jarrett (piano); Gary Peacock (bass); Jack DeJohnette (drums). ECM 25007-2.

OREGON. Oregon (instrumentals). ECM 23796-2.

MAVIS RIVERS: *It's a Good Day*. Mavis Rivers (vocals); instrumental accompaniment. DELOS D/CD 4002.

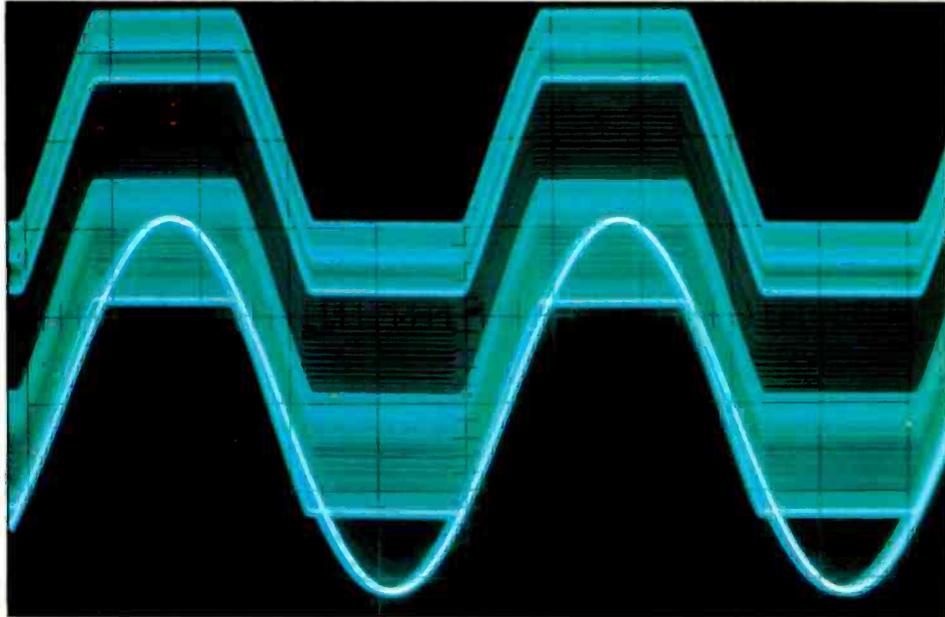
SONNY ROLLINS: *Trio/Brass*. Sonny Rollins (tenor saxophone); Nat Adlerley (cornet); Clark Terry, Ernie Royal, Reunald Jones (trumpet); Jimmy Cleveland, Frank Rehak (trombone); others. VERVE 815 056-2.

BOBBY SHEW/CHUCK FINDLEY: *Trumpets No End*. Bobby Shew (trumpet, flugelhorn, shew-horn); Chuck Findley (trumpet, flugelhorn, trombone); others. DELOS D/CD 4003.

SARAH VAUGHAN AND MICHAEL TILSON THOMAS: *Gershwin Live!* Sarah Vaughan (vocals); Los Angeles Philharmonic, Michael Tilson Thomas cond. CBS MK 37277.

DINAH WASHINGTON: *Dinah Jams*. Dinah Washington (vocals); Clifford Brown, Maynard Ferguson, Clark Terry (trumpet); Herb Geller, Harold Land (saxophone); Junior Mance, Richie Powell (piano); Keeter Betts, George Morrow (bass); Max Roach (drums). EMARCY 814 639-2.

POWER TO YOUR SPEAKERS



Loudspeakers will stand only so much abuse—don't overdo it.

OF all loudspeaker specifications, power handling is probably the least understood and the most potentially dangerous if ignored. If a loudspeaker fails, for example, it may not be the only casualty; with a typical two-way speaker system, failure of the tweeter may cause the minimum impedance of the speaker to drop from a safe 4 ohms to less than half an ohm! This is almost the equivalent of a short-circuit at the amplifier terminals and might cause the rapid failure of many amplifiers. To avoid such a catastrophe, it helps to understand just what happens when you play music through your speaker system.

Consider an amplifier rated at 50 watts per channel, about average by today's standards, driving a pair of speakers that will then produce sound, or acoustical power, which, like electrical power, is measured in watts. How much acoustical power is thus produced? Certainly not 50 watts. That much acoustical power (as opposed to electrical power)

by Timothy Holl

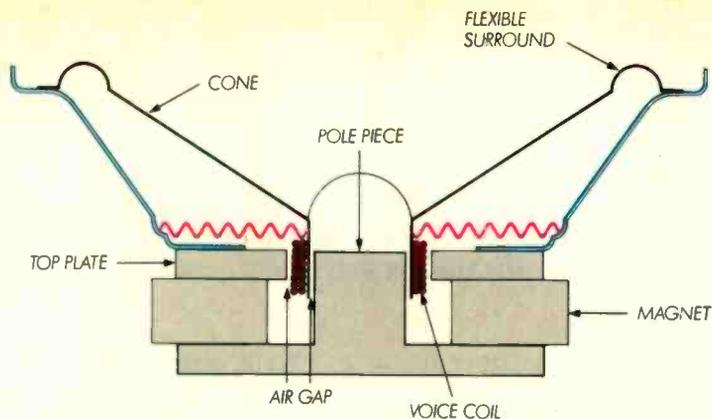
would be not merely deafening, it would probably shake a house to pieces. By looking at the acoustical power generated by everyday noises we can get an idea of the true efficiency of a loudspeaker. (*Efficiency* is the acoustical power output divided by the electrical power input, both measured in watts; it is different from the *sensitivity* parameter seen on spec sheets, which is the sound-pressure output level, expressed in decibels, with a specific input level). A large pipe organ will typically produce peaks of about 13 watts of sound, a piano about 0.4 watt, and a bass singer around 0.03 watt. Normal speech has an average output of about 0.000024 watt.

These levels are obviously very low compared with the electrical power levels we are used to, but speakers are in fact very *inefficient* devices that produce low acoustical-power levels from high electrical-power signals. Acoustic-suspension

systems have actual efficiencies of 0.1 to 0.4 percent, bass-reflex and vented systems about 1 percent, and horn-loaded speakers from 15 to 20 percent. If you drive a pair of speakers with the full output of a 50-watt amplifier, you will get from 0.05 to 0.2 watt of sound output. Where does the rest of the power go?

Nearly all of the missing power turns into heat in the voice-coil wires of the various drivers in the speaker system (see Figure 1). A voice coil has a relatively small surface area and therefore heats up quickly when a signal is passed through it. The heat has to cross an air gap to reach the driver's metal top plate and pole piece, which can then act as heat sinks. Unfortunately, air is not a good conductor of heat, so the "metalwork" cannot act as a very effective heat sink; the voice coil can get very hot within seconds, but the metalwork heats to a lower temperature over several hours.

The rapid voice-coil heating is important, since a common cause of



speaker breakdown is the thermal failure of the adhesives holding the overloaded voice coil together—the speaker gets cooked. In a multi-way speaker system, thermal problems are most likely to occur in tweeters or midrange drivers, which typically have small voice coils. Woofers have much larger and more rugged structures.

Recent years have seen an alleviation of the thermal-overload problem with the introduction of magnetic-fluid cooling. Magnetic fluids, such as Ferrofluid, are suspensions of ferrite particles in oil. The particles are attracted by magnetic fields, and when the fluid is injected into the air gap of a driver, it can be trapped there by the strong magnetic field and constantly bathe the voice coil in oil. While oil in itself is not a good heat conductor, it is much better than air. Thus, for a given power input, a driver with magnetic fluid in its gap will usually transfer four times more heat away from its voice coil than an identical driver without the fluid. It's easy to see why this simple yet effective technique is almost universally employed in high-quality loudspeaker systems.

But even systems with magnetic fluid in the drive units can be damaged if they are overloaded. After all, quadrupling the power-handling ability increases the maximum sound level by only 6 dB! Magnetic fluid is not a cure-all.

Hot Music

A more complete understanding of overload damage requires a look at the signals a loudspeaker receives. If a speaker had to handle equal signal levels at all audible frequencies, each driver in a multi-way system would have to have the same power-handling capabilities.

Fortunately for loudspeaker designers, this is not the case. Music signal levels vary at different frequencies, peaking around 500 Hz for classical music and around 800 to 1,000 Hz for rock (Figure 2).

Rock music is therefore more "dangerous" for loudspeakers for two reasons: (1) it is played louder most of the time, and (2) it has its maximum output at the frequencies handled by midrange drivers. Classical music has its greatest energy at frequencies handled by the more robust woofers.

With a typical piece of rock music, a tweeter in a typical two-way system will receive peaks of about 1.5 watts even though the amplifier may be supplying peak outputs of 50 watts. The speaker designer assumes that this ratio—determined by the frequency distribution of music—will hold in normal use. Consequently, care should be taken not to apply high levels to the tweeter. A tweeter in a loudspeaker rated to handle 200 watts could easily be damaged by a continuous high-frequency test signal of only 20 watts, which is unnaturally powerful compared with normal music. Use such test signals (from test discs or tapes) only at low playback volumes. It is also important to turn down the volume when fast-scanning or cueing a tape, not only because the high-pitched squealing that may be produced is annoying but because it also sends a great deal of energy into the tweeter.

Hot Sounds

There is one other important factor relating to speaker damage when reproducing music: dynamic range. A transistor amplifier is essentially a device that produces a voltage across the speaker terminals proportional to a given input voltage. The maximum power output of the amplifier is determined by the maximum voltage it can produce at the speaker, assuming that the speaker has a high enough impedance that the amplifier's output current capability is not exceeded (power in watts equals voltage times current in amperes).

The power rating of an amplifier—or, more accurately, its short-term dynamic output power—de-

Figure 1 (above left). A cross section of a typical dynamic woofer. Note the small air gap between the voice coil and the magnet pole piece and other large metal structures.

Figure 2 (below). The average energy distribution of rock music. Classical music has a lower peak frequency and rolls off slightly faster.



A common cause of speaker breakdown is thermal failure of an overloaded voice coil—the speaker gets cooked.

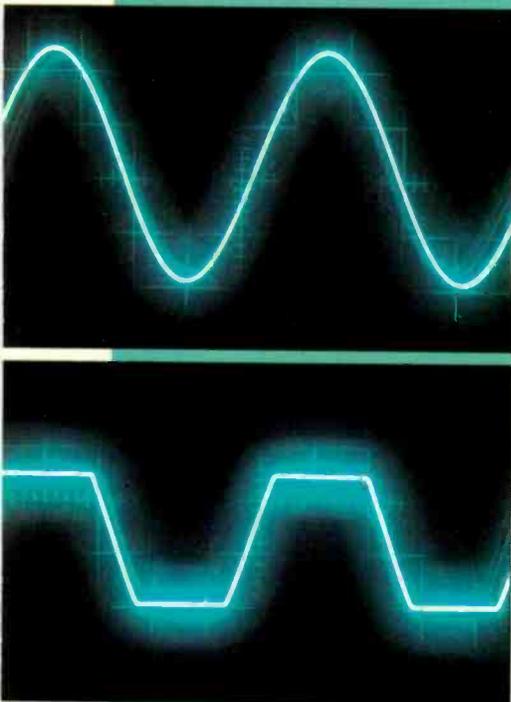


Figure 3. Clipping involves running an amplifier up to its maximum output. A sine wave (top) becomes grossly distorted when clipped (bottom).

termines how much power it can deliver on *peaks* in the music. The *average* power supplied to the speaker will be much less, typically about one-tenth of the peak power when playing conventional program material. It is the *average* power, not the peak output, that determines how much a speaker heats up.

Because of the dynamic range of music, hi-fi service departments frequently receive loudspeaker systems that were thermally damaged by the use of an amplifier that was too *low* in power! This apparent contradiction is not hard to explain. A speaker designer knows that a system rated as safe for use with, say, a 100-watt amplifier should only have to handle an average power of 10 watts, and he will probably double that to 20 watts or so for safety. Now let's suppose that someone who likes very loud rock music hooks this 100-watt-capable speaker up to a 50-watt amplifier, then keeps turning up the volume to get a nice (?) loud sound. In doing so he overloads the amplifier, causing it to clip the signal (Figure 3). He has reduced the music's dynamic range considerably by boosting the low-level passages closer to the maximum output level (at clipping) of the amplifier. As a result his 50-watt amplifier puts out an *average* of 30 or 40 watts, which is in excess of the 20-watt-average design level of the speakers. Damage is possible.

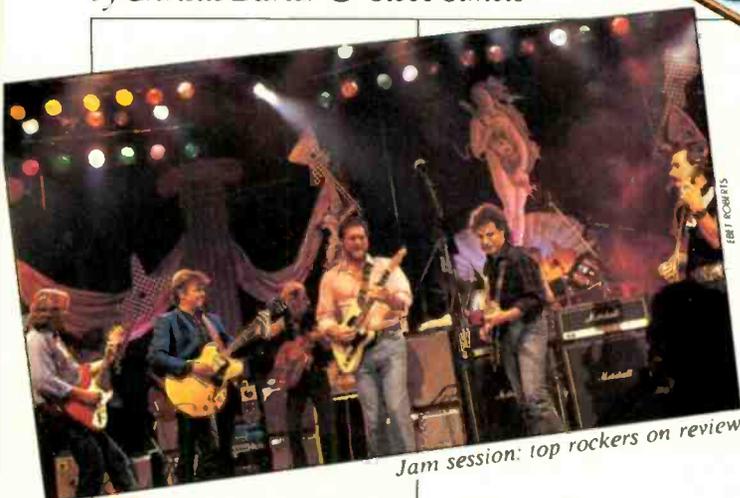
To prevent speaker damage through amplifier overload, find a volume-control setting at which clipping occurs only on loud passages, and then never exceed that setting (the exact setting may vary depending on the signal source—tuner, tape deck, CD player, etc.). The clipping point can be determined by ear by listening closely for the onset of distortion on recordings containing loud piano music and the like, or a technician can check it by using an oscilloscope hooked up to the speaker terminals. Don't forget, though, that the clipping we're concerned with here is fairly long term (several seconds or longer). Short-term clipping (several *milli*-seconds in duration) is generally of no concern.

While we're on the subject of volume settings, remember that drivers heat up at two rates; the voice coil heats up fast, while the surrounding metalwork heats up more slowly. The temperature rise of a coil is determined by the signal it receives. If you want to demonstrate your system to friends by playing a wide-dynamic-range recording at high volume, it is safer to do so when the system is first turned on than after continuous use for several hours playing loud music. In the latter case, the metalwork will have gotten hot, and the additional temperature rise caused by a loud demonstration may well push the voice coil to a dangerously high temperature, whereas the same rise in a cool speaker would be quite safe! As with any precision mechanical device, a degree of caution in use pays great dividends.

The different heating rates of the parts of a driver make attempts to improve the power handling of existing speakers only moderately successful. Fusing, for example, is usually a good idea, but it can only allow for a single short-term maximum input; therefore, if a fuse is to protect for high levels after several hours of use, it will have to restrict the levels that can be achieved when using speakers for shorter periods. Fuses can, however, give a substantial degree of protection, and values should be chosen with the advice of the speaker manufacturer.

Some speakers are supplied with built-in protection circuitry. If this is to be truly effective, it has to be designed to take account of the multiple heating rates of each drive unit in the speaker system, which is complex and costly to achieve. Such circuitry usually shows up only in high-end models. The best way to avoid speaker damage is to choose speakers with adequate power-handling capabilities for the type of music you intend to play at the highest volume level you expect to want, and then use them with care. Always, always turn down the level if audible speaker or amplifier distortion occurs, and never, never plug speaker terminals into a wall outlet. □

by Christie Barter & Steve Simels



Jam session: top rockers on review

BATTLE OF THE AXE HEROES. In the foreground above: Pink Floyd's David Gilmour, Welsh rocker Dave Edmunds, r-&-b legend Steve Cropper, Journey's Neal Schon, and the Allman Brothers' Dickie Betts. Lurking in the background: first-generation rockabilly great Link Wray and the Stray Cats' Brian Setzer. Put them all together and what have you got? An extremely loud jam version of Chuck Berry's venerable *Johnny B. Goode*. The occasion? The recent *Guitar Greats* stage spectacular at New Jersey's Capitol Theater, sponsored by a local radio station and *Guitar Player* magazine. What did it sound like? According to our spies, like a cross between a Yardbirds reunion and a war in Central America. Sceptics take note: a live album is promised within the year. □

Subsequently, Hampton flew to Paris to open a new auditorium bearing his name at the Hotel Meridien. He was scheduled to give six concerts there and to receive a decoration from Jacques Chirac, the mayor of Paris.

