

DECEMBER 1983 • \$1.50

# Stereo Review

## HOW TO CHOOSE A CARTRIDGE

### Understanding Stylus Shapes

### The Sound of Music on Video

### Four Grand Operas

### Equipment Test Reports

- Sanyo VCR 7300 Beta Hi-Fi Video Cassette Recorder
- Yamaha R-50 AM/FM Receiver
- Technics RS-M234X Cassette Deck
- Akai CD-D1 Compact Disc Player
- KEF Carina II Speaker System

### PLUS

- Nakamichi TD-1200 Car Stereo System

### Disc Specials

- Herbie Hancock
- Three Dog Night
- The Lounge Lizards
- Gerry Mulligan

- Messiah!*
- Così fan tutte*
- Carmen*



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 LEONTYNE PRICE  
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 HANDEL  
 MESSIAH  
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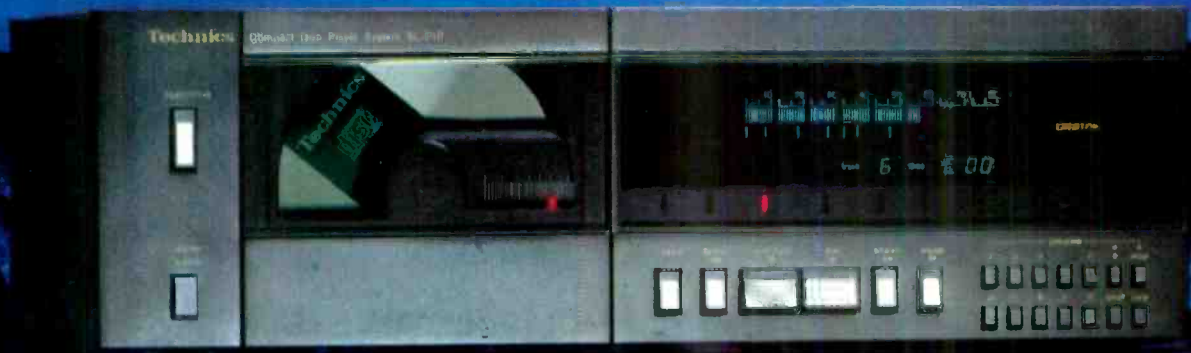
And the SL-P10 can be programmed to find a specific cut, play a series of cuts in any order or play a cut repeatedly.

Then there is the Technics SV-P100. The world's first compact, fully self-contained digital cassette recorder. It is a computerized marvel that uses ordinary video cassettes to record, store and play back the astonishing realism of digitally encoded music.

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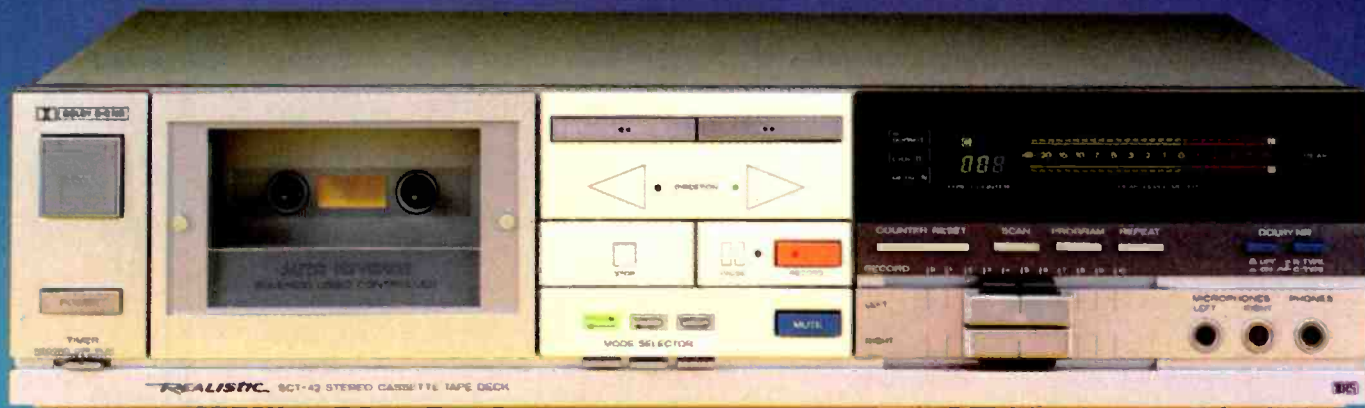


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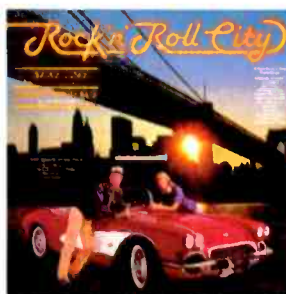
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# Stereo Review

(ISSN 0039-1220)

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COVER: Design by Borys Patchowsky; photo by Bruce Pendleton. See pages 33 and 36 for test reports on the Sanyo VCR 7300 Beta Hi-Fi video-cassette recorder and the Yamaha R-50 AM/FM receiver.

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# A feast for the power hungry.

If you're hungry for a sound system with enough power to register on the Richter scale, here's some food for thought. Kenwood introduces the new BASIC series. Components so technologically advanced, they can be appreciated by serious audio enthusiasts, yet afforded by anyone.

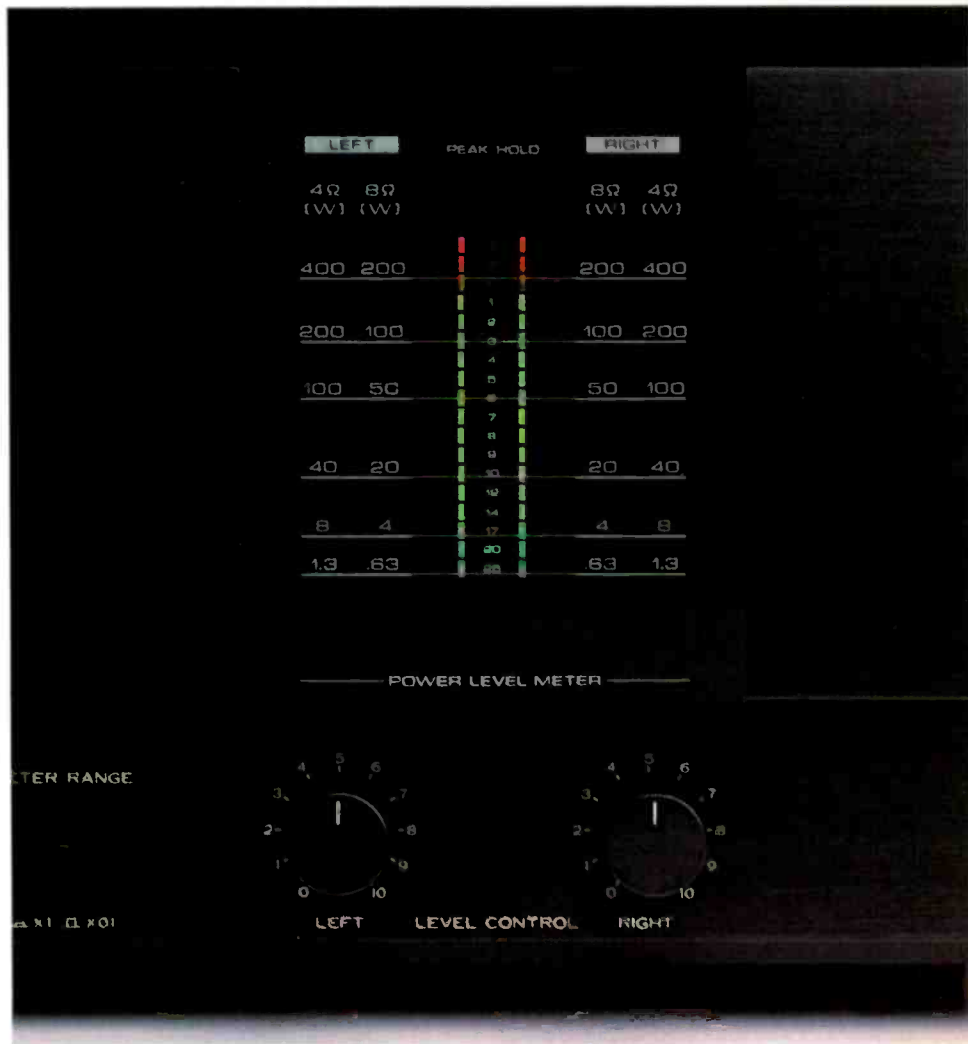
Consider. The BASIC M2 stereo power amplifier. At 220 watts per channel min RMS, both channels driven at 8 ohms from 20Hz to 20kHz with no more than 0.004% THD, it has power to spare. However, with Kenwood's unique Dynamic Linear Drive circuitry, you have the option to not use its vast power reserves, without interfering with tonal quality at low volume.

This unit is so sophisticated, it even corrects for problems that originate in the speakers. With Kenwood's Sigma Drive, the M2 compensates for distortion caused by electrical current generated by speaker cone movement. Granted, this distortion is infinitesimal. But, we figure that audiophiles will appreciate absolute precision control of speaker cone excursion.

As a stereo buff, it's important to have your amplifier combined with units that are not only compatible, but equally demanding of sound perfection. Take a look at the BASIC C1, a preamp engineered to match the high standards of the M2 exactly. With tremendous sensitivity to highs and lows, it delivers even the most dynamic source material clearly and smoothly.

Complete your BASIC system with the T1 tuner. At all times, in all conditions, its precision automatic electronic tuning brings in crystal clear reception.

Individually, the BASIC components offer performance,



refinements and engineering exceptional to the field of stereo electronics.

Together, they offer a sound experience that conventional systems haven't begun to approach.

If you're truly serious about your hunger for power, check into the new Kenwood BASIC series.

It will more than satisfy your appetite.



Kenwood's BASIC T1 stereo tuner and C1 preamp are also perfectly compatible with the M1 power amp pictured here.

## KENWOOD

Kenwood Electronics  
1315 E. Watsoncenter Rd., Carson, CA 90745..

# Bulletin

Edited by Christie Barter and Gordon Sell

● CARLY SIMON is filming a feature-length music video for RCA Videodiscs. The sixty- to ninety-minute production will be the rock equivalent of a classic movie musical, incorporating plot, developed characters, dancing, and, of course, Simon's music. This is the first time RCA has contracted a major pop artist for a video of this scope. Scheduled for release in all formats in 1984, the video will concentrate on new material like that in her latest LP, "Hello Big Man" (see "Best of the Month," page 83).

● A SPECIAL ARMSTRONG AWARD, named for the inventor of FM radio, has gone to Chicago station WFMT for engineering and technical achievement and for "recognizing that you cannot separate the sound quality of a medium from the message." The first U.S. satellite radio superstation, WFMT can be received on cable in thirty-nine states.

● MUSICAL TV SHOWS ON PBS in the Great Performances series, funded in part by Exxon, include "An American Christmas" on December 19 with Freda Payne, the Columbus Boys Choir, the Ella Mitchell Gospel Singers, and others. Vivaldi's Four Seasons will be performed by the English Chamber Orchestra on December 26....The Live from Lincoln Center series will present Marilyn Horne on December 28 in "The Great American Songbook," a program of folk songs, hymns, spirituals, and theater songs, with the American Symphony Orchestra conducted by Leonard Slatkin.

● TECH NOTES: Sears, Roebuck and Co. is now selling a Compact Disc player for \$589.99....CD player prices are falling in Japan, where Hitachi, Sony, Yamaha, and Matsushita have players for \$400 to \$500....Harman Kardon is celebrating its thirtieth anniversary. The company introduced the first hi-fi integrated receiver in 1953....RCA expects to have sold 500,000 CED video disc players and 10 million CED video discs by the end of 1983....By early fall, more than seventy radio stations were using Compact Discs for some of their programming....According to the

National Association of Broadcasters, the broadcast industry has reversed a three-year slump and many stations are becoming more profitable....Calmtone Stereo Controller uses a biofeedback sensor to measure a listener's stress level and rewards stress reduction by raising or lowering the volume of a hi-fi system. The company that makes Calmtone, Thought Technology Ltd., of Montreal, does not explain how the listener can manipulate his stress symptoms to maintain a steady volume level....Radio stations equipped with the Harris AM stereo system are back on the air with stereo broadcasts now that the FCC has reinstated technical approval of their equipment.

● PRERECORDED CASSETTE QUALITY can be expected to improve as new processes and products become available to the major tape duplicators. Electro Sound, Otari, and Cetec-Gauss are using Dolby HX Professional to increase the high-frequency headroom of tapes dubbed on high-speed duplicating machines that operate up to sixty-four times normal tape speed. And BASF has developed a chrome duplicating master tape said to deliver improved high-frequency performance at these speeds.

● RCA'S LA CAGE AUX FOLLES, besides being a runaway bestseller on LP and cassette, is the first recording of a Broadway show to make it as a Compact Disc. The original-cast album was in RCA's first CD release this fall.

● ON THE AIR: National Public Radio has inaugurated a twenty-six-week season by the Pittsburgh Symphony, hosted and conducted by André Previn, and is once again carrying the San Francisco Opera broadcasts....The Mutual Broadcasting System, for the second consecutive season, is presenting twenty-six concerts by the National Symphony, more than half of them live from the Kennedy Center in Washington....American Public Radio is broadcasting the chamber-music concerts played at this year's Spoleto Festival in Charleston and a full thirty-four-week season by the Minnesota Orchestra.

# Speaking My Piece

By William Livingstone

With the World's Greatest Fiddlers at the World's Largest Record Store, Tower Records in New York



## IS VIDEO MUSICAL?

THE one hundredth anniversary of recorded sound was celebrated in 1977, but as late as 1967 this magazine published a debate on a recurring question: Are records musical? Musicologist Hans Keller said they weren't. Violinist Yehudi Menuhin said they were. I sided with Menuhin.

You can revive that debate today among those who hang out on Saturday afternoons in certain audio salons and record stores. And tempers will grow as hot and voices as shrill as in debates on whether all Compact Disc players sound alike or in discussions of our comparative tests of speaker cables.

Similar heat has been generated by debates on motion pictures. Are they only a form of entertainment called "movies" or an art best referred to as "film" or "cinema"? And what about that electronic stepchild television? Can it transmit art?

Without a lot of debate, some kinds of television, under the term "video," have been recognized as an art form by our most prestigious cultural institutions. The Whitney Museum of American Art has a Film and Video Department (not Movie and TV, please note), and the Museum of Modern Art always has a video exhibition on view.

Art form or no, television has had such poor sound that until recently audio enthusiasts had nothing but contempt for it. Despite sonic limitations, however, musicians take to the small screen whenever they can and often reach huge audiences.

The Public Broadcasting Service pioneered the use of FM stereo simulcasts to upgrade the sound of its best musical shows, and this technology is sometimes used on a larger scale. See page 89 for details of a global telecast in stereo this month by the rock group Asia and page 106 for details of an intercontinental TV tribute to singer Maria Callas.

Regular stereo telecasts in this country are not far off, and we already have stereo in home video on disc and tape. Its sound is good enough that, according to a representative of JBL who spoke to the press during the recent Audio Engineering Society convention, movie theaters are now upgrading their audio systems to be able to compete with the sound of home video.

Although conservative audiophiles may wish video would go away (and take the Compact Disc with it), the editors of this magazine feel obliged to keep readers informed on the state of video, sonically and musically. We have reported on it from time to time, and this month we have a few reviews of popular music on video disc, a test report on the Sanyo Beta Hi-Fi VCR, and a survey of current video hardware by Brad Meyer (page 74) and software by Chris Albertson (page 78).

Any doubts about whether video is musical were removed for me by a press preview of footage of Maria Callas to be shown in the tribute to her on PBS on December 12. Callas, who died in 1977, is well documented on records, but few of her performances were preserved on film or videotape. I adored her, and just seeing a black-and-white tape of her in concert brought her startlingly back to life for me. The tape captured her ability to create character so vividly that I would not have been surprised if she had emerged from the screen in 3-D like Princess Leia in *Star Wars* and said, "Obi-Wan Kenobi, only you can help me."

We are all tired of being told what comes out of a computer if what you put in is garbage. But it is the same with video: music in, music out. If you care for great singing, don't miss Callas on PBS on December 12. If you don't have a VCR to preserve it, you'll wish you did. □

## Stereo Review

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# Thanks Koss

# Letters

## Rear-Channel Revival

● We can all thank Hollywood and Dolby Labs for regenerating interest in rear-channel sound. As Julian Hirsch pointed out in his October review of the Fosgate Surround Stereo System, however, there are substantial differences between matrix-decoded and time-delayed rear-channel sound. In the Dolby theater installations both systems are used: the film soundtracks are matrix encoded, and the decoded rear-channel output is then delayed by an amount appropriate to the dimensions of the particular theater. We are proud to have produced hundreds of delay systems for Dolby's theater installations using a simplified version of our consumer model, the SD550. Over the years we've been told that many people prefer listening to their SQ quadraphonic recordings played back in conventional stereo with a time delay for the rear speakers rather than with one of the earlier SQ decoders. Now, with the Fosgate decoder, they can use and enjoy both ambience-enhancement systems.

JOEL M. COHEN  
Sound Concepts, Inc.  
Brookline, Mass.

## Dynamic Range

● Julian Hirsch's October column on "Dynamic Range and Decibels" was an eye opener, although I cannot agree with all of it. Contrary to Mr. Hirsch, I happen to be a stickler for "unvarying adherence to the rules of language" whether it be technical language or English literature. My beef has to do with his reference to a hard-rock recording "with a 10-dB overall dynamic range" as a *compressed* program source. A "compressed" program source, up until now, has meant one whose original dynamic range has been altered by electronic or other means. Wouldn't it have been better to refer to such a recording as being of a *narrow* dynamic range? True, an overall dynamic range of 10 dB is nothing to rave about, but if it is hard-rock recording as it is done today, then the music is "*au naturel*," not compressed.

FRANCIS A. HURTEBISE  
Long Beach, Calif.

*Some rock recordings are "naturally" narrow in dynamics, others are compressed in the recording or cutting process. It all depends on the production techniques used.*

## Talking Heads

● Who is S.S.? Is he allowed outside yet without his mother? He claims that he actually listened to Talking Heads' "Speaking in Tongues" (October)—that's how he knows the difference between irony and "polyrhythmic noodling." I doubt it, for he

certainly can't discern the difference between cynicism and apathetic stupidity. If nothing else, "Speaking in Tongues" has something your reviewer will probably never attain: style.

VAUGHN HAMBLEY  
Fort Erie, Ontario

## America

● If Alanna Nash considers America a pair of musical "wimps" (October review of "Your Move"), I wonder how she explains that Messrs. Beckley and Bunnell have had success making music for twelve years. As for her pitiful agonizing over their "whiney



America: Gerry Beckley, Dewey Bunnell

and adolescent" sound at their age, since when did age ever prevent concern over matters of the heart? Whatever the duo's reasons and motivations, America has found a musical formula that works, and I intend to enjoy them until I'm dead or lose my hearing.

DALE L. BECKLEY  
Edison, N.J.

## Delia Bell

● Read and enjoyed your article about Delia Bell in the October issue. Just one thing about it, though: there isn't any Hugo, Oklahoma. It's Hugo, Oklahoma. This is not fussin' about it, just thought you might like to know. It probably happened when the article was in the printing process.

BOB VORE  
Baltimore, Md.

*Right. Sorry, Hugo.*

## Compact Discs

● Your cheerleading attitude concerning Compact Disc players has not made me dash out and buy one. The pages of STEREO REVIEW continue to provide the best reasons for caution as I read about a system that stores the digital code on a sheet of material the size of an index card, then learn there is talk of a "magnetic-bubble" memory, and, most recently, discover that Sony is working

on a minicassette that will store three hours of digital sound. At this rate of technological development, equipment will become obsolete very quickly. The Digital Revolution is here to stay, and I'm all for it, but the days of sound reproduction via a rotating disc—whether read by a diamond needle or a laser—appear to be numbered.

GREG LAXER  
Danielson, Conn.

*Technical Editor David Ranada replies: For relatively low cost (from both the manufacturing and consumer viewpoints) and high reliability, no digital-audio medium available now or to be introduced within the next ten or fifteen years can or will rival the Compact Disc. It can be very expensive to duplicate digital microcassettes, and the various solid-state memories have a long way to go before they reach a practical "information density" for music.*

## Concertgebouw Orchestra

● In an October review of two recent Telefunken releases of Mozart symphonies, Stoddard Lincoln expressed his disappointment with the recording of the *Jupiter*, stating that the Concertgebouw Orchestra of Amsterdam "seems to have reverted to its usual bombast." I have not heard this disc, and it is possible that the rendition is less than ideal, but to insinuate that the Dutch orchestra is by nature bombastic borders on the absurd. Few symphony orchestras in the world play with more refinement and polish than the Concertgebouw.

ALAN S. ROSENTHAL  
Randallstown, Md.

## Speaker Cables: Finale

● We have now all heard both sides of the story. Laurence Greenhill's test (August) was well conducted and simple, producing empirical results that have, to date, been challenged only by mysterious, baseless claims from quite biased observers. The almost mythological haze surrounding the more expensive (equals best?) cables and their capabilities was removed by unbiased and carefully conducted testing. Perhaps if the opponents could produce reasonable counter claims based on equally valid test results a more profitable argument could continue. Arguments backed by such statements as "We have been in the field for *x* years" or "Listen to us, we oughta know, we sell a lot of them," fall short. Very short.

KIRK HOAGLUND  
Minneapolis, Minn.

● The criticisms of your speaker-cable tests that were printed in October "Letters" show that, in spite of all scientific rigor, the more emotional members of the audiophile elite simply cannot have their beliefs undermined. John Stuart Mill once said that religion was acceptable because it made people feel good. Many of the people in the hi-fi industry seem to think that some of the items created for the lunatic fringe are okay for the same reason.

HOWARD FERSTLER  
Tallahassee, Fla.

● I was amused that Jack Shafton, in his October letter about STEREO REVIEW's test



## Where Do You Stand on Stereo?

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of speaker cables, said that the magazine "has been a constant wall in the way of progress" in music reproduction. The last time I read one of the lunatic-fringe audiophile publications, I found the claim that among the worst developments in audio history were the transistor, the direct-drive turntable, and digital audio. It seems to me that STEREO REVIEW has supported these advances that the lunatic fringe hates. It should be obvious from this who is really standing in the way of progress.

PAUL THIEL  
Covington, Ky.

● If perceived differences between products don't far outstrip merely statistical significance, then they aren't worth much at all, certainly not \$6,000 for a high-end preamp, \$1,500 for a cartridge, or a couple of bucks a foot for cable. For that kind of money, I expect a product to be not only detectably different 100 per cent of the time but so significantly superior that my enjoyment of music played through it is affected. It should be like the difference between steak and hamburger, between fresh orange juice and Tang, or between a standard TV screen and a high-resolution one.

MICHAEL RANDALL  
New York, N.Y.

● The most important factor in the controversy surrounding Monster Cable is its high capacitance. Some wide-band, high-slew-rate amplifiers do not appreciate capacitive loads. Excessive capacitive loading can re-

sult in amplifier instabilities and hypersonic oscillation. These problems, which are often undetected, can cause the amplifier to run hot or even self-destruct with no apparent cause. There should be more research into this aspect of Monster Cable.

DAVID R. JOHNSON  
Fargo, N.D.

● After reading Laurence Greenhill's assessment of Monster Cable in August, I still went ahead and bought some. At the same time I also bought some low-capacitance, gold-ended patch cords to connect my cassette deck and Compact Disc player to my amplifier. While I perceived a subtle but noticeable improvement in sound (attributable mostly, I'm sure, to the patch cords rather than to the Monster Cable), I also noticed that my amplifier was running cooler. Considering the damage that heat can do to critical components, that's a *definite* advantage.

JAY L. RUDKO  
A.P.O. New York, N.Y.

● Perhaps using Monster Cable or placing your amplifier on or under cinder blocks improves the sound of a stereo system, but I doubt it, and the partisans of such things will have to produce plenty of data—not anecdotal evidence, but data from properly controlled experiments—before I'm convinced that there is any audible effect, for better or worse. I have no doubt that the defenders of Monster Cable are sincere, but I have even less doubt that they are mistak-

en in their assertions. And, contrary to Jack Shafton, the burden of proof is not on STEREO REVIEW or any of the doubters but falls rather on the people making the (currently) unsubstantiated claims. (I'm waiting for the golden-ear crowd to proclaim that stereo systems in Washington State sound better because hydroelectrically generated electricity is "cleaner.")

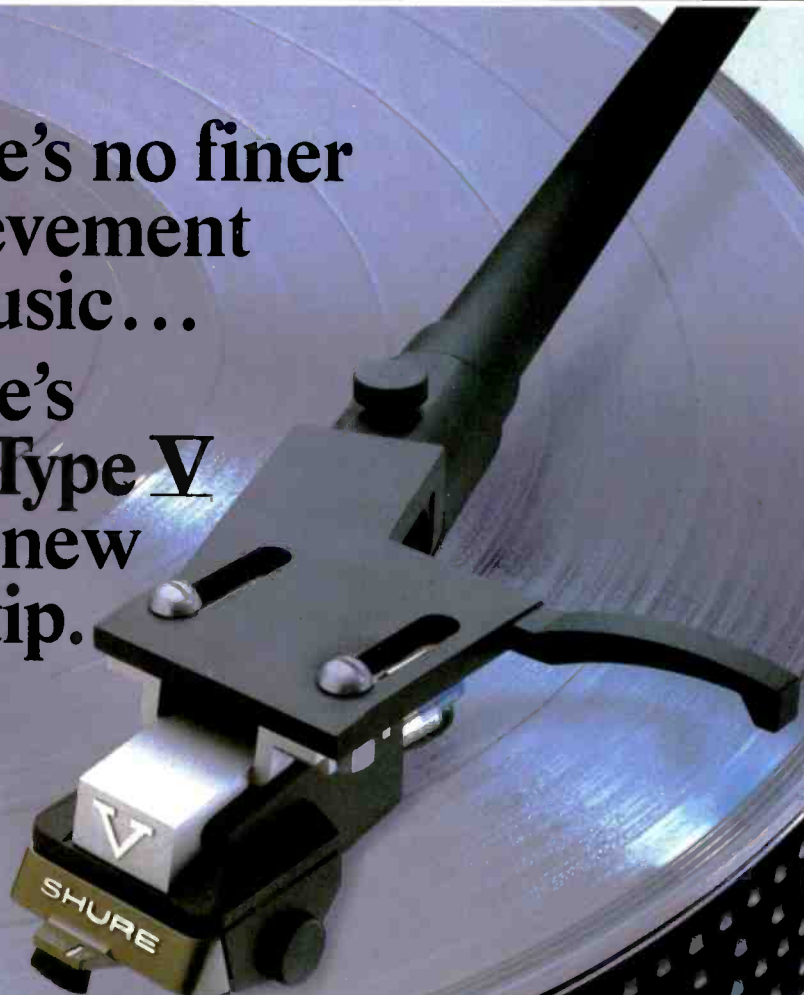
Audible effects can be caused for no readily quantifiable reason, and enough research, intelligently conducted, can probably explain them. But, apart from goring someone's ox, what would be the point? After all, personal taste is the final arbiter in matters psychoacoustical. In short, I propose a truce of sorts between the various factions in this rather long controversy: those of us with tin ears should be allowed to cling to our irrational, blinkered skepticism, and those with golden ears should be allowed to listen to the faeries at the bottom of their stereos.

JEFFREY HUKKANEN  
Whittier, Calif.

*The article on our speaker-cable tests, published in August, generated a great many letters expressing widely differing points of view. In the last three issues we have printed a representative sampling of them. At press time for this issue letters on the subject—many of them interesting—were still coming in. Space in the letters column is limited, and we must now, regretfully, consider the correspondence on this matter closed.*

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V15 Type V  
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MR tip.



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table just as the tape begins. Presto!

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auto-editing system. Just program  
the turntable (that's right, it's  
programmable too!) to play the  
tracks you want, in the sequence you  
want. During recording, the deck  
will automatically pause while the  
tone-arm skips the tracks you  
don't want.

The incredible Aiwa V-700.  
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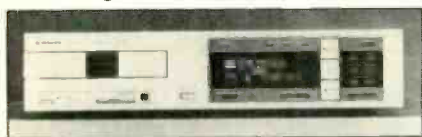
And find out for yourself how extraordinary a touch of luxury can sound.

# New Products

## Latest Audio Equipment and Accessories

### Pioneer's First Compact Disc Player

□ The first digital Compact Disc player from Pioneer, the P-D70, is a front-loading model that holds the disc in a sliding drawer. It can be programmed to play or repeat up to ten selections or to repeat any user-defined segment of a disc. The player can



also cue up selections by using INDEX SEARCH (which samples the first few seconds of a track), TRACK SEARCH (which finds the start of the current or next track), MINUTE SEARCH (which locates selections by programmed time information), and SLOW SCAN (which increases the playing speed while leaving the music audible). Peak signal levels for each channel are shown on a twelve-segment LED indicator while the number of the track being played and the elapsed time are displayed on digital readouts. There is a front-panel headphone jack with a separate slide volume control.

Special optical laser technology developed by Pioneer is said virtually to eliminate tracking error. Dynamic range and signal-to-noise ratio are both rated at 95 dB, distortion at 0.004 per cent. Pioneer attributes this performance to the use of hand-selected digital-to-analog converters. The unit is about 16½ inches wide and less than 4 inches tall. Price: less than \$800.

Circle 120 on reader service card

### AR's Remote Control For All Audio Systems

□ Acoustic Research's SRC-1 Stereo Remote Control consists of a hand-held wireless transmitter (providing fifteen functions with only eight keys) and a separate receiver



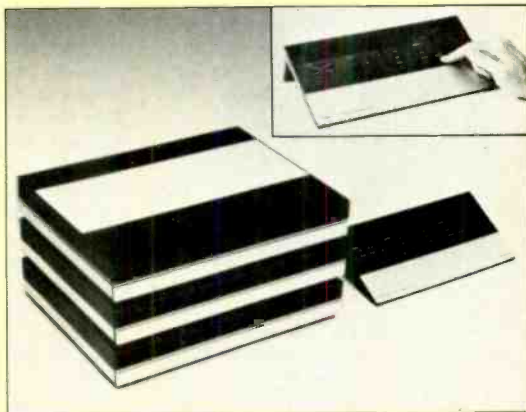
er unit that connects to any existing audio system and an a.c. outlet. The infrared transmitter operates up to 25 feet from the receiver unit, which is connected to the audio system through the tape-monitor loop

(the SRC-1 provides a replacement loop). Functions controlled by the SRC-1 include power on/off, volume (two speeds), left/right balance, left/right mute, automatic channel balancing, soft/full muting, external-processor selection, and a sleep timer (which cuts power to the audio system after 30 minutes if no SRC-1 controls are activated during that period).

All volume, balance, and control settings are memorized when the audio system is turned off, but the system always comes on with a 20-dB mute in order to prevent accidental excessive levels. One button push re-

stores the memorized control settings. In addition to the manually operated tape-monitor loop, there is an external-processor loop controllable by the remote transmitter. There are lighted indicators for power-on, receiving, mute-on, balance-centered, and processor-selected conditions. Attenuation range is 0 to 75 dB plus full off (attenuation of greater than 85 dB) in steps of 1.5 dB with a 0.5-dB accuracy from 0 to -30 dB (1 dB below -30 dB). Clipping occurs with a 4.5-volt peak input; noise is more than 95 dB below a 1-volt rms level (A-weighted). Total harmonic distortion is 0.01 per cent or

### B&O System Is Controllable by Remote Links



□ Bang & Olufsen's Beosystem 5000 consists of a receiver, a turntable, a cassette deck, a master control panel, and infrared remote-control link units. All the components can be controlled from any room that has a pair of speakers and a remote link connected by cable to the system's receiver. The links emit digital pulses (using pulse-width modulation) to the receiver, which responds either to confirm reception and execution of the command or to tell the user why it cannot be carried out (for instance, that a record cannot be played because none is on the turntable). The master control panel can be placed anywhere in the room with the operating units.

The system can be programmed with twelve different operating commands, and an internal clock timer permits automatic programming for seven days in advance. All components except the master control can be stacked, with the turntable on top; the cassette deck and B&O's forthcoming CD player load through slide-out drawers in front.

The Beomaster 5000 receiver has B&O's Automatic Power Handling Control circuit, which monitors the amplifier's output and lowers it if it exceeds

safe limits. The volume can be increased again as soon as the signal level decreases or after a pair of speakers is switched off. The tuner section of the receiver features Automatic Station Lock, a development of AFC that makes weak stations easier to tune in. The Beocord 5000 cassette deck incorporates the Dolby-HX Professional headroom-extension system, which is said to extend its high-frequency headroom by as much as 7 dB at 10,000 Hz. (The system monitors the signal in each channel and adjusts the bias current according to the high-frequency levels.) The Beogram 5000 turntable has its subchassis supported by the main chassis with three pendulums suspended from leaf springs in order to reduce acoustic feedback.

The receiver specifications include a power output of 55 watts per channel into 8 ohms, and A-weighted signal-to-noise ratios of more than 74 dB for phono and 76 dB for tape. Prices: Beomaster 5000 receiver and master control panel, \$1,195; Beocord 5000 cassette deck, \$695; Beogram 5000 turntable, \$295; master control links, about \$225 each.

Circle 121 on reader service card

# New Products

less, frequency response 6 to 60,000 Hz  $\pm 0.25$  dB. Price: \$159.99.

Circle 122 on reader service card

## EPI Speaker Series Uses New Driver Materials

Central to the technology behind Epicure's EPI Time/Energy series of loudspeakers are new materials for tweeter diaphragms and woofer and midrange cones. The engineering goals for the new materials



were increased stiffness (to resist flexing and energy storage in the diaphragms) and high self-damping (so that any energy that is stored by the diaphragms will be dissipated within their structure and not released as sound). Two-layer materials were found to meet these requirements. The tweeter diaphragms in the T/E series use a very light, very stiff plastic base material spray-coated with a layer of damping material. The midrange and woofer cones are produced by bonding the plastic base material to a highly damped foam material; the same foam is used in the cones' surrounds, and the foam coatings and surrounds are made as one part.

The top-of-the-line T/E 360 (shown) is a three-way floor-standing speaker with a 1-inch tweeter, a 4-inch midrange, and a 10-inch woofer working with a 10-inch passive radiator. The recommended "practical power range" for an amplifier is 20 to 250 watts per channel. Crossover frequencies are 700 and 3,000 Hz. Impedance is 4 ohms. Frequency response is given as 32 to 20,000 Hz  $\pm 3$  dB. Dimensions are 37 1/2 x 17 x 10 1/2 inches. Finish is oak-grain vinyl with a brown cloth grille. Price per pair: \$700.

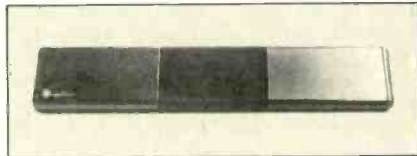
The T/E series includes five other models, four of them bookshelf units. The smallest, the T/E 70, has a rated frequency response of 55 to 20,000 Hz  $\pm 3$  dB. Drivers are a 1-inch tweeter and a 6-inch woofer; crossover frequency is 1,800 Hz. Nominal impedance is 8 ohms; recommended ampli-

fier power range is 15 to 80 watts per channel. Cabinet finish is walnut-grain vinyl with a brown cloth grille. Dimensions are 16 x 10 1/2 x 7 1/2 inches. Price per pair: \$184.

Circle 123 on reader service card

## Car Subwoofer From Audio Pro

Audio Pro's B2-07 car subwoofer is self-powered by a 30-watt bridged amplifier. This arrangement lowers the demand on the primary car stereo amplifier, thereby reducing or eliminating clipping and distor-



tion. The speaker uses two 4 1/2-inch drivers connected in a push-pull configuration (one moves in while the other moves out) to minimize distortion. It is said to give accurate bass response at frequencies where conventional car speakers often distort, enabling a system's other speakers to reproduce the midrange and lower midrange with greater clarity and accuracy.

Inside a car the B2-07 can achieve a sound-pressure level up to 105 dB (95 dB SPL in an anechoic chamber). Frequency response is given as 40 to 250 Hz  $\pm 0, -2$  dB. An active crossover is provided; the crossover point is variable between 50 and 250 Hz, allowing the B2-07's frequency response to be matched to that of the satellite car speakers. The system measures 29 1/4 x 7 3/4 x 5 1/4 inches, weighs 14 1/4 pounds, and can be mounted on the rear deck of a car. Price: \$595. Distributed by Sonic Research, Inc., Dept. SR, P.O. Box 399, 27 Sugar Hollow Road, Danbury, Conn. 06810.