Miles Davis was in Copenhagen at the end of the year to receive the 1984 Sonning Music Award for his "inspiring and innovative contributions



Confab: Hampton and Jacques

A REUNION engineered by the music-licensing company Broadcast Music, Inc., brought together more than two hundred world-class jazz musicians at the Copacabana in New York. The occasion was BMI's Jazz Pioneer Awards, which recognized the significant contributions that these 219 men and women have made—and continue to make—to jazz in America.

Included among the honorees, some of whom got up to jam on the Copa's stage, were Lionel Hampton and Illinois Jacquet (shown in conversation here), Herbie Hancock, Miles Davis, Jimmy Giuffre, Hubert Laws, Gil Evans, and David Amram.

as an instrumentalist, orchestra leader, and composer." A previous winner of the Sonning prize was Isaac Stern, honored by STEREO REVIEW in this issue. □

THE first recordings by Isaac Stern scheduled for release by CBS Masterworks under its new Artist Laureate banner will be a complete set of the Beethoven Violin Sonatas, in which Stern is joined by a long-time collaborator on discs, the pianist Eugene Istomin. Also in the works is a Stern retrospective, an album of some of his other memorable collaborations, and unaccompanied Bach sonatas and partitas. □

THE tricentennials of Bach, Handel, and Scarlatti are being celebrated all over the globe this year, and nearly every musician worthy of the name is making some kind of contribution. Two young Americans with record-company backing have seized on particularly felicitous ways to do their bit. One of them is John Bayless, who has revived the art of improvisation with the ingeniously titled Pro Arte album "Happy Birthday Bach!"

Side one offers a suite of dazzling improvisations on the *Happy Birthday* tune done in the style of several of Bach's most familiar works, beginning with an overture combining themes from the E Major Partita and *Jesu Joy of Man's Desiring* and ending with a finale built around *A Mighty Fortress Is Our God*. On side two Bayless tosses off a group of *Happy Birthday* improvisations in the styles of Mozart, Chopin, Ravel, Stravinsky, and others (including himself). As birthday parties go, it's heady stuff.

The other young recording artist honoring the 300th birthdays of these Baroque masters is Scott Ross, who has picked Domenico Scarlatti. It's an apt choice since Ross is a harpsichord player. He is based in Paris this year and has persuaded the French state radio to give him a half hour or so every week in order to play *all of* Scarlatti's keyboard sonatas. And since there are 545 of them, it will take Ross easily a year to complete his chosen task. He is also scheduled to record all

Birthday boy Bayless



of the sonatas for Erato as he goes along. It's estimated that will make for a set of thirty-three records. A big birthday box! □

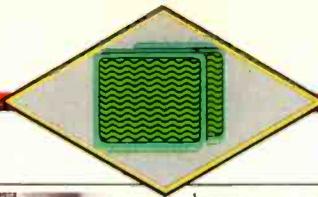
BORN TO BE ROTTEN: Yes, that's the lovely and talented Johnny Rotten (né John Lydon) with microphone in hand. The former chief crooner for the Sex Pistols is now head honcho of Public Image Ltd. Young



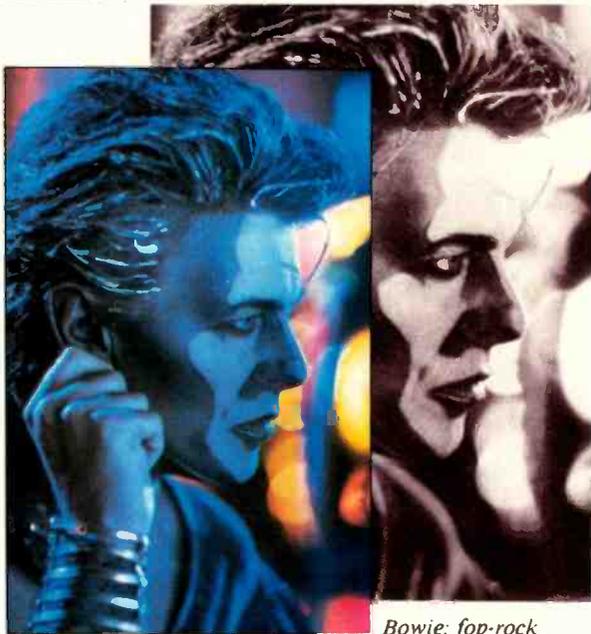
Citizen Rotten

John, who once claimed he would never revert to his "rotten" nickname because it made check-cashing difficult, is shown here on stage in a recent concert at Manhattan's Palladium. During the concert he even deigned to promote his latest Elektra album, charmingly titled "This Is What You Want, This Is What You Get," and he trotted out a few Sex Pistols chestnuts to confound the faithful. How was the show? We weren't there, but our confidential sources report that Sid Vicious was sorely missed. □

WORD is out that Michael Jackson's next album will be based on a film score he's writing for the Geffen Film Company. He's also contracted to star in the same picture, which begins shooting sometime later this year. The soundtrack album will be released on the Geffen label and distributed worldwide by CBS Records. The film will be distributed by Warner Brothers. □



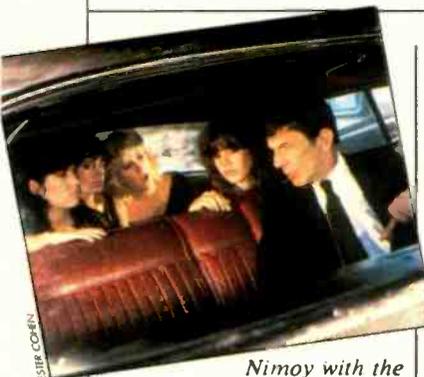
by Christie Barter & Steve Simels



Bowie: fop-rock

THE enigmatically made-up fellow pictured above is, of course, none other than noted rock chameleon **David Bowie**. But what's he made up for? Nothing less than his role as fop-rock star Screaming Lord Byron in Sony's just-released video "Jazzin' for Blue Jean" (reviewed in this issue). Though Bowie does

perform a song as Byron, this genuinely witty twenty-minute mini-movie is a real film, not just an extended rock video. Sony, incidentally, informs us that the cassette will be available in both Beta and VHS Hi-Fi. We liked it so much that it's winning one of STEREO REVIEW's first video awards. □



LESTIR COHEN

Nimoy with the Bangles: off to Liverpool

STAR TREK STAR: Are the Bangles closet Trekkies? We can't say for sure, but it seems a highly logical assumption since (as shown here) everybody's favorite female band from Los Angeles did corral the unflappable **Leonard Nimoy** for a role in their latest video. *Going Down to Liverpool*, directed by the mother of Bangles guitarist Susanna Hoffs, features a stone-faced Nimoy (without

his Mr. Spock ears) as the group's chauffeur, a long-suffering character who doesn't care much for the quartet's choice of radio stations. Incidentally, rumors that the Go-Go's are planning to retaliate by hiring William Shatner, another *Star Trek* veteran, are as yet unconfirmed. □

THE first video from a Broadway show is the *Rum Tum Tugger* number from the Andrew Lloyd Webber musical *Cats*. The featured role of a rock-and-roller cat, paying a sort of homage to **Mick Jagger**, is performed for video/TV by **Terence V. Mann**, who was the original Rum Tum Tugger in the Broadway production.

Another first is claimed by A&M Video for **Bryan Adams's** "Reckless." For the first time, according to the company, a commercial music video was released simultaneously with the LP, the

chrome cassette, and the Compact Disc. That *does* take corporate planning.

The first releases from Warner Bros. Records' newly launched Warner Music Video division include a twenty-minute compilation of clips by **Madonna** and an hour-long concert video by **Dio**. □

GRAMMY AWARD-winning singer/songwriter **Melissa Manchester** collaborated with producer **Giorgio Moroder** on *Thief of Hearts*, the title tune for the Paramount picture of the same name. Manchester performed the song for the soundtrack of the movie and for a single on PolyGram Records. *Thief of Hearts* also provides her with her entry into the wonderful world of video.

Unlike most video spinoffs from movies, the *Thief of Hearts* video contains no footage from the original film. Instead, the song has been completely revisualized with Manchester interpreting the role of the film's heroine. Shown with her here is her co-star, **Steve Bauer**, who plays the same role that he did in the movie.

In show business, uniqueness and "famous firsts" are highly prized. Therefore, with due solemnity we report the claims made for Manchester's video debut. It is said to be unique in that the *Thief of Hearts* video is the only one in which a recording artist—in this case Manchester—has

STEVE SCHARP



Bauer, Manchester: spinoff

cast herself in a role from an original movie. Got that? Furthermore, the video is said to mark the first time a motion-picture star—in this case Bauer—has re-created

one of his big-screen roles for the little screen. *U-nique!*

Manchester has recently changed record labels, and her debut album on MCA Records is due for release any day now. □

AN expensively produced revival at the Metropolitan Opera last season was **Riccardo Zandonai's** *Franческа da Rimini* with **Renata Scotto** and **Placido Domingo**.



Domingo and Scotto: revival

First presented at the Met in 1916, the opera had not been performed there since 1918. More than a few operagoers who saw the Met's new production last season found the work to be rather thin musically and complained that under the circumstances that under the circumstances the Met had overproduced it.

You'll have a chance to decide for yourself on January 30 when a live performance taped last April is telecast by PBS in its Live from the Met series. Others in the cast besides Scotto and Domingo are **Cornell MacNeil** and **William Lewis**. The conductor is **James Levine**. Major funding is being provided by the **Texaco Philanthropic Foundation, Inc.** □

IT's taken her a while, but **Columbia** recording artist **Barbra Streisand** is at last making her music-video debut—with *Left in the Dark*, a track from her recent album "Emotion" (reviewed on page 78). According to the Columbia Records handout, the video "intertwines rock elements with the look and narrative qualities of a major theatrical motion picture." Which probably explains the presence of **Kris Kristofferson** as (again) Barbra's co-star. □

WICHANDER ASSOCIATES

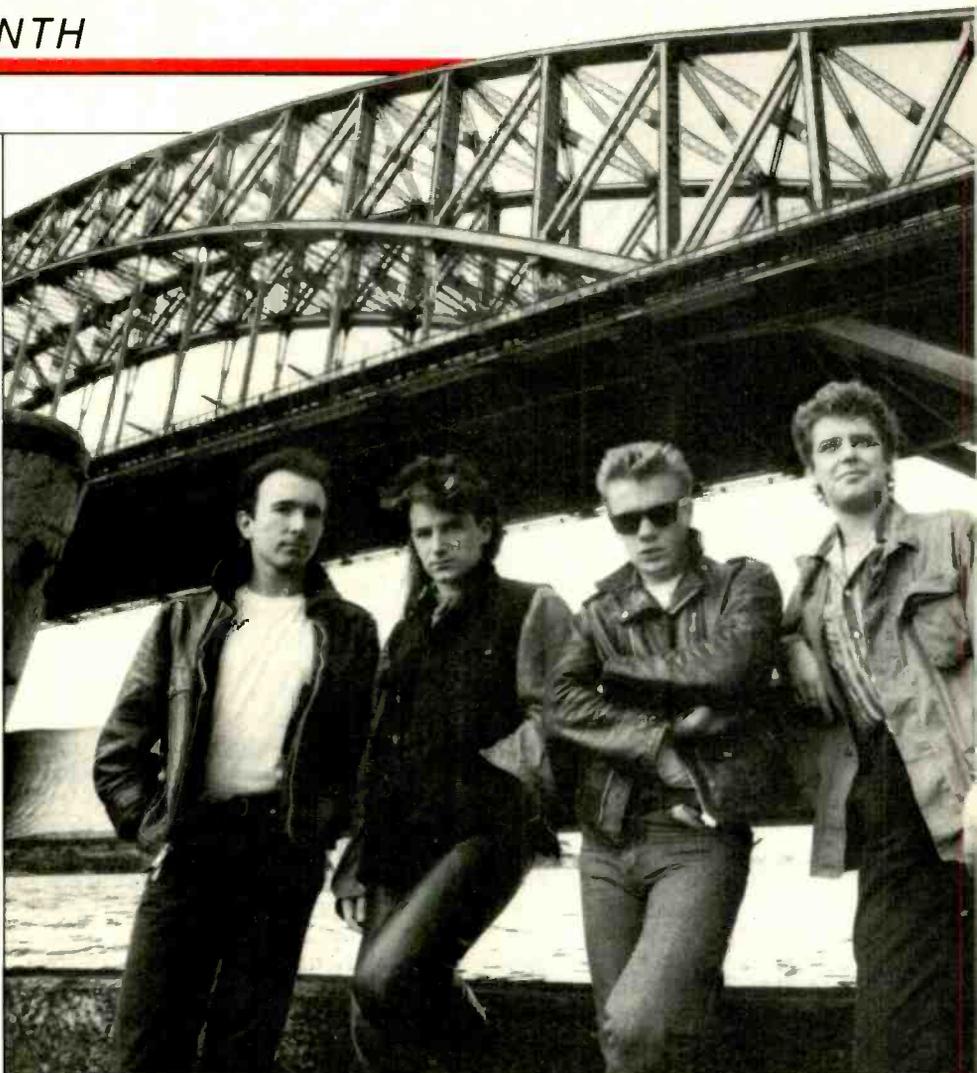
Stereo Review's critics choose the outstanding current releases

EXPLORING ISSUES AND IDEAS WITH U2

THE new U2 album, "The Unforgettable Fire," is the group's first album of new music since 1983's breakthrough "War," and it is also their first without producer Steve Lillywhite. It was produced by Brian Eno and the Canadian Daniel Lanois (of Martha and the Muffins), who seem odd choices for a band so untechnologically inclined. U2's work up to now has emphasized intense passion, not technical sophistication. They've ignored gadgetry and concentrated instead on the direct appeal of the Edge's slashing guitar, the unadorned, bashing, street-corner sound of drummer Larry Mullen, and the vocals of a singer, Bono, whose tone is uncertain at best.

As you might expect, the album incorporates more studio technology than the group has previously used, but it keeps intact the essential qualities that make U2 so compelling: intensity, a willingness to fly in the face of convention and fashion, and a determination to focus the music on ideas and issues, not their own personalities. Eno's role here is much the same as it was on the Talking Heads' "More Songs About Buildings and Food"—helping the band consolidate its sound while exploring new sonic territory.

"The Unforgettable Fire" represents a significant expansion of U2's heretofore limited musical vocabulary. Additional layers of rhythm guitar on *A Sort of Homecoming* and *Pride (In the Name of Love)* give these opening tracks apocalyptic force. The opening bars of *Wire* create what sounds like a synthesized kalimba—fluttering dollops of sound that explode eventually into one of the Edge's furious, rapid-fire chordal blasts. Synthesizers mur-



U2 (from left, the Edge, Bono, Mullen, and Clayton): flying in the face of fashion

mur beneath *The Unforgettable Fire* while plunging strings make dramatic stabs at Bono's vocal line. The instrumental *4th of July*, an aural picture of the night sky, is lit up by random, echoing bursts of synthesizer that decay slowly as they fall to rest on the terra firma of Adam Clayton's marching bass.

While all this perhaps makes U2 more accessible, it doesn't alter the essential make-up of the band; its center is still Bono. Untrained, unpolished, he is nonetheless the most powerful and convincing vocalist in rock today, making his way around the melody like a drunken revolutionary driving home an argument with an empty bottle. Railing against a wall of pounding chords in *Pride*, Bono very nearly reaches the level of rhetoric once achieved by the crusader the song eulogizes—Martin Luther King, Jr. The music of Bono and U2 is the music of resistance and questioning.

Don't expect answers from U2. Their songs are neither analytical nor prescriptive but visceral and metaphorical, concerned more with the effects of the human condition than with its causes. "The Unforgettable Fire" is a piercing exploration of suffering, and if U2 can give us nothing more than a sense of that condition through jarring chords, jagged rhythms, and words of sorrow and violence, what we get here is still far more real and far more valuable than we have any right to expect from rock music.

Mark Peel

U2: *The Unforgettable Fire*. Bono (vocals); the Edge (guitar, keyboards, vocals); Adam Clayton (bass); Larry Mullen, Jr. (drums); vocal and instrumental accompaniment. *A Sort of Homecoming*; *Pride (In the Name of Love)*; *Wire*; *The Unforgettable Fire*; *Promenade*; *4th of July*; *Bad*; *Indian Summer Sky*; *Elvis Presley and America*; *MLK*. ISLAND 90231-1 \$8.98, © 90231-4 \$8.98.

PETER GARRETT

ROSEN, POLLINI: EXCEPTIONAL SCHUMANN

SCHUMANN'S piano music has certainly been well served on records, but two new collections of it, played respectively by Charles Rosen on Nonesuch and by Maurizio Pollini on Deutsche Grammophon, are exceptional enough to justify any duplication of titles you may already have, though in several cases they would not, in fact, be precise duplications. In five of the eight works they have recorded, Rosen and Pollini use Schumann's original versions instead of the "final" ones followed in virtually every other recording.