Circle 124 on reader service card

## Ortofon's Low-Mass Moving-Coil Cartridge

Ortofon's new MC 10 Super moving-coil cartridge has an output of 0.3 millivolt at 1,000 Hz and 5 centimeters per second groove velocity. It can be connected directly into the MC input of an amplifier or receiver



or to the MM input with the aid of an intermediate step-up device. Internal impedance of the coils is 3 ohms. They are mounted at a 90-degree angle to each other to improve channel separation by precisely matching the angles of record-groove walls. The effective tip mass is only 0.5 milligram thanks to a new armature, magnet, and

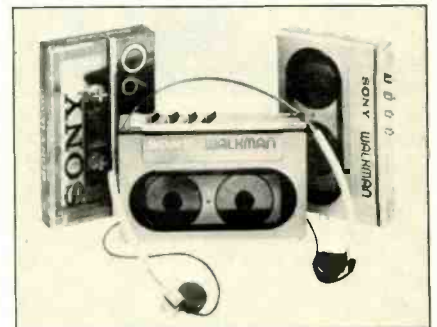
damping system; the nude elliptical stylus is mounted on a light cantilever.

The MC 10 Super employs the company's Ortophase linear-phase approach, which minimizes high-frequency phase shifts. Specifications include channel balance within 1.5 dB and channel separation of 25 dB at 1,000 Hz, frequency intermodulation distortion of 1 per cent or less at the recommended tracking force of 1.5 grams, tracking ability of 60 micrometers at 315 Hz (1.5 grams tracking force), and frequency response of 20 to 20,000 Hz  $\pm 4, -1$  dB. Total weight is 7 grams. Price: \$149.

Circle 125 on reader service card

## Sony Introduces World's Smallest Cassette Player

Sony's WM-10 Walkman is the same size as a standard cassette case (4 3/4 x 2 3/4 x 2 3/32 inches), yet it features Dolby-B noise reduction as well as selection between normal and chrome/metal tape-playback



equalization. The player's small dimensions are made possible by the use of a flat "pancake" brushless, slotless, d.c. motor, extensive use of integrated circuitry, and novel approaches to locating the battery and loading the cassette. One AA battery (supplied) provides up to five hours of continuous play even with the Dolby circuits switched in.

To minimize wow and flutter, the WM-10 has a frequency-generator servo system that constantly checks and corrects motor speed; a "counter-inertial" flywheel helps maintain proper speed, especially when the player is being carried around. Other features include an auto shut-off and a headphone safety switch that prevents it from being turned on unless headphones are plugged in. The supplied Sony MDR-W30 headphones have earpieces that rest inside the ear. They are said to take advantage of a "ducted turbo port for deeper, more powerful bass."

Available accessories include an a.c. power adaptor, an external battery pack for thirteen hours of continuous playback, and Sony's SRS-10 self-powered stereo speaker set. The SRS-10 plugs directly into the WM-10 and includes an internal amplifier, which can also drive two additional headphone sets.

Specifications for the WM-10 include a frequency response of 40 to 15,000 Hz. The similar WM-F10 adds an FM-only stereo radio in a slightly thicker case (27/32 inches). Prices: WM-10, \$99.95; SRS-10, \$49.95; WM-F10, \$129.95.

Circle 126 on reader service card

(Continued on page 18)



# HEAR ALL OF THE MUSIC AND NONE OF THE TAPE...



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CIRCLE NO. 15 ON READER SERVICE CARD

 **BASF**  
Chrome Audio & Video Tapes

# CHRYSLER CREATES LASER XE. The sports car

We gave Laser XE world-class performance. In the slalom, Laser beats all entries—from Trans Am to Mustang GT. We built Laser XE to outperform the competition: Camaro Z28, Trans Am, Mustang GT, Toyota Supra, Mazda RX-7. Laser does it when you equip it with turbo, performance handling package and nitrogen-charged shocks.\* Laser does it with front-wheel drive, new dual-path suspension system

and quick-ratio power steering. In the slalom Laser finishes No. 1— even ahead of the legendary Porsche 944.



We turbocharged it. From 0-50, Laser XE leaves Camaro Z28 with its shadow. Z28 is a powerhouse—but Laser XE is the sophisticated new wave. Its multi-point injection system "spritzes" fuel in at four points. Its water-cooled bearing reduces a critical turbo temperature by 500°F. Its turbo engine boosts h.p. 45% and moves Laser like light. With 5-speed over-

drive stick your time to 50 mph is 5.8 seconds. Z28, Trans Am, Supra and RX-7 are in your remote-controlled side-view mirrors.

We gave it high-performance braking. Laser XE stops where Trans Am doesn't. We think total performance calls for performance braking. So we gave Laser XE semi-metallic brake pads, power brakes all around and optional wide 15" alloy wheels with Goodyear Eagle GT radial tires. Result: Laser stops quicker than Z28, Trans Am,



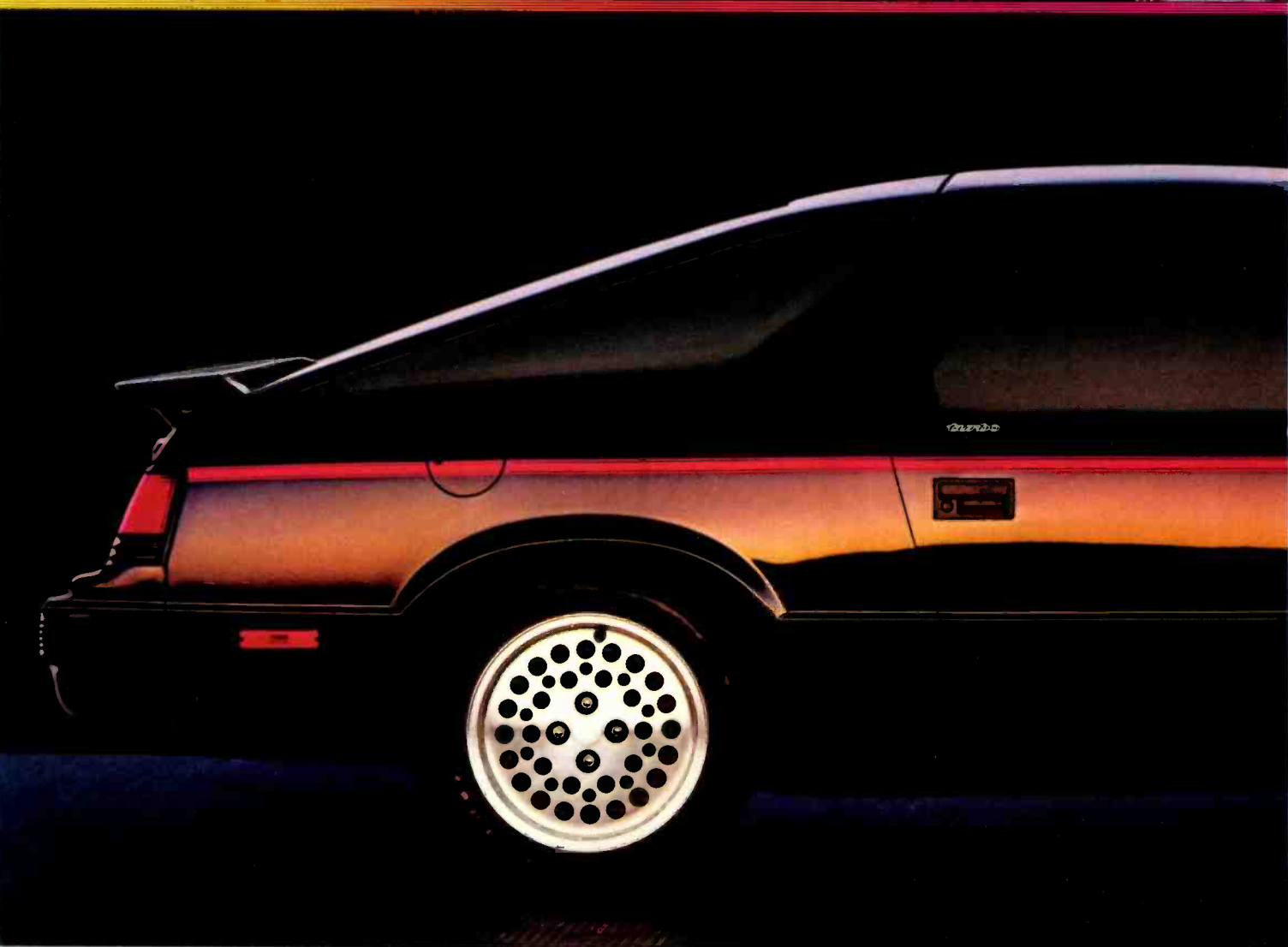
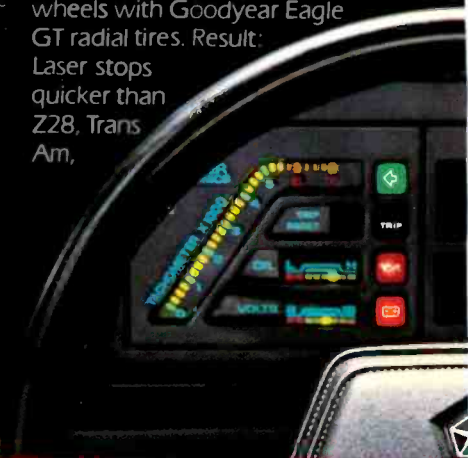
Laser beats Porsche in the slalom.



Laser outperforms Trans Am in braking.



Laser is faster than Camaro Z28 from 0-50 mph.

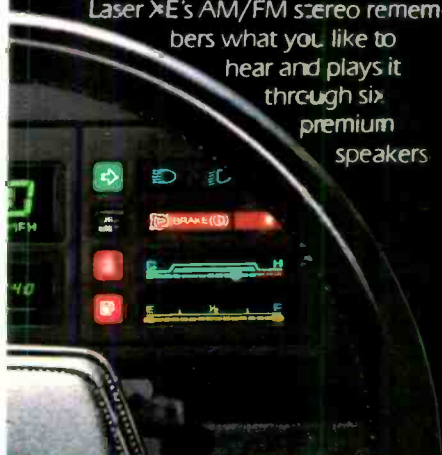


that had to outperform the competition.

Mustang GT, Supra, RX-7. Even Porsche 944 can't beat our world class braking. We even gave it a brain.

This is a car that thinks with you. Laser XE's 22 feature electronic monitor is like your sixth sense of the road. It ever talks your language. And Laser XE's navigator computes nine things you need to know while its color graphic displays help make you a calculating driver. But performing better isn't your only pleasure.

Laser XE's AM/FM stereo remembers what you like to hear and plays it through six premium speakers



you can choose. And its self-diagnostic system is the nearest thing to an on-board mechanic.



Even your performance seat performs. It cushions you with pronounced padding and holds you in position on turns with lateral "wings." You pump up pneumatic cushions for thigh and lum-

bar support, and you can order a six-way power seat. And it's only fitting that you can choose world-class Mark Cross leather for your seats and cockpit.

We gave it our best: a 5 year/50,000 mile Protection Plan.

Chrysler believes a performer should be a survivor. We build for that. And back your engine and powertrain for 5 years or 50,000 miles, and give you outer-body rust-through protection.<sup>\*\*\*</sup> What competitor does that? None. See dealer for details. Buckle up for safety.

35 Est. Hwy [22] EPA Est. MPG<sup>†</sup>  
Base Laser: \$8,648<sup>\*\*</sup>  
XE as shown: \$12,235<sup>\*\*</sup>



Laser. A product of The New Chrysler Technology.

\*Based on overall results of UBAC Sports Car Certification tests versus 1983 models. Laser XE equipped with optional handling suspension, Turbo package and 15" Roac wheels tires. \*\*5 years/50,000 miles, whichever comes first. Limited warranty. Deductible required. Excludes leases. †Use EPA est. mpg. for comparison. Actual mileage may vary depending on speed, trip length and weather. ‡Mileage less. \*\*Sticker price. Taxes, title and destination charges extra.

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*Lee Iacocca*



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CIRCLE NO. 16 ON READER SERVICE CARD

## New Products

### Kenwood Adds Amp and Tuner to Its Basic Series

□ The Basic M2 stereo power amplifier and the Basic T1 AM/FM tuner are two new components in Kenwood's Basic series, which replaces its Audio Purist line. The



M2 uses Dynamic Linear Drive circuitry for low distortion, high efficiency, and minimal heat generation as well as Sigma Drive, a method of extending the amplifier's feedback loop to the speaker connections. Other features include separate left- and right-channel volume controls, connection and switching for two pairs of speakers, a headphone output, and eighteen-segment peak-holding output-level indicators. The Basic M2 is rated at 220 watts per channel into 8-ohm loads from 20 to 20,000 Hz with no more than 0.004 per cent total harmonic distortion.

Using digital frequency-synthesis tuning, the Basic T1 tuner has six AM and six FM presets. Stereo decoding is performed by a phase-locked-loop integrated circuit that is said to provide wide separation with low distortion. Station frequency is displayed on a fluorescent digital readout, and there are indicator lights for stereo or mono reception and automatic or manual tuning. Usable sensitivity is given as 10.8 dBf (1.9 microvolts) for FM, 10 microvolts for AM. Capture ratio is 1 dB. Prices: Basic M2, \$600; Basic T1, \$200.

Circle 127 on reader service card

### JVC Car System Has Removable Cassette Deck

□ The KS-Q8 Executive Car Audio from JVC incorporates an AM/FM receiver and a removable stereo cassette player/record-



er. The deck can be removed from the car unit by pressing a release button. Out of the car it will operate as a battery-powered portable player/recorder or it can be connected to a home audio system. The KS-Q8 is intended for those who use their cars as offices and need to make taped notes as they drive and want to take the tapes and player with them when they leave the car. JVC also suggests that "thieves will be deterred when the cassette [unit] is removed from the system." In addition to Dolby-B noise reduction and metal-tape compatibility, the recorder features a MUSIC SCAN function to facilitate locating the beginnings of recorded selections.

The KS-Q8's tuner section uses PLL digital-synthesis circuitry and has an easy-to-read digital frequency display. There are five AM and five FM presets. The amplifier section can be used in a variety of different ways since there are connections for front and rear speaker pairs as well as for a booster amplifier or graphic equalizer. Amplifier power is rated at 12 watts per channel (22 watts per channel maximum) with no more than 0.8 per cent total harmonic distortion. Price: \$499.

Circle 128 on reader service card

### Infinity's New Car Speakers

□ Designed to work well with the latest car stereo cassette/receivers, the two-way, 6 x 9-inch A692 Infinity Reference Standard speaker system uses a polypropylene woofer



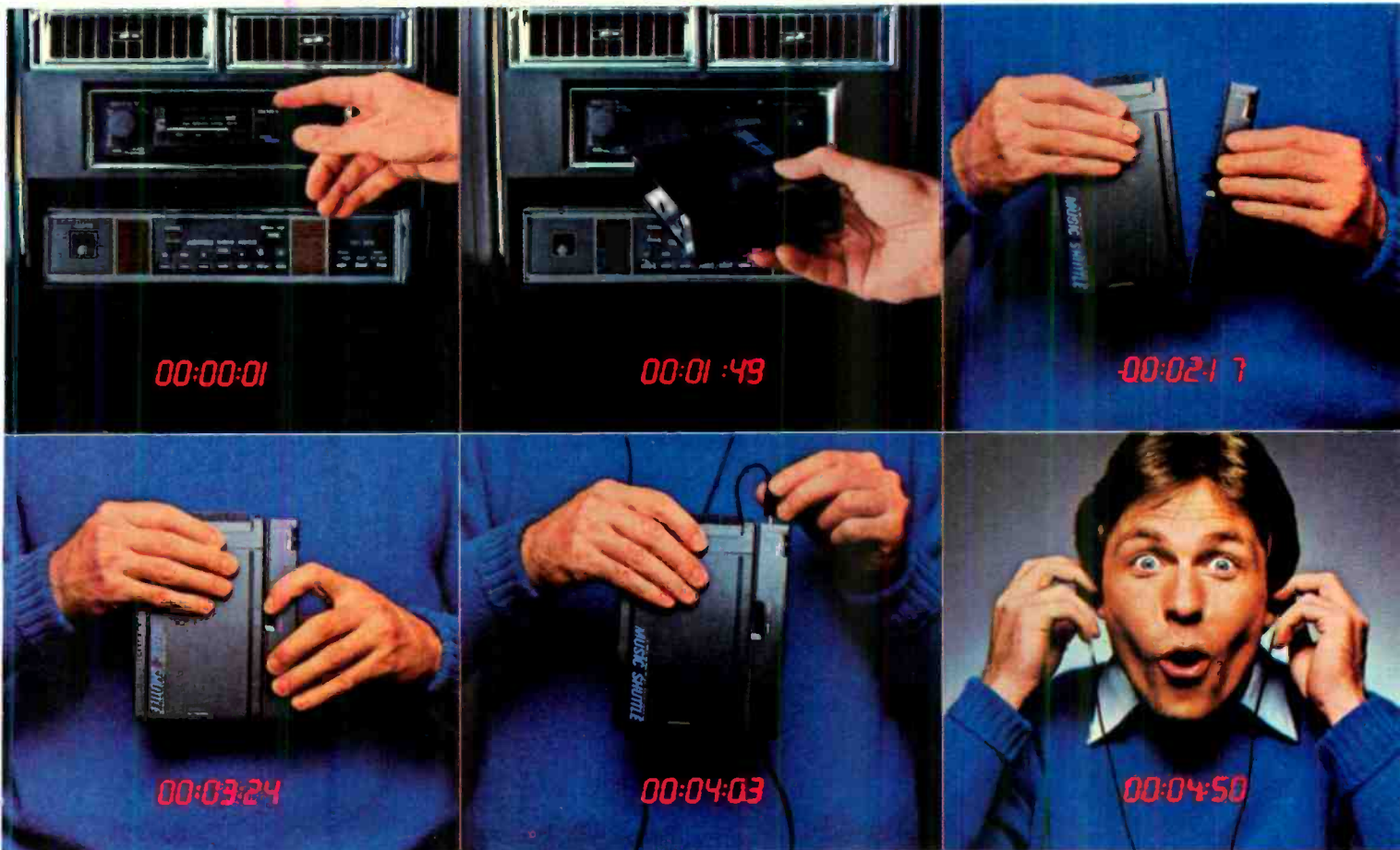
and a polycarbonate midrange/tweeter. Polypropylene is said to offer an optimum stiffness-to-mass ratio and high internal damping in addition to being moisture resistant. For increased durability the A692 is constructed with reinforced grilles and heavy-duty steel frames. Frequency response is given as 40 to 18,000 Hz; crossover frequency is 4,000 Hz. Impedance is 4 ohms. Sensitivity is 90 dB sound-pressure level with a 1-watt input at 1 meter. Required mounting depth is 3 inches. Price: \$129 per pair.

Circle 129 on reader service card

### Nakamichi's Unidirectional Auto-Reverse Deck

□ Nakamichi's new RX-202 "UniDirectional" auto-reverse (UDAR) cassette deck is claimed to solve the azimuth-tracking-error problem inherent in most bidirectional auto-reverse cassette decks at a cost much lower than that of the Auto Azimuth Correction System used in the Nakamichi Dragon home deck and Nakamichi Mobile Sound System. The problem occurs when a tape recorded in one direction is played

# IT GOES FROM CAR STEREO TO PORTABLE IN 4.5 SECONDS.



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At the push of a button, the Music Shuttle's cassette player ejects, and is ready for a battery pack and headphones.

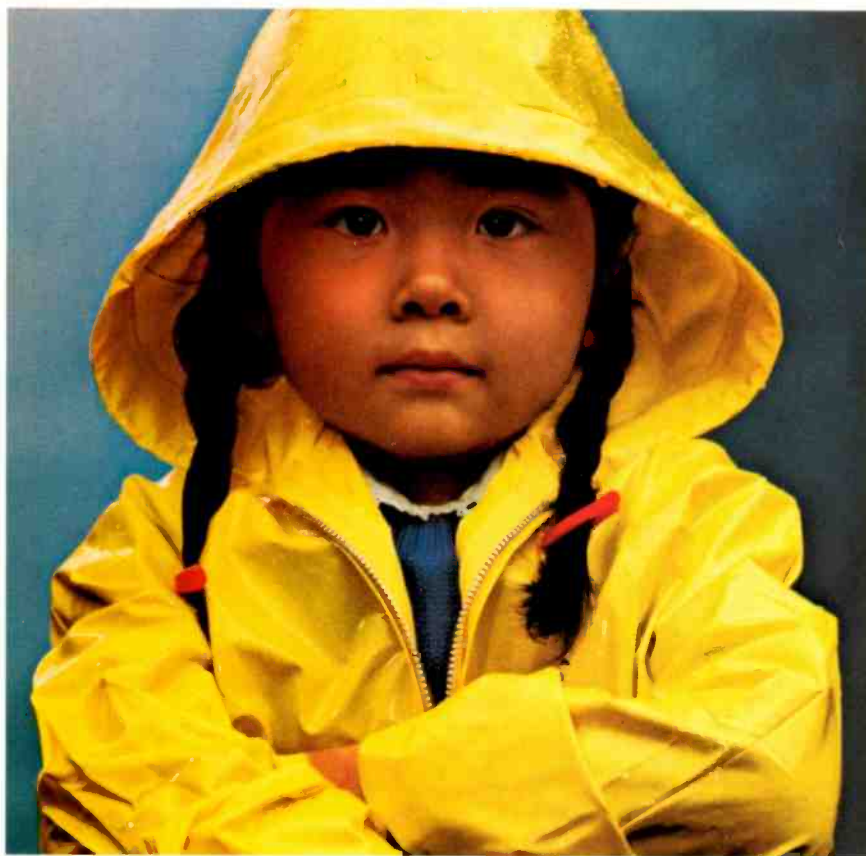
What's left behind in your dashboard is the Music Shuttle's AM/FM radio. A radio that delivers high-fidelity stereo even when the cassette player isn't in your car.

Also left behind is a large, conspicuous hole where the cassette player once was. A hole that will do more to discourage a thief than any alarm or lock.

All of which makes the Music Shuttle the first car stereo that, literally, leaves nothing to be desired.

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THE ONE AND ONLY.

# Now you can take perfect flash shots with your ears.



The Vivitar 3500 flash is so remarkably easy to use, your only requirement is a good pair of ears.

Our 3500 literally talks you into great photography. First, by telling you with a short "beep" that the flash is charged and ready to shoot. And then, by letting out a longer "beep" after the shot to tell you the light was correct. (We've even included a light that lets you check everything visually.)

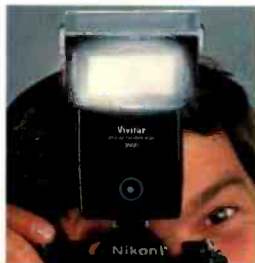
The automatic 3500 flash is so simple, about all you do is attach it to your Canon, Minolta, Nikon, Pentax, Olympus, Contax, Yashica or other popular 35mm SLR camera, focus and shoot.

## Vivitar

The result? The 3500 delivers a level of performance that's unheard of. You can take superb automatic shots out to 47 feet.

And bounce light to soften the lighting and eliminate "redeye." And because our compact unit

**Beep, Beep, Flash**



**Beeeeeeep!**



also has zoom capabilities, it will work perfectly with an assortment of lenses.

If it seems incomprehensible that our flash does so much and yet costs so little, we suggest you visit a photo store and try one out. Hearing is believing.

## The 3500 Flash by Vivitar

## New Products

back in the opposite direction, because the tape is unlikely to track along exactly the same path. An error as small as 8 minutes of arc ( $2/15$  of a degree) causes a 3-dB loss at 10,000 Hz and complete loss of signal information at 20,000 Hz. To avoid such errors, the RX-202 automatically disengages the cassette at the end of each side, turns it around, reloads it, and resumes playback or recording in less than 2 seconds. Because each side is played back in the same direction in which it was recorded, the azimuth angle is invariant. The microprocessor-controlled UDAR system is independent of the RX-202's single-capstan basic transport.

The RX-202 can be set to play one side of a cassette once, both sides once, or both



sides repeated continuously, and it can record either one side only or both sides. The tape is monitored by a music sensor that automatically advances the tape rapidly to the end for quick reverse when the program is finished. When the AUTO REC STANDBY button is pushed once in the stop or pause mode, the RX-202 rewinds the tape to the beginning of the side, advances through the leader, records a 6-second blank, and enters the record-standby mode. Pressing the switch twice while recording side A advances the tape to the end of the side, flips the tape, and repeats the above procedure. A Dual-Speed Master Fader automatically fades the level over 4 or 2 seconds.

The RX-202's frequency response is given as 20 to 20,000 Hz (measured at a -20-dB recording level). Wow-and-flutter is less than 0.06 per cent weighted rms, signal-to-noise ratio better than 68 dB with Dolby-C, and total harmonic distortion less than 1 per cent. The deck measures 17 $\frac{3}{4}$  inches wide, 5 $\frac{3}{8}$  inches high, and 10 inches deep; weight is 19 $\frac{3}{4}$  pounds. Price: \$650.

Circle 130 on reader service card

## Portable Stereo VCR From Canon USA

□ Canon's VR-20A is a portable VHS video-cassette recorder featuring virtually noise-free and jitter-free still-frame, frame-advance, and slow-motion playback modes at both SP and SLP tape speeds. The unit's four video heads are selected and controlled by a microcomputer according to the tape speed and the special mode desired. The stereo audio tracks are equipped with Dolby noise reduction, and an audio-dub facility

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CIRCLE NO. 3 ON READER SERVICE CARD

STEREO REVIEW

permits separate recording of images and sounds. There are two microphone inputs for recording stereo soundtracks. A compat-



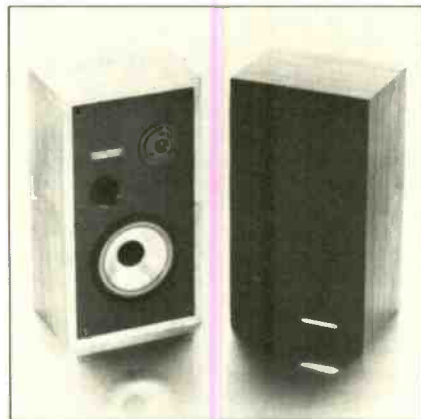
ible video camera (VC-10A) and tuner timer (VT-10A) are available.

Specifications include horizontal resolution of more than 230 lines and an audio frequency response at the SP speed of 100 to 8,000 Hz. Audio signal-to-noise ratio is better than 42 dB (Dolby on, SP speed). With its internal battery pack the VR-20A weighs about 8½ pounds. Dimensions are 3⅝ x 9⅜ x 9½ inches. Price: \$825.

Circle 131 on reader service card

## Marantz Speakers for Digital Audio Programs

□ Marantz's new Digital Reference Monitor loudspeaker series is designed to meet the technical demands of digital program sources at a reasonable price. The speakers feature soft-dome tweeters, ferrofluid-cooled midrange drivers, and "Low Noise Plastic" woofers. The high-dispersion tweeters are intended to maximize the optimum listening area, and the ¾-inch high-



density particle-board cabinets are designed to eliminate box-panel resonances.

The DRM series consists of the two-way DR 80 (shown) with an 8-inch woofer, the three-way DR 100 with a 10-inch woofer, and the three-way DR 120 with a 12-inch woofer. Prices per pair: DR 80, \$300; DR 100, \$430; DR 120, \$520.

Circle 132 on reader service card

**NOTE:** All product descriptions and specifications quoted in these columns are based on materials supplied by the manufacturers, who will respond directly to reader requests for further information.

Domestic inflation and fluctuations in the value of the dollar overseas affect the price of merchandise imported into this country. Please be aware that prices quoted in this issue are therefore subject to change.

# How to get 336 lenses in your camera bag.



You have two choices. Either you find a bag that's extraordinarily large. Or you find one lens that delivers 336 different focal lengths. Like the 75-410mm zoom lens system from Vivitar.

## Vivitar

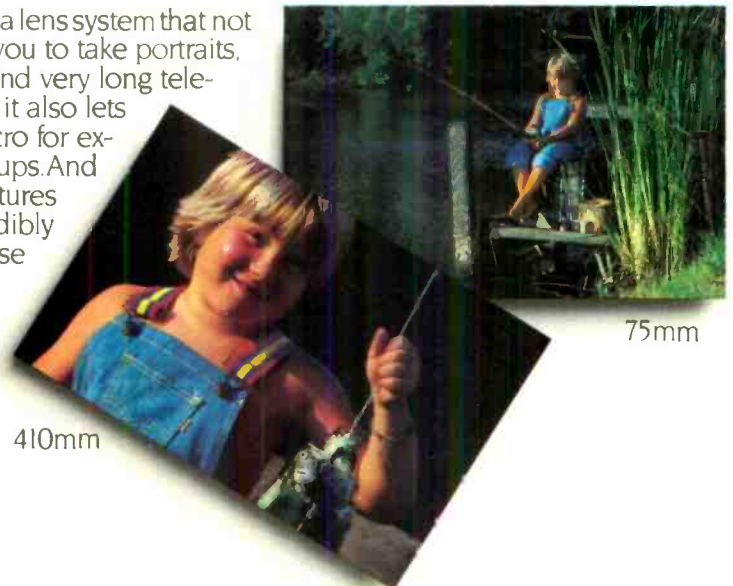
Our lens system is made up of two components. We start with a 75-205mm f/3.5-4.5 lens which is the fastest, smallest and lightest lens in its class. And to it, we add a specially designed 2X Matched Multiplier™ for doubling the focal range.

The result: a lens system that not only allows you to take portraits, telephotos and very long telephoto shots, it also lets you use macro for extreme close-ups. And all of the pictures will be incredibly sharp because

of the lens' high degree of contrast and resolution.

But performance is not the only part of our system that's unsurpassed. So is its value. There's simply no better 75-410mm lens system at any price. And each system is backed by a 5-year limited warranty.

So the choice is quite simple. You can buy 336 lenses for your Canon, Minolta, Nikon, Olympus, Pentax or other popular 35mm SLR camera. Or you can buy one Vivitar 75-410mm zoom lens system. Ours is certainly a nicer fit in your camera bag.



## The 75-410mm Zoom System by Vivitar

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CIRCLE NO. 4 ON READER SERVICE CARD

# Elegantly simple.

In 1971 this man introduced the first planar magnetic loudspeaker to American audiophiles. Now, with four models priced from \$475 per pair and up, Magneplanars® are still the ONLY full-range planar magnetic speakers on the market. With over 50,000 pairs sold, Magneplanars are recognized worldwide as an elegantly simple, cost-effective approach to accurate music reproduction. Although there have been speakers that do some things better, never has there been any that do more things right—especially for the price.



And now, Jim Winey, in recognizing the performance advantage of true ribbon tweeters for esoteric audio, has developed a superior true ribbon tweeter that interfaces synergistically with Magneplanars. As with Magneplanars, this patented\* ribbon tweeter is an elegantly simple device. However, this simplicity is deceiving, for it accomplishes all of the following:

- Direct drive (no transformer) • Low mass ribbon (only 2.5 microns thick) • Bi-polar operation (no rear cavity or loading) • Response to 50 kHz • Near perfect dispersion (360 degrees to 25 kHz) • Line source (ideal interface with Magneplanars) • Affordable

Currently available  
in the Tympani IV and MGIII

**MAGNEPAN**  
1645 9th Street  
White Bear Lake, MIN 55110

\*Pat. No. 4,319,096

# Audio Q. and A.

By Larry Klein



Checking out fiberglass wedges in an anechoic test chamber

## Hill-and-Dale Recording

**Q.** I recently read an article about old records that mentioned a "hill-and-dale" recording technique and vertical and lateral cuts. Can you explain these?

PAUL WILSON  
Mattoon, Ill.

**A.** Edison's 1877 prototype model of the photograph worked on the hill-and-dale principle, meaning that the record groove carried the signal in the form of vertical undulations. The recording stylus—which was attached to an acoustically driven diaphragm—indented a sheet of tin foil wrapped around a rotating cylinder. The varying depths and repetition rates of the indentations were reconverted by the playback stylus into an approximation of the original sound.

Edison's 1878 patent also covered lateral-cut (side-to-side) recordings, but he very much preferred the hill-and-dale technique. Hill-and-dale disc recordings appeared too, but by 1915 or so hill-and-dale cylinders and discs were far outnumbered by lateral-cut discs.

Early investigations into single-groove stereo recording temporarily revived interest in vertical modulation, but the stereo disc-groove format that was finally agreed on modulated each channel's groove wall diagonally rather than vertically or laterally (see the drawing below).

Recording technology might be consid-

ered to have come full circle in that today's video discs and digital CD's both employ a form of vertical modulation—although "pits and plateaus" would be more descriptive of the way it appears than hills and dales.

## Cap Question

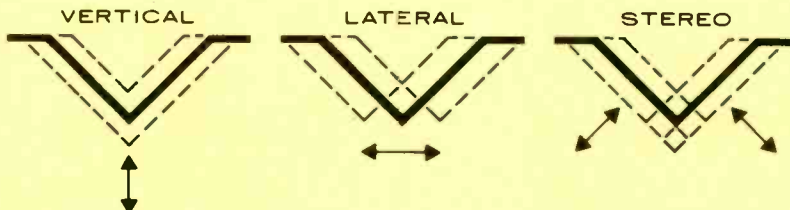
**Q.** I've been reading about "Wonder Caps" and thinking about modifying my preamplifier and power amplifier with these polypropylene capacitors. Would they make an audible difference? And, if so, what other components could they be applied to?

FRANK RECUPERO  
Forest Hills, N.Y.

**A.** A while ago I wrote about the various audio totem devices that are alleged to make hi-fi systems sound cleaner, purer, more detailed, and so forth—or, at least, make them sound that way to those whose ears and minds are open to the effects. Unfortunately, most objective investigators have found that the subjective improvements wrought by the magical (and usually expensive) devices tend to disappear when viewed under the bright light of scientific testing procedures.

As some readers may suspect, I am inclined to include the alleged audible virtues of polypropylene capacitors in the very-much-unproven category. This is not to say

Three techniques of cutting record grooves. In a vertical-cut ("hill-and-dale") recording the groove, in effect, narrows and widens with the signal modulation. With a lateral cut, both groove walls move in unison to the right or left. In a stereo groove, the walls are cut diagonally, and the stylus tracks them together.







"That night  
I was listening to  
the bass player cook.

As his hands went  
spidering up and down  
the strings

his thum-thum-thum  
became the group's  
heartbeat — and mine too.

In my living room, I had  
traveled once again to that  
smokey little jazz club long ago."

A JVC High Fidelity System  
can take you to another  
time and place, with components  
that reduce six different  
kinds of distortion down to inaudible.

Nothing interferes with the  
reality of your music. You're there.

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CIRCLE NO. 7 ON READER SERVICE CARD

that some circuits won't perform better when the capacitors in them employ a certain type of dielectric, but the matter is far from mystical and in any case is not that difficult to test.

What follows is an illustrative true story with the names omitted to protect the innocent or guilty (I leave it to my readers to judge which are which). A while back I received an irate letter from a professor at a university in Washington State taking Julian Hirsch to task for not having pointed out an audible defect in a kit power amplifier he had tested. The professor knew about the defect because it was pointed out by a reviewer for one of the "underground" audio publications. The reviewer also

"cured" the problem by replacing a critical capacitor with its polypropylene equivalent. The complaining professor went on to say that the reviewer who detected the problem capacitor and replaced it was obviously right because the manufacturer switched to a polypropylene capacitor for all later production units.

Hoping to get at the truth of the matter, I called the president of the company involved. His story was this: Yes, he had read the critical review, and some of his engineers actually agreed with the reviewer on the capacitor change. In order to bring some objectivity to the situation, the manufacturer took several freshly manufactured samples of the amplifier in question,

checked them for normal performance, and then installed the critical polypropylene capacitors in some units and not in others. Unfortunately for the true believers, despite prolonged listening tests none of the engineers was ever able to consistently differentiate by ear between the "improved" units and the unimproved ones with the original non-polypropylene capacitors.

So why did the manufacturer ultimately install the magic capacitor(s) in his amplifier? Simply because it wasn't too expensive to do so and it made the audio tweaks among his customers happy. As someone once said in another context, a little chicken soup can't hurt.

## Car Speaker Distortion

**Q** I recently bought at a flea market a pair of 6 x 9-inch three-way car speakers. The brand name is Big Max. I installed them in my car, but when I turned up the volume they sounded terribly distorted. I can't understand why, since my car stereo has a fairly low power rating. Are the speakers defective?