Pollini, for instance, plays the *Symphonic Etudes*, with one or two minor exceptions, from the first version Schumann published (1837) instead of the final one of 1852, the chief difference being the former's somewhat more elaborate concluding section. Pollini also includes the five variations Schumann discarded before the first publication. Brahms had them published in 1873, sixteen years after Schumann's death, and several pianists now incorporate them in their performances of the work, inserted individually at vari-

Maurizio Pollini: Olympian



BRANDENSTEIN/DEUTSCHE GRAMMOPHON

ous points. Pollini plays them between Etudes V and VI.

While in the past Pollini has sometimes excited more admiration for his grasp of structure and the cool perfection of his playing, there is a very welcome warmth of heart as well as Olympian breadth in his performance of the etudes. The brief *Arabeske*, Op. 18, which serves as filler, is altogether exceptional as well. It is neither sentimentalized nor turned into a frothy trifle but set forth in the most straightforward, no-nonsense style as the substantial and elegant piece it is. The piano itself has a warmer, richer sound than we hear in many recordings by Pollini.

The sound of Charles Rosen's instrument also contributes significantly to the enjoyment of his splendid performances of the six works in his set, which are presented chronologically on the three discs. Rosen recorded quite good versions of *Carnaval* and the *Dauidsbündlertänze* for Epic more than twenty years ago. His new ones are electrifying, and in the latter work Rosen is in a sense more faithful to Schumann's inspiration than the composer himself remained. The *Dauidsbündlertänze*, *Kreisleriana*, and the seldom-heard *Impromptus on a Theme of Clara Wieck* are here performed from first editions. The unfamiliar title *Dichtungen für das Pianoforte (Poems for Piano)* is the one Schumann affixed, together with a descriptive title for each movement, to the original version, which he never published, of the great Fantasy in C Major, Op. 17.

In his superb annotation Rosen describes the *Dauidsbündlertänze* as "Schumann's most private, and one of his most poetic, works." But of the revisions the composer later made he adds, "One might say that David sold out to the Philistines." The album is labeled "The Revolutionary Masterpieces," and the point seems to be that Schumann may have been as wrong-headed in altering these "revolutionary" works as Bruckner was in allowing himself to be persuaded to smooth out his symphonic scores. In any event, Rosen's intensely committed playing makes a very strong case for these first thoughts of Schumann's,



Charles Rosen: electrifying

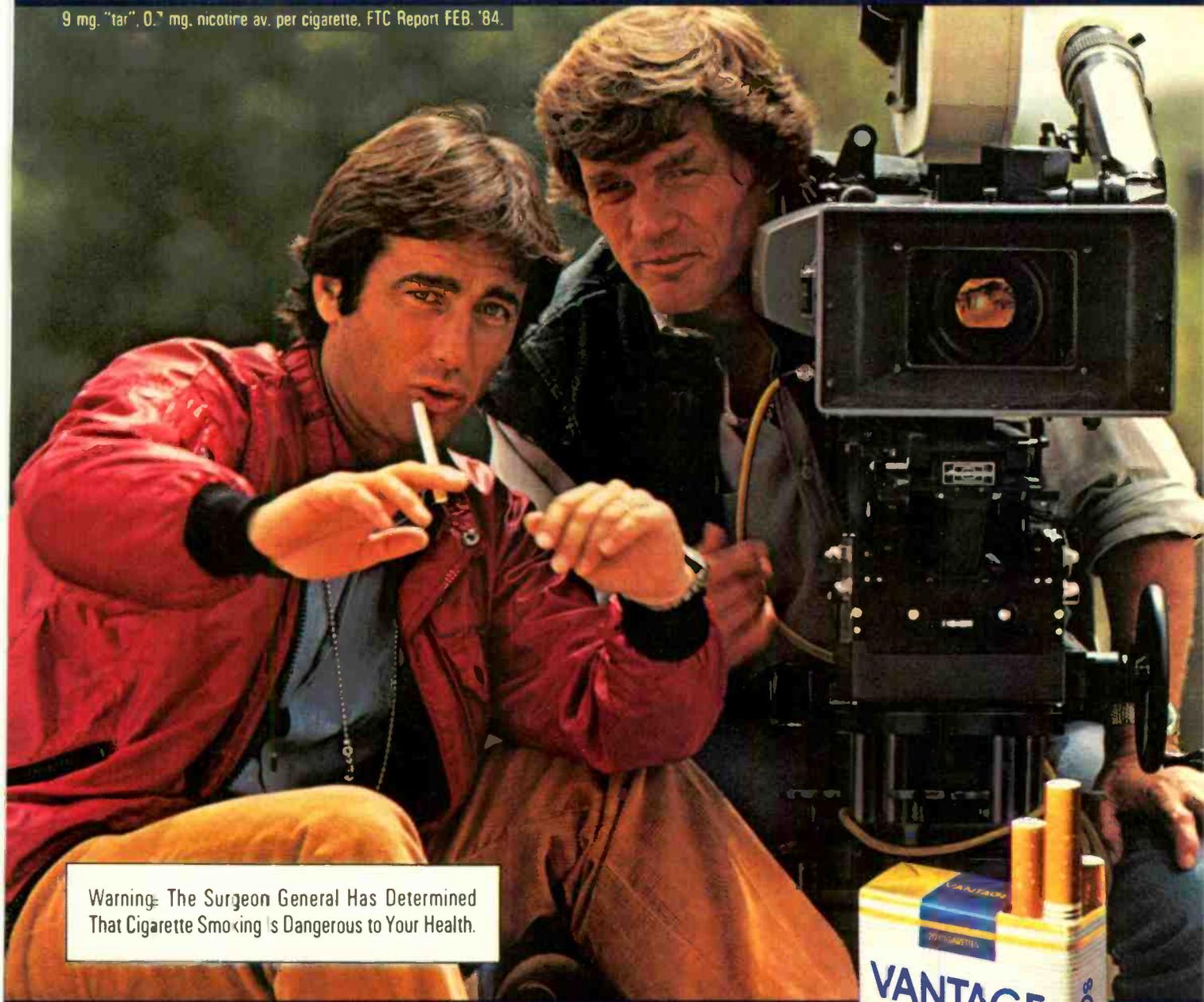
as it does for everything in the set. *Carnaval* is especially persuasive in its sweep as well as its cogency.

Rosen's piano is not identified, but its characteristics call attention to themselves in the happiest sense because the sound seems so ideally suited to this music. It is beautifully conveyed in the splendid recording, made for Nonesuch by Klaas Posthuma, whose high standards have been demonstrated the last few years on his own Etcetera label. Whether Rosen goes on to record more Schumann or not, the present set is something that ought to be acquired and enjoyed by everyone with working ears. *Richard Freed*

SCHUMANN: *Impromptus on a Theme of Clara Wieck, Op. 5; Dauidsbündlertänze, Op. 6; Carnaval, Op. 9; Sonata in F-sharp Minor, Op. 11; Kreisleriana, Op. 16; Dichtungen für das Pianoforte.* Charles Rosen (piano). NONESUCH ● 79062 three discs \$23.96, © 79062-4 three cassettes \$23.96.

SCHUMANN: *Symphonic Etudes, Op. 13 (with Five Variations, Op. posth.); Arabeske, Op. 18.* Maurizio Pollini (piano). DEUTSCHE GRAMMOPHON ● 410 916-1 \$11.98, © 410 916-4 \$11.98, © 410 916-2, no list price.

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BOB BLAKEMAN/ASYLUM

Linda Ronstadt: succeeding with a contemporary musical sensibility

PAST GLORIES RE-CREATED FOR TODAY

TALK about upward mobility! Linda Ronstadt first appeared in the Sixties in a group called the Stone Poneys, then took some time out to learn how to sing, and finally became a genuine folk-rock star in the Seventies. Now, in the Eighties, she's taken to singing major roles in operetta and opera on Broadway and off. At the same time she's releasing albums that fondly explore the past glories of American popular music. Last year's "What's New" turned out to be a sleeper hit, and her brand-new "Lush Life" promises to be an even bigger seller.

"What's New" suggested a tribute to Frank Sinatra's classic album "Only the Lonely." "Lush Life," again arranged and conducted by Nelson Riddle with stylish grace and true glitter, ranges a much broader field. It presents a greater challenge to Ronstadt to make something new, interesting, and—most important—emotionally valid out of material that has had classic if not "definitive" interpretations in the past. On the whole, she succeeds superbly. Thanks to her authentically contemporary musical sensibility

and voice (and Riddle's masterly arrangements), her performances ring true on their own terms.

Perhaps many who have (or have heard) the old recordings of these songs will be unable to banish completely memories of, say, Marlene Dietrich's insolent *Falling in Love Again*, Ella Fitzgerald's filigreed *Lush Life*, Hoagy Carmichael's wistful *Skylark*, Jeri Southern's haunting *When I Fall in Love*, or Billie Holiday's desperate *I'm a Fool to Want You*. But the songs are strong enough to support more than one interpretation, and Ronstadt is so convincing in her attacks and performances that such memories recede after the first few bars. There is no nostalgia or gimmickry or retro cuteness to her work here. It is all just lovely music, beautifully performed for today's ears.

What's next for Linda Ronstadt? Well, I wouldn't be the least surprised if in the Nineties someone mounts a new production of Wagner's *Ring* starring you know who.

Peter Reilly

LINDA RONSTADT: *Lush Life*. Linda Ronstadt (vocals); orchestra, Nelson Riddle arr. and cond. *When I Fall in Love; Skylark; It Never Entered My Mind; Mean to Me; When Your Lover Has Gone; I'm a Fool to Want You; You Took Advantage of Me; Sophisticated Lady; Can't We Be Friends; My Old Flame; Falling in Love Again; Lush Life*. ASYLUM 60387-1 \$8.98, © 60387-4 \$8.98.

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POPULAR

- **DARYL HALL/JOHN OATES:** *H₂O*. RCA RCD1-4383. "Classy popular music making" (February 1983).
- **HEART:** *Little Queen*. PORTRAIT EK 34799. "Refreshing snap and dash" (September 1977).
- **JAY HOGGARD:** *Love Survives*. GRAMAVISION GRCD 8204. "Jazz lion goes funk" (November 1983).
- **JULIO IGLESIAS:** *1100 Bel Air Place*. COLUMBIA CK 39157. Top Ten, of course.
- **ELTON JOHN:** *Too Low for Zero*. GEFEN 4006-2. "A fine song in *One More Arrow*" (September 1983).
- **WILLIE NELSON:** *Without a Song*. COLUMBIA CK 39110. "Much charm and sincerity" (March 1984).
- **JAMES NEWTON:** *GRAMAVISION GRCD 8205*. "Fresh ideas from fresh talent" (October 1983).
- **PACIFIC OVERTURES** (Stephen Sondheim). RCA RCD1-4407. The original-Broadway-cast album.
- **WANG CHUNG:** *Points on the Curve*. GEFEN 4004-2. "Highbrow synthesized ear candy" (May 1984).

CLASSICAL

- **BARBER/SHOSTAKOVICH:** *Cello Concertos*. Wallfish, Simon. CHANDOS CHAN 8322. Major works, first-rate performances.
- **CHOPIN:** *Piano Concertos Nos. 1-2*. Ax, Ormandy. RCA RCD1-5317. "Elegant pianism" (March 1982).
- **DEBUSSY:** *La Mer; Nocturnes*. Previn. ANGEL 47028. "Glowing, summery readings" (October 1984).
- **GREATEST HITS OF 1720**. Philharmonia Virtuosi of New York. CBS MK 34544. "Consistently charming, brilliantly recorded" (February 1978).
- **MONTEVERDI:** *Balli e Balletti*. Gardiner. ERATO ECD-88032. "Delightful" (February 1984).
- **SCHUBERT:** *Impromptus, Opp. 90, 142*. Perahia. CBS MK 37291. "Exceptional inner illumination" (March 1984).
- **VERDI:** *Requiem*. Solti. LONDON 411 944-2 LH2. "Driving, supercharged" (February 1969).
- **WAGNER:** *Parsifal*. Karajan. DG 412 347-2 GH4. "Luminous and firmly committed" (August 1981).

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

BACH: Concertos for Flute and Strings in C Major (BWV 1055), G Minor (BWV 1056), and E Minor (from Cantata No. 35); Cantata No. 209: Sinfonia. Jean-Pierre Rampal (flute); Ars Rediviva Orchestra of Prague, Milan Munclinger cond. CBS ● IM 39022, © IMT 39022. © MK 39022, no list price.

Performance: *Airy*
Recording: *Nice*

Coming to the aid of Jean-Pierre Rampal in his constant quest for new repertoire, Milan Munclinger has produced three "flute" concertos by Bach. Side one of this record consists of transpositions of the Harpsichord Concertos in A Major and F Minor. Such arrangements are, of course, fair game, and they are successful for the oboe or violin, but the flute is simply too light an instrument for them. Rampal's fast tempos and glib approach only compound the problem and result in some very skittish music-making.

Side two is more successful: the flute sounds more at home in the concertante movements for organ drawn from Cantata No. 35. Here, and in the Sinfonia, originally written for flute, Rampal musters rather more dignity than usual. If only he would slow down so we could hear the music. S.L.

BRUCKNER: Symphony No. 6, in A Major. Bavarian State Orchestra, Wolfgang Sawallisch cond. ORFEO ● S 024821 \$13.98, © M 024821 \$13.98, © C 024821 \$20.

Performance: *Expansive*
Recording: *Impressive*

Since the middle 1950's Wolfgang Sawallisch has been represented by an impressive list of recordings, chiefly of operatic and choral repertoire. While he has done a substantial amount of symphonic work, this Orfeo recording of the Bruckner Sixth Symphony is the first that for me has revealed his musicianship to its fullest potential.

The Bruckner Sixth is atypical in the context of that master's late symphonies. Not only is it the shortest, but it is

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GIULINI'S MAHLER

NORMALLY I feel no overwhelming need to audition any alternatives to the three Bruno Walter recordings of Mahler's *Das Lied von der Erde*, especially the one with Kathleen Ferrier and Julius Patzak. But it has been vastly stimulating to come upon the unique view of this masterpiece recently offered on Deutsche Grammophon by that most thoughtful and humanistic of today's Italian conductors, Carlo Maria Giulini. He is aided by two excellent singers, contralto Brigitte Fassbaender and tenor Francisco Araiza, the Berlin Philharmonic Orchestra in top form, and a production crew that clearly gave its all to capture every nuance of Mahler's magnificent scoring, which is by turn prismatic and darkly somber, but at all times transparent.

The opening *Trinklied* is one of the cruelest tests in the literature for even the finest of tenors since the singer must not only deal with a high tessitura but also project through proclamatory horns in unison without merely bleating. If Fritz Wunderlich under Otto Klemperer's baton was perhaps the most successful of the tenors who have recorded this music, Araiza here scores well above average.

It is in the contralto part that the vocal competition is stiffest, beginning with Ferrier and Kerstin Thorborg in the early recordings and extending in more recent years to Maureen Forrester, Christa Ludwig, and, most illustriously, Dame Janet Baker. Quite honestly, I can't say that Fassbaender quite matches this company. A troublesome wobble creeps into her delivery, most audibly in the pages of *Der Abschied* that come before the big orchestral interlude. Matters improve in the inefably poignant final pages, however. Fassbaender also deserves a bouquet for the way she sings her fiendishly difficult part in the *Schönheit* movement.

Giulini and the Berliners, however, are the ones who carry this performance and give it its special stamp. Its most striking element is the departure from the middle-European oppressiveness that can sometimes make even this marvelous music a bit deadly. Throughout the performance Giulini seems to be striving for a singing line and a translucency of texture, without in any way diluting the plangency of Mahler's musical utterance. The second movement, *Der Einsame im Herbst*, comes particularly to mind: the autumn mists drifting over the lake are for me transported from the Austrian Alps to Italy's Lake Como. If Arturo Toscanini had not been so anti-Mahler (he respected the man but could not abide the music) and had chosen in his prime to take on *Das Lied*, his reading probably would have been endowed with a transparency and lyrical flow similar to Giulini's.

A major plus for this production is the extraordinarily fine recording, which has space, brilliancy, richness, and impact—all in the ideal measure demanded by Mahler's scoring. The singers are not unnecessarily spotlighted but blend naturally in and out of the complex orchestral fabric. In fact, what Giulini does in this recording, and what the recording itself does, to convey both the grand design and the detailed facets of this great work would be all but impossible to achieve under live concert conditions.

There have been great recorded realizations of *Das Lied von der Erde* in the past, and there will be great ones in the future. But, by any standard, this one by Giulini should retain a special place in the Mahler discography for many years to come. David Hall

MAHLER: *Das Lied von der Erde*. Brigitte Fassbaender (contralto); Francisco Araiza (tenor); Berlin Philharmonic Orchestra, Carlo Maria Giulini cond. DEUTSCHE GRAMMOPHON ● 413 459-1 \$11.98, © 413 459-4 \$11.98, © 413 459-2 no list price.