JAMES R. HARRIS  
Springfield, Ohio

**A** Although I doubt that your Big Max speakers represent the state of the art in car-stereo transducers, they should at least be able to take the output of a 4-watt amplifier without distorting. Let me suggest some diagnostic procedures. Assuming that both speakers sound equally bad, remove one of them from the car and temporarily connect it to one channel of your home hi-fi system. Set your amplifier to mono and turn the balance control to the side with the Big Max speaker. Put on a record or tape and slowly turn up the volume. If the speaker doesn't distort at reasonable levels, then the fault is not in the speaker itself but in the connections to it. Try another speaker connected to the leads from your car stereo receiver to confirm that *it* for some reason hasn't suddenly gone bad.

Most likely the Big Max speaker itself is somehow grounding one side of the amplifier's speaker output. In many car stereo units this will cause severe distortion. You can test this hypothesis by playing the speaker with the leads connected to it but without its frame touching the car's metal chassis. If Big Max sounds fine until it is positioned in its mounting hole, check to see if there might not be a connection between one of the speaker's input terminals and the speaker frame. If you can remove it, you've solved your problem. If not, you may be able to mount your Big Max speakers in such a way that they are insulated from the metal chassis of the car.

In any case, the perils of buying audio equipment of unknown parentage is well illustrated by your Big Max problem. There are definite advantages in sticking to well-known brands. □

*Because the number of questions we receive each month is greater than we can reply to individually, only those letters selected for use in this column can be answered. Sorry!*

# ALL THIS FOR UNDER \$200?



## The NAD 6125 CASSETTE DECK gives you:

- Dolby C and B\* Noise Reduction
- High-performance M/X Head
- 12 Segment LED Meter
- Soft Touch Transport
- One Button Record
- Switchable Multiplex Filter

Before you spend more than \$200 on a cassette deck, be sure you hear the NAD 6125. We know of no other deck in or close to its price range that audibly outperforms this remarkable component. The NAD 6125 will compliment any high quality stereo system at an uncommonly affordable price.

\* TM Dolby Laboratories

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# HOW COULD A CASSETTE DECK WITH TWO HEADS BE SO HARD TO GET?



The Kyocera D-801 Cassette Deck is hard to get because so much more is built into it. For example, it has five circuit boards where most decks have only one or two. But that's only the beginning.

## It more than meets the ultimate tape deck challenge.

The challenge is to move tape across the heads at as nearly a constant speed as possible. Variations in speed, of course, come out in your speakers or headphones as wow and flutter.

Many decks claim a wow and flutter figure of 0.05% WRMS—trouble is, speed variations of 0.05% are clearly audible with piano music (one of the most revealing tests you can give a cassette deck—try it on the D-801 and marvel!).

The D-801 by Kyocera comes through with a remarkably low wow and flutter figure of 0.02% WRMS—and that is derived from a unique, three-motor, dual capstan drive mechanism. Two capstans are driven by a direct drive motor. A beltless/clutchless simple DC motor drives the feed and takeup reels, while a third motor is used as a head-position assist drive (it greatly prolongs head-to-tape azimuth accuracy). The dual capstan system provides that sensationally accurate tape travel, maintaining proper tension between capstans to eliminate external shock source modulating noise.

## It more than meets the needs of the audio perfectionist.

The D-801 goes above and beyond even the fussiest audiophile's needs with 3-position bias/equalization selection (with fine bias adjustment), 400 Hz calibration tone, Automatic Program Mute Recording, automatic search, and electronic 4 digit display, including counter, elapsed time and time remaining functions.

The D-801's noise reduction systems were built for the audio purist. It has two—Dolby\* B & C—Dolby B for music material of limited dynamic range, Dolby C for music of the widest dynamic range, so noise reduction can be tailored to program material.

Finally, the specs everyone wants: frequency response of 30-20,000 Hz  $\pm$  3 dB using metal or CrO<sub>2</sub> tape, and a S/N ratio of 78 dB with metal tape in Dolby C NR mode.

If you have any trouble finding a Kyocera dealer, contact: Kyocera International, Inc., 7 Powder Horn Drive, Warren, NJ 07060 (201) 560-0060.

CIRCLE NO. 8 ON READER SERVICE CARD



\*Dolby is a registered trademark of Dolby Laboratories, Inc.

# Tape Talk

By Craig Stark



## Tape or Deck Flaws?

**Q.** *A number of major high-quality cassette brands give me a consistent problem: the recorded sound grows gradually more "woolly," then gradually returns to normal, like an exaggerated case of the "phasing" used in many pop hits. The problem is accompanied by a sound like crinkling cellophane from the cassette. When I eject the tape, however, it seems undamaged. Can you explain this?*

BRUCE E. JAMISON  
Aspinwall, Pa.

**A.** Since several major and usually reliable cassette brands are giving you trouble, I suspect that the problem lies with your deck. When any two separately manufactured items, such as a deck and a cassette shell, must fit together with some precision, there is always the possibility that their individually acceptable deviations from perfection will reinforce each other rather than cancel out. If your deck happens to be right at the edge of tolerance in terms of seating the cassette (so that the tape guides won't rub the tape edges or feed the tape onto the take-up hub improperly), even microscopic center-line differences among the shells used by different brands can give you the kind of problem you describe. Fixing it will probably involve readjustment of the height of your deck's tape-head assembly, which may require returning the deck to the manufacturer.

## Tape Dropouts

**Q.** *What causes tape dropouts? This is a problem with many cassettes in my collection.*

GARLAND HUNTER II  
Philadelphia, Pa.

**A.** I once saw a poster that portrayed dropouts as a series of potholes in an otherwise smooth highway, and this seems to be most people's instinctive understanding. In fact, however, most tape dropouts today are caused by grit particles (such as a small grain of sand) that protrude above the tape's magnetic surface. As these foreign bodies pass across the recorder's head they

momentarily interrupt the intimate contact between head and tape. Such interruptions cause signal losses (high frequencies are most severely affected) whose duration and noticeability depend on the size of the alien particles, the width of the tape track, and the speed of the tape.

There are other possible causes of dropouts as well. A slight crease in the tape (frequently found near the ends of a tape where the hub fastener makes an impression through a number of layers) can cause the same kind of interruption. A ragged tape edge from poor tape slitting during manufacture will also cause dropouts, especially in the left channel. If you have a persistent problem, however, the odds are either that you're using inexpensive tapes or that you're not keeping your deck's heads and pinch-roller clean. Cheap tapes shed more oxide and/or binder particles during normal playing than do quality products, and these particles (often after an intermittent "storage" period on the head or pinch-roller) get redeposited and pressed into the tape surface, where they act just like the grit particles described earlier.

## Rolling Your Own

**Q.** *I have a large collection of prerecorded cassettes, but their sound quality isn't as good as LP's of the same performances. Is it possible that if I bought the LP's and dubbed them myself I could get better-sounding cassettes than the prerecorded ones I'm now buying?*

ALAN KIRKLAND  
Ithaca, N.Y.

**A.** Yes. In my experience, with a good tape and proper attention to recording levels, home-recorded cassettes are usually superior to most prerecorded versions. Most commercially recorded cassettes are duplicated at speed ratios of 128 to 1 (or higher) and use "third-line" tape stock and cassette shells, with predictably inferior results. Using a reasonably good deck with Dolby-C or dbx noise reduction, premium cassettes, and a fresh LP, I think you'll find your self-recorded cassettes appreciably better than their commercial counterparts.

There are a few "audiophile" lines of commercially recorded cassettes (InSync Labs and Mobile Fidelity, for example) that you won't be able to match, however. These are duplicated at a 1-to-1 ("real-time") speed ratio, use premium-grade cassette tape and shells, and are dubbed from the same master tapes as the LP's themselves. Their price, of course, is necessarily rather high (about \$20). Almost as good are some of the very reasonably priced (\$7) classical cassettes from Sine Qua Non, which are duplicated at a higher but still moderate speed ratio and use excellent tape stock.

## Dubbing Digital

**Q.** *Given the enormous dynamic range of digital Compact Discs, is there any hope that I could dub them onto cassettes without serious losses?*

ELLIOT LINDSEY  
Haverford, Pa.

**A.** Thanks to Technics, my laboratory has been equipped for some months now with a CD player that I have been using as a test source for checking the record-playback capabilities of a number of cassette decks. Quite frankly, the results have surprised me.

Using a top-quality three-head recorder, Dolby-C, and metal tape, I have been able to make copies so close to the originals that the audible differences are only marginally significant. If you came into the room and didn't know whether the digital source or the dubbed copy was actually being played, the odds are high that at any normal listening level you wouldn't be able to tell from the sound quality alone.

This is not to say that there are no audible differences you could spot if you listened hard enough in an A/B test. The chief differences I have found in the cassette dubs are residual tape hiss (during playback at "concert hall" volume), a very slight "grittiness" (analogous to seeing the grain in a photographic film) that seems to arise from cassette wow-and-flutter, and modulation noise. This last, incidentally, can often be heard on CD recordings themselves if they were made from an analog master tape. In the copies there is also a very slight dulling of sharp-attack transients and some treble saturation loss in high-energy high-frequency passages.

Predictably, of course, some cassette decks do better than others in this grueling audio test. The higher the quality of your recorder, the better sound quality you'll get with it whatever the source. Machines equipped with dbx noise reduction can handle a dynamic range even greater than Dolby-C, although with my very limited set of CD pressings I have not found the audible results with dbx distinctly superior. In most cases, however, you do need noise reduction more effective than Dolby-B. □

*Because the number of questions we receive each month is greater than we can reply to individually, only those letters selected for use in this column can be answered. Sorry!*

# Reach for a world of flavor.

# MERIT



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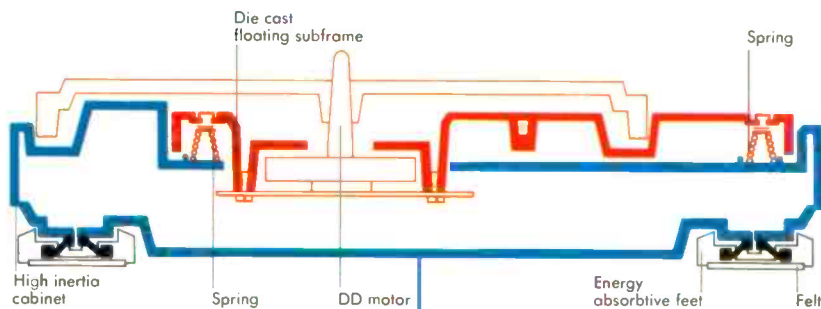
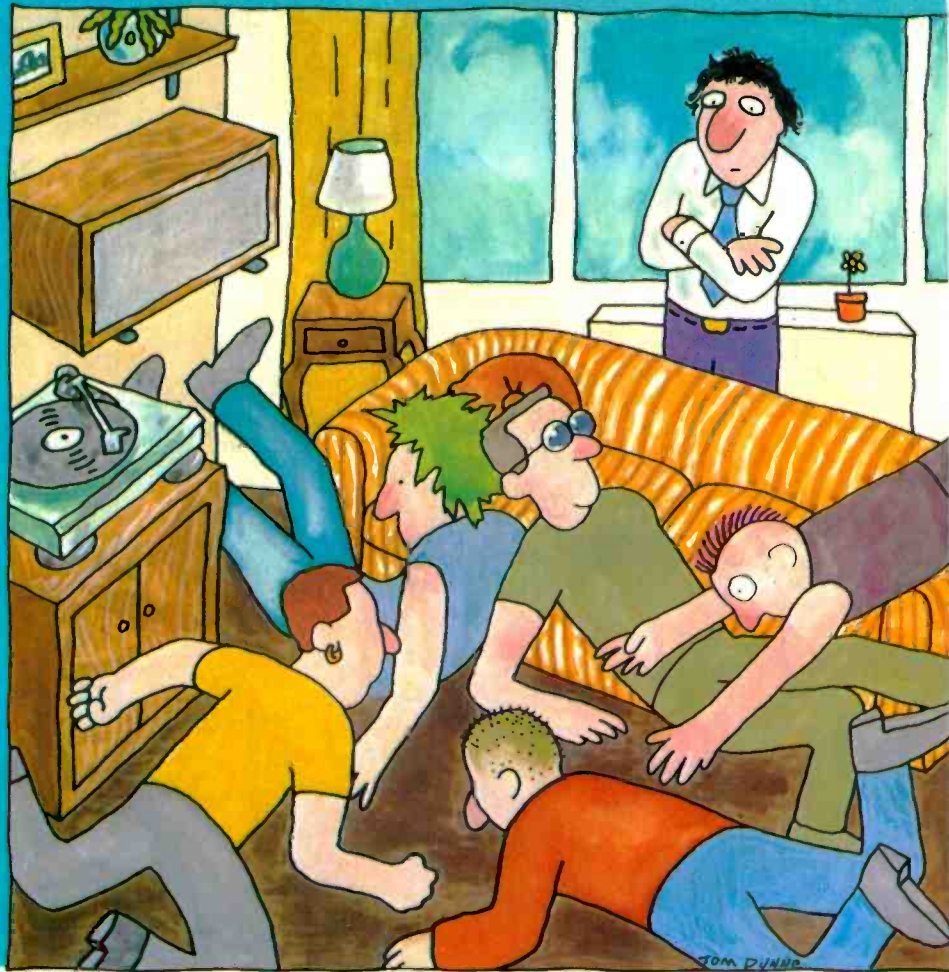
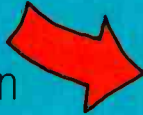
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8 mg "tar," 0.6 mg nicotine av. per cigarette, FTC Report Mar. 83

# Perfect Playing

(Even when your guests get a little out of hand).



## Onkyo's Triple Stage Isolation System

When the joint is jumpin' around you, it's nice to know your turntable isn't. That's because Onkyo's new turntables, like our CP-1044F, all feature our patented Triple Stage Isolation System.

Until now, there were only two basic approaches to prevent unwanted tonearm movement and turntable feedback. One took advantage of a solid, heavy construction, while the other used a

spring suspension to damp vibrations. Neither was totally effective.

Onkyo engineers solved this problem by combining these ideas. As the drawing illustrates, our Triple Stage System uses both massive construction

and a spring suspended floating subframe. The entire system then rests on four energy absorbing feet. The result? The most effective protection against turntable feedback you can buy—in any price range.

And, that's another nice thing about all our new turntables, they're very affordable. Onkyo was one of the first audio companies to introduce the straight tonearm back in 1977, and we've spent the succeeding years refining our turntables. So remember, when your guests get a little out of hand, it's good to have an Onkyo turntable handy.



Nobody knows more about audio than Onkyo.

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The Triple Stage Isolation System is available on our new CP-1044F, CP-1033A, CP-1022A and Integra Series CP-1055 turntables. For complete literature, please write directly to Onkyo.

# Technical Talk

By Julian D. Hirsch



## Phase Shift and Group Delay

**T**HE term "group delay," which now appears in our loudspeaker test reports, probably means little to most readers, even those who have strong opinions on the significance of phase shift in components such as amplifiers. Actually, phase shift and group delay are closely related, and I will try to shed a little light on these rather esoteric concepts with a minimum of mathematics or technical jargon. Since oversimplification is thereby unavoidable, I beg the indulgence of mathematical purists.

*Phase* is a measure of the relationship in time between two waveforms, either electrical or acoustical. If two electrical signals of the same frequency start increasing positively from zero voltage at the same time, reach their maximum levels simultaneously, and pass through zero volts in the negative direction together, they are said to be "in phase." If one goes positive while the other goes negative but both cross zero volts at the same time, they are "out of phase" by 180 degrees (see Figure 1). Each cycle of a sinusoidal waveform can be divided into 360 degrees, and it is possible to have a phase difference between two waveforms of anywhere between 0 and  $\pm 180$  degrees. A waveform either "lags" or "leads" another depending on which of the two is taken as the reference. A +270-degree phase shift cannot be distinguished from a -90-degree one without knowledge of the previous history of the two waveforms or their relationship to a third waveform.

Why is all this important to the listener? Because a phase shift also represents a *time shift* or *time delay*. The period (or dura-

tion) of one cycle of a 1,000-Hz sine wave is 1 millisecond (thousandth of a second), so a 90-degree (quarter-cycle) phase shift at that frequency corresponds to a time shift of 0.25 millisecond. This is the time required for sound to travel about 3 inches in air, which is on the same order of magnitude as the size of a human head or a typical loudspeaker driver.

This degree of time shift or delay seems to be an innocuous effect under practical listening conditions. Indeed, if a 0.25-millisecond delay affects all audio frequencies equally, it is of no significance (consider the delay of years that can occur between the making of a recording and its playback!). But now let's look at a 90-degree phase shift applied to audio frequencies of 20 and 20,000 Hz. A 20-Hz signal has a period of 50 milliseconds, so a 90-degree phase shift at this frequency corresponds to a time shift of 12.5 milliseconds. That amounts to an acoustical shift of about *12 feet*—not quite so negligible as in our first example. But at the other extreme, 20,000 Hz, the time error is a negligible 12.5 *microseconds* (millionths of a second), with a corresponding acoustical shift of about 0.15 inch.

If our hypothetical music system had a constant phase shift of 90 degrees from 20 to 20,000 Hz (real ones aren't that bad), the various frequencies in the program would be delayed by different amounts, ranging from a few microseconds at the high end to many milliseconds at the lower frequencies. To visualize the effect of such a system on a waveform, suppose that the input signal is a rectangular step just like the front "half" of

a square wave. Such a step contains *all* frequencies, from 0 Hz through the ultrasonic. A system with no phase shift would create that step waveform at the listener's ears (it would eventually decay since normal speakers do not reproduce 0 Hz well, but that is another matter). Our system with a constant 90-degree phase shift would correctly reproduce the sharp leading edge of the step, since the high frequencies are delayed only a short time, but the longer delay of the middle frequencies causes their contribution to the waveform to lag further behind, and the low frequencies would follow considerably behind schedule. The sum of all these delays produces an effect on the waveform commonly (and aptly) called "time smear" (see Figure 2).

The foregoing suggests that a constant phase shift across the audio frequency range (a constant 0-millisecond shift is fine but unattainable) is undesirable from the standpoint of waveform fidelity. What we really want is a constant amount of *delay* at all frequencies, so that all the frequency components of a complex signal arrive in correct temporal order and re-create the waveform accurately at the listening position. To achieve this requires (you'll have to take my word for it) a *phase shift that increases linearly with frequency*. If, for example, the phase shift at 20,000 Hz were 90 degrees, it would have to fall to 4.5 degrees at 1,000 Hz and 0.09 degree at 20 Hz to propagate a waveform with a constant time delay of 12.5 microseconds.

Time delays measured across the audio spectrum are what we mean when we speak

### Tested This Month

Sanyo VCR 7300 Beta Hi-Fi Video Cassette Recorder • Yamaha R-50 AM/FM Receiver  
Technics RS-M234X Cassette Deck • Akai CD-D1 Compact Disc Player  
KEF Carina II Speaker System

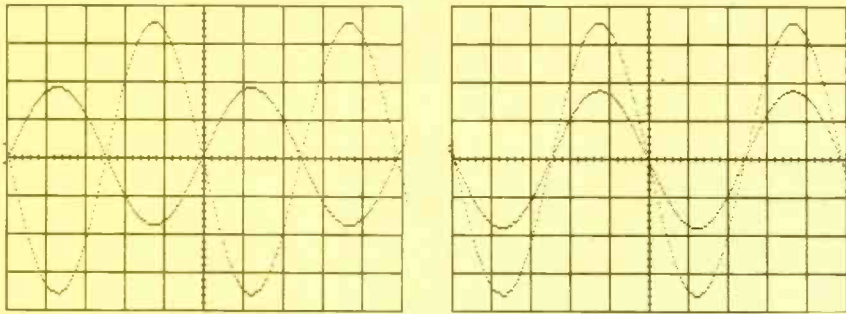


Figure 1. Plot at far left shows two signals that are in phase with each other, plot at near left two that are out of phase by 180 degrees.

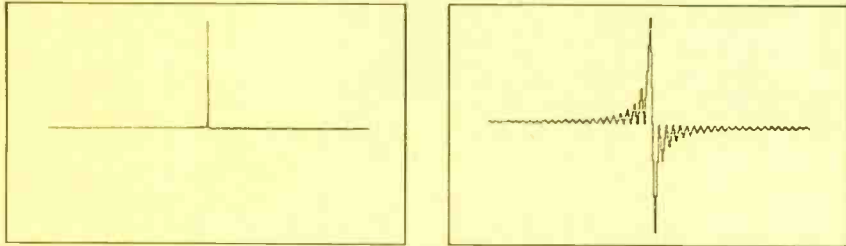


Figure 2. Far left, a signal reproduced with no phase shift; near left, the "time smear" effect of a constant phase shift of 90 degrees.

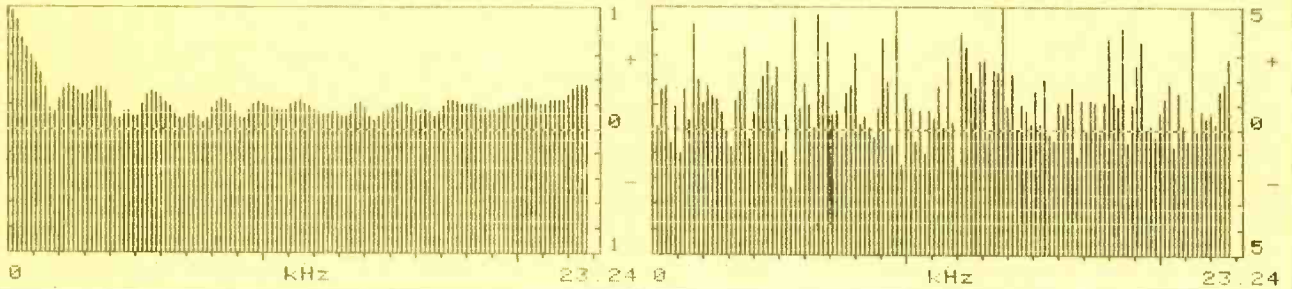


Figure 3. Plot at lower left shows the group delay for a speaker with smooth frequency response; plot at lower right is for an omnidirectional speaker with ragged frequency response.

of group delay, which is determined by the rate of change of phase shift with frequency. If frequency and phase shift are linearly related (that is, they increase or decrease together and in proportion), that rate of change is constant; hence, the group delay is constant. For accurate waveform reproduction, a plot of group delay as a function of frequency should be a horizontal line over most of the audio range. Of course, this ideal is never realized in the real world, and it is difficult to establish a definite threshold of audibility for group-delay figures in high-fidelity systems.

A recent paper by Douglas Preis of Tufts University (published in the November

1982 *Journal of the Audio Engineering Society*) summarizes the results of many psychoacoustic studies of human perception of group-delay distortion. It appears that under controlled laboratory conditions, the threshold of audibility is about 1 millisecond from 500 to about 6,000 Hz (the upper frequency limit of the experiments), expanding to about 2.5 milliseconds between 100 and 400 Hz. Other measurements of the actual group-delay distortion of seven different speakers showed peak values of 1 to 2 milliseconds from 300 to 20,000 Hz and as much as 8 milliseconds at 50 Hz.

Our IQS FFT analysis system enables us to measure and plot the phase shift and

group delay of loudspeakers for frequencies up to 20,000 Hz, although its frequency resolution makes readings below 1,000 Hz uncertain. Figure 3 (left) shows the group-delay plot for the Infinity RS6 speaker we reported on last month. Note that the group delay varies over a total range of only about 0.3 millisecond between 1,500 and 20,000 Hz (the vertical scale is 0.2 millisecond per small division). Another extreme is represented by a multidriver "omnidirectional" speaker, which had a ragged frequency response because of multiple reflections from the room boundaries. This appeared as equally ragged phase-response and group-delay characteristics, with the group delay exceeding 3 milliseconds at many frequencies (Figure 3, right, with each small vertical division equaling 0.6 millisecond). It is interesting to note that this speaker sounded quite good—not nearly as dreadful as its group-delay plot would suggest. (Waveform accuracy isn't the only thing determining the ears' assessment of sonic fidelity.)

If all of this has been less than perfectly clear, perhaps I have been overly ambitious in trying to explain in a few words a subject whose full explication requires many volumes of highly mathematical texts and reams of psychoacoustic test data. As a listener or speaker shopper, just keep in mind that group delay is a convenient measure of the "time smear" of a speaker, and it is the relevant factor in situations where manufacturers and others glibly use "phase shift," "linear phase," and similar technical expressions. □



... and narrating this evening's performance of Prokofiev's Peter and the Wolf will be former President Richard M. Nixon. The directors of the Philharmonic Society have agreed to Mr. Nixon's request that he be allowed to substitute the name 'John Dean' each time 'the Wolf' appears in the narration."



# READ THIS AD AND YOU'LL BUY A HARMAN KARDON CASSETTE DECK



That's a bold statement, but Harman Kardon has been making bold audio statements for over thirty years, introducing the world's first high fidelity receiver, the first stereo receiver and ultrawideband frequency response. Harman Kardon was also the first company to use Dolby<sup>®</sup> in a cassette deck.

Today, Harman Kardon products continue to be so technologically advanced that "state-of-the-art" falls short of describing them. They have become "state-of-the-mind," the highest level at which the mind can create.

The CD491 is Harman Kardon's most sophisticated state-of-the-mind cassette deck and one of the few in the world that can equal the full range of human hearing. The CD491 has a remarkable 20Hz to 20kHz frequency response using any tape formulation, not just expensive metal tape. An audiophile would settle for nothing less. Even more remarkable is that in a national challenge<sup>1</sup>, Harman Kardon measured frequency response and beat 98% of the competition, including units costing twice as much.

The CD491 incorporates a dual capstan transport with twin flywheels to insure perfect movement of the tape across its 5 high performance heads. The dual capstan serves to isolate the tape from the cassette shell while the dynamically balanced flywheels help generate a

consistently accurate tape speed. Together, they enable the CD491 to reduce wow-and-flutter to an audible .025%. The only "wow" you'll ever hear is the reaction of people listening to your Harman Kardon cassette deck.

The CD491 incorporates Dolby HX Pro<sup>1</sup> for extended frequency response, plus Dolby B and C<sup>2</sup> for maximum noise reduction. Three precision heads offer improved performance and the convenience of monitoring while recording. Included is a Sendust head to withstand high record levels without overload and a ferrite playback head for extended high frequency response.

The combined benefits of the CD491's performance features allow for the accurate recording of more dynamic audio signals than previously possible. In fact, the large signal response (frequency response at 0VU) of the CD491 is a virtually unrivaled 20Hz-20kHz  $\pm 3$ dB. This is especially significant as more demanding forms of software, such as digital audio, become available.

So, while other manufacturers continue to pile on unnecessary features and gimmicks, Harman Kardon continues to develop only fundamentally advanced audio equipment.

<sup>1</sup>) Dolby is the registered trademark of Dolby Laboratories Inc.  
<sup>2</sup>) In 1982 Harman Kardon challenged individuals to bring in their cassette decks to a local HK dealer. All units were cleaned and demagnetized in order to insure fair test results. The Harman Kardon unit was factory packed.

## harman/kardon

Our state-of-the-mind is tomorrow's state-of-the-art.

# Introducing the Sherwood S-2680CP Receiver.

## Some of its best reviews came out before it did.

Our new digital synthesized receiver has a lot in common with our highly acclaimed 6000 Series Separates. In fact, with the same phono preamp and tuning sections, our new receiver provides virtually the same sonic qualities as our 6000 Series Separates.

So when the experts raved about our 6000 Series, they were also (unknowingly) raving about our S-2680CP Receiver.

For example, about our S-6020CP Preamp, *High Fidelity's*™ January, 1983 issue stated:

*...virtually beyond criticism."*

*"Its performance... is at a level we've rarely seen surpassed."*

*"We can't think of a preamp that offers more performance and flexibility for the dollar."*

Our S-2680CP Receiver shares the very same circuitry, functions and specifications.

Regarding our S-6010CP Tuner, the April,

1983 *Audio* reported:

*"It pulled in fully as many stations with acceptable listening quality as tuners costing two and three times as much."*

The tuning section in our Receiver is identical, right down to the instant recall of 16 different sta-

tions at the touch of a button.

This remarkable Receiver delivers a squeaky clean 70 watts per channel, is protected from TIM and is totally stable into low impedance loads.

The S-2680CP is like our 6000 Series in one other important way: value. Its suggested list is under \$500.

If you like the sound of the 6000 Series reviews, you'll love the sound of our new S-2680CP Receiver.



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CIRCLE NO. 33 ON READER SERVICE CARD

# Equipment Test Reports

Hirsch-Houck Laboratories: Julian D. Hirsch and Craig Stark



Photo by Roy Schneider

## Sanyo VCR 7300 Beta Hi-Fi Video Cassette Recorder

**T**HE Beta Hi-Fi system, which allows very high-quality audio recording and playback on standard Beta-format video cassettes with or without an accompanying video program, has now appeared in a compact, portable video cassette recorder (VCR) from Sanyo, the VCR 7300. Beta Hi-Fi's audio quality in many respects bridges the gap between open-reel analog recording and full digital recording. A VCR equipped with the system can be used not only for recording simulcasts or audio-only programs but also to play back prerecorded video cassettes incorporating Beta Hi-Fi soundtracks.

Beta Hi-Fi works by having the two stereo audio channels frequency-modulate two high-frequency carrier signals, which in turn are recorded (simultaneously with any video material) on the video tape through the rotating video heads. The FM carriers are in the frequency range of 1 to 2 MHz and lie between the chrominance (color) and luminance (brightness) sections of the recorded video signal; they have no significant effect on picture quality. Concurrently with the recording of the Beta Hi-Fi tracks, the stereo audio signals are combined and recorded in mono (with much lower audio

fidelity) on the standard longitudinal audio track by a fixed record/playback head. This makes the recording playable on Beta-format VCR's without the Beta Hi-Fi circuits. A VCR that does incorporate the system automatically switches it in when it detects a video cassette containing Beta Hi-Fi signals being played. The key Beta Hi-Fi specifications listed in the VCR 7300's instruction manual include a frequency response of 20 to 20,000 Hz (no tolerance stated), distortion of less than 0.3 per cent at 400 Hz (recording level not given), dynamic range of more than 80 dB, wow-and-flutter of less than 0.005 per cent wrms, and channel separation of more than 60 dB.

The Sanyo VCR 7300 resembles a moderately large portable radio. It is 10½ inches high with the carrying handle folded flush with the top, 14¼ inches wide, and 6 inches deep. It has an all-black exterior and small chromed pushbutton controls. An optional rechargeable battery pack can power the recorder for up to 40 minutes, but the recorder comes with an a.c. power supply that fits the battery compartment in the rear of the case. A charger stand is furnished, allowing the a.c. supply to be used to charge a battery pack, and the VCR 7300

can also be operated from a standard 12-volt car battery. The unit's weight, including the a.c. power supply, is about 16½ pounds.

The basic transport functions, controlled by solenoids and light-touch buttons, include PLAY, STOP, PAUSE, F.FWD, and RWD. The last two also activate a search mode if used together with PLAY: the tape speed is increased several times, and the speeded-up picture remains visible while the audio is muted. If a fast mode is engaged from a stopped condition, however, the tape speed is much faster and no picture is visible. A furnished remote-control unit has a 20-foot connecting cable and operates the transport controls during playback but not, except for PAUSE, during recording.

One small button selects either VCR or TV operation (the latter enables the user to watch one program while recording another), and others control the REC and AUDIO DUB operations. The latter two require prior operation of a second interlock button as a precaution against accidental erasure of a tape. The AUDIO DUB mode allows a mono audio track to be added to an existing video tape or to replace its original soundtrack.

Twelve buttons at the top right of the re-

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

ULTRA LIGHTS, 5 mg. "tar", 0.5 mg. nicotine av. per cigarette by FTC method,  
FILTER, 9 mg. "tar", 0.7 mg. nicotine av. per cigarette, FTC Report MAR. '83.

**VANTAGE.**  
**THE TASTE OF SUCCESS.**

Great Taste  
with Low Tar.  
That's Success!

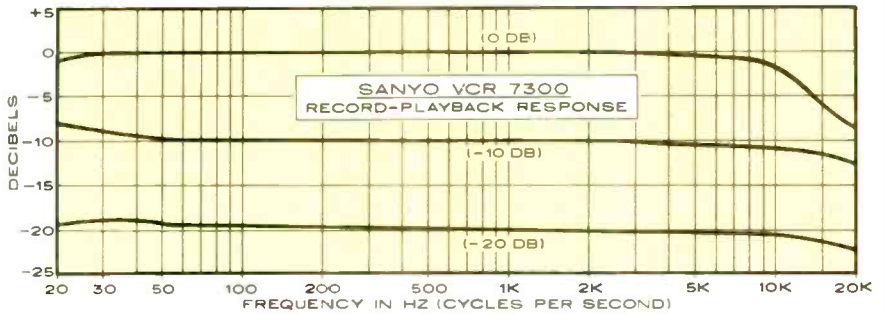


## test reports

corder can be programmed for instant tuning to any of twelve TV channels. The TV tuner has a full 105-channel capability, and a complete set of channel numbers is supplied for insertion into the windows below the selector buttons. A hinged door on the panel provides access to the programming controls as well as to the timer buttons for setting the clock and the timer-recording function. With the door closed, pushbuttons are accessible for switching the display between clock and tape-counter readout, switching on the counter-memory system (which stops the tape at 0000 when rewinding), and resetting the counter to 0000.

The VCR 7300's timer can be set to record any single broadcast during a seven-day period or a broadcast on each of the seven days at the same time. The clock display is an LCD panel on which the day of the week and the time are visible even when the recorder is turned off. Other operating information, such as the use of the rewind-memory feature or of a camera input source, also appears in this window. It is clearly visible in daylight or normal room lighting, and pushing a button on the panel lights it internally for use in the dark. Next to the LCD panel are the recording-level indicators, two parallel rows of LED's calibrated from -18 to +6 dB (green up to -3 dB, red from 0 to +6 dB). These display audio levels during Beta Hi-Fi recording and playback.

A sliding door below the programming door covers the mode-selection controls. A three-position REC MODE slide switch selects either mono or Beta Hi-Fi stereo recording of a video program. The third position, STEREO AUDIO, is for audio-only recording using the Beta Hi-Fi system. The input selector also has three positions, one for video programs from the tuner, one for a camera, and one for the external video-input phono jack on the side of the recorder. An EXT AUDIO IN switch sets the VCR 7300 to record audio either from the TV tuner or from



the machine's external audio-input jacks.

Two small knobs adjust the audio recording level, and a switch below them replaces the manual adjustment by an automatic level control. Another switch selects the tape speed, either Beta II or Beta III; Beta Hi-Fi performance remains the same at both speeds. With an L-830 cassette (the longest currently available) these speeds provide maximum uninterrupted recording times of 200 and 300 minutes, respectively. Tape speed is automatically selected during playback. A knob switch selects the audio-output mode, with a choice of stereo, mono, or either channel alone. Except with Beta Hi-Fi tapes, the output is automatically in mono.

A recess on the right side of the recorder contains standard phono jacks for the external audio inputs and outputs (stereo) and the video input and output, miniature phone jacks for a stereo headphone and two microphones, a multi-pin camera connector, a 12-volt power jack for use with a car battery, and F-type coaxial connectors for a 75-ohm TV antenna cable and for connection to the TV receiver's antenna input. An EDITING slide switch simplifies start/stop editing by eliminating the brief unrecorded tape segment that would otherwise occur each time the PAUSE function was used. Another switch selects either Channel 3 or Channel

4 for the VCR output to the TV receiver. Price: \$1,000. Sanyo Electric, Inc., Dept. SR, 1200 West Artesia Boulevard, Compton, Calif. 90220.

● **Laboratory Measurements.** Our tests of the Sanyo VCR 7300 were limited to its Beta Hi-Fi audio mode, using a standard L-500 Beta cassette. A "0-dB" recording level as indicated on the meters required an input of 0.24 volt, and the playback output was 0.34 volt. The playback distortion at the 0-dB level varied somewhat with frequency, from 0.21 per cent over most of the audio range to 3.2 per cent at 10,000 Hz. At -10 dB, the distortion was only 0.06 per cent at 1,000 Hz, 0.22 per cent at 100 Hz, and 1 per cent at 10,000 Hz. At 1,000 Hz, a +6.5-dB input was required for a reference playback distortion of 3 per cent. With the automatic recording-level system in use, the LED indication never exceeded -9 dB, and waveform clipping occurred at 3.4 volts input.

The signal-to-noise ratio, relative to the output from a +6.5-dB input signal, was 75 dB unweighted and 81.5 dB with A-weighting. The channel separation was 55 dB at 1,000 Hz and about 40 dB at 10,000 Hz. The flutter was even lower than rated, 0.003 per cent weighted rms (JIS) and  $\pm 0.004$  per cent weighted peak (CCIR). All these measurements were made at the faster Beta II speed, but spot checks at Beta III showed no differences in performance.

The record-playback frequency response was measured at 0, -10, and -20 dB. The test signal, sweeping from 20 to 20,000 Hz, was recorded from a digital Compact Disc test record and a CD player whose measured response was flat within 0.1 dB over that range. The playback signal from the VCR 7300 was plotted on the automatic tracking module of a Urei response plotter. At -10 and -20 dB, the playback response was within +1, -2 dB from 20 to 20,000 Hz. At 0 dB, it was within +0, -1.5 dB from 20 to 10,000 Hz, falling to -8.5 dB at 20,000 Hz.

Additional response measurements were made using an expanded display scale for improved resolution. At -20 dB (Beta II speed) the two channels had identical responses, sloping down by 1 dB from 20 to 10,000 Hz and to nearly -3 dB at 20,000 Hz. The slightly different results of this measurement compared with the first one reflect its five-times-better amplitude resolution. Another high-resolution measurement was made at -20 dB using both the Beta II and Beta III speeds. Above 1,000 Hz the two response curves were identical;



"... Yes, yes, I hear the amplifier clipping! That darned electric company! If we've asked them once, we've asked them a dozen times—send us more amperes and watts, we'll pay whatever it costs!"

## test reports

below that frequency the response was almost perfectly flat with Beta II but rose to +0.6 dB at 20 Hz with Beta III. The rewind time for the L-500 cassette was 3 minutes 13 seconds, a very reasonable time for a tape capable of holding either 2 or 3 hours of high-quality program.

● **Comment.** The instruction manual for the Sanyo VCR 7300 appears to be very complete in its explanation of the many control functions and operating modes. Nevertheless, this is not an easy machine to use until you have mastered its idiosyncrasies. The most disturbing of these was the confusing identification of the positions of the REC MODE switch. Its markings suggest that Beta Hi-Fi is operational in all three positions, but it actually functions in only two of them.

Otherwise, the VCR 7300 proved to be a

superb audio recorder. We dubbed several digital Compact Discs on it, and the playback was, for all practical purposes, indistinguishable from the original. It is important that the maximum recording level not exceed +3 dB (the second red light), although the worst effect of mild over-recording was slightly compressed dynamics not unlike those produced by a typical audio cassette recorder.

The use of this machine as a portable VCR seems less promising than its audio potential. There are much lighter and smaller portable VCR's available for use with cameras (the TV tuner is not needed for this), and the styling and features of the Model 7300 do not seem particularly appropriate for home video recording. But as a portable (or even a fixed) audio recorder it appears to be an excellent value. Of course, in order to use even a fraction of its poten-

tial, you'll need a pair of good microphones and at least a simple mixer. The miniature microphone jacks seem incongruous considering the caliber of microphone that is justified—even mandatory—with a machine of this quality. Incidentally, Sanyo strongly recommends that a spare charged battery pack be available when operating on battery power. If the battery goes dead, you have to replace it before you can even open the tape compartment to remove the cassette!

In sum, the Sanyo VCR 7300 impressed us as an ingenious exploitation of the Beta Hi-Fi technique. It is a very fine tape recorder whose performance, though not quite the equal of a digital machine, is better than any but the finest studio analog open-reel tape recorders—and at a small fraction of the price. —Julian D. Hirsch

Circle 140 on reader service card



Yamaha R-50 AM/FM Receiver

**Y**AMAHA'S R-50 stereo receiver, one of the lower-priced models in its current product line, offers a combination of unusual features and fine performance. The R-50 is rated to deliver 35 watts per channel into 8-ohm loads from 20 to 20,000 Hz with no more than 0.015 per cent total harmonic distortion. Good as it is, this specification is not particularly unusual for one of today's sophisticated consumer electronic products. What is unusual is that the R-50 was designed and rated to drive low-impedance loads. Its dynamic-power output at 1,000 Hz is specified as 60 watts into 4 ohms and 70 watts into 2 ohms. The ability to provide higher output into low impedances—and its inclusion in the published specifications—is most unusual for any receiver, and it is almost unique for one in the price range of the R-50.

For the user, the Yamaha R-50 looks and acts much like a digital-synthesis receiver. It has pushbuttons for tuning, station presets, and a digital frequency readout. But the R-50 does *not* use a digital-synthesis tuner section, at least not in the conventional sense. Yamaha describes the circuitry as a "Computer Servo Lock" tuning system that automatically adjusts the tuned fre-

quency to the exact signal frequency of strong broadcasts but uses a more conventional PLL synthesizer for reception of weak or noisy signals.

The front panel of the Yamaha R-50 presents a neat, uncluttered appearance. A large display window contains LED's that indicate the tuning mode (auto-scan or manual), signal quality (three levels), stereo FM reception, the tuned frequency, and the selected signal source. The sources, selected by four large pushplates above the window, include TAPE MONITOR, PHONO, VIDEO/AUX, and TUNER. To the left of these are ten station-preset pushbuttons, each of which can be used to store and recall one station frequency, including its band (AM or FM) and mono or stereo mode. Pressing a preset button automatically switches the tuner's band and mode settings to those activated when the memory was loaded. Each time the receiver is turned on, it begins in the tuner mode. A power pushplate completes the array across the top of the panel.

A large volume knob is at the right of the panel, and below the input display are four small knobs for the tone, balance, and loudness controls. Some years ago, Yamaha was one of the first major receiver manufactur-

ers to offer the kind of truly useful loudness-compensation system found in the R-50. At the clockwise limit of the LOUDNESS knob the frequency response is flat. Rotating the LOUDNESS knob counterclockwise reduces the midrange volume by up to 20 dB, with a lesser effect at lower and higher frequencies so that they become slightly boosted relative to the midrange level. The resulting response contours are well chosen, and the ability to match them to actual listening levels (using the separate volume control) makes this one of the few effective loudness-control systems we have seen.

Another useful feature of the Yamaha R-50 is the BASS EXTENSION pushbutton. This affects frequencies below 100 Hz, boosting the response by a maximum of +8 dB at 60 Hz and cutting off sharply (18 dB per octave) below 45 Hz. The receiver also has a fixed infrasonic filter rolling off below 15 Hz at 12 dB per octave. Most of the other front-panel controls pertain to the tuner section. There is a tuning bar (marked DOWN at the left end, UP at the right) and pushbuttons for loading the preset memory, selecting the AM or FM frequency band, and selecting the tuning mode (automatic

(Continued on page 40)

# Buff Stuff from TDK.



You, the audiophile, are the toughest critic we know when it comes to sound performance. You're very selective in deciding the perfect equipment for your recording and listening needs.

And you're just as selective in choosing your recording tape. TDK knows that. So we developed a line of high performance audio cassettes that meet your critical requirements.

We call it the TDK Professional Reference Series.

You're probably using TDK SA-X high bias cassettes now because of their superior performance characteristics. In addition, TDK has developed normal bias AD-X which uses TDK's famous Avilyn particle formulation and delivers a wider dynamic range with far less distortion than ever before. Plus, TDK's unique metal bias MA-II cassette which features high-energy performance in a one-of-a-kind unibody

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The TDK Professional Reference Series...it'll sound impressive to your ears. So share the pleasure with your friends; they'll appreciate it.

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When was the last time this many publications agreed on anything?



"My friends there kept hopping in and out of the car, shaking their heads in delighted astonishment."



"... the one option no one should go without ..."



"If your car is this well equipped, you won't want to go home again."



"Best Sound System: Delco-Bose"



"... you have to hear it to believe it."



"The results are fantastic."



"... a concert hall on wheels!"



"A new and revolutionary sound system ..."



"... (a) system which purists and novices alike will appreciate."





"Believe every rave you've read, and then some."



"... one of the sweeter bargains of the year."



"... a car stereo the quality of which is, in a word, stunning."



"I've experienced all kinds of car stereos, but nothing like this system."



"... Delco-GM/Bose deliver a knockout punch!"



"...this sonic paradise..."

"... a truly outstanding advance in automotive sound."



"The performance... was astounding... I can't imagine anyone (buying) one of these cars... without the music system."

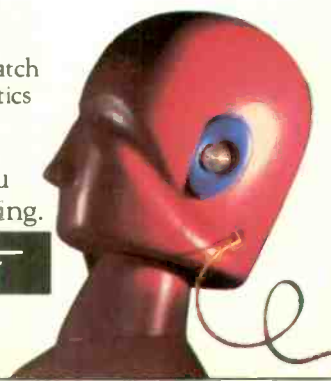
Will you have the same reaction as the press? Our recent experience has convinced us that, regardless of your interest in music, you will require less than one minute of listening to know that you want the Delco-GM/Bose Music System in your next car.

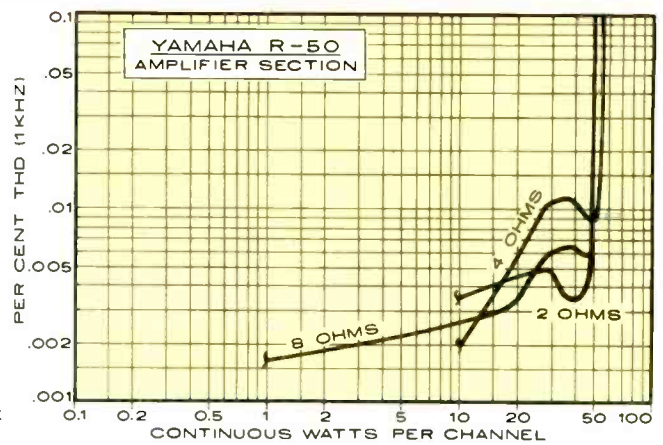
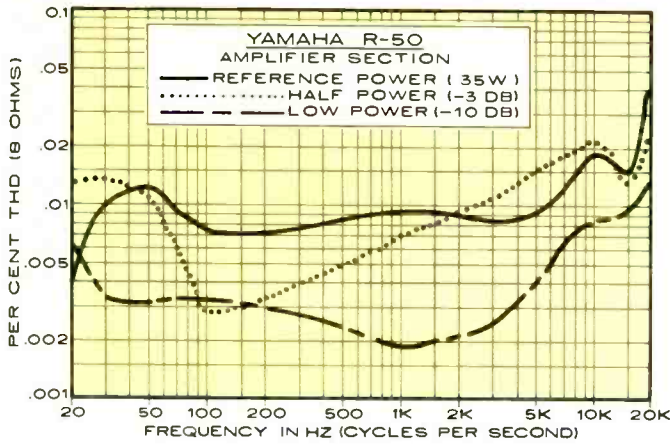
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or manual/FM mono). In the manual tuning mode, FM reception is mono only, and touching the tuner bar changes frequencies in discrete steps, with 0.1-MHz increments for FM and 10-kHz increments for AM; holding the bar in for a couple of seconds causes the selected band to be scanned rapidly. In the auto mode, a single touch on the bar causes the tuner to scan, with the audio output muted, until it finds a signal of sufficient strength, at which point it stops and unmutes after a couple of seconds' delay; stereo FM broadcasts are automatically decoded for stereo. Two speaker-selector buttons and a headphone jack complete the front-panel facilities.

The rear apron of the R-50 contains the various signal jacks, antenna connectors (push-type insulated posts), insulated spring-loaded speaker terminals, a hinged and removable AM antenna, and two a.c. outlets (one of them switched). The output transistors are cooled by large internally mounted fins through a sealed-fluid heat-transfer system; air passes by convection from the bottom of the receiver to exit at the top. For proper operation of the heat-transfer system, Yamaha recommends installing the receiver on a level surface with the cooling holes unobstructed. The Yamaha R-50, with a satin-silver finish, measures 17<sup>1</sup>/<sub>8</sub> inches wide, 13<sup>3</sup>/<sub>4</sub> inches deep, and 4 inches high. It weighs about 14 pounds. Price: \$335. Yamaha Electronics Corp.,

USA, Dept. SR, 6660 Orangethorpe Avenue, Buena Park, Calif. 90620.

● **Laboratory Measurements.** Preconditioning the Yamaha R-50 by driving both audio channels at one-third rated power into 8-ohm loads for an hour left its top very hot to the touch, though not dangerously so. (The top became only faintly warm in normal operation.) Its power output at clipping (with a 1,000-Hz signal) was 47.5 watts per channel into 8-ohm loads, 57 watts into 4 ohms, and a most impressive 50 watts into 2 ohms. The 8-ohm clipping headroom was 1.33 dB. Dynamic-power measurements more than confirmed Yamaha's ratings, with short-term outputs of 66 watts into 8 ohms and 85 watts into either 4 or 2 ohms, for an 8-ohm EIA dynamic headroom of 2.78 dB.

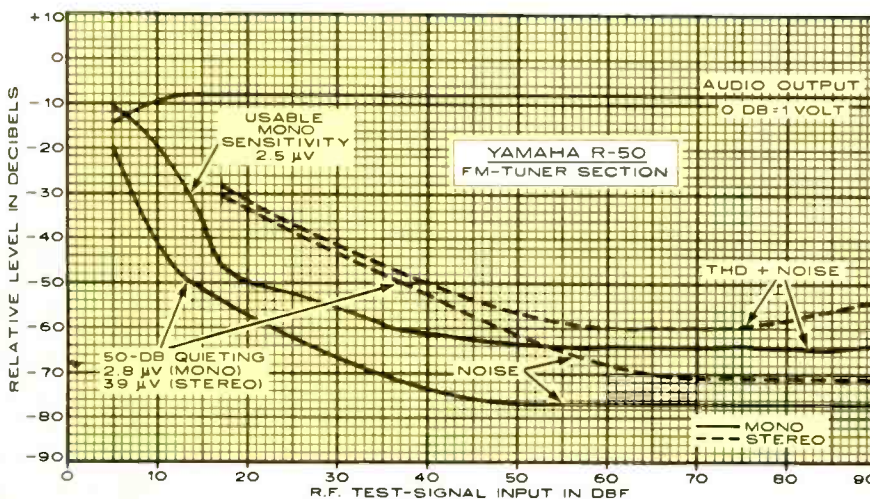
The R-50's amplifier had very low distortion under all operating conditions short of actual clipping. With 8-ohm loads, the 1,000-Hz distortion was 0.002 per cent or less up to several watts output, rising to about 0.006 per cent at 45 watts, just before the waveform clipped. The 4-ohm distortion readings rose from 0.002 per cent at 10 watts to 0.012 per cent at 30 to 40 watts, dropping off to 0.009 per cent at 50 watts. Even 2-ohm operation did not significantly increase the distortion, which was between 0.0035 and 0.005 per cent from 10 to 40 watts and 0.02 per cent at 50 watts.

The total harmonic distortion at rated power into 8 ohms was between 0.008 and 0.012 per cent from 26 to 7,000 Hz, reaching 0.02 per cent in the 10,000- to 20,000-Hz range. At typical listening levels (a few watts), it was under 0.004 per cent from 30 to 5,000 Hz and just over 0.01 per cent at 20,000 Hz. The intermodulation distortion with equal-amplitude 18,000- and 19,000-Hz input signals was -84 dB (relative to 35 watts) for the third-order products at 17,000 and 20,000 Hz. The second-order (1,000-Hz) distortion product could not be detected down to our -100-dB measurement-noise level. The slew factor exceeded our test limit of 25. The amplifier was stable with reactive simulated speaker loads.

Through the high-level inputs, 22 millivolts (mV) were required for a reference 1-watt output. The corresponding phono-input sensitivity was 0.42 mV. The respective A-weighted noise levels were -83 and -80 dB relative to 1 watt. The phono input overloaded at levels between approximately 85 and 100 mV, depending on frequency. Although lower than the overload levels we have measured on some other amplifiers, this level is completely adequate for today's moving-magnet cartridges and records. The phono-preamplifier input impedance was 54,000 ohms in parallel with a relatively high 250 picofarads. (Most cartridges should perform properly with this amplifier if the record player, like most newer ones, has connecting cables with no more than 100 picofarads capacitance per channel.)

The tone-control range was a moderate  $\pm 8$  to 10 dB, sufficient for any reasonable listening requirements. The fixed infrasonic filter began to roll off the lows at about 100 Hz, but the response was down only 3.5 dB at 20 Hz (-1 dB at 35 Hz). The BASS-EXTENSION circuit had the claimed response. The loudness compensation boosted both lows and highs (the latter only slightly), with most of the action taking place near the limit of the control, where the midrange level was down by 20 dB. The RIAA phono equalization (measured at the tape output) was perfectly accurate (within 0.1 dB) from 600 to 20,000 Hz, falling slightly at lower frequencies to -1 dB at 20 Hz. The equalization was not affected significantly by phono-cartridge inductance.

The FM tuner had a usable sensitivity in mono of 13.2 dBf (2.5 microvolts, or  $\mu\text{V}$ ), and in stereo it was 17.9 dBf (4.3  $\mu\text{V}$ ), just



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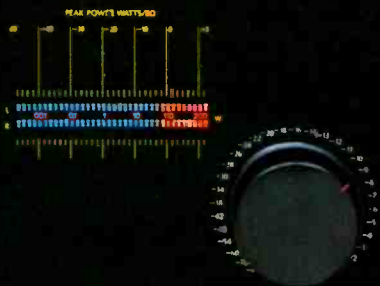
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CIRCLE NO. 44 ON READER SERVICE CARD

above the stereo threshold of 17 dBf (4  $\mu$ V). The 50-dB quieting sensitivity was 14.1 dBf (2.8  $\mu$ V) in mono, and in stereo it was 37 dBf (39  $\mu$ V). The ultimate quieting achieved (at 65 dBf, or 1,000  $\mu$ V) was 77 dB in mono and 70 dB in stereo, and the corresponding distortion readings were 0.06 and 0.1 per cent. Both the distortion and noise readings were so close to the residual levels of our signal generator that we can consider both parameters to be below our measurement limits.

The stereo FM frequency response was flat within 0.5 dB overall from 30 to 15,000 Hz. The channel separation was also exceptionally uniform, between 35 and 37.5 dB from 30 to 6,000 Hz and still a very good 33 dB at 15,000 Hz. The FM intermodulation distortion, with 14,000- and 15,000-Hz modulating frequencies, was down 55 dB for third-order products (mono and stereo); the second-order (1,000-Hz) distortion was -73 dB in mono, -71 dB in stereo.

In terms of tuning the R-50 behaved exactly as though it had a very powerful amplified AFC (automatic frequency control) system. The distortion was always at its minimum value (unlike the case with almost all other frequency-synthesis tuners we have tested). When we detuned the signal generator slightly to see if the distortion decreased, there was a short increase followed by a slower return to the minimum value as the tuner followed the changing frequency. This "pulling" effect prevented us from measuring the tuner's capture ratio or its adjacent-channel selectivity, but the alternate-channel selectivity was a good 65 dB (and quite symmetrical about the center frequency, another rare occurrence among FM tuners).

The AM rejection was 66 dB at 45 dBf

(100  $\mu$ V), and the image rejection was 52 dB. The stereo threshold was difficult to determine exactly, since it was apparently in the range where the tuner shifted from one tuning system to the other; however, it seemed to be around 13.5 to 20 dBf (2.5 to 5.5  $\mu$ V). Despite the tuner's flat high-frequency response, the 19-kHz pilot carrier in its output was at a very low -72 dB. The tuner hum was also very low at -74 dB. The AM-tuner frequency response was unusually wide, being down 6 dB at 60 and 7,000 Hz.

● **Comment.** It is often difficult for us to get especially enthusiastic about any particular stereo receiver because most are generally similar in features and competent in performance. But the Yamaha R-50 is a welcome exception to that rule, definitely *not* "just another stereo receiver!"

For one thing, its audio amplifiers are designed to cope with the real world of speakers, which may demand large instantaneous current peaks that many amplifiers (particularly those in low-priced receivers) are simply unable to deliver. The emergence of digital recordings, with their extended dynamic range, makes this an even more important consideration when choosing an amplifier or receiver. The R-50 is, to the best of our knowledge, the first receiver from a major Japanese manufacturer that seems designed to be able to drive even the lowest load impedances likely to be presented to it.

The R-50 is equally noteworthy in its more conventional specifications. Special emphasis has been placed on features that can contribute in a meaningful way to the sound quality. No esoteric philosophy of audio perception is needed to appreciate the

benefits of the bass extender or the superb Yamaha loudness compensator. The former imparts a welcome bottom-end "punch" with not a hint of muddiness or artificial mid-bass tubbiness. Although it is especially suited to smaller speakers whose bass is limited, we found it equally beneficial with larger speakers and many headphones. The receiver's infrasonic filtering is unique in this class of product. Most such "filters" have nearly ineffective 6-dB-per-octave slopes; the R-50's filter drops at 12 dB per octave—or something like 30 dB per octave when the bass extender is used. No speaker driven by this receiver is going to be overloaded by infrasonic rumble!

The extended AM bandwidth also sets this receiver apart from others, though to our disappointment the sound from our local AM stations was no better than we are accustomed to hearing. The receiver is limited, of course, by the quality of what is broadcast, but this does not detract in any way from the desirability of having a reasonable tuner bandwidth like the R-50's.

In every respect, we found the handling and sound of the Yamaha R-50 to be of the highest quality. Its measured performance ranged from satisfactory to superb—tending strongly toward the latter! This receiver would be worthy of special mention if its price were three times as high; at \$335 the R-50 is one of the more striking values we have seen lately. A decade or so ago, some receivers of roughly similar power rating but vastly inferior overall performance sold for considerably *more* than the R-50. Better than most products, the R-50 demonstrates how much more "hi-fi" your 1983 dollar can buy.

—Julian D. Hirsch

Circle 141 on reader service card



Technics RS-M234X Cassette Deck

**T**HE Technics RS-M234X is a two-head, single-capstan cassette deck that incorporates all three major noise-reduction systems—Dolby-B, Dolby-C, and dbx—in an attractively priced "no frills" design. Its record/playback head is made of hardened permalloy, and a single d.c. motor drives

both the capstan and the reel hubs. The transport functions are activated by push-button mechanical linkages rather than by solenoids, but these are far easier to use than the old piano-key levers. A useful transport feature is that the fast-forward or rewind buttons may be depressed during

play, permitting high-speed cue-and-review operations with an instant return to the play mode. A three-digit mechanical counter is used for the tape-position indicator, but no memory-stop or other counter-activated functions are provided.

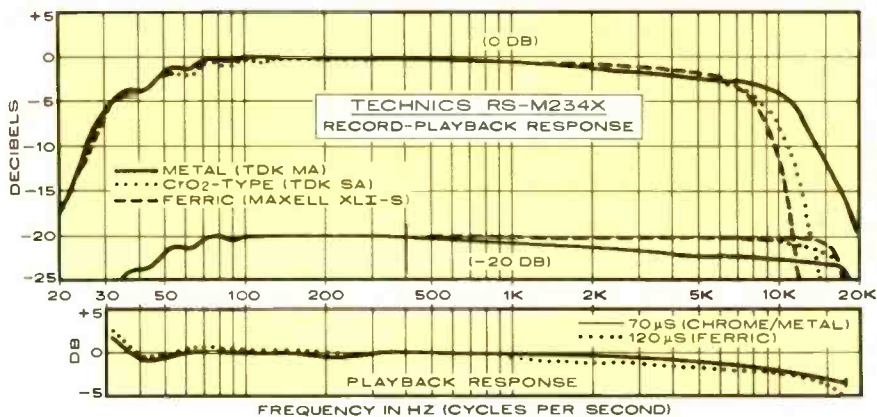
Sensors inside the cassette well detect the

tape type (shown by indicator lights) and automatically set the proper equalization and bias (the settings cannot be overridden manually). The clear window gives a good view of the cassette label, and the door is removable for head cleaning and demagnetizing. Pushbutton switches are used for record mute and to select either no noise reduction, Dolby-B, Dolby-C, or dbx. An additional pushbutton allows for the decoded playback of dbx-encoded discs. Recording level is set with a single slide control (1¾-inch travel), and an additional, center-detented slider (¾-inch travel) is used to adjust left-right channel balance. No playback-level control is provided. Recording and playback levels are shown on an eight-segment peak-reading fluorescent display, which is calibrated from -40 to +18 dB with the Dolby-level marking at +2 dB. Front-panel phone jacks are provided for headphones and a pair of microphones.

The rear panel of the RS-M234X contains only the usual input and output jacks. Overall, the deck measures 17 inches wide, 4¼ inches high, and 8¾ inches deep, and it weighs approximately 9¾ lbs. Price: \$220. Technics, Dept. SR, One Panasonic Way, Secaucus, N.J. 07094.

● **Laboratory Measurements.** The playback frequency response of the RS-M234X was measured using BASF's IEC standard calibrated tapes. Above 1,000 Hz was a gradual downward treble slope that reached -5 dB at 18,000 Hz with the 70-microsecond equalization used for metal and high-bias tapes. The maximum loss with 120-microsecond (ferric) equalization was 3.5 dB. This degree of loss on prerecorded materials would probably go unnoticed under normal listening conditions, but it can be detected in direct comparison with a flat-response deck; it can be corrected with a slight adjustment of the amplifier's treble control.

Our sample of the RS-M234X deck was factory-adjusted for the new-formulation Maxell XLI-S (ferric), TDK SA (high-bias), and TDK MA (metal), which we



The upper curves indicate overall record-playback response at the manufacturer's indicated 0-dB recording level using the tapes designated on the graph. In the center are the same measurements recorded at -20 dB relative to the upper curves, a level conventionally used for tape-deck frequency-response measurements. Bottom curves show playback response from calibrated test tapes and indicate performances with prerecorded tapes.

used for our own measurements. As shown in the -20-dB record-playback frequency-response curves in the accompanying graph, Maxell XLI-S gave extremely flat response to approximately 16,000 Hz. The -3-dB points for TDK SA and MA were at 17,000 Hz, and it is apparent from the rolloffs in both the -20- and 0-dB MA curves that our sample of the deck was either slightly misequalized, overbiased, or suffering from head saturation with the metal tape. Because the Maxell XLI-S tape is new on the market, we also checked the overall frequency response with a number of other ferric tapes. TDK AD-X—which, like XLI-S, normally has a slightly rising high end—gave flat response, but most premium-quality ferrics (for instance, 3M's new XS-I and Maxell's own UD) showed slight high-end losses similar to that shown for the metal MA. In any event, however, when any of the three noise-reduction systems was used a built-in FM-multiplex filter was automatically inserted into the circuit, essentially

eliminating all response above 16,000 Hz. At the low end, the -3-dB frequency was a relatively high 45 Hz, and response below that dropped severely. At least in part this appears to be deliberate (perhaps to minimize picking up low-frequency rumble), for the response of the amplifier section alone fell to -12 dB at 20 Hz.

The 0-dB level indicated on the RS-M234X's peak-reading display was 4 dB lower than the IEC 0-dB reference level (250 nWb/m). Distortion at the deck's 0-dB level was very low: 0.38 per cent with Maxell XLI-S, 0.4 per cent with TDK SA, and 0.34 per cent with TDK MA. Correspondingly, the overload margins before reaching the 3 per cent third-harmonic distortion point used for measuring signal-to-noise ratio (S/N) were somewhat high: 10.2, 6.4 and 8.5 dB, respectively. Based on the output for 3 per cent distortion, the unweighted S/N's (with no noise reduction) for the three tapes were 55.2 dB (Maxell XLI-S), 56 dB (TDK SA), and 55 dB (TDK MA). With IEC A-weighting and Dolby-B the S/N figures improved to 69.2, 68.2, and 67.6 dB, respectively, and Dolby-C raised them to 74.7, 74.2, and 74.3 dB, which is very impressive indeed. These signal-to-noise ratios will only be reached in actual recording, however, if you allow signal peaks to go well above the deck's 0-dB marking. The RS-M234X owner's manual suggests maximum levels ranging from +4 to +8 dB, depending on the tape type and noise-reduction system used, and our measured overload margins basically agree with these recommendations.

The dbx noise-reduction system (unlike either form of Dolby) is a 2:1 compressor-expander. This means that if the input signal has a dynamic range of 90 dB, the dbx-encoded signal recorded on the tape will be compressed to 45 dB, which any good deck can handle. In playback, the encoded signal is expanded by 2:1, thus restoring the original 90-dB range. Measuring the signal-to-noise ratio of a tape deck with dbx is not always easy, however, because the compression/expansion prevents the customary 3 per cent distortion level on the tape from being reached. Instead, amplifier clipping



"... Wellll, yeah, it does sound good, but I think I'll wait till they get all the bugs out and put music on both sides."

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within the RS-M234X became evident at tape-plus-expander playback levels in excess of +17.5 dB (which were actually above the +18-dB indication on the deck's own display). At this very high output level all three tapes had an A-weighted S/N of approximately 94.5 dB. To achieve that high a figure, however, requires using an input level well above what the owner's manual and the red line on the deck's display (+12 dB) recommend. But to avoid treble-saturation losses, we would suggest not going much beyond the IEC 0-dB level (+4 dB on the RS-M234X's display) when using the dbx system in the deck.

Wow-and-flutter, measured using our Teac MT-111 test tape, was 0.045 per cent wrms and 0.08 per cent DIN peak-weighted. Both figures are about average for a deck in this price class. The tape speed varied slightly with the amount of tape on the supply hub but averaged about 0.6 per cent fast. Line-level sensitivity (315-Hz input for an indicated 0-dB on the fluorescent display) was 76 millivolts (mV), and at 0 dB the output level registered 400 mV.

Microphone sensitivity measured 0.25 mV, and the microphone stage reached overload at 47 mV, which is slightly above average. Dolby-level calibration was accurate, and Dolby-B and Dolby-C tracking accuracy was within  $\pm 1$  dB throughout the range of the deck, an excellent figure. Fast-forward and rewind speeds for a C-90 cassette were just over two minutes (85 seconds for a C-60), which is about average for a single-motor transport.

● **Comment.** With both prerecorded and dubbed material we found the sound quality of the RS-M234X to be very good. (Its two-head design made instantaneous source-tape comparisons impossible, so we had to compare finished dubs with synchronized playbacks of the source materials.) A prerecorded passage of Scriabin (on a Connoisseur Society cassette) that we frequently use to test for clarity on piano tones was more clearly reproduced on our \$1,550 reference deck, but few people would value the degree of sonic difference that highly. Using very wide-range materials, such as

Compact Discs, there were some audible losses from source to copy in the top and bottom octaves, but, again, we had to be really looking for trouble to find it.

The dbx system did not audibly "breathe" or "pump," but rapid drum passages seemed slightly blurred, and the leading edge of solo trumpet tones seemed slightly dulled in comparison with Dolby-C. Dolby-B, on the other hand, left too much hiss, at least at the elevated levels we use for critical listening.

Mechanically, the RS-M234X performed quietly and well. Our only criticisms here would be that the fast-forward and rewind buttons are awkwardly small and that the transport remains engaged if the power is turned off (by the power switch or a timer) during play or record. The simple solution to the latter problem is, of course, to push the stop button before turning off the deck. Overall, we found the RS-M234X, with its three noise-reduction systems, an extremely good value for its price. —Craig Stark

Circle 142 on reader service card



Akai CD-D1 Compact Disc Player

THE extensive automatic features and programmable operation of the Akai CD-D1 make it one of the most versatile Compact Disc players we have used. Like all CD players, the CD-D1 employs a laser light source and a photodiode pickup that "tracks" a spiral pattern of microscopic pits on a 4.7-inch-diameter disc. The electrical output of the pickup is in a digitally encoded form from which the original audio program can be recovered with almost total fidelity.

Most of the performance specifications of the CD-D1 are determined by the industry-wide Compact Disc standard, so they are similar to those of other CD players. For example, its frequency response is specified as 20 to 20,000 Hz  $\pm 0.5$  dB, its dynamic

range, signal-to-noise ratio (S/N), and channel separation all as exceeding 90 dB, its harmonic distortion as less than 0.005 per cent, and its wow and flutter as essentially nil (the steadiness of playback pitch is ensured by a highly stable quartz-crystal oscillator).

Akai also specifies some of the approximate program-access times of the CD-D1, including a start-play time of 2 seconds and an average random-access time of 3 seconds. It differs from most current CD players in having sharp-cutoff digital output filters instead of the sharp-cutoff analog filters that other players use. Digital filtering reduces an otherwise unavoidable phase shift at the higher audio frequencies in the program playback. Whether there are any

audible benefits to this lack of phase shift has yet to be decided by research.

The most obvious special qualities of the Akai CD-D1, however, pertain to the great operating flexibility provided by its built-in microprocessor controller. Besides being able to play up to twenty-four selections in a programmed order, the CD-D1 can cue up passages within any recorded selection according to the time in minutes and seconds from its start, and it can directly cue up passages identified on some discs by recorded index points. It also allows for "phrase repeat" play, which permits any portion of a selection to be defined and then replayed as often as desired, and automatic selection-repeat play in any of the cueing modes. Of course, the user can also instruct the unit to





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The CT-90R also features Pioneer's exclusive Ribbon Sendust Heads for wide dynamic range, extended high frequency response, and high signal-to-noise ratio. Dolby® C noise reduction minimizes tape noise.

A sophisticated 3-Direct-Drive-Motor Tape Transport features our own smooth, cog-free, DC Servo Hall design motors for low wow and flutter. Then there's C.A.C. (Computer Aided Convenience), a system that provides a unique ease-of-operation package that includes Blank Search, Index Scan, Blank Skip and Reverse, and Music Repeat.

Together, all these features give you a cassette deck that's so automatic, you only have to do one thing.

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CIRCLE NO. 10 ON READER SERVICE CARD

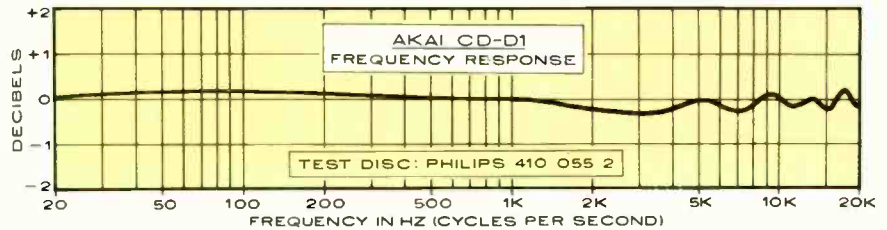
## test reports

play any single selection on a disc by specifying its number.

About half of the front panel of the Akai CD-D1 is devoted to pushbutton controls and indicators for the programming functions, the other half to the disc-loading door. Pressing the STOP/EJECT button causes the bottom-hinged door to swing open. The disc is inserted into a slot on the upper edge of the door, which must then be closed manually. Pressing the PLAY/START button begins play at the beginning of the disc. The PAUSE button stops and starts playback on alternate touches (but, unlike most LP record players, playback always resumes at the exact point where it was halted).

A four-digit display in the center of the panel normally shows the time in minutes and seconds from the start of the selection being heard, and above it another digital readout shows the selection number. Illuminated indicator dots in the time window denote indexed or memory-playback operation, and pressing a button marked TOTAL TIME changes the display to show the elapsed time from the start of the disc instead of from the start of the selection. Indicator lights above the selection display show whether the CD-D1 is in its play, pause, or standby mode (the last is when the player is cueing up a selection). A window above the time display contains a red LED that moves behind a ruler-type scale to show the relative position of the laser pickup head in its path across the disc.

Pressing the F.FWD or the F.REV button slews the pickup rapidly ahead or back; normal play is resumed automatically when the button is released. (No sound is heard in either fast-speed mode.) Two buttons are marked IPLS (for Instant Program Locating System). A momentary pressure on the left-hand button causes the pickup to skip either back to the start of the previous selection on the disc (if it is pressed within the first 4



seconds of play of a selection) or back to the start of the same selection (if pressed more than 4 seconds into a selection). Pressing the right-hand button causes the pickup to skip to the start of the next selection on the disc. In the memory-playback mode, only the right-hand IPLS button is operative, and pressing it causes the player to skip to the next programmed selection.

The right portion of the front panel contains ten memory-selection buttons (numbered from 0 to 9) and related controls. Up to twenty-four selections can be programmed for play in any order by pressing, in sequence, the correspondingly numbered buttons and the SET button for each one. It is easy to check the program sequence by pressing MEMO CALL, which causes the numbers of the programmed selection to appear in sequence in the time-display window. The programmed sequence can be canceled by pressing the C/AC button. Other programming buttons include PHRASE (for the phrase-repeat function), INDEX and TIME (for cueing), and REPEAT (which repeats a programmed sequence).

The rear apron of the Akai CD-D1 contains two audio-output jacks and a small knob that adjusts the output level. The exterior, including most of the main operating controls, is a satin-finished silver color, with the other control areas in dark blue and gray. The player measures 17¼ inches

wide, 5¾ inches high, and 12½ inches deep, and it weighs 16¼ pounds. Price: \$1,000. Akai America, Ltd., Dept. SR, 800 West Artesia Boulevard, Compton, Calif. 90220.