Conductor Giulini (center) with soloists Fassbaender and Araiza



BAYAT/DEUTSCHE GRAMMOPHON

uncharacteristically mercurial in spots. Indeed, when I reviewed the stunning Eugen Jochum performance on Angel in 1982, I dubbed it Bruckner's "*sinfonia capricciosa*."

Like Jochum, Sawallisch searches out the essential flow of the piece, and if he rightly avoids stressing the nervousity of the opening, perhaps a bit more of that quality might have been welcome at the start of the scherzo. The high points of the reading are the lofty and impassioned slow movement and the glorious sense of triumph Sawallisch brings to the last pages after a splendidly intense

reading of the finale. I would rank this and the Jochum performance as the two most satisfying realizations of this curiously fascinating score.

I find the sound of this Munich recording (which I heard on CD) infinitely more grateful than that for the Jochum release. The horn episode midway in the scherzo is gorgeous, and the final pages are magnificently brazen. The acoustic ambience likewise does handsomely for the orchestral string body in the impressive slow movement. Highly recommended, especially on CD, where the work is uninterrupted. *D.H.*

DEBUSSY: *Préludes, Books I and II; Estampes; Reflets dans l'eau.* Yuri Egorov (piano). ANGEL ◉ DSB-3954 two discs \$23.98, ◉ 4X2S-3954 two cassettes \$23.98.

Performance: *Very good*
Recording: *Limpid*

In the last half-dozen years or so, there have been two superb recordings of Debussy's *Préludes*—one by the late Paul Jacobs, issued in 1978 on Nonesuch, the other, which came along in separate installments on Philips two years later, representing Claudio Arrau's first Debussy recordings in more than three decades. Their places at the top of the list are secure, I think, though in this new release Yuri Egorov achieves a fairly distinguished level. He is not as expansive as Arrau and not given to quite as wide a dynamic range as Jacobs, but he can match them both technically, and he shares with them a clear-textured approach that sets the music before us without the blurred quality once deemed appropriate. He shares, too, their subtlety and good sense in knowing that the evocative character of the *Préludes* is so written-in that there is no need for interpretive overlay.

While the album's documentation leaves a bit to be desired, there is a substantial bonus in the form of similarly persuasive performances of the *Estampes* and of the best-known piece from the first set of *Images*, and the recording is as limpid and well balanced as the playing. *R.F.*

DVOŘÁK: *Symphony No. 7, in D Minor, Op. 70.* Vienna Philharmonic Orchestra, Lorin Maazel cond. DEUTSCHE GRAMMOPHON ◉ 410 997-1 \$11.98, ◉ 410 997-4 \$11.98.

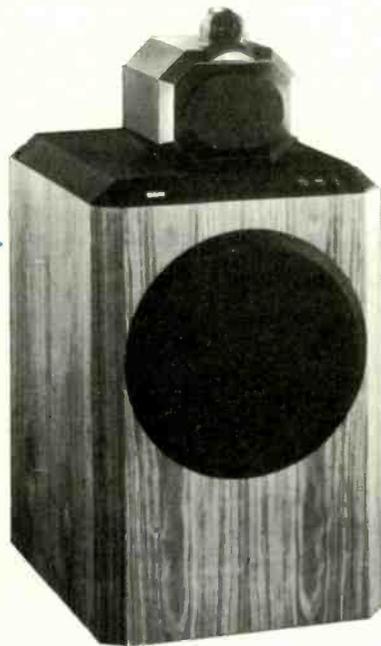
Performance: *The Viennese touch*
Recording: *Very good*

To the best of my knowledge, this is the Vienna Philharmonic's first recording of this most Brahmsian of Dvořák symphonies. As might be expected, the playing does not have the hard rhythmic edge we're used to from the Czech, British, and American orchestras that have recorded the piece.

Lorin Maazel and the Viennese bring a dusky tonal sheen and soft, contoured phrasing to the normally highly charged first movement. The slow movement is gorgeously mellow, while the scherzo, so very Czechoslovakian in flavor, seems to my ears a bit fussy in the dynamics. The finale is properly positive and triumphant in tone but not as fiercely defiant at the close as it is in performances by the best Czech and British orchestras. The recording is warm and full-bodied, though to some ears it may seem slightly heavy in the bass. *D.H.*

FRANCK: *The Great Organ Works, Vol. II. Choral No. 2 in B Minor; Fantasia in A Major; Grande pièce symphonique.* Jennifer Bate (organ). UNI-

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 © DKC 9014 \$13.98. (from Harmonia
 Mundi USA, 2351 Westwood Blvd.,
 Los Angeles, Calif. 90064).

Performance: *Grand*
 Recording: *Excellent*

Addressing the Danion-Gonzalez organ (1979) in the cathedral at Beauvais, an instrument much like Franck's at Sainte-Clotilde in Paris, Jennifer Bate asserts herself as its mistress and also as an authoritative exponent of the composer's music. Knowledgeable of the property of each register, she avails herself of the instrument's full battery but never for an effect in itself; she deploys her resources to put across Franck's unique message. Despite the moodiness of the works and their frequently sprawling organization, Bate's sense of structure helps to sustain interest through to the final cadence. The jacket rightly proclaims her understanding and affinity for this music. S.L.

HANDEL: *Concerti a due cori No. 2, in F Major, and No. 3, in F Major; Music for the Royal Fireworks.* English Baroque Soloists, John Eliot Gardiner cond. PHILIPS ◉ 411 122-1 \$11.98, © 411 122-4 \$11.98, © 411 122-2 no list price.

Performance: *Fine*
 Recording: *Fine*

Rather than trying to duplicate the gargantuan wind band Handel used for the first performance of the *Royal Fireworks* music, John Eliot Gardiner plays it as it was most likely heard in subsequent concert performances. The striking difference lies in the use of strings as well as winds, which to my mind gives the work more colorful contrasts and makes it musically more interesting.

Except for the opening of the *Royal Fireworks*, which is a little on the jerky side, the performances by Gardiner and the English Baroque Soloists are excellent: rhythmically vital and exquisitely phrased. These musicians are masters of their period instruments, and the glorious sound of the old horns affords uncommon pleasure throughout the recording. S.L.

LISZT: *Late Chamber Music. Elégies I and II; La lugubre gondola; Romance oubliée; La notte.* Vera Beths (violin, viola); Anner Bijlsma (cello); Gerda Ockers (harp); Reinbert de Leeuw (piano); Bob Zimmerman (harmonium). PHILIPS/PSI ◉ 411 117-1 \$11.98, © 411 117-4 \$11.98.

Performance: *Sympathetic*
 Recording: *Excellent*

This new Philips import complements another collection of Liszt's chamber music, issued five years ago by the Musical Heritage Society. That disc was devoted entirely to his works for violin and piano, and only one of them, the *Romance oubliée*, composed when Liszt was nearly seventy, is included in the Philips set, which offers a more interest-

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ing assortment of works for different instrumental combinations.

The one item common to both collections is, in fact, not quite a true duplication since it is played on the viola in the Philips collection. Liszt wrote his *Romance oubliée* originally for the *viola alta*, a larger-than-standard viola, and dedicated the piece to its inventor, Hermann Ritter.

The two *Elégies* in the new album are at the core of Liszt's chamber-music output. *Elégie I* was composed in 1874 in three different versions, the one recorded here being for cello, piano, harp, and harmonium. *Elégie II* was composed three years later, for violin (or cello) with piano.

La lugubre gondola, known to us as one of the most striking of Liszt's late piano works, was originally composed in the version performed here, for cello and piano, while the earliest of the five works in the collection is *La notte*, produced in this violin-and-piano version as an adaptation of an orchestral piece.

All of these works are fascinating as heard here, not only as examples of Lisztian chamber music but as examples of the sort of musical thought that characterized the composer's late years. Here the key word is not "virtuosity" but "prophecy." The music is ruminative, introspective, and pithy rather than ornate, with more than a few pre-echoes of the later composers we regard as pioneers of post-Romantic expressionism. The performances are marvelously sympathetic, and the recording is generally excellent—except, frustratingly, in the most elaborately scored of the five pieces, in which the harp and, especially, the harmonium are simply too far in the background for optimum effect. Even so, it's a release of unusual interest, and no one at all interested in Liszt's music should ignore it. R.F.

MAHLER: *Symphony No. 4, in G Major*. Kathleen Battle (soprano); Vienna Philharmonic Orchestra, Lorin Maazel cond. CBS ◉ 1M 39072, © IMT 39072, © MK 39072, no list price.

Performance: *Chamber-like*
Recording: *Variable*

Lorin Maazel's efforts to put his special stamp on the Mahler cycle he is recording for CBS have been, for me, most successful in the Fourth Symphony, the most immediately appealing of the Mahler symphonies and one that has had the benefit of a long line of distinguished recordings. Maazel's opening movement here retains the transparency of chamber music throughout, and very effectively so, but I wonder if the production team, in the effort to create this ambience, didn't allow the few but telling orchestral climaxes to suffer as a consequence.

The chamber-music approach works superbly in the second movement, with its deliberately "mistuned" solo violin representing the satanic presence; the whole reading has great character and

atmosphere. The wonderful slow variations movement goes very slowly indeed (only Karajan adopts a comparable tempo). The line is surely sustained, but somehow the great climax seems heavyhanded rather than exultant.

Most fascinating here is the final movement, with the translucent soprano of Kathleen Battle in the solo part. My impression of her vocal interpretation is that it departs from the usual childlike naïveté and has a more dream-like, *Alice in Wonderland* quality, particularly in the final lines, which are taken more slowly than usual. D.H.

MOZART: *Piano Concerto No. 23, in A Major (K. 488)*; *Piano Concerto No. 26, in D Major (K. 537, "Coronation")*. Friedrich Gulda (piano); Concertgebouw Orchestra, Nikolaus Harnoncourt cond. TELDEC ◉ 6.42970 AZ \$10.98, © 4.42970 CX \$10.98.

Performance: *Heavy*
Recording: *Good*

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authentic performance practices, these performances come off as rather bulky. Gulda seems to force his tone, and the Concertgebouw Orchestra sounds thick. Consequently, much of Mozart's detailed texture, especially in the wind writing, is lost. Disappointing. *S.L.*

MOZART (ed. Maunder): *Requiem (K. 626)*. Emma Kirkby (soprano); Carolyn Watkinson (contralto); Anthony Rolfe-Johnson (tenor); David Thomas (bass); Westminster Cathedral Boys Choir; Chorus and Orchestra of the Academy of Ancient Music, Christopher Hogwood cond. L'OISEAU-LYRE ● 411 712-1 \$10.98, © 411 712-4 \$10.98, © 411 712-2 no list price.

Performance: *Emasculated*
Recording: *Good*

Deciding what in the Requiem is by Mozart and what was added by Süßmayr is a vexing problem, and different editors have tackled it differently. The rationale for this version prepared by C. R. F. Maunder is presented in the album notes. Without repeating his arguments, I will only say that his version is logical and makes musical sense. Alas, that is more than I can say for the performance. Christopher Hogwood's concept of "authentic" Mozart singing leads to frustrating listening, especially when he has Emma Kirkby making thin, squeaking sounds that seem like a parody of a boy soprano. The other soloists tend to follow her lead. *S.L.*

PROKOFIEV: *Symphony No. 3, in C Minor, Op. 44; The Love for Three Oranges, Suite, Op. 33b*. Junge Deutsche Philharmonie, Riccardo Chailly cond. DEUTSCHE GRAMMOPHON ● 410 988-1 \$11.98, © 410 988-4 \$11.98.

Performance: *A for effort*
Recording: *Big-scale*

The Junge Deutsche Philharmonie, some 140 players drawn from various

West German conservatories and colleges, is a highly proficient ensemble that is comparable to the top student orchestras in this country. And Prokofiev's Third Symphony—a challenging, virtuoso work derived from *The Flaming Angel*, the composer's diabolistic opera of the 1920's—is a formidable assignment for any orchestra.

Nevertheless, under Riccardo Chailly's baton the young orchestra does well by the Third, especially in the scary scherzo, although the playing is not quite as stylish as that of the Moscow Radio Symphony in its 1969 Melodiya/Angel issue. It is, rather, the popular *Love for Three Oranges* music that comes a cropper on this disc. Everything is slow and heavy-handed where it should be volatile and suspenseful. Only the single slow movement, the *Andantino* depicting the Prince and the Princess, is convincing. The recording as such is big-scaled and brilliant, though occasionally colored by a touch of excess reverberation. *D.H.*

RAMEAU (arr. James): *Pièces de clavecin. Fanfarinette; Gavotte and Six Doubles; Two Minuets; La Livri; Arlequinade; La Timide, Rondeau gracieux; Rondeau; L'Indiscrète; La Chasse; Les Niais de Sologne, Doubles des Niais Nos. 1-2; Les Soupirs; Air pour les esclaves africains; Les Triolets; Two Tambourins.* Bob James (synthesizers). CBS ● IM 39540, © IMT 39540, no list price.

Performance: *Delightful*
Recording: *Excellent*

Jazz keyboardist Bob James began this series of Rameau pieces arranged for synthesizers as Christmas presents for various friends, and now he has expanded the idea into a full-fledged album of Rameau delights. The music begins innocently with the proper harpsichord sound, but other timbres creep in until eventually the whole Christmas tree is lit with glowing lights and mis-

chievous figures darting in and out of Rameau's originals. The result is admittedly not for the purist, but to me it is as fascinating as it is delightful. *S.L.*

RAVEL: *Ma Mère L'Oye, Complete Ballet; Pavane pour une infante défunte; Le Tombeau de Couperin, Suite; Valses nobles et sentimentales.* Orchestre symphonique de Montréal, Charles Dutoit cond. LONDON ● 410 254-1 \$11.98, © 410 254-4 \$11.98, © 410 254-2 no list price.

Performance: *Idiomatic*
Recording: *Top-drawer*

Charles Dutoit and his Montreal orchestra take to the music of Ravel like ducks to water, and they have the good fortune to have a fine recording locale, the Church of St. Eustache just outside of Montreal. While the surround is airy, the sound does not echo back at random to dilute the impact of Ravel's unique sonorities.

The *Mother Goose* music, complete here with the magical prelude, the spinning-wheel episode, and interludes, is a total joy musically and sonically. The more familiar movements from the shorter suite are done to perfection. Indeed, I don't remember any performance of the final Fairy Garden movement that has conveyed so effectively in its opening the sense of awe-struck wonderment. And, for once, the overwhelming tintinnabulation of high-register percussion at the close is not distorted, thanks to the digital recording.

The famous Pavane is done here as well as it can be done, but I have always felt that the scoring for solo horn lies awkwardly for the instrument, a very rare miscalculation on Ravel's part. The *Tombeau de Couperin* can often be made to sound dry in performance. Here it sparkles like vintage champagne and flows like pure spring water, and the *Valses nobles et sentimentales* display a marvelous combination of verve, acid wit, and tenderness. *D.H.*

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ROSSINI: *L'italiana in Algeri*. Lucia Valentini Terrani (contralto), Isabella; Francisco Araiza (tenor), Lindoro; Wladimiro Ganzarolli (bass), Mustafâ; Jeanne Marie Bima (soprano), Elvira; Enzo Dara (bass), Taddeo; others. Chorus of the Westdeutscher Rundfunk, Köln; Capella Coloniensis, Gabriele Ferro cond. CBS M3 39048 three discs, © M3T 39048 three cassettes, no list price.

Performance: *Spirited*
Recording: *Splendid*

Rossini's *L'italiana in Algeri*, recounting the escapades of one Isabella, an Italian lady in an Algerian harem, has become one of the comic staples of the operatic stage. The sparkling score is the quintessence of Italian *opera buffa*, and the finale of the first act is one of the most hilarious embroglios to take place on operatic boards. With a force of original instruments and a superb cast, Gabriele Ferro has caught the true spirit of this masterpiece.

Both Lucia Valentini Terrani, as Isabella, and Wladimiro Ganzarolli, as Mustafâ, the harem keeper, possess the lowest voices their respective sexes will admit and have sufficient volume to sink the rescue ship waiting in the harbor on half breath. Their style is truly comic. Part of the humor derives from Rossini's diabolical habit of requiring such ponderous instruments to negotiate incredibly florid lines. The effect is at its best when contralto and bass first confront each other, one praising beauty, the other ugliness.

Francisco Araiza, as Isabella's lover, Lindoro, is the perfect Rossini tenor. His light, high voice, flawless technique, and impeccable musicianship are a delight to hear. Jeanne Marie Bima, as Mustafâ's wife (or, rather, one of them), has one of those rarely focused white voices that cuts through the ensembles and rhythmically holds them together. It is, in fact, the ensembles and incredible textures, at times sounding almost like Mendelssohn, that are the chief delight of this music. All in all, the performance is a splendid one, with strong singing, good ensemble, and comic pacing. True Rossini. S.L.

SCHUMANN: *Piano Music* (see Best of the Month, page 62)

SCRIABIN: *Preludes: Op. 9, No. 1; Op. 11, Nos. 2, 4-6, 8-14, 16, 18, 20, 22, 24; Op. 13, Nos. 1-3; Op. 15, Nos. 1, 5; Op. 16, Nos. 2, 4. Sonata No. 4, in F-sharp Major, Op. 30; Etude in C-sharp Minor, Op. 42, No. 5.* Andrei Gavrilov (piano). ANGEL • DS-38161 \$11.98, © 4DS-38161 \$11.98.

Performance: *Insightful*
Recording: *Vivid*

This record represents an international undertaking: it was recorded by an English company in Prague in association with a Russian one and with the cooperation of the Czechs, then pressed in Germany with the benefit of DMM.

And it was worth all that arranging and collaborating. Andrei Gavrilov brings the surest insight to this material and a good deal of imagination to his balancing of pieces that are in turn poetic, brooding, and irruptively dramatic. The sound is a mite reverberant, but never enough to blur, and in general the presence and vividness of the piano are altogether exceptional.

The assortment may not appeal to collectors accustomed to handy "integral" packages of etudes, preludes, sonatas, etc., but it surely will to anyone who cares about Scriabin enough to

duplicate a title or two. The Scriabin cause, in fact, gets a double boost just now, from this superb release and the economical Nonesuch reissue of Ruth Laredo's vibrant Connoisseur Society recordings of the ten sonatas, the Op. 42 Etudes, and other short pieces. R.F.

VERDI: *Macbeth*. Mara Zampieri (soprano), Lady Macbeth; Renato Bruson (baritone), Macbeth; Robert Lloyd (bass), Banco; Neil Shicoff (tenor), Macduff; Claes H. Ahnsjö (tenor), Malcolm; others. Chorus and Orchestra of the Deutschen Oper Berlin, Giuseppe Sino-

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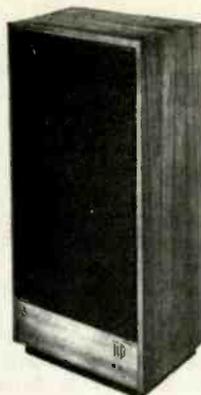
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Performance: *Very good*

Recording: *Fine, well balanced*

Macbeth was Verdi's first musical encounter with Shakespeare, and a score that always remained especially important to him. But the opera was long held in disdain, being of the early-middle period and, admittedly, not a "perfect work." Time, however, has brought this rewarding and moving piece to the stature of a "festival" opera, one that teems with gloriously melodic music well honed to the suspenseful and grisly plot. This Philips recording stands as an example of why Verdi's 1847 score is enjoying its current popularity.

Giuseppe Sinopoli conducts with fire and precision and evokes feelings of eeriness and suspense that imbue the whole performance. His leading of the ballet music is especially effective and makes you feel (which is not always the case) that the ballet is, indeed, exciting music. The orchestra, in fine fettle, seems to relish its task, and the chorus sings with verve and conviction.

Vocally, the honors are carried by the men. Renato Bruson's rich, sometimes burly voice is well suited to Macbeth's dark and murky character; his handling of the ambition-ridden "Due vaticini" and the later Dagger Monologue are particularly effective. Robert Lloyd, an Englishman with a full, organ-toned bass, is splendid as Banco (Banquo), whose warning to his son in Act II is beautifully and sensitively rendered. And the Macduff of Neil Shicoff is sung with ardor and taste.

As the recording progresses, Mara Zampieri improves vocally and warms to her interpretation of Lady Macbeth. Though her first aria, "Vieni! t'affretta," is strident and at times uncertain of pitch, the succeeding "La luce langue" is much better, and the sleep-walking scene is well performed, both vocally and in its evocation of Lady Macbeth's terror. Zampieri's most effective singing, perhaps, is with Bruson in the suspenseful Act I duet. The ensemble work, first-rate throughout, is especially noteworthy in the Apparitions Scene at the beginning of Act II.

The recording itself suggests a live, staged performance—a sensation you do not experience from the effortlessly sung but rather uninvolved performance of Birgit Nilsson with Giuseppe Taddei under Thomas Schippers on the old London set. The Philips recording recalls instead the excitement of the RCA performance with Rysanek, Warren, and Leinsdorf and, from an earlier era, the Urania release, sung in German, with Elisabeth Höngen as a spine-chilling Lady Macbeth and Karl Böhm as the conductor. I make these comparisons with currently unavailable *Macbeth* recordings only to reinforce my recommendation of this new one as an asset to any collection. R.A.

J. WILLIAMS: *Violin Concerto; Flute Concerto.* Mark Peskanov (violin); Peter Lloyd (flute); London Symphony Orchestra, Leonard Slatkin cond. VARÈSE SARABANDE Ⓞ 704120 \$10.98.

Performance: *Very good*
Recording: *Very, very good*

Yes, this is *the* John Williams, composer of the soundtracks for *Star Wars*, *E.T.*, etc., and conductor of the Boston Pops. But it so happens that this same Williams was a serious composer of concert music some years before he won Hollywood fame, and he still is. The *Violin Concerto* is a full-scale, three-movement work in the twentieth-century Romantic eclectic manner, not too far distant from the idioms of William Walton or Samuel Barber. Its high point is the elegiac slow movement, which to some may seem a bit long for its content. The finale, with its solo *moto perpetuo*, typifies the brilliant and effective writing for the violinist throughout the work. The craftsmanship is solid, the scoring gorgeous. And soloist Mark Peskanov is on top of things all the way.

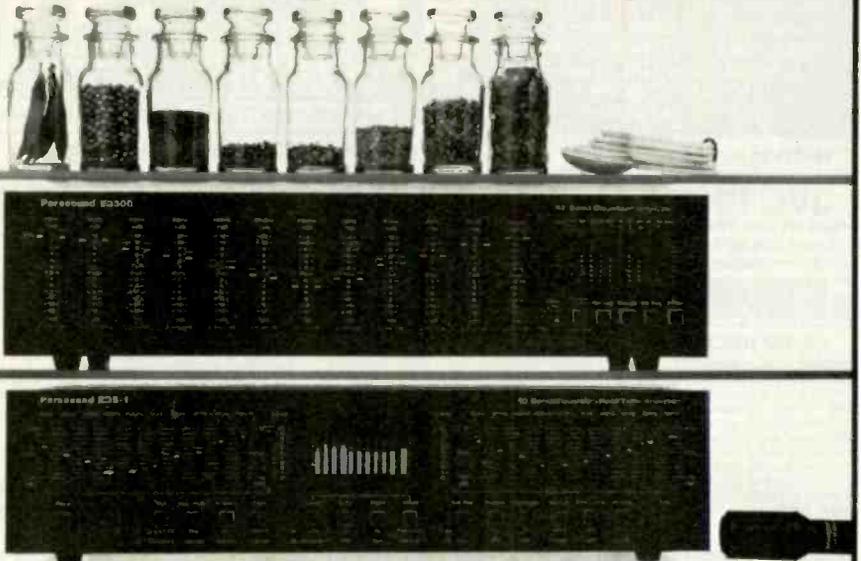
The earlier *Flute Concerto*, however, I find far more interesting. Touched with the influence of Japanese *shakuhachi* flute music, it is a far more daring piece stylistically, with the orchestral part scored for strings and a vast array of percussion, including harp and piano. I would describe its musical language as mainstream post-Darmstadt. Cast in four uninterrupted sections, the *Flute Concerto* offers a brilliant and challenging role for the solo instrument, complete with the devices of expanded flute technique that have come into usage since World War II. This may not be music on the level of a Boulez or Elliott Carter, but to my ears it is as good or better than the general run of contemporary music for instrumental forces of this kind that I have been hearing over the past twenty years. Flutist Peter Lloyd does a superb job, and in both works Leonard Slatkin provides fine orchestral collaboration. The digital recording is sumptuous, brilliant, and crystal clear throughout. In sum, I'd call this one a winner. *D.H.*

VIVALDI: *The Four Seasons.* Christopher Hiron, John Holloway, Alison Bury, Catherine Mackintosh (violin); Academy of Ancient Music, Christopher Hogwood cond. L'OISEAU-LYRE Ⓞ 410 126-1 \$10.98, Ⓞ 410 126-4 \$10.98, Ⓞ 410 126-2 no list price.

Performance: *Subtle*
Recording: *Fine*

You don't usually associate the word "subtle" with Vivaldi, but Christopher Hogwood's reading of this potboiler brings out the delicacy and finesse of the music rather than the rollicks and storms that most performances emphasize. The rhythmic freedom of the various soloists and their confident portrayal of the constantly shifting moods make this umpteenth recording well worth while. *S.L.*

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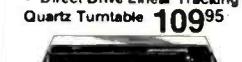


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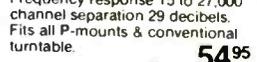


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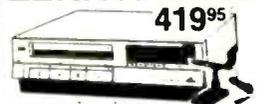
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AZTEC CAMERA: *Knife*. Aztec Camera (vocals and instrumentals). *Still on Fire*; *Just Like the USA*; *Head Is Happy* (*Heart's Insane*); *The Back Door to Heaven*; and four others. SIRE 25183-1 \$8.98, © 25183-4 \$8.98.

Performance: *Obscure*
 Recording: *Very good*

Putting Aztec Camera on your turntable is like settling down to read *Finnegan's Wake*: it requires a conscious decision to make yourself uncomfortable. The group's first major-label release, last year's "High Land, Hard Rain," was a huge critical success (my decidedly unfavorable review in these pages may have been the only bad press the record got). On "Knife," you feel the passion and sensitivity of Aztec's lead singer and songwriter, Roddy Frame, even when you can't quite understand what he's driving at in his lyrics.

In fairness, Frame isn't always obscure—some of his images are quite powerful. He paints a brilliantly graphic canvas, for example, in the title cut, *Knife*: "It's twists are cruel and hopeless/like neglect has worn it thin/and it could rip the sky wide open/and let the rain come tumbling in." On the other hand, I'm not at all sure what the knife image refers to—and, believe me, I've tried to figure it out.

"Knife" benefits considerably from Mark Knopfler's production. Where "High Land" was amateurishly performed, stripped down to the bare elements of an acoustic rock quartet, "Knife" adds some keyboards and horns and is very nearly danceable in places. Frame's guitar work, too, is more impressive. But despite Knopfler's lighter touch, Aztec Camera remains lugubrious. Which is why critics will no doubt feel compelled to praise "Knife"—though few, I'll wager, will play it twice. *M.P.*

JAMES GALWAY, HENRY MANCINI: *In the Pink*. James Galway

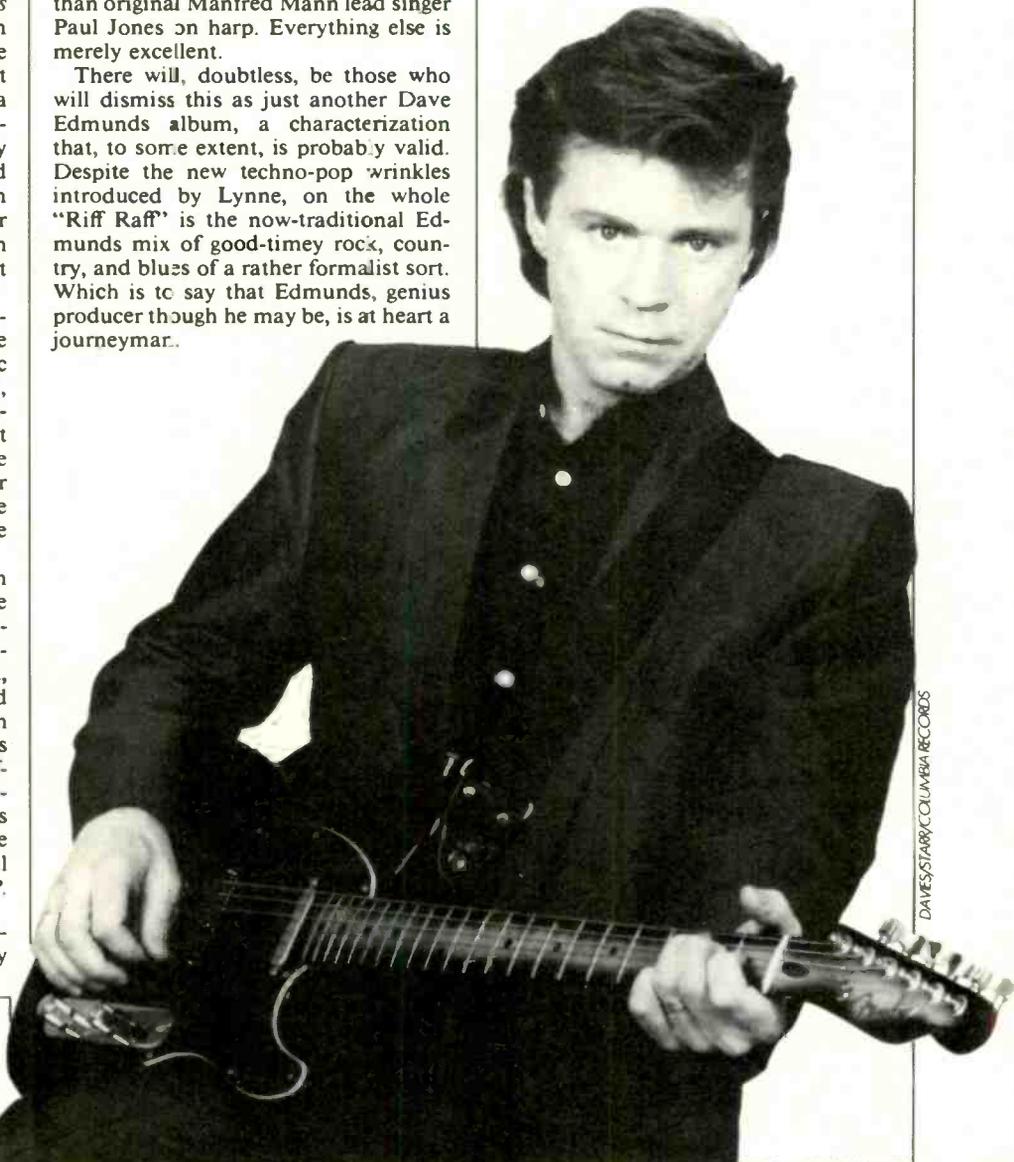
PURE POP FROM DAVE EDMUNDS

DAVE EDMUNDS'S "Riff Raff" continues the collaboration with ELO's Jeff Lynne that Edmunds began on his last album, "Information," and in some ways it's even better—pure pop, with no apologies, filtered through a classic rocker's sensibility. Highlights this time out include a superb remake of the Four Tops' *Something About You*; two electro-pop-goes-rockabilly numbers by Lynne (*Breaking Away* and *SOS*); a fantastic Elvis-style bar-room weeper (*How Could I Be So Wrong*), complete with right-on-the-money neo-Jordannaire back-up vocals; and a shuffle blues, *Can't Get Enough*, featuring none other than original Manfred Mann lead singer Paul Jones on harp. Everything else is merely excellent.

There will, doubtless, be those who will dismiss this as just another Dave Edmunds album, a characterization that, to some extent, is probably valid. Despite the new techno-pop wrinkles introduced by Lynne, on the whole "Riff Raff" is the now-traditional Edmunds mix of good-timey rock, country, and blues of a rather formalist sort. Which is to say that Edmunds, genius producer though he may be, is at heart a journeyman.

Nevertheless, when you consider the really staggeringly consistent quality of the music Edmunds has been making over the last fifteen years, you could hail him as the most entertaining journeyman around and take him on his own terms. If, like me, you're prepared to do that, you'll have a fine time with this album—not a masterpiece, perhaps, but as entertaining and intelligent a party record as you're likely to hear this season. *Steve Simels*

DAVE EDMUNDS: *Riff Raff*. Dave Edmunds (vocals, guitar); other musicians. *Something About You*; *Breaking Out*; *Busted Loose*; *Far Away*; *Rules of the Game*; *Steel Claw*; *S.O.S.*; *Hang On*; *How Could I Be So Wrong*; *Can't Get Enough*. COLUMBIA FC 39273, © FCT 39273, no list price.