● **Laboratory Measurements.** The CD-D1's playback frequency response, measured using the Philips Test Sample 3 (TS3) test record, was flat within +0.2, -0.3 dB from 20 to 20,000 Hz, with both channels having identical responses. The slight fluctuation took the form of a cyclic output variation over the full audio range, becoming more visible in the response curve at higher frequencies. This is a typical characteristic of CD players that use high-frequency digital filtering instead of an analog filter cutting off just above the audio range.

The maximum audio output from a 0-dB recorded level (the maximum possible from a digital disc) was 2.28 volts, with the channel levels matched within 0.12 dB. The 1,000-Hz playback distortion was measured with the Philips TS3 record at recorded levels of 0, -6, -12, and -24 dB (at lower recorded levels the minuscule distortion components were not discernible in the spectrum analysis of the signal). Referred to these output levels, the total harmonic distortion (THD) measured 0.0025, 0.0045, 0.0075, and 0.01 per cent, respectively. When these measurements are referred to the maximum (0-dB) output, the distortion percentages naturally come out lower, with a maximum value of only 0.001 per cent at the -24-dB recorded level. Intermodulation distortion was measured at 0 and -20 dB with mixed test signals of 60 and 7,000 Hz. The respective readings were 0.005 and 0.02 per cent (again, the latter figure falls to 0.002 per cent if the measurement is referred to the maximum output).

The stereo channel separation was measured with the Sony YEDS2 test record at several frequencies from 100 to 20,000 Hz. Measuring in both directions (from left to right and from right to left), we found differences of from 2 to 9 dB between the two channels. The average reading ranged from a maximum of 98.5 dB at 1,000 Hz to a still outstanding minimum of 85.5 dB at 20,000 Hz. The signal-to-noise ratio (S/N) relative to 0 dB was 96.5 dB unweighted and 102 dB with A-weighting. The playback speed was exact, and the flutter reading was the residual of our meter, about 0.001 per cent.

All digital players (tape as well as disc) employ some form of error-correcting system to correct for a reasonable number (up to several thousand) of consecutive errors that could otherwise produce a highly audible noise. Since not all such systems are equally effective, this quality is one of the

### Akai CD-D1 Operating Features and Hirsch-Houck Labs Test Results

#### Manual Features

- Skip to next selection? Yes
- Skip back to previous selection? Yes (see text)
- Skip to start of current selection? Yes
- Scan/search? Yes
- Program audible during scan/search? No
- Repeat selection/side? Yes (see text)
- Repeat phrase? Yes
- Cue by selection number? Yes
- Cue by index number? Yes
- Cue by time? Yes

#### Programming Features

- Can order be random? Yes
- Can sequence be repeated? Yes
- Skip forward to next item? Yes
- Skip back to previous item? No

#### Lab Measurements

- Maximum fixed output level: 2.28 volts
- Maximum variable output level: 2.28 volts
- Total harmonic distortion at 1,000 Hz: 0.0025 per cent referred to 0 dB; 0.01 per cent referred to -24 dB
- Intermodulation distortion: 0.005 per cent referred to 0 dB; 0.02 per cent referred to -20 dB
- Signal-to-noise ratio: 96.5 dB unweighted; 102 dB A-weighted
- Channel separation: 98.5 dB at 1,000 Hz; 85.5 dB at 20,000 Hz
- Frequency response: 20 to 20,000 Hz +0.2, -0.25 dB
- Cueing time: 6 seconds

#### Other Lab Tests

- Impact resistance: top, A; side, A
- Cueing accuracy: A
- Defect tracking: (figures are size of the largest defect successfully tracked): signal-surface damage, 800 micrometers; painted dots, 500 micrometers; simulated fingerprint, pass

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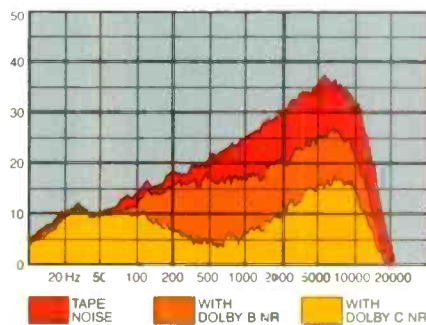
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We refer to the FTX 180 and the other Sanyo FTX Series models as "mobile studio sound systems".

Admittedly, that's a pretty lofty description. But once you hear one in your car, you won't dare call it anything less.



**SANYO**

CIRCLE NO. 12 ON READER SERVICE CARD

few genuine and meaningful distinctions between CD players.

One of the Philips test discs (TS4A) is a modified version of a musical sampler to which calibrated amounts of embedded signal-surface damage, opaque simulated external "dirt" spots, and a pattern of ruled lines that simulates a fingerprint have been added. By playing this record and noting the exact time at which a playback interruption is heard, it is possible to establish the amount of data interruption that can be corrected by the player's circuits. The outer-surface "damage" on this record ranges from 300 micrometers, which should be playable by any properly functioning unit, to 800 micrometers, with which few players can cope. The Akai CD-D1 had a momentary "hang-up" during the 500-micrometer interruption caused by a surface spot and "stuttered" when playing a selection with a 600-micrometer interruption. The interruptions in the inner information layer range from 400 to 900 micrometers in length (the former should be within the ca-

pabilities of any properly operating player). The CD-D1 was able to play the 800-micrometer interruption but had momentary drop-outs at 900 micrometers. There were no audible problems caused by the simulated fingerprint.

The mechanical tracking action of the laser-optical system was apparently well controlled, for moderate impacts on the top or side of the unit did not affect its tracking performance. Slewing from Track 1 to Track 15 of the Philips TS4 sampler took 6 seconds. The CD-D1 was able to make the transition from Track 17 to Track 18 of that disc with no clipping of the opening syllables on the latter track; since there is no quiet interval between these tracks, a player with "loose" servo control sometimes clips the start of Track 18 when cueing it up.

● **Comment.** Only one aspect of the Akai CD-D1's performance impressed us as at all worth criticizing: it repeats a disc indefinitely until the STOP button is pressed—even when the repeat function has not been

activated. While this operating quirk is mentioned in the manual, it is not emphasized, and it was a bit surprising. In any case, the manual should be read carefully by users who hope to get the most out of the CD-D1. Although it is easy enough just to load a disc, press PLAY, and listen to it straight through, mastering the many special operating features that make this player so versatile takes a little study and practice.

In terms of its "sound," all we can say is that the CD-D1 is certainly equal to any other CD player we have tested. This will surely be the rule in future tests as well, since all properly operating CD players necessarily sound virtually identical. Trying to describe sonic differences between them—let alone expressing a preference—seems pointless. Instead, we'd rather concentrate on tracking abilities and programming functions, in both of which the Akai CD-D1 clearly excels.

—Julian D. Hirsch

Circle 143 on reader service card



KEF Carina II  
Speaker  
System

**T**HE Carina II, one of the least expensive models in the KEF product line, is a compact two-way, three-driver speaker system whose symmetrical driver layout makes it suitable for either vertical or horizontal mounting. The completely enclosed walnut-finished wooden cabinet is 23<sup>3</sup>/<sub>8</sub> inches high, 11<sup>7</sup>/<sub>8</sub> inches wide, and 10 inches deep, and the system weighs about 20<sup>3</sup>/<sub>4</sub> pounds.

The Carina II has two 7-inch woofers located near the ends of the front board and a 1<sup>1</sup>/<sub>8</sub>-inch dome tweeter between them. The dark-brown cloth grille assembly is retained by plastic snaps. Heavy-duty binding posts (suitable for use with large-diameter speaker cables and connectors) are recessed into

the rear of the cabinet. No controls are provided. The manufacturer's specifications include an on-axis frequency response of 60 to 20,000 Hz  $\pm$  3 dB, which changes by less than 2 dB over a range of  $\pm$  5 degrees vertically or  $\pm$  20 degrees horizontally (up to 12,000 Hz). The speaker is rated to deliver an 89-dB axial sound-pressure level (SPL) at 1 meter with a 1-watt input of pink noise, and the nominal system impedance is 8 ohms. The Carina II requires minimum amplifier power of 10 to 15 watts per channel, and its 80-watt "program-power" rating makes it compatible with amplifiers rated at 50 to 100 watts per channel. Price: \$500 per pair. KEF Electronics Ltd., Dept. SR,

425 Sherman Avenue, Suite 130, Palo Alto, Calif. 94306.

● **Laboratory Measurements.** Although the size and shape of the KEF Carina II make it suitable for shelf mounting, for best results KEF recommends positioning it at least 20 inches from a rear wall and about 40 inches from a side wall. This recommendation and the driver layout imply a vertical floor installation, which we used in our test and listening room, placing the speakers on 7-inch-high stands.

The averaged room response for the left and right speakers was generally very smooth and extended, although there was a

dip of about 5 dB at 2,000 Hz. The close-miked woofer response reached its maximum at 100 Hz, sloping down gently to about -5 dB in the 500- to 1,500-Hz range and dropping sharply above that frequency. Although the crossover frequency of the Carina II is not specified, it appears to be about 1,500 Hz. The woofer response, which varied  $\pm 2.5$  dB from 60 to 1,600 Hz, fell at 18 dB per octave below 60 Hz.

The spliced composite frequency response was flat within  $\pm 3.5$  dB from 55 to 20,000 Hz except for the additional 2,000-Hz dip. This is, of course, excellent room response for a speaker. The quasi-anechoic frequency response, measured with our IQS FFT signal-analysis system, was very similar to the composite room-response curve. It confirmed the reality of the response "hole," which appeared to fall between 2,000 and 3,000 Hz. The 45-degree horizontal polar dispersion of the Carina II was very good, showing only about 3 dB of variation in output up to 12,500 Hz. The phase linearity was also very good, as demonstrated by the group-delay characteristic, uniform within 0.2 millisecond from 5,000 to 20,000 Hz and varying less than 0.5 millisecond down to 500 Hz.

The measured sensitivity of the speaker was 90 dB, almost exactly as rated. The impedance was typically 8 to 20 ohms between 20 and 1,000 Hz, falling to a broad minimum of 4.5 to 5 ohms from 3,000 to 13,000 Hz. We consider this compatible with the 8-ohm nominal rating. Woofer distortion was measured with a constant input of 2.83 volts (equivalent to 90 dB SPL in the mid-range). It was very low, 0.5 per cent or less, from 100 to 80 Hz, rising to 7 per cent between 40 and 50 Hz and to 16 per cent at 30 Hz. Both this and the low-frequency response measurements indicate that the speaker has an effective low-frequency limit of 55 to 60 Hz, which is consistent with its rating.

● **Comment.** The KEF Carina II must be considered a very good speaker, surely one of the better models in its price range. It has an obviously clean, smooth, and well-balanced sound that is pleasantly free of coloration in any part of the audible range. The 2,000-Hz response dip, whatever its cause, was never audible as such with musical program material. The Carina II has almost none of the lower-midrange emphasis typical of many dynamic speakers. As a result, male voices sound like people talking in a room instead of inside a barrel.

The KEF Carina II is the kind of speaker we can listen to for hours on end without tiring. It is a neutral-sounding speaker, perhaps even more neutral than our reference units (which tend to sound a trifle heavy in our room). The lesson here is (as we have stated before) that speakers do not function in isolation but are inextricably linked to the listening environment. In the case of the Carina II, the strong similarities between its room and anechoic responses, and their consistency with its subjective sound, indicate to us that it is one of the top contenders among speakers costing \$500 per pair or less.

—Julian D. Hirsch

Circle 144 on reader service card

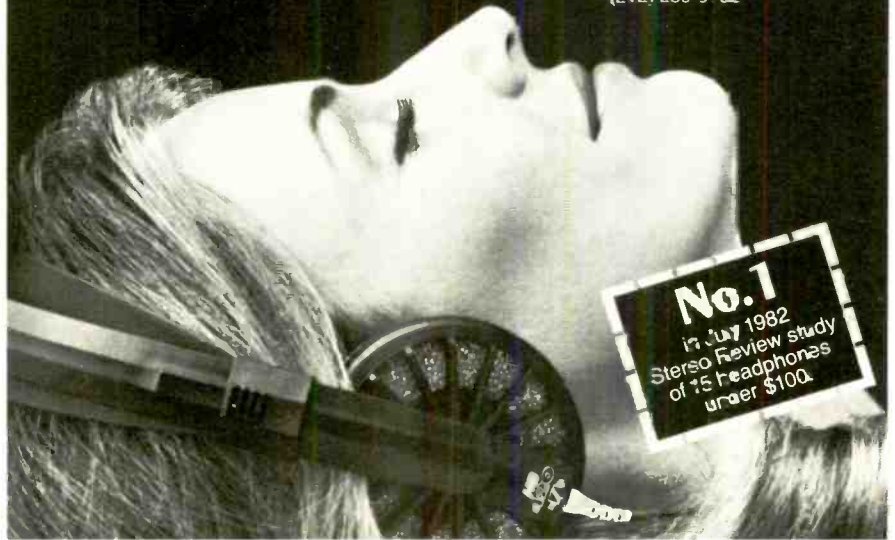
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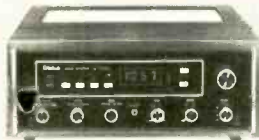
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# Car Stereo

By Christopher Greenleaf and Julian D. Hirsch



NAKAMICHI TD-1200

**T**HE Nakamichi TD-1200 is the nucleus of a deluxe automobile stereo system whose performance ratings match or surpass those of many high-quality home systems. The TD-1200 proper consists of an AM/FM tuner, a cassette deck, and a preamplifier; its matching Nakamichi components, which we did not test for this report, include the PA-300 70-watt power amplifier and the SP-400 three-way speaker system.

Probably the most striking feature of the TD-1200 is its cassette player, which uses the unique Nakamichi Auto Azimuth Correction system (NAAC) heretofore available only on the Nakamichi Dragon home cassette deck (reviewed here in April 1983). The NAAC continuously adjusts the playback-head azimuth alignment to match that of the tape's recorded tracks, thereby ensuring the best high-frequency response from any tape, even if its recorded azimuth is in error or if tape skewing varies the effective azimuth in playback.

The tape transport occupies most of the control unit of the TD-1200, although in normal operation there is no external evidence of this. The transport is housed in a drawer whose front panel contains the function displays and many of the controls, including pushbuttons to select tape direction, fast-forward or rewind, 120- or 70-microsecond playback equalization, and Dolby-B, Dolby-C, or no noise reduction. There are also five station-preset selectors, each usable for an AM and an FM station. The Dolby-B function can be used to decode Dolbyized FM broadcasts, and in that mode the receiver's FM de-emphasis is automatically changed to 25 microseconds.

The only controls not on the front of the cassette drawer are two sets of concentric knobs. The ones to the left of the panel control volume, turn the tuner on or off, and adjust tone in the bass, midrange, and treble ranges. The three similar concentric knobs at the right of the panel are for select-

ing AM or FM reception (with three positions for the latter: automatic-stereo, high-blend, and mono), balance, front/rear fader for four-speaker installations (which requires two power amplifiers), and tuning. Holding the tuning knob against either limit stop causes the tuning to step rapidly upward or downward in frequency; a single brief twist of the knob shifts the frequency by one increment (10 kHz for AM and 0.2 MHz for FM). Pushing the knob in starts automatic station-seek tuning.

Pressing the stop/eject button causes the center panel of the TD-1200 to move out slightly, exposing a raised lip across its top. The entire cassette transport can then be pulled out like a drawer. A cassette is inserted, business end out, in the top of the drawer. The drawer is then pushed shut by hand until it latches, which automatically starts playback of the tape.

Every time a tape is played, the NAAC

automatically adjusts the head alignment, as indicated by the flashing NAAC indicator on the front panel. This initially takes about 2 seconds, after which the indicator letters remain dark except when the system has to operate to correct the azimuth during tape play. The TD-1200 is an auto-reverse tape player. It has the special feature of a sensor that responds to 20 seconds of silence from the tape by advancing to the end of the side at high speed, reversing, and automatically playing the second side, thus eliminating a prolonged silence between the end of the recorded program and the end of the tape.

Because the main control unit of the Nakamichi TD-1200 is largely devoted to its cassette transport and tape and tuner operating controls, the bulk of its tuner circuitry is housed in a separate box about the size of the typical car radio. This has no controls and connects to the control unit through two five-foot cables fitted with DIN connectors. The tuner unit can be installed anywhere within cable reach of the control unit (the cables cannot be extended, however).

The TD-1200 has another unique feature: a digital security lock that makes it impossible to operate the system without keying in a five-digit code through the station-selector buttons. When the car's ignition is turned on, the stereo is inoperative for 3 minutes. After that it cannot be turned on unless the numerical code is first keyed in. The lock feature can be disabled, however, by pressing a button on the panel before shutting the system off, though the 3-minute turn-on delay cannot be eliminated. Price for the TD-1200: \$1,260. Nakamichi USA Corp., Dept. SR, 1101 Colorado Avenue, Santa Monica, Calif. 90401.

## Lab Tests

The basic frequency response of the TD-1200 (through the FM tuner) was flat within  $\pm 0.5$  dB from 30 to 11,000 Hz and down only 1 dB at 28 and 16,500 Hz. The tone controls had a considerable effect, especially in the bass (with a  $\pm 18$ -dB maximum control range). The midrange control was centered at 200 Hz, with a range of about  $\pm 10$  dB. The FM-tuner response was, of course, the same as the measured audio response, but its channel separation was a

## Hirsch-Houck Labs Measurements

**FM mono usable sensitivity** (75-ohm input): 14.1 dBf (1.4  $\mu$ V)  
**Mono 50-dB quieting sensitivity** (75-ohm input): 16.3 dBf (1.8  $\mu$ V)  
**Stereo 50-dB quieting sensitivity** (75-ohm input): 19.2 dBf (2.5  $\mu$ V)  
**Tuner signal-to-noise ratio** at 65 dBf: mono, 70 dB; stereo, 66 dB  
**Tuner distortion** at 65 dBf: mono, 0.13 per cent; stereo, 0.13 per cent  
**FM frequency response** ( $-3$ -dB limits): 23 to 17,000 Hz  
**Stereo separation** at 100, 1,000, and 10,000 Hz: 34, 37.5, and 35 dB  
**Capture ratio** at 65 dBf: 1.95 dB  
**AM rejection** at 65 dBf: 65 dB  
**Alternate-channel selectivity**: 71 dB  
**Adjacent-channel selectivity**: 5.7 dB  
**Image rejection**: 76 dB  
**AM frequency response** ( $-6$ -dB limits): 58 to 2,700 Hz

**Tape-playback frequency response** (standard BASF test tapes,  $-3$ -dB limits): 31 to 18,000 Hz, forward and reverse, 120- and 70- $\mu$ s EQ  
**Tape signal-to-noise ratio** (referred to 250 nWb/m at 315 Hz, 120- $\mu$ s EQ): 45 dB unweighted; 74.7 dB with Dolby-B, CCIR/ARM weighting; 82.3 dB with Dolby-C, CCIR/ARM weighting  
**Flutter**: at start of cassette,  $\pm 0.09$  per cent CCIR weighted peak, 0.065 per cent JIS weighted rms; at end of cassette,  $\pm 0.09$  per cent CCIR weighted peak, 0.058 JIS weighted rms  
**Tape speed accuracy**:  $-0.3$  per cent at start of cassette,  $-0.35$  per cent at end of cassette  
**Fast-rewind time** for C-60 cassette: 50 seconds  
**Tone-control range**:  $+13.5$ ,  $-14$  dB at 100 Hz;  $\pm 8$  dB at 10,000 Hz

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function of signal strength. At 65 dBf (500 microvolts, or  $\mu\text{V}$ , into 75 ohms) the separation was 37 to 38 dB from 200 to 6,000 Hz, and it was better than 27 dB from 30 to 19,000 Hz. With the signal level reduced to 45 dBf (50  $\mu\text{V}$ ) the separation was a nearly constant 11 to 12 dB over the full audio range. In the high-blend mode, the channels were progressively blended in the high frequencies to reduce noise with weak stereo signals. The stereo indicator was lit with as little as 13 dBf (1.2  $\mu\text{V}$ ) input, but the progressively blended channels make it an ineffective indicator of weak-signal stereo performance.

The NAAC feature of the cassette transport led us to expect something unusual from this unit, and we were not disappointed. Its frequency response was essentially the same for either equalization characteristic: almost perfectly flat from 31.5 Hz to about 7,000 Hz and rising slightly, +2 to +3 dB, from 16,000 to 18,000 Hz. Outstanding as this was, it was even more impressive to see the response similarity between the forward and reverse directions of tape motion.

Virtually every other auto-reverse car tape deck we have tested has exhibited a considerable fluctuation in output level when playing high-frequency test tones (above 10,000 Hz), especially in the reverse direction of tape motion. Instead of the usual 5- to 8-dB variations, the output of the Nakamichi deck showed no more than 1 dB of fluctuation in the reverse direction and even less than that in the forward direc-

tion. This was a convincing demonstration of consistent head-to-tape contact.

Testing the Nakamichi TD-1200 left us with good feelings. In terms of measured performance it usually met or surpassed our previous best results for car stereo equipment. In fact, it is at least the equal of a good home stereo receiver in terms of tuner performance and preamplifier controls, and it is better than the majority of home cassette decks in terms of playback performance. Its performance was so impressive that we could overlook the otherwise exasperating 3-minute turn-on delay and give the creators of the digital lock system an "A for effort" even though we doubt it will deter a professional thief (at least until his customers seek restitution for their non-functioning purchases!). —J.H.

## Road Tests

I was fortunate to have use of the TD-1200 long enough to rack up nearly a thousand miles of driving with different FM-reception problems and all types of asphalt, concrete, and dirt road surfaces from Baltimore to Cape Cod. This was quite an experience, but the heart of our test route is still that peculiar corner of New York City adjacent to the Brooklyn Navy Yard, a stretch of the Brooklyn-Queens Expressway, and the Brooklyn Bridge. Over this route the TD-1200's FM tuner had a chance to prove itself against every kind of poor-to-lousy urban reception conditions *anyone* is likely to encounter.

These test areas are filled with strong signals undergoing marked interference, but the Nakamichi tuner never overloaded and typically gave very clean sound. Each of the three main classical-music stations in the New York area has a distinct character to its overall sound, and the TD-1200 is one of the few car tuners I have ever heard that lets these small shadings in signal quality come through in virtually any reception area. Multipath intruded less than I've become accustomed to from very fine mobile tuners, though where it did interrupt it was unmistakable. Test drives past the Empire State Building's transmitters did not reveal any cross-modulation problems, and the normally terrible stereo reception around the footings of the Brooklyn Bridge was merely bad. In mono the multipath effects only rarely obscured the signal.

Reception on outer Cape Cod, which has a clear but distant view of Boston—as the FM waves fly—was substantially cleaner than with any car system I have tested there. With a few Boston stations stereo was even listenable when the high-blend circuit was switched in. I very much appreciated having a choice between full stereo and "full" mono, with the well-behaving high-blend option available to compensate for poor reception conditions on some rural highways. AM listening was as good as the best I've heard and sometimes quieter than the output of a few poor-quality FM tuners, though any distortion or noise in the broadcast signal was very faithfully reproduced.

There is very little to say about the TD-





1200's rock-steady tape transport. Slow driving over rumble strips, granite-block streets, and *twelve* railroad tracks at one crossing near New Haven, Connecticut, simply made little or no impression on the cassette player. A brief, slight wavering of pitch accompanied a 40-mph dash over those same tracks, however.

The player's Dolby-B and Dolby-C performance was equally impeccable. Noise reduction operates best only when proper high-frequency response is maintained in playback, so the effectiveness of the Dolby systems in the TD-1200 is partly thanks to the elegant and very effective NAAC system. To test this system, I recorded some purposely misaligned selections with plenty of high-frequency content. The deck successfully tracked everything, and only a pair of spots where I had wrenched the azimuth out of adjustment very quickly showed up as a brief dulling of the treble. Such an effect would never occur in a normal recording, but it proved just how closely the NAAC circuits tracked the tape.

The player's automatic reverse on detection of a long blank passage worked well with all of my tapes except one in which an unusually low-level orchestral passage lasting several minutes triggered a premature reversal. But this was a *very* low-level recording throughout, and with most tapes even very quiet orchestral passages are unlikely to be cut off. I found the security system a nuisance, however. I grew more and more impatient at having to wait three minutes and then enter the code each time I re-

started my car. While the system might make it possible for an owner to limit use of his costly car stereo to a few choice friends, how is a potential thief to know that an ill-gotten TD-1200 is useless without the code?

Otherwise, the unit's human engineering is mostly very good, with controls that are

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*"The Nakamichi TD-1200 usually met or surpassed our previous best results for car stereo equipment . . ."*

---

efficient and easy to use. Two small exceptions were the volume knob and the LED indicators. The former often came off in my hand when I tried to pull it out for use as the midrange tone control, and there was no way to adjust the shaft to grip it tighter. And some of the LED indicators on the control panel became almost invisible in direct sunlight or even with a bright overcast sky. Even the somewhat larger tuner frequency display was sometimes hard to see clearly without taking my eyes away from the road for a longer time than is really safe.

The TD-1200's tone controls are unusually flexible. The bass control adjusts only the deepest bass; the maximum boost appeared to be around 20 Hz. The midrange control is centered lower than most,

at around 200 Hz, where it easily adjusts the "body" and "warmth" parts of the frequency range; it also reaches down into the upper bass, which suggests that Nakamichi shares with many music lovers the notion that the upper bass and lower midrange ought to be treated as interdependent regions. With the maximum region of treble boost at 20 kHz, right at the top of the musical range, the only relatively uncontrollable portion of the frequency spectrum is centered around 1,500 Hz. An intelligently conceived loudness switch would have been welcome, if only for making a quick adjustment for lower-volume listening while the car is quieter without having to rearrange carefully set tone controls. But the midrange control (in effect a variable loudness control) was unusually useful and tamed a few ragged spots in my car's acoustics.

The Nakamichi Mobile Sound System is a well-conceived group of components whose elaborate design is found not on the exterior, where the controls are sufficient but not overabundant, but inside. The NAAC system, the very solid cassette transport mechanism, the musically useful configuration of the three tone controls, and the obvious quality of the tuner are all elements of the TD-1200 that impressed me even more after using them for some time than they did at first. I think the Nakamichi TD-1200 would become a traveling companion that could not fail to be a very high-quality program source, which is what all the technical virtuosity is ultimately about. —C.G.

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CIRCLE NO. 14 ON READER SERVICE CARD

# HOW TO CHOOSE A CARTRIDGE

By Julian D. Hirsch

**A**LTHOUGH there have been few major changes in phono-cartridge design in recent years, the number of cartridge models available seems to have grown without restraint. The more than three hundred listed in STEREO REVIEW'S 1984 *Stereo Buyers Guide*, priced from \$15 to \$2,500, present a bewildering range of choice for the prospective purchaser. Fortunately, the process of selecting a cartridge need not be as complicated as it appears.

In most cases, the differences in sound quality between comparably priced cartridges will be slight. You might hear them in a true A/B test (very rarely performed correctly with cartridges), but do not expect the kind of audible differences that are typical of loudspeakers. In fact, probably one of the best ways of going about selecting a phono cartridge is to put off listening tests until you are near the end of the process.

The first steps toward a decision should be concerned with compatibility. What characteristics make a phono cartridge suitable for your particular hi-fi system, for your turntable's tone arm and the phono-input circuit of your amplifier or receiver? After you have determined the basic characteristics a cartridge should have to be compatible with your other components, the range of choice will still allow a final selection based on your budget and your individual preferences (here is where the listening tests come in, perhaps). And you will be able to choose a cartridge without risking a serious mistake.

## Amplifier Compatibility

Moving-magnet (MM), moving-iron, and induced-magnet phono cartridges are all *fixed-coil* cartridges, as distinguished from *moving-coil* (MC) cartridges (see box on page 59). From a user's standpoint there are no significant inherent performance differences between the several types of fixed-coil magnetic cartridges—you can find bad to superb examples of every type of cartridge technology.

In general, moving-coil cartridges

have a much lower *output level* than fixed-coil models, often less than 0.1 millivolt when playing a "standard groove" (1,000 Hz recorded on a disc to produce a groove velocity of 3.54 centimeters per second rms). Therefore, they need additional amplification to make them compatible with standard phono inputs, which require about 3 millivolts output from a cartridge playing a standard groove. Sometimes the boost is provided by special step-up transformers or pre-amplifiers inserted in the signal path between the cartridge and the phono input, but today a number of integrated amplifiers, preamplifiers, and receivers have either special MC inputs or phono inputs with sufficient gain to operate directly from low-output MC cartridges. There are also some high-output moving-coil cartridges, typically delivering from 1.5 to 2.5 millivolts, which can be used in a system just like any fixed-coil cartridge. Such cartridges may require the volume control to be set slightly higher than normal for a given listening level; therefore, to keep the audible noise level as low as possible, it is important that the amplifier not have a lower than normal phono-input gain.

Moving-coil cartridges have a much lower internal impedance than other types, usually no more than a few ohms. Their *loading requirements* are generally quite noncritical: the high-output types operate into the standard 47,000-ohm phono input, and lower-output models work perfectly well into a transformer or pre-preamplifier with 20 to 30 ohms of input impedance.

Virtually every fixed-coil cartridge is designed to deliver its specified frequency response when it is loaded by a resistance of 47,000 ohms shunted by a capacitance in the range of 100 to 500 picofarads. Fortunately, virtually every amplifier or receiver phono input has an input impedance of around 47,000 ohms (from the standpoint of cartridge performance, the precise value is quite noncritical).

The capacitance loading of a cartridge is less easily established, being the sum of the phono preamplifier's in-

put capacitance, the tone arm's wiring capacitance, and the capacitance of the tone arm's connecting cables. Although a *large* mismatch can affect the upper-midrange and high-frequency response of the cartridge (some being more sensitive than others to this), a departure from the manufacturer's recommendation of  $\pm 50$  per cent is usually quite acceptable. If you have complete spec sheets for your turntable and amplifier, add up the capacitances involved to see if they fall into the cartridge manufacturer's recommended range.

Another, though less important, compatibility consideration involves the output voltage of the cartridge and the *input-overload point* of the phono preamplifier. At one time this was a potential source of distortion on loud passages, especially if a high-output cartridge were used with a low-overload-point preamplifier. Nowadays this is much less likely to happen since almost all fixed-coil cartridges of reasonable quality have an output in the vicinity of 1 millivolt per centimeter per second of groove velocity when playing a standard groove. Although a loud recorded passage rarely exceeds groove velocities of 15 cm/s or so, it is possible for signal peaks to reach two to three times that level, so the phono stage should be able to accept an input of 50 millivolts or more without distortion. A number of years ago there were many that did not; today, practically every component-quality amplifier or receiver has a phono-overload point of 100 millivolts or more, making the issue moot.

## Tone-Arm Compatibility

In addition to cartridge/amplifier compatibility, it is important that the cartridge be compatible with the tone arm in which it is to be used. This breaks down into *installation* compatibility (whether a particular cartridge can be used in a particular tone arm) and *mechanical* compatibility (whether the cartridge can play ordinary warped and otherwise deformed records when installed in a particular arm).

Regarding installation, it is obvious that a cartridge's weight must fall within the range for which the tone arm's counterweight can compensate. Equally obvious is that the tone arm must be capable of proper operation at the tracking force required by the cartridge (some older or very cheap turntables have arms that will not allow tracking forces below 2 or 3 grams). Not so obvious—until you get the equipment home and the full magnitude of the task becomes apparent—is that installing a cartridge in a tone arm is a delicate operation requiring care and precision.

To ease the cartridge-mounting chore, the *P-mount* installation system was developed by Technics for its linear-tracking turntables, and it has since been adopted by several other Japanese turntable manufacturers. A P-mount tone arm directly accepts only cartridges with standardized dimensions, weight, and connection-pin configuration. This standardization means that the user just has to plug the cartridge into the end of the arm and fasten it by tightening a locking screw. P-mount cartridges are designed to have correct stylus alignment and tracking force automatically when plugged into a P-mount tone arm, eliminating all the normal setup adjustments. Originally only a few P-mount cartridges were available, but today most cartridge manufacturers produce a line of P-mount versions of their more popular standard cartridges.

Mechanical compatibility of cartridge and tone arm involves matching a cartridge's *compliance* (the springiness of the suspension holding the stylus cantilever) with the tone arm's *effective mass*. Not matching these two can produce a combination that will have difficulty tracking warped records and may be prone to skipping grooves on loud passages. A good cartridge/tone-arm match will have a *resonant frequency* of from 8 to 12 Hz. There is no easy way to determine this, however; the measurement is a complex process. All I can do is offer a basic guideline: the higher a cartridge's compliance (which generally means the lower its recommended tracking force), the lower the tone arm's mass should be. Conversely, the heavier the tone arm (this can often be roughly judged by eye and by moving the arm by hand), the lower the compliance of the cartridge that should be used with it (and the higher that cartridge's tracking-force range).

In general, the least-expensive cartridges have heavy, sturdy stylus cantilevers with relatively low compliance and either a spherical or elliptical stylus with a fairly large minor radius (for instance, 0.4 x 0.7 mil) because larger styli are easier to manufacture (see article on page 60). Such a cartridge will be rated to track at a relatively high force, possibly as much as 4 to 6 grams, and is best suited for use in a relatively massive tone arm, the kind that comes with the least-expensive turntables. In a low-mass arm, a low-compliance cartridge may have a mechanical resonance at a higher than optimum frequency, thus affecting its response at the lower audio frequencies. Anyway, the least-expensive cartridges are intended to be used in inexpensive record players and will perform poorly, if

at all, in more sophisticated models.

Higher prices usually bring a progressive reduction of required tracking force, with the best cartridges rated for operation at 1 to 1.25 grams, which makes them suitable for a high-quality tone arm designed to track at forces not exceeding 3 grams. These low tracking forces are associated with lighter, more fragile stylus systems and special stylus shapes. Even if such an expensive, low-tracking-force cartridge could be installed and balanced in a low-priced, massive tone arm, the tone-arm bearing friction and/or inertia would probably require exceeding the cartridge's optimum tracking force, which would at least degrade the performance of the cartridge and might even make it unusable. Worse, disc wear and damage would be greatly accelerated. Thus, an expensive and delicate cartridge used in a low-priced player could easily prove inferior in performance to a less-expensive one meant for such operation.

Most moving-coil cartridges require a relatively high tracking force compared to fixed-coil cartridges in the same price ranges. A recommended force of 2 grams is typical of the better MC models, although some will operate at lower forces. Moving-coil models also tend to have less compliant stylus systems and are thus best suited to medium-mass tone arms. It is well to keep in mind, however, that stylus tracking force per se is *not* an absolute indicator of cartridge quality—or even of potential record wear. Wear is related to the pressure per unit area exerted on the vinyl groove wall by the stylus, and thus to the shape of the stylus tip as well as to the applied tracking force.

## Audio Specifications

Most cartridge specifications include *frequency-response* and *channel-separation* ratings, the former being by far the most important. But, as with amplifiers and speakers, the frequency response of a cartridge has little meaning when expressed only in the form "20 to 20,000 Hz  $\pm 3$  dB"—and none at all if the tolerance is omitted. Differences in test discs and procedures can account for many of the differences in ratings and/or test results among cartridges. None of this information tells much about how the cartridge might sound.

Far more useful is a frequency-response *graph*, though the test-method caveats also apply here. Look for a cartridge with as flat a response as possible when playing into the kind of load your amplifier or receiver presents (hence the concern with cartridge/amplifier compatibility). Many, but not all, of the most highly touted moving-coil car-

tridges (and many lower-priced fixed-coil models) exhibit a rise in frequency response at the highest audio frequencies. Some audiophiles like the "air," "space," or "sheen" this imparts to the music. Others, however, would prefer a more accurate frequency response.

When comparing frequency responses, remember to check the test conditions and make sure they are standard (as in the test reports in *STEREO REVIEW*) or at least similar. Also make sure that if a published response curve looks flat it's because the cartridge response is flat and not because the graph was plotted with a compressed vertical scale (10 dB per vertical division, say).

Channel separation exceeding 15 to 20 dB over most of the range from 100 to 10,000 Hz is more than sufficient for a subjectively full stereo effect. Higher separation ratings or test results are unlikely to produce audible benefits. And, like frequency response, measured separation is very much a function of the test procedure. In this case the geometrical alignment of the cartridge in the tone arm and how well this alignment matches that of the cutting stylus used to make the test record are very important variables.