DAVE EDMUNDS/COLUMBIA RECORDS

Explanation of symbols:

- = Digital-master analog LP
- Ⓢ = Stereo cassette
- Ⓢ = Digital Compact Disc
- Ⓜ = Monophonic recording

(flute); National Philharmonic Orchestra, Henry Mancini cond. *The Pink Panther; Meggie's Theme; Crazy World; Speedy Gonzales; Two for the Road*; and eight others. RCA ● CRC1-5315 \$9.98, © CRK1-5315 \$9.98.

Performance: *Expert*
Recording: *Good*

It sometimes seems as if the only other performer James Galway has not appeared with on records is Boy George. So sure is Galway's commercial instinct and, it must be admitted, so gigantic his talent as a flute player that he can get away with album after album of piffle, like this one, and still hold serious public and critical attention. Henry Mancini, one of the glossier old-line film composers, provides Galway with some memorable melodies here, particularly the medley of *Days of Wine and Roses, Charade*, and *Moon River*. Galway responds with all the performing glee and expertness at his command, which is plenty. P.R.

DARYL HALL, JOHN OATES: *Big Bam Boom*. Daryl Hall (vocals, synthesizers, guitar); John Oates (vocals, guitar, synth-guitar, synthesizers); instrumental and vocal accompaniment. *Dance on Your Knees; Out of Touch; Method of Modern Love; Bank on Your Love; Some Things Are Better Left Un-*

said; and four others. RCA AJL1-5336 \$9.98, © AJK1-5336 \$9.98.

Performance: *Not their best*
Recording: *Okay*

Daryl Hall and John Oates are consummate pros with impeccable commercial credentials, so the natural conclusion you have to draw from "Big Bam Boom" is that they're coasting after the success of their mega hit "H₂O." There's one certifiable Top Ten hit here, *Out of Touch*, the kind of blue-eyed r-&b classic that has kept Hall and Oates on the charts year in and year out. But the rest of "Big Bam" never really hits its stride, with competent but uninspired ballads and uptempo dance tunes that mistake hip phrases ("possession obsession," "going through the motions," "bank on your love") for soul. It's a stiff, slightly awkward record—not a must. M.P.

THE HONEYDRIPPERS: *Volume One*. The Honeydrippers (vocals and instrumentals). *I Get a Thrill; Sea of Love; I Got a Woman*; and two others. ES PERANZA/ATLANTIC 90220-1 \$8.98, © 90220-4 \$8.98.

Performance: *Fun*
Recording: *Very nice*

The Honeydrippers, in case you haven't heard, are ex-Led Zeppelin vocalist

Robert Plant and friends doing a pseudonymous take on a couple of semi-obscure rhythm-and-blues numbers from the Fifties and early Sixties. Simultaneously purist and revisionary, it's a modest little record distinguished mostly by Plant's surprisingly effective vocals. Take him out of Led Zep's ham-handed heavy-metal format, and it turns out he's a genuinely affecting singer. This stuff isn't going to change the world or anything, but it's clearly felt. If there's going to be a Volume Two, I'd like to hear it. S.S.

JOAN JETT AND THE BLACK-HEARTS: *Glorious Results of a Misspent Youth*. Joan Jett and the Blackhearts (vocals and instrumentals). *Cherry Bomb; I Love You Love Me Love; Frustrated; Hold Me; Long Time*; and seven others. MCA MCA-5476 \$8.98, © MCAC-5476 \$8.98.

Performance: *Good junk*
Recording: *Appropriately grungy*

The title here (courtesy, we are told, of the old *Honeymooners* TV series) may refer to Joan Jett's teenage years as a member of the Runaways, Los Angeles's all-girl answer to the New York Dolls, a connection that's driven home by a fairly spirited cover of the Runaways' "classic" *Cherry Bomb*. The remainder of "Misspent Youth" is the

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usual Jett mix of heavy-metal grunge-rock leavened with occasional Rolling Stones-isms (*Frustrated*) and hockey-rink sloganeering. Dumb it may be, but in its peculiarly unselfconscious way it's far more likable than nearly all of the male heavy-metal currently clogging our airwaves and desecrating our concert halls. It's the kind of stuff that gives loud noises a good name. S.S.

GEORGE JONES: *Ladies' Choice.* George Jones (vocals); Deborah Allen, Lacy J. Dalton, Janie Fricke, Terri Gibbs, Emmylou Harris, others (vocals); vocal and instrumental accompaniment. *She's My Rock; Hallelujah, I Love You So; We Sure Make Good Love; All Fall Down;* and six others. EPIC FE 39272, © FET 39272, no list price.

Performance: *Hit and miss*
Recording: *Good*

More often than not, albums like George Jones's "Ladies' Choice," where a male superstar invites every female singer in the business to come down and sing with him, are pretty uneven affairs, if not downright sorry. This one is better than most, and if there are several so-so performances in it, at least there isn't a real clunker or any of those spoken prologues where the guests slobber all over the star before getting down

to business. Jones is his usual deferential self, holding up his end with grace and style, and producer Billy Sherrill is his usual self, not paying enough attention half the time. As for the women, three of them—Brenda Lee, Loretta Lynn, and Deborah Allen—turn in natural, winning performances, their affection for Jones coming through in the process. That's really not reason enough to buy the album, but if you like Jones anyway, you'll probably want to add this one to your collection. A.N.

NEW EDITION. New Edition (vocals); instrumental accompaniment. *Cool It Now; Mr. Telephone Man; Delicious; Hide and Seek; Baby Love;* and five others. MCA MCA-5515 \$7.98, © MCAC-5515 \$7.98.

Performance: *Kids are kids*
Recording: *Very good*

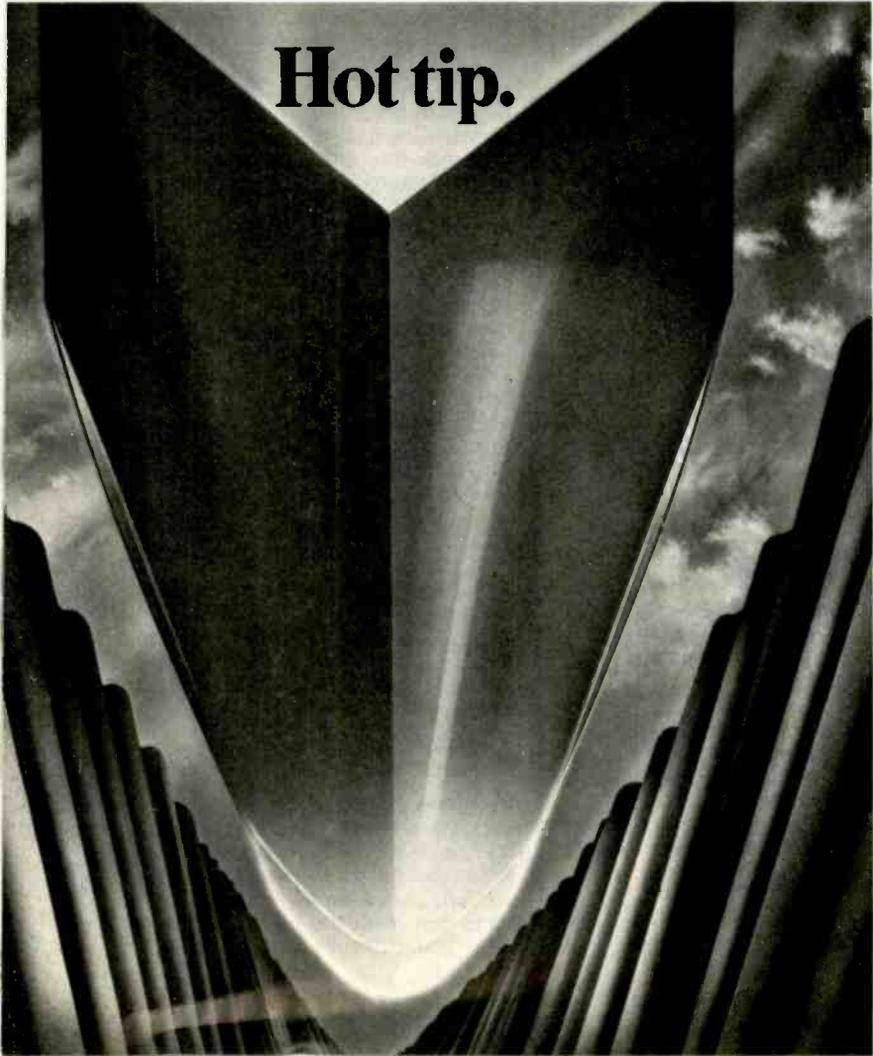
New Edition has a little more substance than the faceless Menudos, but, no matter how you slice it, these kids still have too much baby fat to sing love songs with even the slightest conviction. As their hit singles have proved, there is a youthful market for this sort of thing, but, like the Jacksons, to whom they are often compared, New Edition will inevitably grow up—and possibly yield a star or two. The makings are certainly there. C.A.

ELVIS PRESLEY: *Elvis: The Hillbilly Cat.* Elvis Presley (vocals, guitar); Scotty Moore (guitar); Bill Black (bass). *That's Alright, Mama; Blue Moon of Kentucky; Good Rockin' Tonight; I Got a Woman;* and four interviews. THE MUSIC WORKS/PASSPORT PB 3602 \$6.98, © PBC 3602 \$6.98.

Performance: *Apparently fine*
Recording: *Wretched*

This is stuff left over from the Louisiana Hayride tapes of early Presley appearances marketed a few months ago as "Elvis: The First Live Performances," and unless you're an absolutely dyed-in-the-wool fan, I'd suggest you pass it by in favor of that earlier release. The noise on this album is bad enough to make the effort of listening through it to the music an unrewarding one, and the package is padded with trite reminiscences and lame DJ introductions. All things considered, though this isn't overt schlock like most of RCA's recent Elvis product, the basic motive behind it seems to be similar: the eternal quest for a good fast buck or two. "The Hillbilly Cat" may be justifiable on historical grounds, but, as they used to say in Memphis, *Caveat emptor, y'all.* S.S.

KENNY ROGERS: *What About Me?* Kenny Rogers (vocals); vocal and instrumental accompaniment. *What*



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About Me?; *The Night Goes On*; *Dream Dancin'*; *The Stranger*; *Heart to Heart*; and five others. RCA AFL1-5043 \$8.98, © AFK1-5043 \$8.98.

Performance: *Rejuvenated*
Recording: *Very good*

After his disastrous Bee Gees experiment, Kenny Rogers has bounced back with a surprisingly strong album of soulful (and synthesized) L.A. pop. There's a whopper of a glossy commercial single in the title tune, *What About Me?*, sung by Kim Carnes, Rogers, and James Ingram, but the rest of the album is moodier than we've come to expect from Rogers, as if he's deliberately chosen material awash in dark hues and muted colors. The biggest change, however, is that Rogers performs with a new emotional commitment throughout the program, which runs the gamut from fast to slow, pop to country to r-&-b and even to some mildly funky rock-and-roll. Instead of sauntering through the songs the way he usually does, he seems almost to *live* most of them. Perhaps it's because he co-wrote two of the songs and co-produced the album (with David Foster). There's still that L.A. overglaze, which serves to distance the singer from the audience, but this is Rogers's first album in a long time that hasn't been downright offensive. *A.N.*

LINDA RONDSTADT: *Lush Life* (see *Best of the Month*, page 64)

DIANA ROSS: *Swept Away*. Diana Ross (vocals); orchestra. *Swept Away*; *Missing You*; *Telephone*; *Forever Young*, and six others. RCA AFL1-5009 \$8.98, © AFK1-5009 \$8.98.

Performance: *Glitzarama*
Recording: *Good*

Diana Ross has been on a glitz-glamour, super-star trek for so long now that her singing has become almost secondary to the principle of Being Diana Ross. She's in typical high-key effulgence here, perhaps at her best in the title song, *Swept Away*. As singing it's a lot more convincing than her almost ludicrous posing and posturing in the video she made of it for MTV. The rest is standard lip-gloss Ross, including her duet with a slightly phlegmatic Julio Iglesias on *All of You*. *P.R.*

THE SALON ORCHESTRA: *Classic Caféhaus Music*. The Salon Orchestra. *Die Csardasfürstin*, *Medley*; *Brise de mer*; *Jalousie*; and six others. PRO ARTE ● PAD 136 \$11.98, © PCD 136 \$11.98, © CDD 136 \$16.98.

I SALONISTI: *Serenata*. I Salonisti. *Valse triste*; *La plus que lente*; *La fille aux cheveux de lin*; *Serenata*; and five others. PRO ARTE ● PAD 133 \$11.98, © PCD 133 \$11.98, © CDD 133 \$16.98.

Performances: *Both good*
Recordings: *Both excellent*

Salon music, that tackily genteel performing style of "light" classics that

reached its peak in Grand Hotel dining and reception rooms at the turn of the century, may not be everyone's cup of *thé*. But for those of us with vivid retro imaginations it still serves a purpose—the invention of impossible scenarios and incredible playlets in our minds. After all, it was always meant to be music to accompany conversation, flirtation, or dining.

Both of these albums are such gorgeous examples of the genre, and so beautifully recorded in digital sound, that they must be considered Basic Repertoire for nostalgia junkies. I felt a slight tilt toward the "Caféhaus" album, since the ensemble is much larger and the program more robust, with such things as the *Csardasfürstin* medley and *Jalousie*, but there is much to be said for the delicate rapture of such weepers as *La plus que lente* on the I Salonisti set. Wonderful fun on both albums. *P.R.*

T. G. SHEPPARD: *One Owner Heart*. T. G. Sheppard (vocals); vocal and instrumental accompaniment. *You're Going Out of My Mind*; *Everybody Loves a Sad Song*; *One Owner Heart*; *Love Burning Down*; *Later On*; and five others. WARNER BROS. 25149-1 \$8.98, © 25149-4 \$8.98.

Performance: *Backsliding*
Recording: *Very good*

With his last album, "Slow Burn," T. G. Sheppard aimed for a higher mark than usual, working a sort of Eaglesesque attitude into his brand of commercial country-pop. He sounded as if he were actually more concerned with the music than with his ladies'-man image, and it earned him new respect in Nashville. But with this follow-up album, Sheppard has taken a large step backwards.

The first side of "One Owner Heart" is all Nashville formula at its most predictable, the title song being one of those awful ditties that compares a rejected lover to a used car. Side two fares a bit better, with a couple of semi-substantial love ballads and two other songs where Sheppard is called upon to deliver some old-fashioned anguish, which he does rather well. But his duet with Judy Collins, *Home Again*, is as stiff as a Nelson Eddy/Jeanette MacDonald movie bit, and by the end of the album Sheppard seems to be a singer in search of a direction. *A.N.*

BARBRA STREISAND: *Emotion*. Barbra Streisand (vocals); orchestra. *Emotion*; *Heart Don't Change My Mind*; *When I Dream*; *Time Machine*; *Left in the Dark*; and five others. COLUMBIA OC 39480, © OCT 39480, no list price.

Performance: *Good*
Recording: *Good*

How does a perfectionist mark time? In Barbra Streisand's case, very precisely. Having no film projects at the moment, she's recorded this album instead. She carefully parses her way through the ten songs here with her usual needlepoint care. Unfortunately, the repertoire is

mediocre, and only the title song is really worth the effort. Her duet with Kim Carnes in *Make No Mistake, He's Mine* is something less than a draw, given Streisand's proven comic gifts. Lesser Streisand, but still Streisand. P.R.

ANDY SUMMERS AND ROBERT FRIPP: *Bewitched*. Andy Summers, Robert Fripp (synthesizers, guitars, percussion); instrumental accompaniment. *Parade; What Kind of Man Reads Playboy; Begin the Day; Train*; and six others. A&M SP-5011 \$8.98, © CS-5011 \$8.98.

Performance: *Interesting*
Recording: *Good*

The second collaboration between Andy Summers and Robert Fripp—guitarists for the Police and King Crimson, respectively—is a modest entertainment, though not the display of virtuosity one might have hoped for. These collaborations are largely engineering efforts—that is, Summers and Fripp go into the studio with a few ideas, spin out extemporaneous sequences, loops, phrases, and solos, then reassemble the pieces at the mixing board.

"*Bewitched*" is, for the most part, the work of Summers, who produced it. It's divided into "dance" and "trance" sides, with the latter perhaps more inventive but the former more engaging. The centerpiece of the dance side is an extended jam entitled *What Kind of Man Reads Playboy*, which builds on a simple rhythmic phrase—one of Fripp's—adding layer upon layer of what sound like chuckling syncopated guitars and bass and synth that seem to be winking and nudging one another, as if they all *were* actually peering over the shoulder of a man reading *Playboy*. During its eleven-plus minutes, players enter and exit abruptly, diving in with short, searing solos or guffawing chords. At times the instruments appear to be moving *backwards* against the beat. All in all, it's an inspired bit of insanity.