Ranking in many listeners' minds as equal to or even higher in importance than frequency response is something called *tracking ability*, which is the ability of a cartridge's stylus to follow the undulating groove wall without losing contact. Tracking ability is related in a complex way to tracking force, recorded frequency, and recorded level as well as to the actual construction of the cartridge. It is important because mis-tracking—which is what happens when the stylus loses contact with the groove—not only causes high audible distortion but can cause permanent groove damage.

Some manufacturers specify tracking ability either with a graph or at spot frequencies. The ratings are either in terms of recorded velocity (centimeters per second) or at a single frequency in terms of recorded amplitude (for instance, "60 micrometers at 300 Hz"). The higher the velocity or the greater the amplitude, the better. Tracking ability is one of the measurements we make on all cartridges tested for *STEREO REVIEW*.

In sum, don't just rush out and buy the first cartridge that seems to have good specs. Find out which cartridges have the *right* characteristics for your turntable's tone arm, which ones will get along well with your preamplifier, amplifier, or receiver. Then make your choice. The pay-off is better sound. □

## Cartridge Types

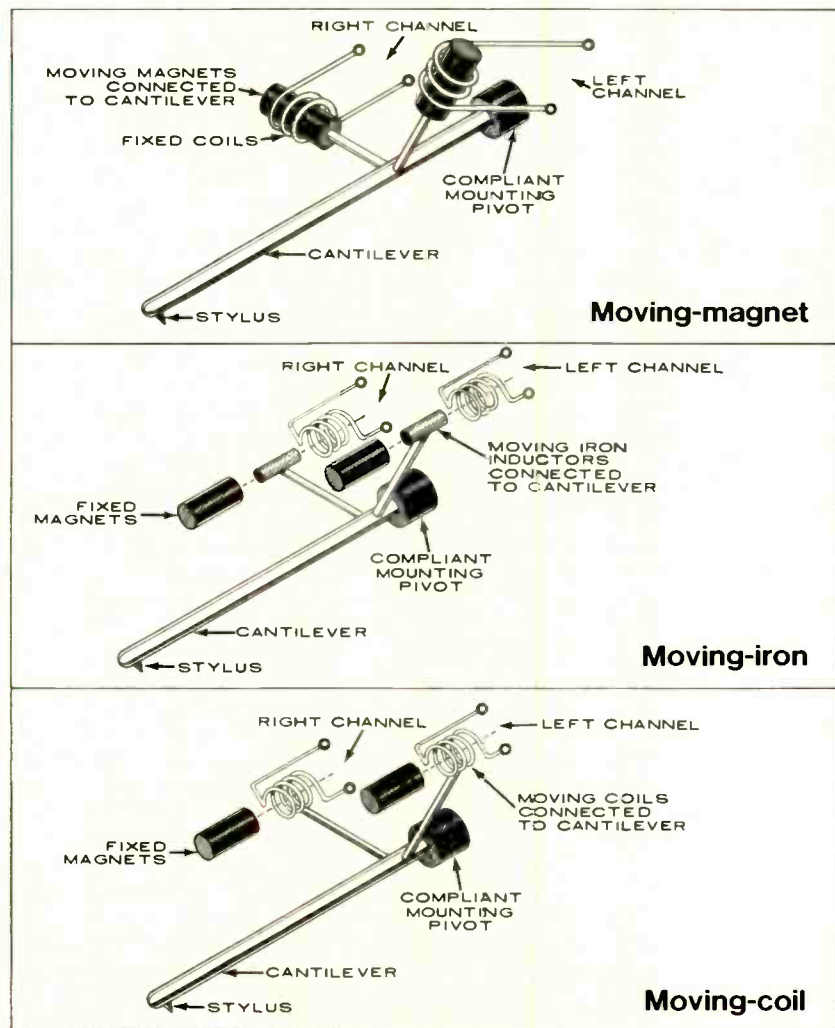
**T**HERE are several types of magnetic phono cartridges available, but all use the same basic physical principle—*electromagnetic induction*. This creates a voltage by the motion of a wire through a magnetic field or the change of a magnetic field around a wire (by moving the field or otherwise varying its strength). Each type of cartridge has certain advantages and disadvantages inherent in its design. The fundamental engineering tradeoff is *output level vs. moving mass*. Raising the former is desirable in order to lower the overall noise level; lowering the latter (a measure of how much material—cantilever, stylus, magnets, coils, etc.—the groove has to "push around") lets the cartridge track more difficult, higher-frequency signals. If its moving mass is too high, the stylus assembly has a hard time changing direction fast enough to keep up with rapidly moving groove walls.

In a *moving-magnet* cartridge, one or two high-energy magnets are attached to the stylus/cantilever assembly and placed adjacent to or within a relatively large, densely wound wire coil. Since the output

of the coil is proportional both to the energy (flux density) of the magnet and to the number of turns in the coil, a moving-magnet design is a good way to obtain a relatively high output level from a compact, low-mass magnet.

A *moving-iron* cartridge has both fixed magnets and fixed coils. The moving parts are two small, magnetically permeable elements connected to the vibrating stylus assembly. These conductors couple the magnetic field to the coils. In a moving-iron cartridge the moving mass can be kept low by using powerful magnets and densely wound coils.

*Moving-coil* cartridges have tiny wire coils attached directly to the stylus assembly. To lower the moving mass, the number of wire turns on the coils is deliberately kept down, with the result that a moving-coil cartridge usually has a low output voltage. On the other hand, moving-coil cartridges can have *very* low moving mass, at least in theory. Replacing a worn stylus in a moving-coil cartridge usually requires returning the cartridge to the manufacturer for complete replacement.



# UNDERSTANDING STYLUS SHAPES

By William A. Burton

**W**HEN you think about all a stylus has to go through to extract music from a record, it's amazing that the thing works at all. Every inch along the radius of an LP crosses approximately 250 grooves, each about as wide as a human hair is thick. A side of an LP containing around 22 minutes of music will have a groove a quarter of a mile long. To play back a tone with a frequency of 20,000 Hz, the stylus must change its direction 40,000 times each second. And to store the difference in loudness between silence and a cannon shot, the groove does not make a gentle wiggle, but a sharp turn of almost 90 degrees.

There is only one important thing a stylus really has to do while playing a record. It has only to follow (trace or track) the groove accurately, moving with every minor change of the groove walls' profiles but without bouncing around or gouging the groove. The stylus must stay in intimate contact with the groove at all times or distortion will result. Far easier said than done. The shape of a stylus is one of the major factors that determine how well groove contact can be maintained.

Styli fall into two main categories according to how they contact the groove: some are point contact, and the rest are line contact. And there are two main kinds of point-contact styli, spherical (also called conical or uniradial) and elliptical (biradial). There are many different kinds of line-contact styli that have complex multiradial shapes, but, as their name implies, they all make contact with the groove wall at a line (in reality an oblong shape) instead of a point (a small circle with real-world styli). A few examples of line-contact styli are the Micro-Ridge (used by Shure), Shibata (Audio-Technica and Astatic), Symmetrical Contact Line (Ortofon), Stereohedron (Pickering), Van den Hul (Adcom, Goldring), and MicroLine (Signet).

So, as shown in the accompanying chart, there are spherical, elliptical, and line-contact styli, all of which play records. The fourth type of stylus shown in the chart is not a playback

stylus but a *cutting* stylus, used to cut the groove in the master disc. We show it here not only because it actually makes the groove but because the trend in playback-stylus design, from spherical to elliptical to line-contact, has been toward a closer resemblance to the shape (and geometrical properties) of the cutting stylus.

## The Spherical Tip

Since the early days of high fidelity, a ball-shaped (spherical) stylus tip, not unlike the tip of a ball-point pen, has been a popular design, mainly because it is relatively easy to manufacture. Spherical styli are nowadays used in the less expensive models in any manufacturer's cartridge lineup. But one of the problems of the spherical tip is distortion caused by its alignment with the groove as it plays. The edges of the cutting stylus change their angle to the center of the groove as the groove is cut, but the contact points of the spherical stylus are always perpendicular to the center of the groove regardless of how it was originally made by the cutting stylus. Another way of looking at this is that the edges of the cutting stylus always line up perpendicular to the overall direction of groove motion, but as a spherical stylus follows the groove, its contact points shift around and make various angles to the general direction of groove motion. Any way you look at it, the two contact points of a spherical stylus respond simultaneously to parts of the groove walls that were not cut simultaneously by the cutting stylus. This misorientation in playback increases as the modulation of the grooves increases, causing more distortion at higher frequencies and levels.

Spherical styli also suffer greatly from the "pinch effect" in which the opposing groove walls force the stylus upwards as the distance between the groove walls (as traced by a spherical stylus) decreases. In the chart, note how the size of the circle changes as a corner of the groove is rounded. The pinch effect reduces a stylus's tracking ability and increases distortion.

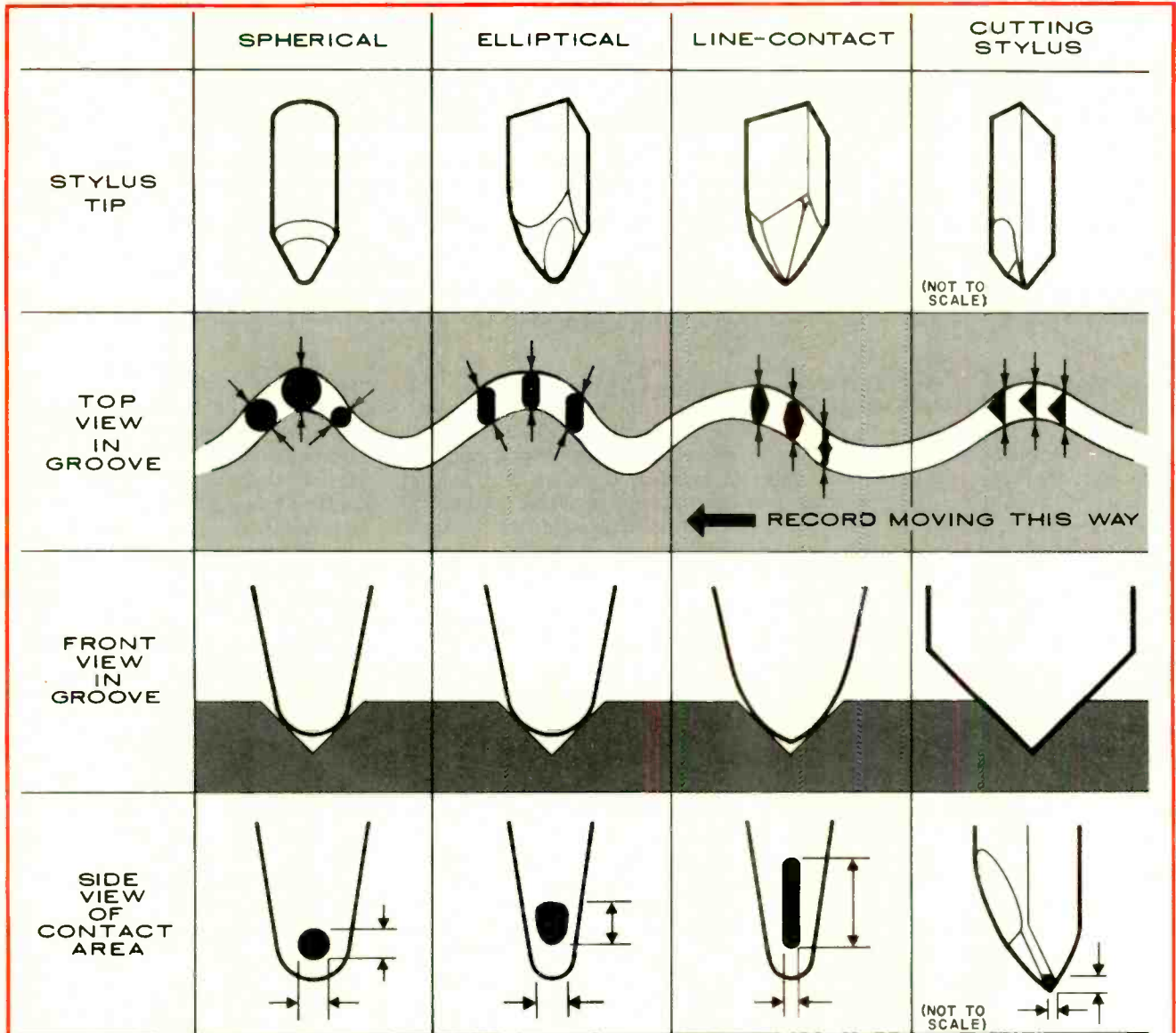
## The Elliptical Tip

The elliptical stylus was developed to reduce the magnitude of the errors caused by spherical styli. Elliptical tips can be thought of as two very much smaller spherical tips with connecting material between them. A reduction of the front-to-back dimension—accomplished by using two different radii to

define the stylus shape instead of one—lets an elliptical stylus track a groove more accurately. The contact points do not shift around as much as with a spherical stylus. Elliptical tips track much better than spherical tips on the shorter-wavelength modulations near the record label where more music (and thus more undulations of the groove wall) are cut into less space.

## The Line-Contact Tip

The CD-4 quadrasonic system for long-playing records required cartridges to track unheard-of (and unheard, being inaudible) frequencies—more than 45,000 Hz. Simple spherical and elliptical styli could not cope with such demands because their shapes were too different from that of the

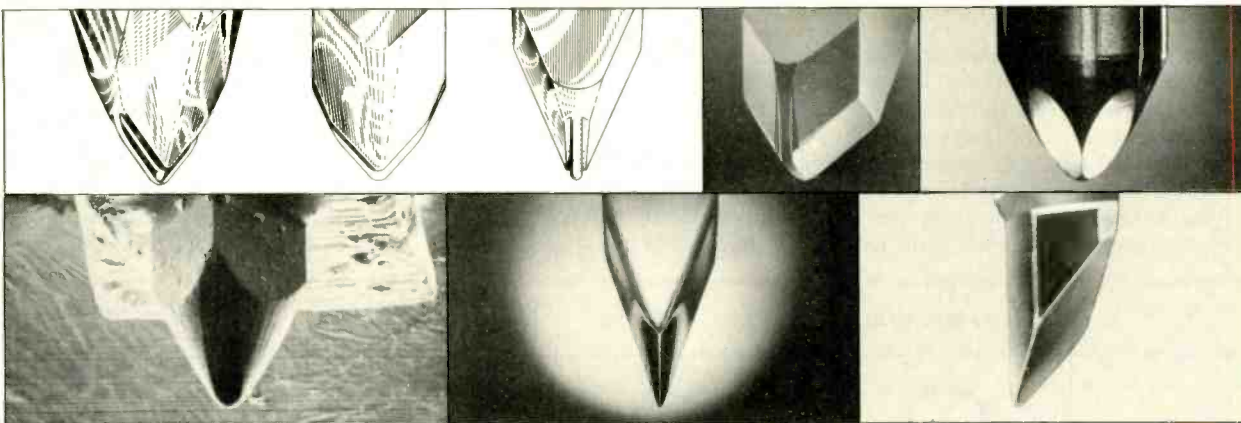


Four stylus shapes. Basic profiles are shown in the top row. Immediately below these is a record groove from the top with cross sections of the different stylus types in the groove. Note the alignment of each stylus's two contact areas (small arrows) as it moves through the groove. A spherical stylus contacts the groove at points that shift backward and forward on the tip as the changing groove is traced. This worsens the "pinch effect," making a spherical stylus ride at different heights in the groove (note the changing size of the cross section). An elliptical stylus's contact points also shift, but not as much. Contrast this behavior with that of the cutting stylus, whose contact areas remain perpendicular to the direction of the record's motion. The contact-area alignment

of the cutting stylus is closely matched by that of the three different types of line-contact styli shown (left to right, Shibata, Van den Hul, and MicroLine).

The third row of drawings shows front views of the different stylus shapes to demonstrate how they fit in the groove. Spherical and elliptical styli touch each groove wall at essentially only one point, but a line-contact stylus makes contact along a vertical line (as the name suggests), more like a cutting stylus. The bottom row of drawings shows side views of the styli that emphasize the differences in their contact areas.

Parts of this chart were based on information provided by Audio-Technica, CBS, Shure Brothers, and Signet.



Top row, three line-contact stylus designs. At left are three views of Signet's MicroLine tip (three-quarter, front, and side); next is Shure's Micro-Ridge, and at right is Pickering's Stereodron tip. Bottom row, an elliptical and two more line-contact styli. At left, photo of an Audio-Technica elliptical stylus tip showing how it was carved from the shank; the stylus is "nude-mounted" (attached directly) to the cantilever. At bottom center is a side

view of Adcom's line-contact Van den Hul stylus, which is nearly as sharp as a cutting stylus; note its short front-to-back dimension and extended contact area (the vertical white line at the center of the tip). At bottom right is a side view of the Lambda stylus tip—a variation of the line-contact Shibata stylus shape—used in Sonic Research's Sonus cartridges. Drawings and photos were provided by the various manufacturers.

knife-edge-like CD-4 cutting stylus.

A modified elliptical shape is used for such styli as the Shibata, Bang & Olufsen's Pramanik, the Quadrahedral, and the Hyperbolic to enable them to follow a CD-4 groove. While quadraphonic records have generally gone on to high fidelity's Elysian Fields, the stereophonic benefits of the stylus shapes developed for CD-4 are still with us. These "line-contact" tip designs have a sharp edge for better tracking of high frequencies as well as a vertically elongated "contact area" to reduce record wear by spreading out the stylus pressure. A stylus's contact area, also called its footprint, is the part of the stylus that actually touches the groove wall. Many line-contact tips have about the same average tracing radii as ellipticals—both ranging from 7.6 to 8.9 micrometers. (The tracing radius—sometimes called the scanning radius—is the radius of a circle defined by the front, back, and contact area of the tip.) Some line-contact styli have front-to-back measurements even smaller than elliptical stylus tips, and these spread their pressure over a larger area to compensate for their increased edge sharpness.

Line-contact styli are more difficult to manufacture than point-contact ones—the Van den Hul design as used by Adcom, for example, requires 16 hours of shaping and grinding. They also require critical alignment to the record groove for lowest distortion and widest separation. In return, they can more accurately duplicate the motions of the stylus that made the disc in the first place.

## The Cutting Stylus

The cutting stylus is designed to do exactly what playback styli should never do—gouge grooves in a disc. The flat forward-facing part of the cutting stylus, called the face, does the slicing of the lacquer master. During cutting, a cutting stylus is usually angled backward 15 degrees so that the material dug from the grooves slides up the face to be sucked away by a vacuum pump. At the sides of the face, facets called dubs are cut to improve high-frequency response.

The contact radius of a stylus relates to how low a stylus rides in a groove. The more pointed a stylus, the smaller its contact radius. Since it is actually making the groove, a cutting stylus essentially always rides on the groove bottom and has a typical contact radius of 2 to 4 micrometers, which is very sharp in comparison with the 18-micrometer contact radii of spherical or elliptical tips. The ultra-flat Van den Hul tip, however, has a contact radius of about 3.5 micrometers. This extreme sharpness has been modified in the Van den Hul II tip so that it has a larger contact radius.

## Buying Tips

Why not make the playback stylus the exact shape of the cutting stylus? Wouldn't that decrease the distortion that is caused by the inability of the stylus to follow the grooves as they were cut? Unfortunately, a playback stylus shaped like a cutting stylus will act like a cutting stylus: it will carve up your

records. Any stylus shape is a compromise between the sharpness of a cutting stylus (which would produce minimal distortion) and the roundness of the old spherical stylus (which produces minimal groove damage as long as the stylus does not mistrack).

In choosing between the three main stylus shapes, look at their advantages and disadvantages. Spherical tips are cheap and present a smooth surface to the record, but they generate distortion because they cannot track high frequencies very well. Sphericals also contact the groove wall at a tiny circle, so their pressure is concentrated in a small area. The more expensive ellipticals provide better tracking because of their shorter front-to-rear dimension. Like the spherical tips, however, they only touch the groove wall at one small point. Line-contact styli have still better tracking because of their even greater sharpness, and they compensate for that increased sharpness by a taller contact area, spreading the pressure of diamond against vinyl over a larger area. Because of their sharpness and the complexity of their shapes, line-contacts must be aligned properly to perform well and to protect the record. And they do tend to be expensive.

Choosing among different types of line-contact stylus is more difficult, for each manufacturer claims that his version of each type is the best. To judge for yourself, examine claims of improved tracking, get figures on the size of the contact area, and *listen* to the cartridges. All the music you hear from a record comes from that stylus tip moving in the grooves. □



## Sneak preview

The other day one of our engineers made an interesting observation.

He was trying to illustrate how much better the new ADS speakers sound.

"Think of the speaker as a camera lens," he said. "What we've done is improve resolution, extend depth of field, magnify detail, produce a finer image."

Not a bad analogy, we thought, and asked him to go on.

"We've done it with a lot of new technology," he explained, "but precision is critical. Take voice coil gaps. Ours are no thicker than your business card. About twice as fine as the gaps in most drivers, which has a lot to do with improving efficiency and reducing high end distortion.

"We've improved power-handling in the high end, too, by using a new high-gravity cooling fluid made to our own specifications.

"We've developed a new Linear Drive, long-voice-coil woofer which really improves bass response. The cone is Stifflite, an expensive, low-mass material used only by ADS. The result is a woofer with very high force-to-mass ratio, which means it goes lower, is more accurate and has more dynamic range."

As you read this, new ADS speakers are on their way to an ADS dealer near you. For his name write us: Analog & Digital Systems, Inc. 234 Progress Way, Wilmington, MA 01887. Or call toll free: 800-824-7888 (in CA 800-852-7777) and ask for Operator 483.

They're truly magnificent speakers. Sneak your own preview soon.

**ADS Audio apart.**

The new L780 is one of seven new ADS speakers available in black or walnut finish. You'll recognize it by the new angled corner and distinctive deep-drawn metal grille.

# A QUARTET OF OPERAS TO OPEN THE SEASON

**B**IZET'S *Carmen* has now passed Gounod's *Faust* and all the Italians to take the lead in that never-ending race for the World's Most Popular Opera. Two of its latest versions have just appeared on the U.S. scene. Peter Brook's powerful and controversial staging of *La Tragédie de Carmen*, using a drastically reduced cast and score, is playing at Lincoln Center (after a huge success in Paris), and Herbert von Karajan's first recording of Bizet's masterpiece in twenty years, featuring a new and much-heralded interpreter of the title role, has been released by Deutsche Grammophon.

In these days of sharp decline for French opera, *Carmen* endures. It has the imprimatur of no less a fan than Friedrich Nietzsche, who used it in his case against Wagner and Wagnerism. For Nietzsche, Bizet and *Carmen* represented the resurgence of the Latin or Mediterranean spirit against the Teutonic and northern ideals of Wagnerian music drama.

*Carmen* is not only enjoyable, it is unquestionably a work of musical genius. And it has one of those archetypal leading characters, a kind of female Don Juan or Faust. The medieval myths were always about men; the modern ones—*Carmen* is one of the first—are often about women as well. Inevitably the story has inspired more than one interpretation. Bizet's musical version of Prosper Mérimée's novel was originally written as a kind of "serious" musical comedy, and as such it flopped. After the composer's death it was fixed up into a grand opera with all the trimmings, and it was in this form that it found fame and fortune.

Brook's production focuses on the characters, the milieu, and the intense emotional core of the story. Karajan, in contrast, has given us the most gorgeous and orchestral *Carmen* yet. The purely musical interpretation—Bizet's musical reading of Mérimée, Karajan's of Bizet—is everything here. The title role is sung by Agnes Baltsa, a gloriously beautiful but strangely undramatic performer. Her early appearances, in

the *Habanera* and the *Seguidilla*, are sung with a beauty of tone, a clarity and breadth of line, a focus, and a "centeredness" that are astonishing to hear. But it is all quite cool, laid back. Baltsa is an unapproachable Carmen, dark but not Latin. Later there is some warming up, but it is anger, not ardor, that fires her. This is not the gypsy lady every man wants to romp with in the tobacco fields but a literally statuesque diva, a distant, classic, ideal figure of mythic proportions.

Whatever passion Carmen lacks in this recording is amply supplied by tenor José Carreras as Don José. When he sings well, he is an exciting performer. Alas, he does not always sing well here, and he is sometimes disturbingly out of tune. Most of the rest of the cast is excellent, again with an emphasis on the musical side. José van Dam lacks some of the baritone swagger we usually associate with Escamillo. His Torcador Song is held back, prototypical rather than immediate and punchy in

effect. Again, as with Baltsa's Carmen, the character is well sung but removed, classicized. Katia Ricciarelli is a charming Micaëla; since this is already the most purely musical character in the opera, the part emerges with more profile than usual.

The version used is essentially Bizet's original *opéra comique*, with heavily edited dialogue instead of recitatives. The dialogue has been dubbed in by a team of French actors who very obviously have nothing to do with the rest of the cast—excellent singers but clearly not idiomatically French performers. Again this contributes to the detached, undramatic effect. The recording itself also minimizes drama in favor of a gorgeous, full-bodied representation of the orchestra and the beautiful setting of solo voices against it. The chorus is treated, not so successfully, in a slightly distant, oratorio-like style.

Unquestionably Karajan has brought out values in this work—genuine and highly musical values, I hasten to add—that no one else has even noticed. It is equally certain that this recording adds to the stature of the score. But it is doubtful that he has penetrated deeply into the true heart and soul of this great music-theater work. If, somehow, one could only get Peter Brook and Karajan together . . . —Eric Salzman

**BIZET: *Carmen*.** Agnes Baltsa (mezzo-soprano). Carmen; José Carreras (tenor), Don José; José van Dam (baritone), Escamillo; Katia Ricciarelli (soprano), Micaëla; Christine Barbaux (soprano), Frasquita; Jane Berbié (soprano), Mercédès; others. Paris Opera Chorus; Schöneberger Boys Choir; Berlin Philharmonic Orchestra, Herbert von Karajan cond. DEUTSCHE GRAMMOPHON ● 2741 025 three discs \$38.94, © 3382 025 \$38.94, © 410 088-2 GH 3, no list price.



Agnes Baltsa as Carmen

Christine Barbaux/Deutsche Grammophon

**J**ENUFA is a turbulent opera in which passion drives some of the characters to violence, destruction, and near-madness. When his adored Jenufa chooses another, the distraught Laca disfigures her in his uncontrolled frustration. Likewise, in an attempt to save

Jenufa's reputation and to secure a more promising future for her, Kostelnicka (Jenufa's step-mother) murders Jenufa's illegitimate child. Such is the stuff of Léoš Janáček's tense drama, and in a new London recording conductor Sir Charles Mackerras captures it in all its tautness. I have never before heard this music performed so compellingly, each act rushing toward its fate-ordained, inevitable conclusion. This is also the first performance to convince me that *Jenufa* is, as its enthusiastic champions have always maintained, a first-rate opera.

Mackerras is just as effective in the opera's lyric moments, which provide much-needed contrast to its seething passions and accumulated tension. As in his previous recordings of Janáček's operas, he is fortunate in having the Vienna Philharmonic's resources to master the composer's fascinating but tricky orchestral idiom with its striking instrumental combinations, unexpected

ing a sensitive, inward character ennobled by suffering.

Wieslav Ochman and Peter Dvorský are not sufficiently differentiated in timbre, but where else can we find two tenors of international caliber in a Czech recording? And I can hardly complain about "wasting" a Lucia Popp on the bit part of Karolka.

All in all, here is another triumph for the London Janáček series brilliantly undertaken by this British conductor who learned his craft from the eminent Vaclav Talich and is repaying his debt

complemented by James Morris's virile baritone as Guglielmo. Francisco Araiza, as Ferrando, has a strong tenor that is also capable of sustaining a long lyric line. Kathleen Battle is a crisp, piping Despina, and José van Dam, as Don Alfonso, manipulates his fine bass instrument as well as he does the characters in the opera.

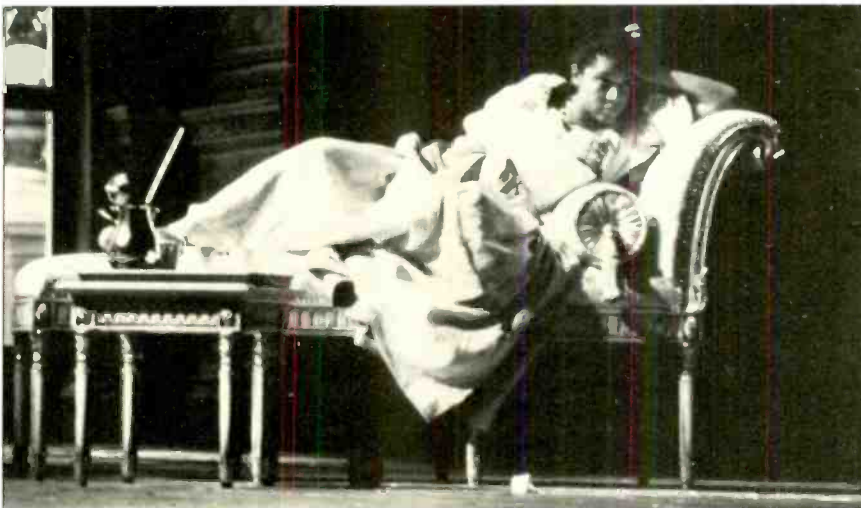
The Vienna Philharmonic, under the direction of Riccardo Muti, produces a sumptuous sound—rather too sumptuous, in fact. The orchestra all too often covers the singers, and Muti's love



Elisabeth Söderström recording *Jenufa*

soloistic writing, terse ostinatos, and other characteristic devices.

Mackerras is also enormously aided by an especially gifted group of major singers. For once there is no need to explain away the vocal shortcomings of all those "personality singers" whom we frequently encounter in recordings of Eastern European origin. Everyone sings here: unwanted parlandos and unbridled passions are not allowed to destroy the vocal lines. Eva Randova's high mezzo may not match our visual image of the aging, earthy Kostelnicka, but we are moved by her beautiful and appealing singing. In the title role, Elisabeth Söderström scores with her familiar communicative artistry. The music is frequently too low for her, the orchestra's dynamic level at times overpowering, but she succeeds in portray-



Kathleen Battle as *Despina* in *Così fan tutti*

to Czech culture in a way that a wide musical public can appreciate. The digital recording captures the sound of the Vienna Philharmonic in full splendor, though it occasionally blankets the singers.

—George Jellinek

**JANÁČEK: *Jenufa*.** Elisabeth Söderström (soprano). Jenufa: Lucia Popp (soprano), Karolka: Eva Randova (mezzo-soprano), Kostelnicka: Wieslav Ochman (tenor), Laca: Peter Dvorský (tenor), Števa; others. Vienna State Opera Chorus; Vienna Philharmonic Orchestra, Sir Charles Mackerras cond. LONDON ● LDR 73009 three discs \$32.94, © LDR5 73009 \$32.94.

**R**ECORDED live at the Salzburg Festival last year, Angel's splendid new *Così fan tutte* makes available a production that was not only tremendously popular but also received considerable critical acclaim. The cast is an exceptionally strong one, and the two pairs of lovers are beautifully matched musically (perhaps rather better than in the mischievous libretto) in that they all possess voluptuous voices that bring an overwhelming immediacy to their confused passions.

Margaret Marshall, as Fiordiligi, turns in some exquisite high pianissimos. Agnes Baltsa's sensuous low register, in her portrayal of Dorabella, is

of long legato lines destroys articulation and inner detail as well as forcing the singers to strain in order to be heard. The orchestral interjections in the accompanied recitative are laid on heavily, and some of Muti's tempos are simply too fast for clean execution. A lighter touch and a more relaxed approach would have better served the vocalists and audience alike.

The live recording projects the excitement and drama of a well-directed, well-acted production. On the other hand, there is a certain amount of musical sloppiness that would not have been allowed to pass in a studio recording. While the arias bear close scrutiny, some of the ensemble passages lack rhythmic precision, and there are some vocal histrionics that interfere with the phrasing. Better not to follow too closely with a score; simply enjoy the wonderful digital sound and envision the action. All in all, despite these reservations, this is a fine *Così* that opera lovers will surely want to add to their collections.

—Stoddard Lincoln

**MOZART: *Così fan tutte*.** Margaret Marshall (soprano), Fiordiligi; Agnes Baltsa (mezzo-soprano), Dorabella; Kathleen Battle (soprano), Despina; James Morris (baritone), Guglielmo; Francisco Araiza (tenor), Ferrando; José van Dam (bass), Don Al-

fonso. Vienna State Opera Chorus; Vienna Philharmonic Orchestra, Riccardo Muti cond. ANGEL ● DSCX-3940 three discs \$39.98, © 4X3X-3940 \$30.98.

**L**IKE so many of Leonard Bernstein's major undertakings, his new Philips recording of Wagner's *Tristan und Isolde* is characterized by a singular intensity that largely defines its own standards. It is something one accepts or does not accept on its own terms; comparisons with other recorded versions of the opera, if not entirely irrelevant, are far less worth making than they might otherwise be.

The late Karl Böhm is quoted by Erik Smith, the producer of the Bernstein recording, as having remarked after attending Bernstein's rehearsal of Act I, "For the first time somebody *dares* to perform the music as Wagner wrote it. The rest of us never dared to!" Böhm had reference in particular to the Prelude, which Bernstein takes very deliberately here, running to a full fourteen minutes. Böhm himself, in his 1966 Bayreuth performance recorded by Deutsche Grammophon, brought it in at ten and a half minutes, which is about the norm. Not only is Bernstein's pacing of the Prelude deliberate, but it seems to appear out of a mystic void. The disc has a long lead-in, and the surface is so quiet that you start to think the playback amplifier may not be turned on. When the music does begin, the opening bars are so hushed as to be almost inaudible. The effect of this unhurried pacing, with all the pauses given full weight and the climaxes held back until they *must* be released, is to engulf the listener deep within the Wagnerian dream-world. The entire work unfolds in a way that not only sustains but intensifies that feeling. The recording becomes something more than an imitation of or substitute for staged opera: it is genuine "symphonic drama."

Bernstein has tended more and more to favor live recordings, but this *Tristan* is not the product of a staged production. It was organized as a concert presentation by the Bavarian Radio specifically in order to make the recording. Each of the three acts was broadcast and recorded separately at intervals of months. Peter Hofmann, who made such a strong impression as Parsifal both in the Karajan recording for DG and in the Metropolitan Opera production under James Levine, had never sung Tristan before, but he surely had definite ideas about a young hero who is made of flesh and blood for all his deep feelings. Hofmann sings with great intelligence as well as impeccable musicianship, evoking a thoroughly credible



Hildegard Behrens as Isolde and Peter Hofmann as Tristan

and enormously appealing Tristan, giving Bernstein the long, soft phrases on a single breath that he demanded in the *Liebesnacht* without hinting at strain. He understands the *character*, not just the notes, and he projects it marvelously well.

Hildegard Behrens is not only ideally matched with her Tristan but is surely the most thoroughly convincing Isolde on records since Birgit Nilsson in the Böhm set. Her voice is rather lighter than we have come to expect from our Wagnerian heroines, but there is no want of power, and she gives us an Isolde who is indeed a spirited young Irish princess with youthful vitality and susceptibilities. Her characterization, like Hofmann's, is as much a joy as the sheer beauty of her singing. Both the *Liebesnacht* and the final scenes are incredibly beautiful here, the climaxes built so subtly yet so inevitably that the apparent spontaneity makes for a far greater impact than any conventional display of power could provoke. The *Liebestod*, ecstatic but without a trace of hysteria, is the awesome "transfiguration" Wagner called it. (The album's eye-catching cover art, by the way, is by another Behrens, the painter Peter Behrens [1868-1949].)

Yvonne Minton is an eloquent and touching Brangäne—warm, compassionate, and vocally steady. Indeed, every role in this production is splendidly sung and acted. Hans Sotin projects genuine nobility as King Marke; Bernd Weikl, the Melot in Karajan's recording on Angel, is a stalwart, convincing Kurwenal here, easily a match for any other singer of the role since the Fischer-Dieskau of the thirty-year-old Furtwängler version. The chorus and orchestra are both superb, and both Marie-Lise Schüpbach, who plays the ex-

tended English horn solos in Act III, and Chandler Goetting, who plays the wooden trumpet, richly deserve their solo credits.

The "intensity" I mentioned earlier may be too shallow a term. What stamps this performance as unique—and sweeps every vocal and instrumental participant along with Bernstein—is the extraordinary sense of *commitment*, which seems to be born of the most unselfconscious immersion in the Wagnerian *mythos* and, by no means incidentally, the highest respect for the composer's written instructions. The recording itself is superb. Böhm's *Tristan*, vital and flowing, is the one I have preferred since its release sixteen years ago in the face of the versions that have appeared since then. The new Bernstein does not diminish it—indeed, the very contrasts between these two splendid sets point up how well such a work sustains a variety of approaches—but the voluptuousness of the orchestral playing, the world-in-itself evocativeness in the "symphonic" balance between voices and orchestra, and the overall dramatic vividness make the Bernstein recording one that, once heard, becomes simply indispensable.