The trance side will appeal to those interested in the technical possibilities of synthesizers and synthesized guitar and percussion. Slight fragments of melody are strung together, superimposed on one another, removed and added, and woven into a succession of aural collages. Not the most compelling work these two have given us, but interesting nonetheless. M.P.

THE SWIMMING POOL Q'S. Jeff Calder (vocals, guitar); Anne Richmond Boston (vocals, keyboards); Bob Elsey (guitar); Billy Burton (drums); J. E. Garnett (bass). *The Bells Ring; Pull Back My Spring; Purple Rivers; The Knave*; and six others. A&M SP-5015 \$8.98, © CS-5015 \$8.98.

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

The Swimming Pool Q's are the sort of band I want to be enthusiastic about but can only muster admiration for. Critics are hailing their "originality," and it's

true—no one else on the current pop scene sounds quite so much like the early Jefferson Airplane. Their music, which also suggests Fairport Convention in its blend of folk and rock, is bright, tuneful, and energetic. Ann Richmond Boston and Jerry Calder, who share lead vocals, are both direct, unaffected, and appealing singers. Bob Elsey's guitar is always busily entertaining, whether he's filling in with a few rapid-fire strokes or pushing a song along with slashing, distorted chords. But something is missing.

The group's rustic, deliberately un-

electronic music often sounds a bit too much like the work of a dedicated group of preservationists. And the lyrics manifest an inarguable gift for manipulating language without giving the listener much of an emotional or intellectual foothold. You find yourself admiring the word play rather than being moved by it. It's the kind of clever, accomplished exercise that needs to be seen and heard live, to be given a human context, before it can work on a record. That's why the Swimming Pool Q's go to the top of my list of bands-to-see, but not my list of albums-to-get. M.P.

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ROGER TAYLOR: *Strange Frontier.* Roger Taylor (drums, vocals); other musicians. *Man on Fire; I Cry for You; It's an Illusion; Racing in the Street; Masters of War; Strange Frontier;* and four others. CAPITOL SJ-12357 \$8.98, © 4XJ-12357 \$8.98.

Performance: *Pompous*
Recording: *Excellent*

Roger Taylor, of course, pounds the skins for Queen, a group not particularly noted for subtlety, and this second solo effort from the photogenic drummer is quite as bombastic and overdone as you might expect. It is not, however, leavened with much humor, Queen's usual saving grace, and after a while the relentless, sledge-hammer production becomes almost oppressive. If there's such a thing as Nuremberg Rally Rock, this is it in its most unalloyed form. Prime offender: an inexplicable version of Bruce Springsteen's understated *Racing in the Streets*, which Taylor renders à la Jim Steinman's gargantuan epics with Meat Loaf and Bonnie Tyler. A thoroughly avoidable business. S.S.

U2: *The Unforgettable Fire* (see Best of the Month, page 61)

TOM VERLAINE: *Cover.* Tom Verlaine (vocals, guitar); other musicians. *Five Miles of You; Travelling; O Foolish*

Heart; Lindi-Lu; Let Go the Mansion; and four others. WARNER BROS. 255144-1 \$8.98, © 25144-4 \$8.98.

Performance: *Compelling*
Recording: *Very good*

This album is of a piece with Tom Verlaine's previous solo outings, which is to say that it alternates between dreaminess and abrasiveness. It's full of inventive, emotive guitar playing, and the lyrics are all but incomprehensible. Personally, I'm a sucker for Verlaine's mixture of post-modernist mysticism and hot licks, and while I don't think that, overall, "Cover" has the agonized intensity of either his seminal work on the two Television albums or his more recent "Dreamtime," there are definitely moments here worth catching. Pick to click: the astonishing, powerful, layered instrumental rave-up that concludes *Miss Emily* and *Lindi-Lu*, a haunting, cheerfully accessible little pop love song that with luck could actually be a hit (the last thing anybody would have expected from this boy). A terrific Walkman album, by the way. S.S.

THE WHITES: *Forever You.* The Whites (vocals and instrumentals); vocal and instrumental accompaniment. *Forever You; Pins and Needles; Mama Don't You Know Your Little Girl; Move It On Over; I Just Started Living Today;*

and five others. MCA/CURB MCA-5490 \$7.98, © MCAC-5490 \$7.98.

Performance: *Not so grabby*
Recording: *Very good*

The good news is that the Whites have a new album out, their first for MCA/Curb. The bad news, however, is that "Forever You" isn't nearly as strong as their last outing, nor as exciting. Cheryl and Sharon still sing like angels, as Emmylou Harris once said, and their musicianship is once again impeccable. But the picking doesn't really sound inspired except during the break of Hank Williams's *Move It On Over*, where Mark O'Connor's liquid fiddle moves through some impressive jazz/swing circlings.

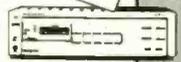
The biggest problem with "Forever You," though, seems to be with the material. Aside from *Pins and Needles*, an irresistible new song that sounds as old-fashioned as can be, there isn't anything here to stir you out of a funk or to put you in touch with those special places in the heart, to borrow a popular movie title. Maybe Ricky Skaggs, the album's producer (as before), was too busy working on his own album to give this one the time it needed, but the Whites deserve better. But don't pass this one up altogether. It's still head and shoulders above most of what comes out of Nashville these days. A.N.

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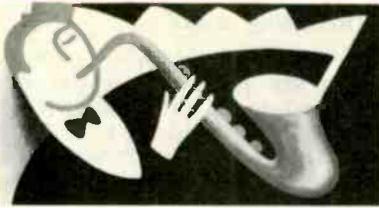
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JAZZ



THE DIRTY DOZEN BRASS BAND: *My Feet Can't Fail Me Now.* The Dirty Dozen Brass Band (instrumentals). *Blackbird Special; Blue Monk; L'il Liza Jane; Bongo Beep; Caravan; St. James Infirmary; I Ate Up the Apple Tree; My Feet Can't Fail Me Now;* and two others. CONCORD JAZZ GW-3005 \$8.98, © GWC-3005 \$8.98.

Performance: *Curiously refreshing*
Recording: *Very good*

The Dirty Dozen Brass Band is from New Orleans, and its music is steeped in the traditions of that city, but these eight (!) musicians are no relics from Preservation Hall. They are young, and their ears are close enough to the ground that their music also reflects the present time. I first heard the band last summer at the Umbria Jazz Festival in Perugia, Italy. In the Gothic surround-

ings of the centuries-old Piazza Grande, they whipped a huge, youthful audience into a frenzy that had the local police and militia on their toes. It was all great fun, however, and "My Feet Can't Fail Me Now" is a worthy and well-recorded debut album. C.A.

BEAVER HARRIS, DON PULLEN, 360° EXPERIENCE: A Well Kept Secret. Don Pullen (piano); Beaver Harris (drums); Hamiet Bluiett, Ricky Ford (saxophone); Buster Williams (bass); Francis Haynes (steel drums); other musicians. *Newcomer; Double Arc Jake; Land of the Pharaohs; Goree; Well Kept Secret.* SHEMA HWSI 2701 \$8.98 (from Hannibal Records, Inc., 611 Broadway, Suite 415, New York, N.Y. 10012).

Performance: *Exciting*
Recording: *Very good*

As I look back on 1984, I can think of no greater live listening experience than that afforded me by pianist Don Pullen and saxophonist Don Adams at last summer's Umbria Jazz Festival. Their performance seemed to be an amalgam of everything that is good in jazz, past and present.

That same ability to cross stylistic and chronological barriers is splendidly demonstrated on this album, which features Pullen with drummer Beaver Harris and a group called the 360° Experi-

ence. There are outstanding contributions from saxophonists Ricky Ford and Hamiet Bluiett and bassist Buster Williams as well. The set should not be missed. C.A.

HANK JONES, TOMMY FLANAGAN: I'm All Smiles. Hank Jones, Tommy Flanagan (pianos). *Au Privave; Con Alma; Relaxin' at Camarillo; In a Sentimental Mood; Some Day My Prince Will Come; Afternoon in Paris;* and two others. VERVE/MPS 817 863-1 \$8.98, © 817 863-4 \$8.98.

Performance: *All 176 keys*
Recording: *Very good remote*

In the Forties boogie-woogie masters Albert Ammons, Pete Johnson, and Meade Lux Lewis proved that three pianists could perform together on three instruments with interesting results, and a handful of piano duos have carried on the tradition without sounding like Ferrante and Teicher. It used to be common for Harlem pianists to compete with one another at the keyboard, but competition is not what Hank Jones and Tommy Flanagan had in mind when they recorded "I'm All Smiles" at a 1983 concert. This is *collaboration*, an intricate weave of Steinway and Bösendorfer that brings out the best in both players. You'll be all smiles too when you hear it. C.A.

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AMADEUS. Original-soundtrack recording. Ivan Moravec (piano); Felicity Lott, Richard Stilwell, others (vocals); Academy of St.-Martin-in-the-Fields, Neville Marriner cond. FANTASY WAM-1791 two discs \$19.98, © 5WAM-1791 two cassettes \$19.98, © FCD-900-1791-2 two CD's \$29.98.

Performance: *Fine*
Recording: *Excellent*

Amadeus, Peter Shaffer's play about the tragic confrontation between "civilized," careful craftsmanship and unruly genius as symbolized by Salieri and Mozart, respectively, has been made into a lavish, slightly heavy-handed film by Milos Forman. The soundtrack for it, however, recorded under the artistic supervision of Neville Marriner and produced by John Strauss, is sheer

joy. Marriner's conducting of excerpts from such diverse works as the Symphony No. 29, the operas *Don Giovanni* and *The Marriage of Figaro*, and the sublime Requiem is always controlled, sensitively inflected, and properly scaled to the film's eighteenth-century setting. And by that I don't mean that he ever allows the proceedings to degenerate into music-box tinkling. There is a lot of genuine fire and Mozartian passion bubbling throughout.

In case you worry that a two-record album containing no more than "gems" or "Mozart's Greatest Hits" is slightly irreverent—don't. The music presented here seems to follow some dramatic plan, so that each excerpt appears to follow quite naturally from the previous one. (Would it be blasphemy to suggest that these records can be played as sophisticated "mood" music around the house? Well, they have been, and quite successfully too, at my house.)

Although the recording is not digital, the sound is excellent—crystalline and noise free. And the focus is slightly "forward," so the music seems particularly vivid and alive. *P.R.*

BACHELOR PARTY. Original-soundtrack recording. The Fleshtones: *American Beat '84*. Oingo Boingo: *Something Isn't Right*. Adrian Zmed: *Little Demon*. R.E.M.: *Wind Out*. The Alarm:

What Kind of Hell. And five others. I.R.S. SP 70047 \$8.98, © 70047 \$8.98.

Performance: *A dull party*
Recording: *Bland*

For every *American Graffiti* there are twenty like *Bachelor Party*, a so-so soundtrack to an awful movie. Comprised chiefly of music by I.R.S. house acts like R.E.M., the Fleshtones, the Alarm, and Jools Holland, *Bachelor Party* tries for that good ol' rock-and-roll that made *Graffiti* a classic. It sounds more like a battle of the garage bands doing Dion and the Belmonts at a Bayonne bachelor party. *M.P.*

GABRIELA. Original-soundtrack recording. Gal Costa, Tom Jobim (vocals); orchestra, Oscar Castro Neves arr. and cond. RCA ABL1-5186 \$8.98, © ABK1-5186 \$8.98.

Performance: *Fair*
Recording: *Good*

Antonio Carlos Jobim's score for this new Brazilian film is one long, incessant musical mutter. The two or three vocals, by Gal Costa and Tom Jobim, scarcely liven things up—Portuguese, sung or spoken, has always sounded mushy to me, as if someone were trying to enunciate and drink hot soup at the same time. Let's hope the picture is a lot better than the music for it. *P.R.*

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THE ALLMAN BROTHERS BAND: *Brothers of the Road*. The Allman Brothers Band (vocals and instrumentals). *Pony Boy; Jessica; You Don't Love Me; Blue Sky; Never Knew How Much (I Needed You); Statesboro Blues; Whippin' Post*; and twelve others. PIONEER ARTISTS LaserDisc PA-84-087 \$24.95.

Performance: *They've done better*
Recording: *Average remote*

One of the reasons I'm particularly glad the Seventies are over is that I can finally go see a bar band without enduring a drunken lout screaming in my left ear for the Allman Brothers' *Whippin' Post*. Perhaps, as this particular concert video suggests, that's because those drunken louts only go out now when the Allmans themselves are on the road.

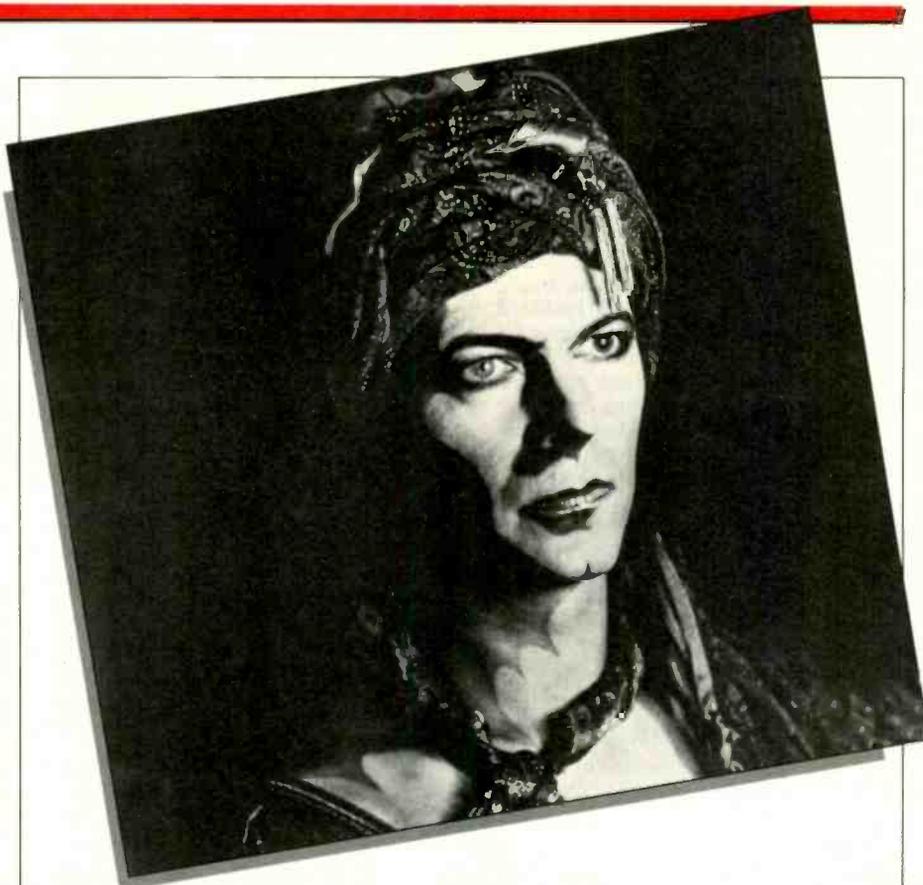
Questions of audience behavior aside, however, what's offered here is something of a mixed bag aesthetically. True, the reconstituted 1982 Allmans on view in "Brothers of the Road" run through pretty much the same set the original outfit would have run through in 1972, and they run through it pretty well. Close your eyes, in fact, and you might even forget that Duane Allman and Berry Oakley were long since wiped out in traffic accidents. Unfortunately, that's about all that can be said for the program. The video format emphasizes somewhat mercilessly the band's utter lack of interest in anything beyond hot licks (even at their peak they had minimal stage presence). Since all of these songs are available in far superior audio-only versions, this seems to be a LaserDisc with, to paraphrase Randy Newman, no reason to live. *L.M.*

ASIA IN ASIA. Asia (vocals and instrumentals). *Heat of the Moment; Only Time Will Tell; Eye to Eye; The Smile Has Left Your Eyes; Soul Survivor*; and seven others. PIONEER ARTISTS LaserDisc PA-84-092 \$24.95.

Performance: *Wimp-rock redux*
Recording: *Anemic*

Here's a concert video, like so many others originally shot for MTV, that qualifies as a genuine non-event. First broadcast on a worldwide satellite hookup from Tokyo, it presents the aging English art-rock veterans of Asia purveying their trademark brand of vaguely melodic winsomeness and arena-scaled flourishes. Besides Carl Palmer's drum solo, a marathon indul-

gence the like of which has not been heard since the heyday of Ginger Baker, the only surprise here is the anemic thinness of the band's instrumental work. On records, songs such as *Heat of the Moment* have a sound suggesting a Phil Spector production of Mahler's *Symphony of a Thousand*. Live, however, the most Asia can crank out is an ensemble attack with all the raw power



BOWIE JAZZIN'

IT may sound curmudgeonly to say this, but David Bowie's *Jazzin' for Blue Jean* is the first music video I've seen in a long time that didn't reduce me to scowling fidgets. Of course, that may be because it isn't really a music video but, rather, an old-fashioned short subject, as they used to call them, with a big musical number reasonably well integrated into the plot. Bowie plays a working-class poseur trying to impress a society girl by claiming he's tight with a pop star (Screaming Lord Byron, also played by Bowie), and though his acting has been somewhat hit or miss in the past, here he's near Oscar-level—hilarious and completely believable as both the hustler and the effete rocker.