—Richard Freed

**WAGNER: *Tristan und Isolde*.** Hildegard Behrens (soprano), Isolde; Peter Hofmann (tenor), Tristan; Yvonne Minton (mezzo-soprano), Brangäne; Hans Sotin (bass), King Marke; Bernd Weikl (baritone), Kurwenal; Heribert Steinbach (tenor), Melot; Heinz Zednik (tenor), Shepherd; Raimund Grumbach (bass), Steersman; Thomas Moser (tenor), Sailor; Bavarian Radio Chorus and Symphony Orchestra, Leonard Bernstein cond. PHILIPS ● 6769 091 five discs \$64.90, © 7654 091 three cassettes \$64.90; © 411-036-2 one disc, excerpts, no list price.

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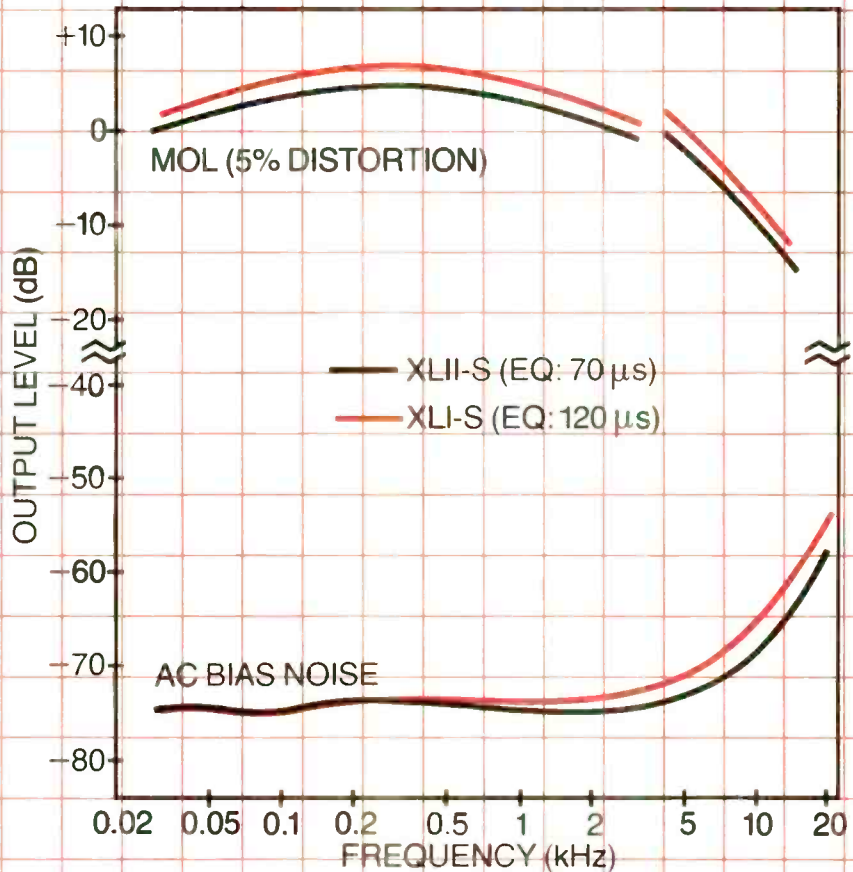
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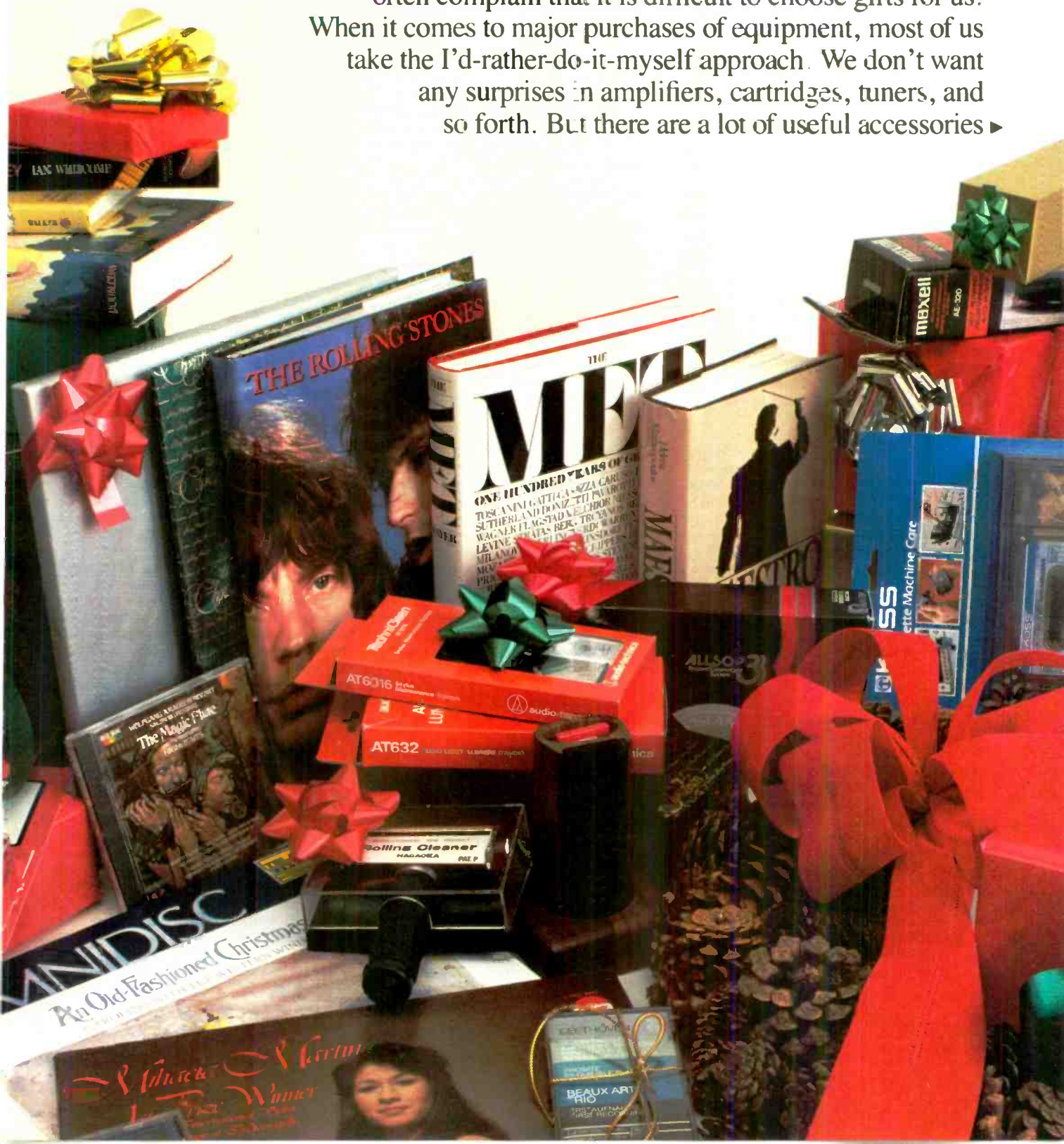
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# WHAT DO YOU WANT FOR CHRISTMAS?

The families and friends of music-loving audiophiles often complain that it is difficult to choose gifts for us. When it comes to major purchases of equipment, most of us take the I'd-rather-do-it-myself approach. We don't want any surprises in amplifiers, cartridges, tuners, and so forth. But there are a lot of useful accessories ▶



# CHRISTMAS

that it would be fun to try out and a wealth of records, tapes, and books on music that would be welcome gifts during the holidays or at any other time.

This year we polled our entire staff of editors and regular contributors to compile a list of acceptable gifts for \$50 each or less. We asked them to recommend accessories they had found helpful in maintaining and using their stereo systems or books and records they liked well enough to endorse as Christmas presents. Now all *you* have to do is check off a few that appeal to you and leave the list lying about in some conspicuous place. —*Editors*

- Chris Albertson, record reviewer: **Realistic Tape Control Center** from Radio Shack. With this little black box you can link your receiver to as many as three tape decks to have them interact at the mere flip of a switch or two. You can dub, record, or monitor in any combination without changing a single cord. Price: \$24.95.
- Christie Barter, Music Editor: During the celebrations of the Metropolitan Opera's hundredth anniversary Martin Mayer's book *The Met* (Simon and Schuster) would make a handsome gift. It's underpriced at \$35. Roger Englander's *Opera: What's All the Screaming About?* (Walker, \$12.95), a lighthearted and affectionate survey, is an accessible introduction for beginners.
- The Met's music director, James Levine, is a prolific recording artist. Highlights from his complete recording of Mozart's *The Magic Flute* are on one of the first RCA Compact Discs. No list price.
- Louise Boundas, Managing Editor: For anybody who, like me, is all thumbs when it comes to demagnetizing a tape deck, I recommend the **Discwasher D'Mag cassette-deck demagnetizer** (\$19.95).
- A good thing to play on a properly cleaned and demagnetized deck is the Beaux Arts Trio's recording (the first ever) of Beethoven's Piano Trio in D after Symphony No. 2, a digital recording on a chromium-dioxide tape cassette (Philips 410 376-4). Price: \$12.98.
- And almost any record collector would appreciate a **Discwasher D4+ record care system** (\$16.50) and a couple of packages of **anti-static record sleeves**.
- William Burton, Directory Editor: For cleaning records I recommend the **Nagaoka rolling cleaner** by MicroFidelity. It looks like a sticky paint roller, but it works and it's quick. Price: \$20.
- For the really discriminating audiophile I'd recommend a roll of **16-gauge zip cord**. It's extremely musical, providing sweet highs, limpid midrange, and tight bass. Prices vary, but get a \$10 roll.
- Richard Freed, record reviewer: **LAST record care system**, from the LAST Factory. Its liquid cleaners and preservative effectively restore and seal in the quality of LP's and 45's. It's very easy to use, and it works. The power cleaner, preservative, and record cleaner are available separately or in a three-part kit. Kit price: \$29.95.
- Phyl Garland, record reviewer: The brilliant young trumpeter Wynton Marsalis has only been making records for a couple of years, but it would already cost more than \$50 to buy all of them. Get them anyway. He has recorded with a number of distinguished musicians, including some members of his own family. Almost all of the records are on CBS, but he has recorded with Art Blakey for Concord, and he is featured on "Art Blakey in Sweden," a Swedish import on the Amigo label, distributed by Dominus Records, P.O. Box 48, Darien, Conn. 06820.
- Christopher Greenleaf, car stereo columnist: The **Allsop 3 Ultraline cleaning cassette** works the same on either side, so there's no wrong way to insert it into a home cassette deck or car stereo. For obvious reasons tape decks in cars require more frequent cleaning than home units. Maintain the Allsop cassette properly by renewing the cleaning pads (available as replacement parts), and banish all your guilt about dirty tape heads and encrusted pinch-rollers. Price: \$16.95.
- Trevor Pinnock's performance of Bach's Brandenburg Concertos (Archiv 2742 003) with the English Concert has settled my questions about what to give friends this season. Special low price: \$17.96 for two discs or cassettes.
- David Hall, record reviewer: The two Christmas records I've enjoyed most in recent years are collections—one English, one American—of traditional carols, hymns, songs, and dances available from Revels, Inc., P.O. Box 502, Cambridge, Mass. 02139. The English program is "The Christmas Revels: In Celebration of the Winter Solstice" (RC 1078), traditional and ritual carols, dances, and processions directed by John Langstaff. "The Christmas Revels: Wassail! Wassail!" (RC 1082) is an American celebration of the season directed by John Langstaff with Jean Ritchie and Robert J. Lurtsema as special guests. Price: \$9.98 each.

□ Julian Hirsch, head of Hirsch-Houck Laboratories and director of STEREO REVIEW's testing program: **Shure SFG-2 stylus-force gauge** (\$5.95). A "best buy," indispensable for anyone who plays records and values them. It is a rare record player whose arm can be set to give accurately known tracking forces without an external stylus gauge, and this one is accurate within 0.05 grams from 0.5 to 3 grams. I use it for all cartridge setups in our lab tests.

□ **DB Systems DBP-10 phono alignment protractor** (\$21.95). For the enthusiast who installs cartridges more often than tri-yearly! With care, you can set a cartridge/arm to tangency within a fraction of a degree using this handy gadget.

□ **R. B. Annis Model 20/B5 magnetometer** (\$11.60). For the tape recordist, this device measures the strength of the magnetic field around your tape heads, reels, or even near a speaker if you are concerned about risking your tapes in its vicinity. It is handy for detecting a magnetized tape capstan, which can easily degrade your tapes as you play them. Well worth its price.

□ George Jellinek, record reviewer: A number of important recordings of operas by Richard Wagner have been released during the year in which the hundredth anniversary of his death has been celebrated. One that would make an excellent gift for any Wagner fan is "Wagner on Record" (Seraphim), a seven-disc album of excerpts from all his major operas recorded between 1926 and 1942. Among the many artists from this "golden age of Wagnerian singing," the ones most generously represented in the album are Lauritz Melchior and Frieda Leider. Price: \$41.98.

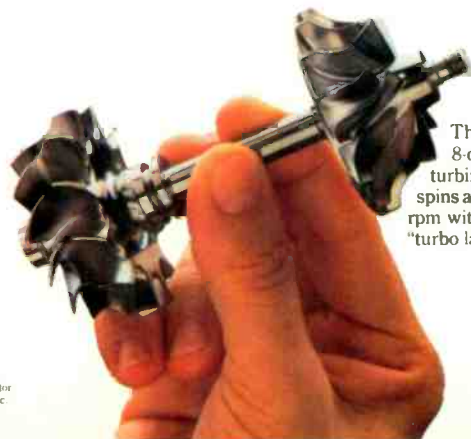
□ Larry Klein, Contributing Editor and columnist: A **replacement stylus**. Any cartridge between one and five years old could benefit from a replacement stylus. (Cartridges older than five years should probably be replaced entirely.) Make sure that the replacement you buy is supplied by the manufacturer of your cartridge. There may be a world of difference in performance between, say, a "replacement stylus for a Shure cartridge" and a "Shure replacement stylus." If you have trouble locating an appropriate replacement stylus for your cartridge, try Needle in a Haystack; their toll-free number is 800-368-3506.

□ Stoddard Lincoln, record reviewer: The L'Oiseau-Lyre recording (DSLO 694) of Christopher Hogwood conducting the Academy of Ancient Music in Pachelbel's Canon and music of Handel, Vivaldi, and Gluck. It contains Gluck's *Dance of the Blessed Spirits* and other chestnuts played this time the way they *should* be played. It's a delight. Special low price: \$6.98 for disc or cassette. ▶





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# CHRISTMAS

□ William Livingstone, Editor in Chief: **Audio-Technica's AT 632 audio light.** Somehow, most of us manage to put our turntables in unsuitably dark places. This ingenious light, which can be mounted so that it turns on automatically whenever the dust cover is raised, makes it easy to read record labels, check records for cleanliness, or find the right band. Price: \$29.95.

**Audio-Technica's AT6016 TechniClean stylus cleaner.** Since I am not by nature a scrupulous housekeeper, regular maintenance chores are made easier for me if I have a specialized tool for each task. I remember to clean the stylus more often because I have this instrument and the cleaning liquid that goes with it. Price: \$12.95.

Helena Matheopolous's *Maestro* (Harper and Row) is a collection of interviews with today's most prominent symphony orchestra conductors, such as Claudio Abbado, Leonard Bernstein, Colin Davis, Carlos Kleiber, Herbert von Karajan, and so forth. It's the best book of its kind that I know. Price: \$24.95.

Violinist Mihaela Martin's recording debut, with pianist Paul Ostrovsky, on Vox Cum Laude (VCL 9043). I wrote the liner notes for this record by the first-prize winner of the 1982 International Violin Competition of Indianapolis. Martin and Ostrovsky play Schubert's Sonata in A for Violin and Piano and Stravinsky's Divertimento. My notes are nothing special, but I have enjoyed the record so much that I've spent my fee on copies of the album to give to friends. Price: \$8.98.

□ Rocco Mattered, Editorial Assistant: I always clean my records (even new ones) before I play them. To keep records in the best possible condition, I use the **Sound Guard total record care system.** Both the cleaner and the preservative include an anti-stat. I recommend this system without reservation. Price: \$21.95.

□ Alanna Nash, record reviewer: *The Rolling Stone Illustrated History of Rock & Roll* (Random House), a collection of articles by well-known writers on popular music, including Lester Bangs, Robert Palmer, John Morthland, and Greil Marcus, edited by Jim Miller. It seems to have an essay on every definitive phase of rock-pop history. The profiles are always written with insight, wit, and style. The most recent revision updates the book through 1980. Price: \$25 in hardcover.

□ Borys Patchowsky, Art Director: If we have our way, it's going to be a spic-and-span Christmas because all of us seem to be recommending gifts that will clean records or tape decks. I'd like to recommend the **Koss total cassette machine care system,** very moderately priced at only \$5.99.

□ Mark Peel, record reviewer: For rock fans I'd choose *The Harmony Illustrated History of Rock*, fourth edition, published by Harmony Books in hardcover at \$19.95 and in paperback at \$11.95. It's my first choice for facts and trivia on who played for what group when. The accompanying essays are usually excellent and the discographies comprehensive. I've owned two of the three previous editions. This new one is the first to include information on producers, managers, and instrument makers.

For "serious" music enthusiasts I'd choose a cork-handled conductor's baton for use in front of stereo speakers. Wood handles are okay, but cork is easier to grip when I work up a sweat leading the Academy of St. Martin-in-the-Fields through a spirited reading of Mozart's Fortieth. Price: under \$10 at instrument and sheet-music shops.

□ Lincoln Perry, illustrator: I try very hard to keep oily fingerprints off the surfaces of my records. Somehow they attract and hold dust anyway, but the **Allsop 3 Orbitrac record-cleaning system** helps me restore them to pristine condition, and it's actually fun to use. Price: \$16.95.

□ David Ranada, Technical Editor: If you want to know more about digital audio, I'd recommend *Digital Audio Technology* by H. Nakajima, T. Doi, J. Fukuda, and A. Iga (all of Sony). It is a fairly complete but not-too-mathematical introduction to the field (Tab Books No. 1451, \$11.95).

□ Peter Reilly, record reviewer: I think the greatest vocal recording ever made is Elisabeth Schwarzkopf's first version (mono) of Richard Strauss's *Four Last Songs*, which is still available on Angel (35084). The combination of the feeling Strauss put into these mature works with Schwarzkopf's sensuous voice in its prime resulted in a recorded testament from two great artists. Price: \$9.98.

□ Charles Rodrigues, cartoonist: I listen to FM radio a lot while I'm drawing, and if you want to increase the musical pleasure of someone who lives in the suburbs as I do, give him an **FM antenna.** I wouldn't care to endorse any particular model, but an antenna that can be rotated easily greatly increases the number of stations that can be received and makes a vast difference in the quality of reception.

□ Eric Salzman, record reviewer: I have lots of wonderful records to recommend as gifts. Unfortunately, they were all produced by me for Nonesuch. If that doesn't rule them out, I suggest: "An Old-Fashioned Christmas" (79053), which is new this season. You won't believe how fresh the traditional European and American carols sound when sung in a tremendously pure and beautiful style by the Western Wind. Also, "The Tango Project" (79030) and, hot off the presses, "Two to Tango" (79057). All are digital recordings. Price: \$11.98 each.

□ Gordon Sell, Technical Editor: For anyone who wants to learn more about his hi-fi system there is nothing like a good test record. Such a record can help you set up your phono cartridge for maximum performance and help you evaluate the performance of other parts of your system and listening room. Telarc's "Omnidisc" (DG 10073-4), which sells for \$29.95, is one of the best. So is **STEREO REVIEW's own SRT-14A Test Record.** Price: \$9.95 (plus applicable sales tax) from Test Record, P.O. Box 555, Morris Plains, N.J. 07950.

□ Steve Simels, record reviewer: My choice is the video disc "The Compleat Beatles" from MGM/UA/Delilah. It has great clips, sensational sound, and a reasonable narration by Malcolm McDowell. All told, it's so good that this disc alone is reason enough to buy a video-disc player. The disc is available for either LaserVision or CED players. I prefer it in LaserVision. The same program is also available on tape, but the sound is not as good. Price: LaserVision, \$34.95; CED, \$29.95.

□ Craig Stark, Contributing Editor and columnist: I would not be without the **Annis Hand-Mag tape head and capstan demagnetizer,** Model 115, from the R. B. Annis Company. It is strong enough to really do the job properly. Price: \$29.70.

□ David Stein, Assistant Managing Editor: Since a book of Rodrigues cartoons from **STEREO REVIEW** hasn't been published yet (we're working on it), my choice of a gift for an audiophile is the **Maxell AE-320 self-rotating record cleaner.** It's quick, effective, and easy enough to use to encourage routine cleaning every time you play a record. It won't work on every turntable—vertical models, changers, ones with tone arms too close to the platter—but on those it fits it's a wonder. Price: \$29.99.

□ Joel Vance, record reviewer: When I choose a record as a present, I generally select something special, not just a current release by a big company. A good choice, I think, would be "Eddie Lang: Jazz Guitar Virtuoso" (Yazoo 1059) from Yazoo Records, 245 Waverly Place, New York, N.Y. 10014. Price: \$7.98.

□ Paulette Weiss, Popular Music Editor: For those with a love of music, a sense of humor, and a VCR I'd choose a gift from the Pacific Arts Video catalog, probably "Michael Nesmith in Elephant Parts," just rereleased at \$39.95 in Beta or VHS.

For those recently bitten by the audio bug, I'd get **Mobile Fidelity's Geo-Disc.** It's a tool for easy, accurate cartridge and stylus alignment. Price: \$25.

From the deluge of new books on popular music and musicians I choose *The Rolling Stones* by Robert Palmer, Doubleday, \$29.95 (lavishly illustrated). □

# The Sound of Music on Video

## The Hardware

By E. Brad Meyer

**W**E hi-fi enthusiasts are confronted with a bewildering variety of new program sources these days. For many years, all we had were records, FM broadcasts, and, for tape fanatics, an occasional open-reel release. Now the LP record is being displaced, in numbers if not always in sound quality, by prerecorded cassettes, and in a few years the digital Compact Disc should capture a major market share as well.

But some of the most interesting new audio developments are actually occurring in the field of video. The sound that comes to us along with pictures has improved vastly in the past two years. This is true mainly for video tapes and discs, but there is also good sound being transmitted over some commercial cable systems. (Progress has been temporarily stalled in conventional over-the-air broadcasting, but more about that later.)

Electronics manufacturers, in order to entice us into staying home evenings instead of going out to the movies, try to provide a reasonable facsimile of the theater experience with component video systems, in which a separate color monitor handles only the picture while a conventional stereo system provides the sound using audio signals from a

TV tuner, video-cassette recorder, or video-disc player. While no video screen of any size can yet even approach the picture quality of a movie, a good home stereo system can sound better than all but the very best theater setups. For many people, therefore, good sound has become an important part of home video.

If you'd like to take advantage of this new technology by routing your video sound through your stereo system, two kinds of video tape (VHS and Beta) and video disc (CED and LaserVision) are available. Do any of these formats offer true high-fidelity sound? And, if so, is there enough good program material to justify the purchase of new video equipment just for the improvement in the sound?

After a brief explanation of how the audio circuitry in a video tape or disc player works, I'll tell you what kind of performance you can expect. Then we can also look at the prospects for stereo sound on conventional broadcast TV and on cable. A brief survey of currently available program material begins on page 78.

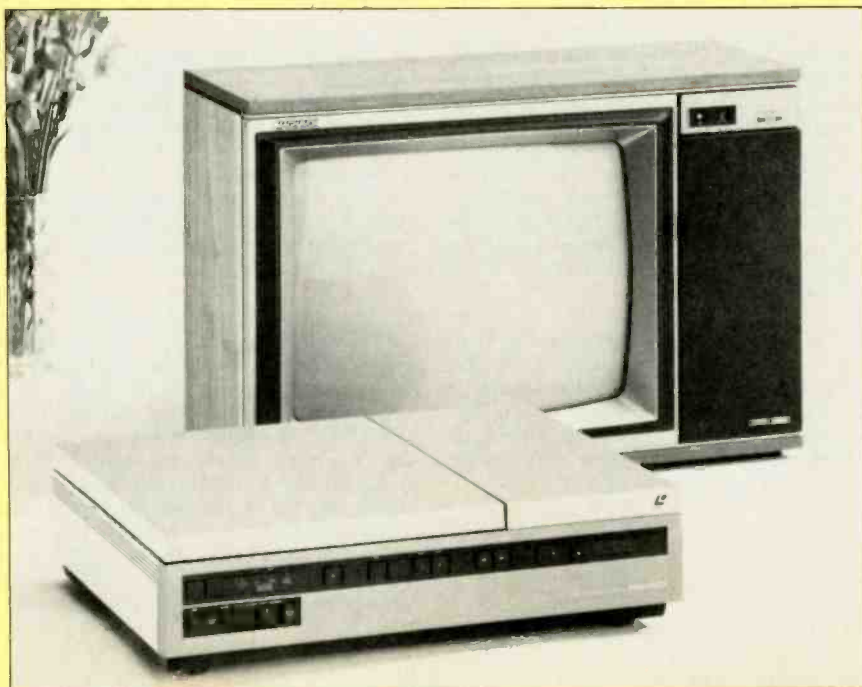
### A Bit of History

To the audiophile, the sound that accompanies moving pictures of any sort has until recently ranged from painful to barely tolerable. The speakers in many movie theaters still conform to a

set of specifications promulgated in the 1930's that call for sharp rolloffs both below 100 Hz and above 5 kHz. In television, the situation has been even worse; typical TV-set amplifiers and speakers have sounded only slightly better than the average telephone.

The recent box-office success of movies in which sound plays an important part—whether for special effects, as in space epics such as *Star Wars*, or for music, as in *Saturday Night Fever*—has changed this situation. Films like these derive a significant part of their audience appeal from their soundtracks as played through the Dolby Stereo sound systems found in a few theaters, systems with wide-range frequency response and dynamics that provide stereo dialogue and sound up front and impressive ambience effects from “surround” speakers on the side and rear walls.

Good home stereo components can provide sound that's at least comparable in quality to that of the front channels of a big theater system, but only video hardware and software that can deliver a good audio signal will enable the system to reach this level. The video playback medium must have wide frequency response, low distortion, low flutter, good dynamic range, and, of course, two channels with decent stereo separation. If video sound were as good as what you now get from your home audio cassette deck, these criteria



Magnavox VH8010 LaserDisc player and RC4275WA color video monitor

would be met reasonably well, so I'll use that level of performance as a familiar point of comparison. The first video tape decks and disc players were distinctly worse than even a mediocre audio cassette deck. The current video-disc players appear to be about as good as good audio recorders, and some of the newest video recorders are quite a lot better than most analog audio-only recorders. We'll take a brief look at how sound is recorded on video tapes and discs, treating the different machines in the order in which they appeared on the market.

### First-Generation Video Tape

The first Betamax home video recorders (circa 1975) had mediocre mono sound. Most of the tape's half-inch width is needed for the video signal, which is recorded by a pair of very narrow heads mounted on a tilted, rapidly spinning cylinder around which the tape is wrapped. The cylinder, or "drum," moves the video heads past the tape at a speed of around 300 inches per second (ips) even though the tape itself is moving at less than 2 ips. The high tape-to-head speed enables the machine to record the very high-frequency video signals while still providing long playing times.

Two narrow strips or bands of tape, one at each edge, are unoccupied by the

Tim Newman/Jenkins Covington Newman



ZZ Top in the video "Sharp Dressed Man"

video signal. On one edge is a control signal used to regulate the speed of the tape in playback, and on the other is the audio signal, recorded by a fixed head at the actual tape speed (as in an audio tape deck). In the longer-playing modes, this speed may be under 0.5 ips, much slower than the 1.875 ips of an audio cassette deck. The slow speed produces a considerable loss in both high-frequency response and signal-to-noise ratio. The audio track on the video tape is also much narrower than its audio-only counterpart, further increasing the noise problem. And the flutter on many home video recorders is in the neighborhood of 1 per cent, about

ten times too high for minimal "high-fidelity" performance.

In the other (incompatible) videotape format, VHS, the situation is essentially the same, with one additional twist. In the past two years stereo VHS decks have appeared in which the already narrow audio track at the edge of the tape has been split into two tracks with an unrecorded guard band in between to prevent crosstalk. This scheme cuts the width of the already narrow audio track by a factor of about three, further increasing noise. Most (but not all) stereo VHS machines have Dolby-B noise reduction, which lowers the noise to tolerable levels but degrades the high-frequency response at the slower speeds. The result still cannot be called high-fidelity.

### First-Generation Video Discs

Video discs, like tapes, come in two incompatible formats: LaserVision (LV) and CED (for Capacitance Electronic Disc). On all video discs, the audio information is stored and retrieved using a technique called frequency-



Pioneer LD-1100 LaserDisc player

# The Sound of Music on Video

modulation (FM) recording. In this method the audio signal, instead of being recorded directly, is used to modulate the frequency of a carrier signal that is much higher than the highest audible sound; typically the carrier falls between 1 and 2 megahertz. The FM carrier's high frequency presents no difficulty to the disc system, which must already handle far higher frequencies to deliver the picture.

From the beginning, LV discs have had stereo sound. Unlike stereo FM radio, in which the two channels of audio are combined onto a single carrier (via a technique known as multiplexing), LV uses two separate FM carriers. This provides virtually complete stereo separation, a necessity in Japan and Europe where bilingual programming is common. The LaserVision two-carrier FM system has adequate frequency response and low distortion, but early LV players were quite hissy because their disc-playing mechanism produced a fair amount of high-frequency flutter; in an FM recording system, any speed variation, including wow or flutter, creates an unwanted audio signal, or noise.

As for CED, the RCA system, when the first players came out it seemed that the system's designer had ignored the goal of good sound. The players were monophonic, and there were no connectors for carrying the audio to a separate sound system. The audio was available only on the television-frequency output signal that feeds the picture to a TV set. Although the performance of the CED's single channel was probably about as good as either channel of the LV player, it was hard to tell through the usual TV set's amplifier and speaker.

## Second-Generation Disc Players

Both LV and CED disc players now have much lower noise thanks to a slightly modified version of the CX noise-reduction system originally designed for phonograph records. CED players now also provide stereo sound, using a multiplex system very much like that used in FM broadcasting in which there are sum (left + right) and difference (left - right) signals.

Such sum-and-difference encoding means less than perfect, but more than adequate, separation, and it helps provide compatibility between the various grades of player. The most basic CED players deliver a mono signal in the CX-encoded (compressed) form, which helps compensate for the dynamic-range deficiencies of the TV-set amplifiers and speakers with which these players tend to be used. The more expensive versions supply two channels of CX-decoded audio, with full dynamic range, for stereo playback.

## Second-Generation Video Tape

Both the Beta and VHS manufacturers have now adopted FM recording, with results that promise to give audio performance superior to all commercially available media except the all-digital Compact Disc. In the Beta Hi-Fi system, the stringent high-frequency requirements of FM recording are met by using the video recording heads—which, as you may remember, are on a rotating drum that gives them a tape-to-head speed of over 300 ips. A separate FM carrier is used for each audio channel, both between 1 and 2 MHz.

This requires stealing some of the frequency spectrum formerly allotted to the video signal, but the picture quality does not seem to suffer noticeably.

The VHS Hi-Fi method is a bit different, with two separate audio heads mounted on the rotating video-head drum. The audio heads record the two FM-sound carriers, and then the video heads come along and lay down their signal right over the audio. In any magnetic tape, the higher frequencies are recorded only in the surface layer, so the video (which is mostly above 3 MHz) lies close to the surface while the audio remains beneath.

The low-frequency flutter that mars the audio performance of earlier video cassette decks is transformed by the FM process into inaudible low-frequency noise. Wow-and-flutter in these decks is lower than that achievable by all but digital audio recorders. Both Beta and VHS Hi-Fi have effective noise-reduction circuits that give signal-to-noise ratios of around 80 dB, which is better than many professional open-reel mastering recorders. Frequency response and distortion are also excellent. In fact, these machines may prove useful as audio-only recorders for live music and other applications.

## How Does It Sound?

You may be wondering at this point exactly how well all these systems work. Can you really get high-fidelity sound along with pictures in these formats? The answer is that you *can*, but too often you *don't*. Movie soundtracks on video don't always sound so good, even when they have been carefully recorded and edited, because they have been mixed and equalized for average the-

RCA's random-access SelectaVision SJT400 CED video-disc player



# REDEFINITION.

## THE CARVER RECEIVER

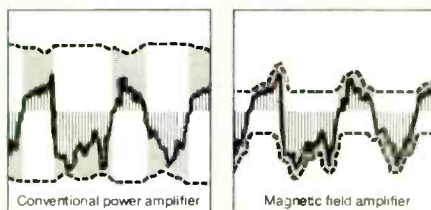
Redefines your expectations of receiver performance with the power you need for Digital Audio Discs plus virtually noise-free stereo FM reception. A receiver with astonishing performance incorporating two highly significant technological breakthroughs: Bob Carver's Magnetic Field Power Amplifier and his Asymmetrical Charge Coupled FM Detector.

**ESSENTIAL POWER:** Your system needs an abundance of power to reproduce, without distortion, the dynamic range of music on Digital Audio Discs and fine analog recordings.

The Magnetic Field Amplifier in the CARVER Receiver gives you 130 watts per channel\* of pure, clean power with superbly defined, high fidelity reproduction.

The Magnetic Field Amplifier produces large amounts of power (absolutely necessary for the accurate reproduction of music at realistic listening levels) without the need for heavy heat sinks, massive transformers, and enormous power capacitors required by conventional amplifier design.

Unlike conventional amplifiers which produce a constant, high voltage level at all times, irrespective of the demands of the ever-changing audio signal! (Even when there is no audio signal in the circuit at all!), the Magnetic Field Amplifier's power supply is signal responsive. Highly efficient, it produces *exactly and only* the power needed to carry the signal with complete accuracy and fidelity.



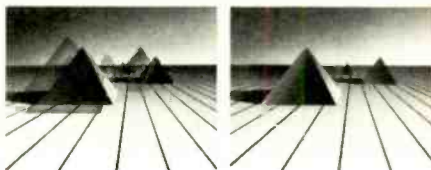
Solid line: audio output signal. Broken line: power supply voltage. Shaded area: wasted power. Vertical lines: power to speakers.

The 130 watts-per-channel\* CARVER Receiver is about the same size and weight of conventional receivers having merely 30 watts per channel!

**NOISE-FREE RECEPTION:** The AM-FM CARVER Receiver gives you FM stereo performance unmatched by that of any other receiver.

As it is transmitted from the station, the stereo FM signal is extremely vulnerable to distortion, noise, hiss and multipath interference.

However, when you engage CARVER's Asymmetrical Charge Coupled FM Detector circuit, the stereo signal arrives at your ears virtually noise-free. You hear fully separated stereo with space, depth and ambience!



Reflected multi-path signals cause audible distortion.

Asymmetrical Charge Coupled FM Detector gives your ears a true sonic image.

The Asymmetrical Charge Coupled FM Detector was first introduced in CARVER's TX-11 Stereo Tuner, receiving unparalleled critical acclaim:

*"A major advance... Its noise reduction for stereo reception ranged from appreciable to tremendous. It makes the majority of stereo signals sound virtually as quiet as mono signals, yet it does not dilute the stereo effect."*

Julian D. Hirsch, STEREO REVIEW (December, 1982)

*"Separation was still there; only the background noise had been diminished, and with it, much of the sibilance and hissy edginess so characteristic of multipath interference."*

Leonard Feldman, AUDIO (December, 1982)

*"What distinguishes the TX-11 is its ability to pull clean, noise-free sound out of weak or multipath ridden signals that would have you lunging for the mono switch on any other tuner we know of."*

HIGH FIDELITY (January, 1983)

The CARVER Receiver has been designed for fidelity, accuracy and musicality. You will want to visit your CARVER dealer for a personal audition of this remarkable instrument.

\*130 watts per channel RMS into 8 ohms, 20 Hz to 20 kHz with no more than 0.05% total harmonic distortion.



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Carver Corporation P.O. Box 664, Woodinville, WA 98072

# The Sound of Music on Video

Angel/EMI Records



Conductor Carlo Maria Giulini and violinist Itzhak Perlman in a concert video disc of the Brahms Violin Concerto

ater systems. There are notable exceptions to this rule, though—some versions of *Dragonslayer* and *Alien* come to mind—and in a few years we should see more good film soundtracks in the video tape and disc versions.