The story line of *Jazzin' for Blue Jean* is fairly slight, but by way of compensation there's a lot of sharp satire on the sleazier elements of the rock scene and

on pop culture in general. Even better, the big musical number—Bowie's own recent hit *Blue Jean*, done as a nightclub appearance by Byron—is as well staged and shot as anything you've ever seen in an old MGM film. Director Julien Temple, who's also worked for the Sex Pistols and the Stones, clearly has a career in features ahead of him.

That *Jazzin' for Blue Jean* seems virtually revolutionary is probably less a reflection of its intrinsic value than on the general mediocrity of its competition. But when all is said and done, it is as entertaining and innovative a home video package as has yet been offered up by any major rock figure. And the audio track, not so incidentally, is absolutely spectacular. *Louis Meredith*

DAVID BOWIE: *Jazzin' for Blue Jean*. SONY VIDEO MINI-MOVIE VHS Hi-Fi \$19.95, Beta Hi-Fi \$19.95.

of the Carpenters on an off night, a depressing thought on any continent.

John Wetton, the band's now-departed lead singer, is replaced in Pioneer's liner notes by Greg Lake, but it's actually Wetton on the disc itself. My brief sigh of relief upon making that happy discovery was probably the only enjoyment I had throughout the fifty-nine minutes of "Asia in Asia." *L.M.*

FREDDIE HUBBARD: *Studio Live.* Freddie Hubbard (trumpet); instrumental accompaniment. *Hubbard's Cupboard; Birdland; Condition Alpha; This Is It;* and three others. SONY VIDEO LP VHS Hi-Fi \$29.95, Beta Hi-Fi \$29.95.

Performance: *Uneventful*
Recording: *Unprofessional*

The producers of "Studio Live" obviously thought it would be a good idea to show how an album is recorded, and it might work in some cases. Here, for several reasons, it does not. The music, which has trumpeter Freddie Hubbard tooting through trite arrangements, is very blah, the camera work is of local-news minicam caliber, and someone has written an excruciating narrative that is delivered in the kind of patronizing tone I thought had gone out with the Fifties. Hubbard deserves better. *C.A.*

THE POLICE: *The Synchronicity Concert.* The Police (vocals and instrumentals). *Synchronicity I; Walking on the Moon; King of Pain;* and twelve others. A&M/I.R.S. VHS Hi-Fi 61002 \$39.95, Beta Hi-Fi 21002 \$39.95. PIONEER ARTISTS LaserDisc PA-84-096 \$24.95.

Performance: *World-class*
Recording: *Very good*

Taped at Atlanta's Omni, one of the less forbidding sports arenas in America,

"The Synchronicity Concert" catches everybody's favorite platinum blondes at the peak of their powers. There is much to admire here: Sting's remarkable evolution into a truly commanding front man rather than just a presence, the every-note-counts economy and power of Andy Summer's guitar work, and the seemingly inexhaustible energy and inventiveness of drummer Stewart Copeland. Even more impressive, an almost palpable feeling of affection comes across from both sides of the stage. When the band broke into its *One World* anthems, the mood seemed so genuinely celebratory that I was tempted to suppress my customary critical cynicism and believe, in classic Sixties fashion, that music can still be a force for good.

Still, I came away vaguely dissatisfied with this package, probably because I hadn't really learned anything new from it. Let's face it, the songs here, especially the ones from the "Synchronicity" album, are about as overfamiliar as hit songs can be, and for my money it's not enough to re-create them absolutely faithfully, which by and large is what's done. But if you want just a well-shot, well-recorded document of the Police on a good night, this is it. *L.M.*

MEL TORMÉ: *The Mel Tormé Special.* Mel Tormé (vocals); Jon Hen-

dricks (vocals); George Shearing (piano); Mel Lewis and the Jazz Orchestra. *New York State of Mind; Oh! Lady Be Good; Here's That Rainy Day; When Sunny Gets Blue;* and four others. SONY VIDEO LP VHS Hi-Fi \$29.95, Beta Hi-Fi \$29.95.

Performance: *Excellent*
Recording: *Good*

The package only promises Mel Tormé, but "The Mel Tormé Special" delivers a great deal more. Not only do we get the former Velvet Fog performing, in splendid condition, with Mel Lewis and the Jazz Orchestra, but the concert tapes, from San Francisco's Louise M. Davies Hall, are skillfully interspersed with Tormé's spoken observations, a wonderful rehearsal moment with pianist George Shearing, and a duet with Jon Hendricks. The absolute peak, however, is Tormé's tribute to Ella Fitzgerald, a tour de force scat performance of *Oh! Lady Be Good*. I am not sure why Mel Lewis only appears on one number when the orchestra bears his name, but his stand-in does a good job. These days video companies seem to be grasping for products to release, and a lot of inferior material is being marketed. This well-conceived, beautifully executed fifty-three-minute cassette provides welcome relief. It is superb from start to finish. *C.A.*

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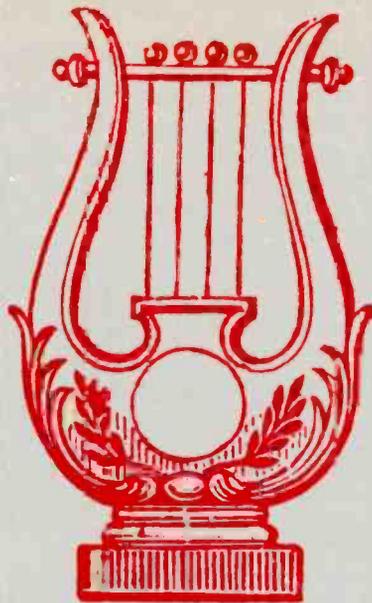
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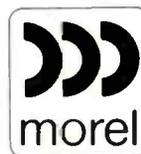
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Tweeter Type	Soft dome, Aluminum voice coil
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Sensitivity 1W/1M	92 db
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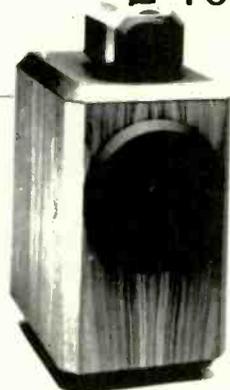
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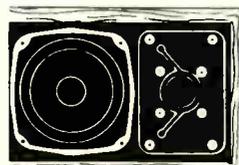
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PIONEER CLD-900
(Continued from page 53)

Although the actual performance of the CLD-900 does not appear to have suffered in any way from its dual-function design, a few features found in many other contemporary Compact Disc players have been omitted from it. For example, while it is easy to access any single track of a CD from the remote controller, there is no provision for programming the machine to play several tracks in a selected order. In compensation for this, however, the CLD-900 can be set to repeat an entire record, the track being played, or any selected portion of the program ("phrase repeat"). A slightly more serious quirk is that—presumably on the assumption that the machine will always be used with a video monitor—its front-panel display offers little specific information about the CD being played (such as its total number of tracks, playing time, time remaining, etc.). This information is available on the TV display, but a few CD listeners might object to the high-frequency whistle emitted by many TV sets and video monitors.

Video Disc Performance

To a greater extent than with CD's, the special control features of the LaserDisc video system depend on the software as well as the hardware. For example, with "Standard Play" (CAV) records, which are limited to 30 minutes of program per side, the CLD-900 (like Pioneer's LD-1100 LaserDisc-only player) provides a full range of special operating modes, including several faster or slower speeds in either direction, single-frame displays, and frame stepping in either direction under manual control or at automatically set rates. In such cases, you can key in any desired video frame number (more than 50,000 can be contained on a single disc); in a few seconds that frame will be seen on the TV screen and playing can be resumed from there if desired. With "Extended Play" discs, however, which have up to one hour per side, the CLD-900, like other video-disc players, provides only the special operating modes of pause, fast scan, and chapter search, as well as two-channel (stereo) sound if the disc is so programmed.

With suitably encoded discs, the CLD-900 will sense the presence of CX noise-reduction encoding and

switch on its decoding system automatically, although it must be switched manually when playing older CX-encoded discs that lack the necessary pilot signal. Finally, the new digital-audio LaserDiscs will automatically switch the CLD-900 to its digital mode if the front-panel VIDEO DISC AUDIO switch is set for auto operation. If the switch is set to "analog only," the audio will be heard from the normal LaserDisc frequency-modulated sound channel. In this mode the CX noise-reduction system comes on automatically since all the digital LaserDiscs contain the necessary switching signal.

The CX noise reduction worked very well, and we have no doubt that the overall S/N surpassed Pioneer's rating of 70 dB. The audio quality, while certainly not the equal of a good CD, was nonetheless true high-fidelity. When we played the digital-audio LaserDisc and compared the sound from its digital and analog tracks, they were surprisingly alike, but it wasn't the kind of music I would pick to make such a comparison. Only by placing an ear against the tweeter during a few of the quieter moments on the record could we hear the very low hiss on the analog tracks disappear totally when we switched to the digital soundtrack.

The video quality of the discs we used was also good, but this was obviously as much a function of the recording techniques as of the LaserDisc process (they were recorded live at concert halls and opera houses). Still, our experience with this unit convinced us that a LaserDisc with stereo sound, even in its CX-encoded analog form, can have audio and video quality superior to anything we have experienced from conventional home video-cassette recorders.

Pointing the Way

The Pioneer CLD-900 is one of the most versatile and technically sophisticated pieces of home electronic entertainment equipment we have seen. Its few imperfections are truly insignificant compared with what it actually does—and how well it does it. Besides being an entirely viable product in itself, it certainly points the way toward future generations of audio/video products that merge different media to give consumers greater convenience without compromise in performance or technical quality. □

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WHAT THEY'RE WATCHING

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ERNEST GILBERT

President of Video Arts International and Ernest Gilbert & Associates, Inc., Public Relations

As president of his own videotape distributing firm, Ernest Gilbert has no trouble finding things to watch, but what he's been turning to most often in recent months are not commercial releases but home-made videos of his cat, Troubles. "It's all because of a piece of new technology," Ernie told me, "the Beta Movie, a true self-contained portable video camera with the cassette right in it."

So what do you do with this new toy? Experiment with it around the house, that's what, picking a moving domestic object to start with. "Troubles doesn't know what response is," his owner says. "It's incredible to watch what he does, batting things around, and he seems to know when he's on camera. That's good because I'm just learning, and my camera work isn't all that terrific yet."

Gilbert's tastes are otherwise pretty wide-ranging. "I love the performing arts," he says, "and that's why I started Video Arts International. It's a labor of love." VAI, his company, has just released Strauss's

Der Rosenkavalier on two cassettes in either the Beta or VHS format. Herbert von Karajan is the conductor and the singers include Elisabeth Schwarzkopf and Sena Jurinac. "So far as I know there is nothing else available in video from either of these ladies. Both are towering figures in music, and just being able to bring this performance into my collection was almost reason enough to get into the video business."

In addition to enjoying his own releases, Gilbert keeps an appreciative eye on the competition. Especially fond of opera and ballet, he says a favorite in video is Mikhail Baryshnikov's production of *The Nutcracker*, available on both video tape and LaserDisc.

"On discs there are the National Video/Covent Garden productions made available here by Pioneer," Gilbert says. "My favorite among these is *Peter Grimes* with Jon Vickers. The new Metropolitan Opera series, also on Pioneer, looks very promising. On tape there's Puccini's *Turandot* with Eva Marton. It's got some wonderful singing, including the Calaf of José Carreras, who I think should always be mentioned in the same breath with 'the other two' [tenors Placido Domingo and Luciano Pavarotti]. His voice is absolutely gorgeous, and he's in great form on this tape."

The equipment Ernie uses for video recording and playback includes the new Pioneer LD 700 video disc player, the Sony 2700 Beta Hi-Fi video cassette recorder, and for VHS the JVC 7100. "Through taping I've built up a good backlog of vintage movies from the Thirties, Forties, and Fifties," he says.

"I get a lot of fun from grade-B horror films like *The Howling* and *American Werewolf in London*. But my all-time favorite picture is *Auntie Mame*, which I must have watched forty times on tape. It reminds me of my own aunt, who set out to broaden my education by taking me off to concerts, opera, and ballet when I was a kid—to the consternation of my parents, who thought I should be paying more attention to becoming a doctor. Every kid should have an Auntie Mame. I'm indebted to mine for much of the fun I'm having with video today." *Christie Barter*

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FEBRUARY 1985

by Ralph Hodges



Jon Dahlquist
and the DQ-10

IN February 1973, Jon Dahlquist, by training an engineer specializing in mechanics and vibration, introduced a loudspeaker, the Dahlquist DQ-10, that has since become one of the most applauded and most controversial designs of our times.

At \$600, the DQ-10 is not an especially expensive high-end loudspeaker. For me, as for most listeners, it emits a remarkably civilized and agreeable sound. It sounds honest, and it sounds finished, although its bass output is not devastating. Some cantankerous auditors have found fault with its design trade-offs, but a mark of its superiority is that these trade-offs can be heard clearly. A lesser speaker would obscure them with sonic haze and hash. The DQ-10 is mercilessly critical about itself.

The DQ-10 is a complex system incorporating five drivers: two cones, two domes, and a piezoelectric device for the extreme top end. The woofer is the only driver that is enclosed in the conventional sense. The rest stand free, each mounted on an individual "mini baffle" whose dimensions are related to the longest wavelength it will reproduce. The drivers are all positioned with respect to the listening axis so that their outputs will temporally coincide. The DQ-10 was among

the first, and arguably the *very* first, speaker system to employ this "phased array" approach in a commercial product, and it led to a host of competitors experimenting with the same principle. Dahlquist's thinking about this sort of driver configuration remains a little different from that of the rest of the crowd, however.

"It's possible to arrange things so that, at the beginning of a transient signal, the outputs from a multiple-driver array all reach the listener at the same time. It's also possible, at the *end* of a transient signal, to get the outputs of the array to *stop* reaching the listener at the same time. But, given the constraints of real-world drivers and crossover networks, it's impossible to satisfy both conditions. In the DQ-10, I aimed for coincident stopping rather than starting. It was the right decision for me as a listener, but I can't claim it will be ideal for all listeners."

Alarming, in the opinion of many, the DQ-10 incorporates two midrange drivers, a cone and a dome. They are positioned side by side, and there is a considerable overlap in the frequency spectrums they handle. Normally this is a dangerous design practice because the outputs of the drivers are bound to interfere acoustically in complex ways. But Dahlquist thinks it is worth taking that risk.

"In the DQ-10, I aimed for coincident stopping [of a transient signal] rather than starting. It was the right decision for me as a listener, but I can't claim it will be ideal for all listeners."

—Jon Dahlquist

"The DQ-10 was conceived in large part as a reproducer of the operatic voice, and that's a task for which it is extremely difficult, if not impossible, to find a single driver that's satisfactory over the full range. So I used two drivers.

"An established but evidently little-known fact is that if you space two different drivers, such as a cone

and a dome, horizontally about as far apart as your ears, you can effect an almost audibly seamless transition between them and also benefit from the strengths of both driver types. A vertical disposition of the drivers will not yield as accurate a presentation of the frequency spectrum, although the stereo imaging would logically be superior. It was for the sake of imaging that we will be introducing the DQ-20 [a vertical arrangement of the same driver scheme]. It is coming much later because it was much more difficult to design."

"To be perfectly honest, if you wanted to say that the DQ-10 was an effort to produce a Quad that offered a bit more bass and treble, with a few less complications in amplifier interface, I'd be happy to go along."

A final controversial point is that in appearance the DQ-10 is a dead ringer for the original Quad electrostatic loudspeaker, a classic that some audiophiles consider the best midrange reproducer ever made (alas, it is a little retiring at the extreme high and low ends). Says Dahlquist, "I'm a bit nonplussed that anyone would think, because I made the DQ-10 look like the Quad, that I was trying to ride on its coat-tails. The DQ-10 looks like the Quad as a tribute to the Quad. To be perfectly honest, if you wanted to say that the DQ-10 was an attempt to produce a Quad that offered a bit more bass and treble, with a few less complications in amplifier interface, I'd be happy to go along. I think the Quad remains a better speaker in some respects. But I also believe that the DQ-10 is superior in others."

According to Dahlquist the DQ-10 was not originally constructed for commercial reasons "... but simply as a speaker I'd like to have for myself. I was persuaded to put it on the market because of the approval of friends and advisors, and thus a hobby became a business and a career." □

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