The situation with the new music-video recordings appears even more promising. Most of these were originally audio productions made on good equipment, with the video material added later. If the transfers to tape and disc are handled carefully, there is no reason why music tapes and discs, including the 20-minute "Video 45" tapes and the analogous small Laser-Vision discs that may be appearing soon, cannot provide truly satisfying sound along with the "visuals."

One thing that helps greatly in the recreation of the theatrical experience is the addition of extra channels to the playback system along with a decoder to extract the "surround" material, which is present on all stereo tapes and discs made from Dolby Stereo movie soundtracks. There are commercially available decoders that will unscramble the surround according to the original encoding, or you can use any of several other circuits, such as a QS or SQ quadraphonic decoder (if you can find one), or a "holographic" image enhancer if you have one of those around the house. Even the old DynaQuad (Haf-ler) method of feeding a simple left-minus-right signal to the rear speakers will work reasonably well.

## Stereo TV

And what of the regular broadcasts that we all watch at home? Will those of us with only a TV set and a stereo system ever be able to make use of these stereo soundtracks? Stereo TV has been available in Japan, though not in all parts of it, for a couple of years now, and it will eventually arrive in the U.S. The process has been held up by the FCC's refusal to settle on a single method of broadcasting the two channels or on a standard noise-reduction scheme. The impasse may be on its way to are solution by the time you read this. If all goes well, you might be able to receive your first stereo TV broadcast in late 1984 or early 1985.

In the meantime, those of you with cable service may already be able to receive music-video programs in stereo. The big cable companies broadcast many hours of stereo sound each week over their satellite distribution networks. Owners of satellite receivers can capture those signals directly with an FM tuner connected to the output of the down-converter, and cable customers whose local distribution services have stereo encoding can pick up two-channel audio in the same way. But many distributors have simply combined the two channels into one in the belief that few customers will notice. If your local cable service is doing this, now is the time for a little grass-roots activism! □

## The Software

By Chris Albertson

**T**EN years ago, when I bought my first video-cassette machine, a Sony U-matic, most people did not know that visual images could be captured on tape. They had, in fact, watched taped shows for more than a decade on their television sets, but they thought it was film. There are still people who believe video recording started with the Betamax or VHS systems, and so swiftly has the technology moved that half-inch *open-reel* video recorders passed without most people noticing. I bought one of those machines too (a Sony AV-8650). But I never had a prerecorded tape for either deck because the hardware manufacturers focused on the business and educational markets and the handful of companies who pioneered video software took equally narrow aim. Thus, about the closest these offerings came to entertainment was a series of speed-reading courses conducted by Dick Cavett that cost several hundred dollars. If you wanted music or drama, you had to tape it yourself—but, interestingly enough, you could do so in stereo. Why the designers of home machines later regressed to mono is something I will never fully understand. In those early days, even dissertations on the sex



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**0 to 50 in 5.78 seconds.** Now, while you're re-reading Turbo Colt's acceleration number in wide-eyed amazement, let us remind you that there's much more to Turbo Colt than a turbocharger. Turbo Colt is equipped to give you all the fun, the great handling, and the looks that should go along with its kind of acceleration. It rolls on Michelin XVS 165/70 HR 13's, with non-linear,

high-control springs, solid front and rear stabilizer bars (.79" up front, .57" out back), heavy duty transmission and clutch, and front gas-filled shocks. Front air dam, rear spoiler, tachometer, halogen headlamps and a sport braking system are all standard.

Check out the rest of Turbo Colt's stats and go grab hold of one at your Dodge or Plymouth dealer.

## TURBO COLT: VITAL STATISTICS

**ACCELERATION:** Zero to 50 mph...5.78 seconds  
**ENGINE:** 1.6 liter turbo-charged, electronically-

controlled injected 4-cyl. MCA-Jet  
**TURBO BOOST:** 7.5 lbs. psi  
**POWER:** 102 bhp @ 5500 rpm  
**POWER TO WEIGHT RATIO:** 19.77 lbs per hp  
**TORQUE:** 122 lbs-ft. @ 3,000 rpm  
**TRANSMISSION:** 4x2 Twin Stick



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**IMPORTS WITH A PURPOSE.**



**Dodge**



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BUCKLE UP FOR SAFETY

# The Sound of Music on Video

life of a sawfish came in stereo sound.

If the days I spent with my U-matic 3 1/4-inch cassette and my 1/2-inch open-reel machine seem very distant, it is because we have come so far in only a decade. I still have the open-reel deck, but my U-matic has long since been replaced with a VHS system, and I have added two video-disc players: a Pioneer VP-1000 laser system and a Zenith CED unit. This equipment, along with a hookup to a cable system, allows me to select from an impressive menu of visual music presentations, and the choice is getting wider all the time.

Of course, I should point out that while the video palette is broad and varied, it is still somewhat lopsided in favor of pop music, specifically pop music reflecting the current wave. There are, for instance, no satellite cable programs devoted to Mozart or Monk, and only very recently have jazz and classical music begun to trickle into the video catalogs. Rock, on the other hand, is in abundant supply, especially on the cable shows, which thrive on the presentations of a recent phenomenon known simply as "videos." These are usually hit audio recordings imaginatively dressed up in video. It could be argued quite convincingly that Walt Disney planted the seed with his 1940 film *Fantasia*, which juxtaposed Mickey Mouse and Mussorgsky. And I suppose it would not be too far off to suggest that the Beatles films brought the concept of music with images closer to its present-day video form.

Making a video is expensive, costing between \$20,000 and \$100,000, and there is currently some dispute over who should bear this cost. Once made, videos are given free to anyone who is

willing to show them, and their dissemination is definitely boosting regular record sales—and, some say, rescuing a drowning record industry. The expense is certainly more justified in business terms than the money traditionally wasted on ego-boosting limousines, promotional parties, and billboards along Sunset Strip.

One fact is clear: *videos sell records*, especially if presented on a show like Warner Amex Satellite Entertainment Company's MTV, a nationwide twenty-four-hour cable music channel that practically started a new industry. Since beaming its first earthbound signal in August 1981, MTV has been taken on by 1,300 cable networks, but it has also generated considerable controversy by its narrow selection of videos, which all but excludes black artists. Answering accusations of racism, the MTV brass claims that its mostly white play-list merely reflects its policy of emphasizing rock, but MTV also plays country music and other decidedly non-rock white acts. So the controversy rages on.

I have another complaint against MTV, and it is strictly a technical one. I wish the channel's chatty, inane vid-jocks would stop bragging about their stereo sound. In fact, I wish they would creep back to radio, but at least they should stop telling viewers, "Call your cable company and order a stereo installation." I *did* call mine, Group W in Manhattan, but I got the distinct impression that they never heard of stereo sound!

The success of MTV has spawned several imitators, and some shows are clearly designed to fill the racial gap. Not surprisingly, that seems to be the

case with a six-hour-a-week presentation of the BET (Black Entertainment Television) cable channel, *Video Soul*, which boasts an "urban contemporary" policy. It will thus include Dolly Parton but is more likely to offer Rick James. BET also offers its estimated 4.6 million viewers *Black Showcase*, a weekly hour that includes jazz and blues. Other offerings that might find their way to your screen are TNN (The Nashville Network), which is one long *Hee-Haw*; *FM-TV*, a two-hour syndicated program of contemporary videos carried in sixty-five markets; and *Friday Night Videos*, a ninety-minute NBC network show. The last is by far the most satisfying I have seen yet. The video selections seem to be based entirely on artistic merit, there are no "personalities" interfering between video clips, and—in New York City, at least—a stereo simulcast is offered by a local FM station.

Speaking of things local, there are now shows of this nature springing up throughout the country. In New York it's *New York Hot Tracks*, which is taped on location at a different club each week and blends videos with brief appearances by local groups. Predominantly black in its orientation, *Hot Tracks* helps balance the programming of MTV, but it suffers from poor production and the small talk of a local radio disc jockey who is a decided misfit in the visual medium.

These shows should not, strictly speaking, be categorized as "software," but if you want your own copy of a favorite artist's video, chances are you will have to tape it off the air or cable—and then it does, indeed, become software. So far, very few videos have

Sony Beta Hi-Fi SL-2700  
video-cassette recorder





Randy Newman in his  
"I Love LA" video

found their way onto a disc or prerecorded tape, but that may change as Sony tests the market with its (tape) Video 45's and Video LP's. The former run about fifteen minutes and list for \$15.95 in Beta format, \$19.95 in VHS; the latter can cost from \$19.95 to \$34.95 depending on the length.

Pop music has thrived well on RCA's CED video discs, especially since the introduction of stereo players. The RCA catalog offers some four hundred CED releases, but I am not so sure that I would want to sit through a program in a medium that tends to skip through the recording. At first I thought it was my player, but I have spoken to several people who own CED equipment, and all report the same problem. Why, then, is the system succeeding? Price is the main factor, I suspect. A player can be had for less than \$200, and when software for the CED system was first introduced, it was considerably cheaper than prerecorded tape and quite a few dollars below the price of laser discs. Today that is no longer true. Most CX-encoded stereo discs containing musical material cost \$24.98, which is on par with the laser disc. Of course, RCA also lets you relive NBC television shows in mono for a lot less: just \$14.98 for a feature-length version of the successful *Victory at Sea* series and \$19.98 for some of Don Kirshner's rock concerts.

[An RCA spokesman told *STEREO REVIEW* that the skipping problem has

virtually been eliminated in the new electronic models of the RCA CED player—that is, models with electronic controls plus a new turntable and stylus configuration. These players all bear the letter "J" in the model number, as in, for example, Model SJT-400.—Eds.]

The laser-disc catalogs have grown more slowly, but 1983 saw a noticeable increase in releases. In this system, which is technically superior and has offered stereo from the beginning, the program is more varied, at least as far as music is concerned. There is talk of Pioneer bringing out laser-disc singles, which may result in the release of some of the better videos, such as the engaging Michael Jackson *Beat It* rumble, the Eurythmics' marvelous *Sweet Dreams*, or ZZ Top's mini-movie *Sharp Dressed Man*. Unfortunately, the creativity that goes into so many videos is missing from most full-length discs, and, with few exceptions, concerts reduced to picture-tube size quickly become a bore to watch.

When it comes to classical music, no visual medium brings it into your living room better than laser discs. Opera is a natural, of course, and the outdoor production of *Aida* (Pioneer PA-82-017) is as stunning a home entertainment as you are likely to experience. While classical music is not new to television, laser discs bring to it an added, very important dimension: superb sound. It is thrilling to hear Smetana's *My Father-*

*land* with impressive fidelity and clarity of tone while you watch the Czech Philharmonic Orchestra perform it, and when the cameras occasionally exit Vladislav Hall to scan the ruins of an old fortress or glide over a breathtaking bend in the Moldau river, the experience becomes even richer. But while classical music comes over well on laser discs and more care seems to go into the production, the selection is still small. The main problem with video discs, and this goes for both systems, is that manufacturers so far seem to rely mostly on existing material. When new recordings are made expressly for the new medium, the result is generally far superior to anything we have previously seen or heard.

Another way to add good-sounding music to your television set is through film soundtracks. This category includes the bulk of existing tape and disc video software. Until recently, it cost over \$100 to acquire (legally) a major motion picture on video cassette, but now many movies are available for \$30 or \$40, which is comparable to disc prices. Here too, discs have the upper hand as far as audio and video clarity is concerned, and the laser disc—being technically superior and most enduring—gets top honors. Still, you can own such classic black-and-white films as *Citizen Kane* and *The Hunchback of Notre Dame* for a mere \$19.98 in the CED format, and that is a price neither tape nor laser-disc manufacturers have been able to match.

I have focused on music, but there is a great deal more available on video discs and tapes, ranging from Julia Child preparing a *mousse au chocolat* and tips on how to photograph with a 35-mm camera to a variety of aerobic dance-alongs. And, as Al Jolson remarked in the first feature-length talkie, "You ain't seen nothin' yet!" Video software has come a long way since Dick Cavett subbed for Evelyn Wood, and the picture will get even brighter, as it were, as more and more producers create specifically for this take-home medium. □

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# Best of the Month

Stereo Review's Selection of Recordings of Special Merit

Carly Simon's  
"Hello Big Man":  
Sensuality, Wit, and  
Pop-Music Art

**C**ARLY SIMON is getting better and better. Her newest Warner Brothers release, "Hello Big Man," is an exuberant, sexy, funny, sometimes poignant album. She performs with the vibrant gusto and earthiness that made her a star in the first place, and the songs, most of which she wrote or

helped to write, probably say more about the way life is lived in the Eighties by an attractive, intelligent woman than any three weighty sociological treatises ever could.

Never a shrinking violet, either in performance or in the out-front sensuality of her subject matter, Simon re-

*Carly Simon: no shrinking violet*



Lynn Goldsmith

cently said of herself: "I'm a strong woman, but I'm not a self-conscious feminist or a bra-waver. I believe in the equality of men and women, but not in any similarity. I've always gone directly after what I wanted, and if that happened to be a man. . . ." This untraditional attitude sometimes causes problems, of course, and Simon doesn't sidestep them. In *Damn, You Get to Me*, for instance, the object of a woman's affection is unresponsive because she has tried to take the lead in the significant first moves. Near the end she sings, "You led me by the hand/You took me slow so I would understand/Damn, you got to me/Let me get to you." The implied observation that each side got what it originally wanted is only one of the many truly *adult* notes she strikes in this album.

Equally forthright is *You Know*

*What to Do*, which Simon describes as "a sort of imagined macho-rape fantasy with overtones of Lady Chatterley and Mellors." Probably the most sensual track on the album, it still has the slightly acerbic tone that characterizes many of her songs about sex, romantic love, or both. There is no distancing by wit, however, in the delightful *Menemsha*, in which children from the Simon clan sing out in a joyous chorus, or in the limpid *Orpheus*, which Simon composed as a bedtime story for her son and in which she plays guitar again after a hiatus of several years. The reggae of *Such a Good Boy* and *Is This Love?* is totally authentic-sounding, and *Floundering*, the sad story of a lonely urban lady, is delivered straightforwardly and affectingly.

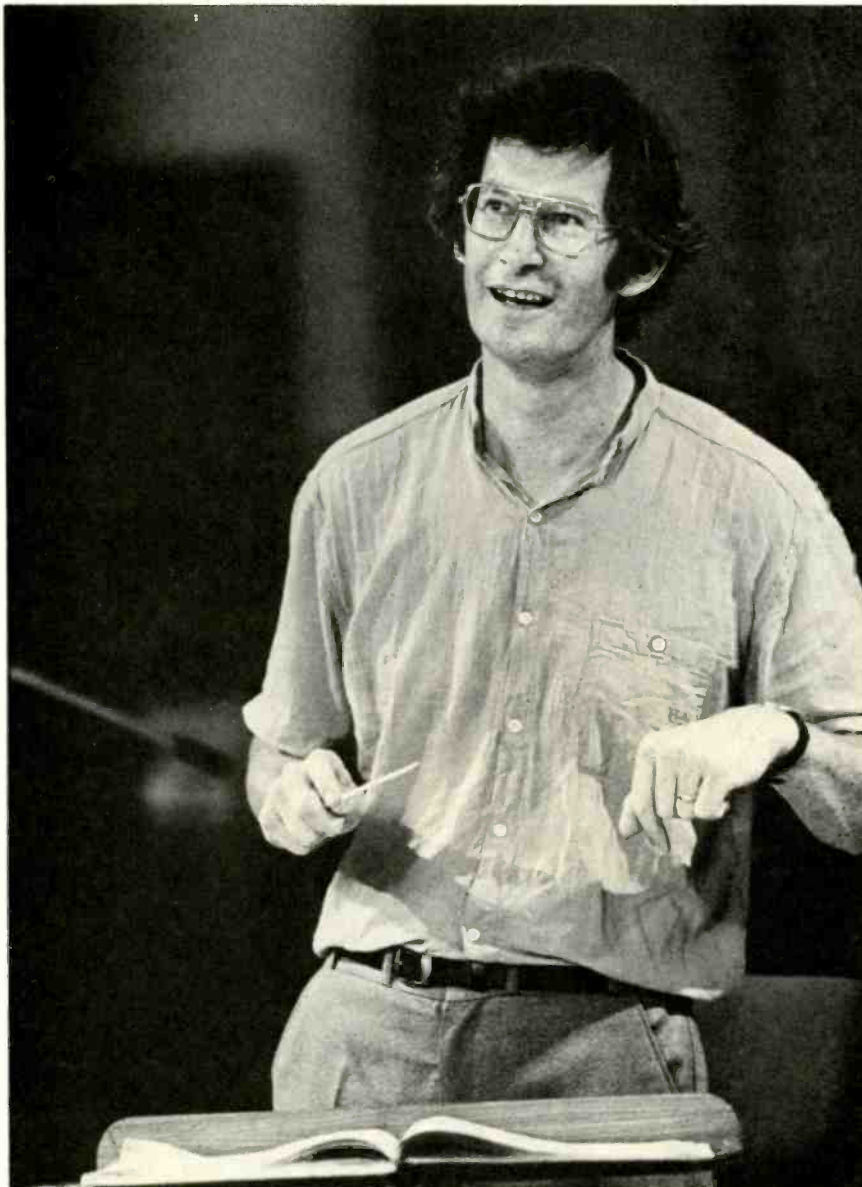
Easily the finest song here is the title track, *Hello Big Man*, which is, Simon

told me, "Mostly the story of my mother and father and how they met. Everything but the last verse, which is the way I *wish* it had turned out, is true. My mother got a job as a switchboard operator at Simon & Schuster. She was a little over five feet tall, and her first day on the job she met my father, who is six foot six, in the hall. He looked down at her and said, 'Hello, little lady,' and she looked up at him and said, 'Hello, big man.'" The lovely song that Simon has written about their lives seems as far away from the values and realities of the Eighties as pressed flowers and life-long monogamy. It is, however, a genuine work of pop-music art.

At last an album *about* something—real people, real feelings, real music making. Don't miss it. —Peter Reilly

**CARLY SIMON:** *Hello Big Man*. Carly Simon (vocals); orchestra. *You Know What to Do; Menemsha; Damn, You Get to Me; Is This Love?; Orpheus; It Happens Everyday; Such a Good Boy; Hello Big Man; You Don't Feel the Same; Floundering*. WARNER BROS. 1-23886 \$8.98, ©4-23886 \$8.98.

Conductor John Eliot Gardiner: meeting Handel's challenges



Clive Barde/Deutsche Grammophon

## Handel's *Hercules*: A Great Work Gets a Great Performance

**A**LTHOUGH Handel's *Hercules* was a failure in its day, in an article accompanying the new Archiv recording of the work, Handel scholar Winton Dean describes it as "one of the greatest secular musical dramas in the English language." One hearing of the hair-raising performance led by John Eliot Gardiner certainly confirms Dean's judgment of this magnificent work (which Handel himself called a "musical drama"). The libretto, by Thomas Broughton, is one of the best Handel ever set, and it inspired him to create one of his most moving and tragic scores.

The work is a taut study of jealousy and its effects. The leading character is Dejanira, the wife of Hercules, who is jealous of her husband's attentions to Iole, a captive princess. Despite the hero's advances, however, Iole remains innocent and marries Hyllus, the son of Hercules—but only after Dejanira has destroyed Hercules with a poisoned robe that she believed would restore his love for her.

As Dejanira, mezzo-soprano Sarah Walker leads us through emotions of grief, exultation, hate, revenge, and



Neil Young:  
utterly believable  
as a Fifties rocker

madness. Her voice is lovely in her delicately traced sorrow, bitchy in her jealous mockery of Hercules, and malignant in her final tortured insanity. Her word coloration is forceful and her coloratura brilliant. As Hercules, bass John Tomlinson is a virile foil, swaggering through his blustering arias and agonizing in his final consuming fire.

Tenor Anthony Rolfe Johnson, as Hyllus, is truly heroic as he defends his father and exquisitely tender in his addresses to Iole. Soprano Jennifer Smith brings genuine pathos to the part of Iole, brilliantly conveying her innocence and joy at her union with Hyllus. Catherine Denley and Peter Savidge bring great dignity to their lesser but musically important roles.

The singing of the Monteverdi Choir is energetic and forceful. Their portrayal of jealousy in the second act is truly frightening, and the clarity of line in the fugued gigue, "Wanton God of amorous fire," brings massed coloratura singing to a pinnacle of virtuosity. The English Baroque Soloists, a splendid band playing early instruments in authentic style, gives the crowning touch to the performance.

I have often praised John Eliot Gardiner's leadership in recordings of early

music for soloists, chorus, and orchestra, but this time he has really outdone himself, rising to the challenge of one of Handel's greatest works.

—Stoddard Lincoln

**HANDEL: *Hercules*.** John Tomlinson (bass), Hercules; Sarah Walker (mezzo-soprano), Dejanira; Jennifer Smith (soprano), Iole; Anthony Rolfe Johnson (tenor), Hyllus; Catherine Denley (mezzo-soprano), Lichas; Peter Savidge (bass), Priest of Jupiter. Monteverdi Choir; English Baroque Soloists, John Eliot Gardiner cond. ARCHIV ● 2742 004 three discs \$38.94, © 3383 004 \$38.94.

## Neil Young Finds the Soul of the Fifties In "Everybody's Rockin' "

**N**EIL YOUNG'S new album, "Everybody's Rockin'," is, like its electronic-music predecessor, "Trans," one of Young's little goofs. But this time it's a brilliant goof: a state-of-the-art, digitally mastered 1983 album that sounds

uncannily like the records made in ill-equipped little Southern studios in 1958. It makes sense, actually. Since Young abandoned overdubbing back in the early Seventies, he's been the only commercially successful rock star to record in essentially the same unadorned manner as the Fifties pioneers.

Nonetheless, I was unprepared for the utter believability of this particular journey through the past, on which Young is accompanied by a band called the Shocking Pinks. It's so offhand and spontaneous sounding and funny that the deliberate anachronisms—mostly Young's harmonica solos—don't even register on first listening. (One notable reminder that this is an Eighties record: Young claims on the fadeout of one song that he's "screwed Runaround Sue," an admission Dion would *never* have made.) Dressed in his best rockabilly drag on the album cover, Young looks for all the world like Slim Whitman. But the music inside is not all strictly rockabilly. There's also a lot of New Orleans-style r-&-b and even a straight blues song, *Bright Lights, Big City*, courtesy of Jimmy Reed. And, of course, Neil Young being Neil Young, there's no mistaking any of this stuff for the work of anybody but its creator,

especially the apparently dead-serious *Payola Blues*.

Young has done a truly amazing thing here: he's gotten into the soul of a musical style long since relegated to the dustbin of history (revisionists such as the Stray Cats notwithstanding). Sloppy, chaotic, and totally askew, "Everybody's Rockin'" may not be to everybody's taste, but, taken on its own idiosyncratic terms, it's probably a great record.  
—Steve Simels

**NEIL YOUNG:** *Everybody's Rockin'*; Neil Young (vocals, guitar, harmonica); the Shocking Pinks (vocals and instrumentals); *Betty Lou's Got a New Pair of Shoes*; *Rainin' in My Heart*; *Payola Blues*; *Wonderin'*; *Kinda Fonda Wanda*; *Jellyroll Man*; *Bright Lights, Big City*; *Cry, Cry, Cry*; *Mystery Train*; *Everybody's Rockin'*. GEF-FEN ● GHS 4013 \$8.98, © M5G 4013 \$8.98, © M9G 4013 \$8.98.

## Vladimir Ashkenazy's Rich, Convincing Rachmaninoff Third

**L**AST July I accorded high praise to Lorin Maazel's steely and urgent reading of the Rachmaninoff Third Symphony with the Berlin Philharmonic for Deutsche Grammophon. I thought it might be "the last word" in interpreting this score, and the digital sound was stunning. Now London has released Vladimir Ashkenazy's recording, also digital, with the Amsterdam Concertgebouw Orchestra, and his almost diametrically opposed view of the piece is in its own way equally convincing—and equally well presented in terms of sound and performance. Without a doubt, this is the most sensuous

and richly nuanced version of the Rachmaninoff Third that has come my way either on discs or in the concert hall, not excluding the recordings by Rachmaninoff himself and by Leopold Stokowski, who conducted the world première in Philadelphia in 1936.

Major factors in this result are the extraordinary finesse and precision of the playing Ashkenazy has elicited and the unusually rich and detailed recording provided by the London/Decca production team. The performance exploits to the limit the music's implicit contrasts, not so much to underline the sentiments as to bring out its mercurial characteristics. Ashkenazy's generally fast pacing also contributes to this effect, particularly in the opening movement. In the combined slow movement and scherzo he emphasizes the instrumental colors of the first and the volatility of the second. The fugato-textured finale is taken at a terrific clip, which the Concertgebouw players bring off with spirited ease, and for once the brief slow interlude does not seem like a bare patch. In short, this is a performance that "dares all" and gets away with it.

The filler piece is a sonata-allegro that Rachmaninoff wrote at age nineteen for a projected but uncompleted symphony. The music is an amalgam of somberness and exuberance that owes more than a little to the first movement of Tchaikovsky's Fourth. The performance is all that could be desired.

In all, this is a fascinating, brilliantly successful release.  
—David Hall

**RACHMANINOFF:** *Symphony No. 3, in A Minor, Op. 44; "Youth" Symphony (1891)*. Concertgebouw Orchestra, Vladimir Ashkenazy cond. LONDON ● LDR 71031 \$12.98, © LDR5 71031 \$12.98.

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## Roberta Flack and Peabo Bryson Make Sweet Music Together

**I**T would be hard to imagine a more compatible musical couple than Roberta Flack and Peabo Bryson. Their new Capitol album, "Born to Love," is much more of a true collaboration than their previous joint venture, "Live and More" on Atlantic, where it was obvious that the better-established Flack was "presenting" Bryson by giving him a chance to shine on his own as well as in a few duets. This time they meet as equals and become a real duo.

*Vladimir Ashkenazy: extraordinary finesse and precision*



London Records





Roberta Flack and Peabo Bryson: an ideal musical couple

In many respects, Bryson is an ideal successor to the late Donny Hathaway, whose career Flack also furthered and who performed with her on some of her most memorable recordings. Hathaway's style was steeped in the spirit and flavor of black gospel music, which provided much of the foundation for Flack's earlier work as well. Bryson is more in tune with Flack's current style, which is closer to middle-of-the-road pop modified by the smooth textures and lilting rhythms of Sixties soul music. Flack's current mode sacrifices some of her previous depth for a broader, mass appeal, but she is still a serious artist operating on a high level, and she still has the same honey-ripened voice and velvety style. Bryson is definitely the right partner for her at this time.

The album's quality is established immediately with the opening selection, *Tonight, I Celebrate My Love*, a fine ballad that has the appeal of a sure hit as well. Flack and Bryson's delicate and balanced treatment enhances the song's effectiveness. Their vocal blend is consistently attractive on the other duet selections too, among them two songs written and produced by Burt Bach-

rach and Carol Bayer Sager, *Blame It on Me* and *Maybe* (which Marvin Hamlisch had a hand in also). A real surprise is their sizzling attack on *Comin' Alive*, certainly the funkier up-tempo dance number either has ever recorded. It opens with a rousing yelp from Flack, and the two hustle and scuffle through it, somehow managing to make it sound less trite than it really is. Bryson steps into the spotlight alone on the title track, his own *Born to Love*, which should solidify his position as one of today's more gifted writers and performers of intimate music.

This is a flawlessly assembled album of contemporary rhythm-and-blues crafted to appeal to mainstream musical tastes without betraying the artists' roots. Sweeter sounds are not easy to come by. —Phyl Garland

**PEABO BRYSON AND ROBERTA FLACK: *Born to Love*.** Peabo Bryson, Roberta Flack (vocals); vocal and instrumental accompaniment. *Tonight, I Celebrate My Love; Born to Love; Heaven Above; Can We Find Love Again; Comin' Alive; Blame It on Me; Maybe; I Just Came Here to Dance; You're Lookin' Like Love to Me.* CAPITOL ST-12284 \$8.98, © 4XT-12284 \$8.98.

## Best of the Month

Recent selections  
you might have missed

### CLASSICAL

- **Beethoven: *String Quartets Nos. 12-16; Grosse Fuge.*** RCA ARL4-4509. "The Cleveland Quartet caps its Beethoven series with another winner." (October)
- **Brahms: *Vocal Ensembles.*** DEUTSCHE GRAMMOPHON 2740 280. "Clear, natural singing, marvelous sound." (September)
- **Fauré: *Songs.*** ANGEL DS-37893. "A prize selection . . . from Frederica von Stade." (October)
- **Mozart: *Piano Concertos Nos. 20 and 27.*** LONDON CS 7251. "Elegant, passionate, and committed performances from Sir Clifford Curzon . . ." (August)
- **Mozart: *Symphonies Nos. 31, 35, 38, 40, and 41.*** L'OISEAU-LYRE D172D4. ". . . some of the finest Mozart playing around." (September)
- **Ravel: *Gaspar de la nuit.*** Prokofiev: **Piano Sonata No. 6.** DEUTSCHE GRAMMOPHON 2532 093. ". . . [Ivo Pogorelich's performance is] simply irresistible in its imaginativeness and sweep." (November)
- **Rossini: *Il barbiere di Siviglia.*** PHILIPS 6759 100. ". . . the best Barber to come along in some twenty years." (November)
- **Schubert: *Piano Sonata in B-flat Major.*** HYPERION A66004. ". . . an exceptional realization of a great work." (August)

### POPULAR

- **Joan Baez: *Very Early Joan.*** VANGUARD VSD-79446/7. ". . . a spellbinding album by one of the most influential . . . popular artists of our time." (August)
- **Guy Clark: *Better Days.*** WARNER BROS. 23880-1. ". . . the finest album to come out of Nashville this year . . ." (November)
- **Local Hero.** WARNER BROS. 23827-1. "A beautiful, powerfully exciting film soundtrack by Mark Knopfler." (September)
- **Susannah McCorkle: *The People That You Never Get to Love.*** INNER CITY IC 1151. "Wonderful songs, wonderful singing." (September)
- **Graham Parker: *The Real Macaw.*** ARISTA AL8-8023. ". . . Intelligent, unselfish, adult love songs . . . positively inspirational. . . ." (November)
- **Mitch Ryder: *Never Kick a Sleeping Dog.*** RIVA RVL 7503. ". . . a nearly perfect comeback album." (October)
- **Carlos Santana: *Havana Moon.*** COLUMBIA FC 38642. "Soulful, fresh, and personal." (August)
- **Deniece Williams: *I'm So Proud.*** COLUMBIA FC 38622. ". . . a showcase for 'the songbird of soul.'" (October)
- **ZZ Top: *Eliminator.*** WARNER BROS. 23774-1. "Hard-rocking, low-riding, sleazy, and funny." (August)

# Popular Music

## News Briefs



**I**NTERNATIONAL singer **Julio Iglesias** (above) was honored by the *Guinness Book of World Records* in Paris in September with the newly created Diamond Disc award. The lawyer-turned-entertainer received the honor for selling more than a hundred million records worldwide in six different languages (English, Spanish, Italian, French, German, and Japanese)—an accomplishment unequaled by any other recording artist. The Spanish-born singer's new CBS recording "*En Concierto*" is, therefore, a timely release. It is a double album that contains Iglesias's international "greatest hits" in several languages. □

**M**ichael Jackson's album "*Thriller*" has now sold more than 14 million copies around the world, which makes it the largest-selling album in CBS Records' history, surpassing even "*Simon and Garfunkel's Greatest Hits*."

*Above right, the Prince of Wales meets Dire Straits; far right, Michael Jackson and Samir Kamoun pay tribute to Charlie Chaplin; near right, Culture Club (that's Boy George with the boots).*

With sales of 8.5 million in the United States, "*Thriller*" has also become CBS's greatest seller in this country, breaking the record previously held by the debut album of the rock group Boston.

This fall "*Thriller*" made further pop history when it became the first album to place five singles on the U.S. Top Ten charts. The fifth single was *Human Nature*, which followed, in order of release, *The Girl Is Mine*, *Billie Jean*, *Beat It*, and *Wanna Be Startin' Something*.

Jackson's earlier album "*Off the Wall*" produced four Top Ten singles, which means that his current run totals nine chart-toppers so far. Only five

other artists are ahead of Jackson with longer lists of consecutive hits: Elvis Presley with thirty, the Beatles with twenty-four, Pat Boone with fourteen, and Ricky Nelson and Brenda Lee with ten each.

According to Jackson, one of the major influences on his life and career has been Charlie Chaplin. He is shown below with actor Samir Kamoun in a little birthday memorial tribute to Chaplin, which they put on earlier this year. □

**R**OCKING THE PALACE: "I wanted to get up and dance, but I wasn't allowed to in the Royal Box," the Princess of Wales confessed to **Mark Knopfler** of Dire Straits after the group performed at a

benefit concert to aid the Prince's Trust in England. Prince Charles described the band's music as "dynamic, romantic, and beautiful" and noted that his wife owned Dire Straits' latest album, "*Love Over Gold*." The benefit performance in London ended the group's tremendously successful 1983 world tour. Pictured just below are: Peter Townshend, rock benefit artistic advisor; Princess Diana and Prince Charles; Alan Clark, Hal Lindes, John Illsley, and Mark Knopfler, all of Dire Straits; and Ed Bicknell, the group's manager. □

**M**ORE CHART RECORDS: Those who doubted that America was ready for a dread-locked androgyne sing-



Warner Bros. Records



Mark Lebon/Virgin Records



Epic Records

ing star like **Boy George** may be shocked to learn that **Culture Club**, the English band he fronts now, claims to be *the first group in more than twenty years to have three songs from their debut album land in the American Top Ten*. Wow! The songs are *Do You Really Want to Hurt Me*, *Time*, and, the most recent addition, *I'll Tumble 4 Ya*.

A different kind of distinction is claimed for r-&-b maestro **Luther Vandross**. He has a stunning uninterrupted chart run of 110 weeks (two solo albums and a production for Aretha Franklin). Isn't it about time for some pop anti-trust laws? S.S.

**N**OW IT CAN BE TOLD! According to a forthcoming book by former record executive Shaun Considine, the rea-

son **Barbra Streisand** has never had a nose job has nothing to do with vanity. In fact, claims the author in *ffStops* (due from Delacorte), Streisand has three times approached plastic surgeons about reworking her signature schnozz, but she changed her mind when no one could guarantee that the operation wouldn't affect the quality of her voice. The thanks of a grateful nation go to Considine; now we can all sleep easier knowing the truth. S.S.

**O**N December 6 the rock supergroup **Asia** will give what is claimed to be the first concert to be broadcast live on television worldwide with stereo simulcast. The concert will take place in Tokyo, and three satellites will be used to transmit it to viewers elsewhere in



Asia: today Toyko, tomorrow the world

Asia and in Europe, Australia, and the United States. At press time details for handling the complexities of delivering accurate stereo sound over the globe were still incomplete.

MTV and Geffen Records,

among others, are presenting the "Asia in Asia" event. The concert will undoubtedly function as colossal "tour support" for sale of the band's latest album, "Alpha," which is reviewed below. □

## Disc and Tape Reviews

By CHRIS ALBERTSON • PHYL GARLAND • ALANNA NASH • MARK PEEL  
PETER REILLY • STEVE SIMELS • JOEL VANCE

**ASIA: Alpha.** Asia (vocals and instrumentals). *Don't Cry; Never in a Million Years; My Own Time; The Heat Goes On;* and six others. GEFEN GHS 4008 \$8.98, © M5G 4008 \$8.98, © M9G 4008 \$8.98.

Performance: **Capitalism at work**  
Recording: **Very good**

I suppose I could manage to find something nice to say about "Alpha": competently performed, certainly well-engineered. But the only thing that really needs to be said about Asia's latest LP is that the product is here, a response to the dictates of the marketplace and the law of supply and demand. It needs a review about as much as a can of tuna fish needs a review: you know what you're getting even before you've taken off the shrinkwrap. And if, through some accident at the pressing plant, a couple of hundred thousand jackets went out with the latest Journey album inside instead, I don't think anyone would notice or care. Not even Asia. M.P.

**THE BLASTERS: Non Fiction.** The Blast-ers (vocals and instrumentals). *Red Rose;*

*Barefoot Rock; Boomtown; One More Dance; Tag Along; Fool's Paradise;* and five others. SLASH/WARNER BROS. 23818-1 \$8.98, © 23818-4 \$8.98.

Performance: **Spotty**  
Recording: **Good**

Neo-rockabilly bands are sometimes fun to listen to if you want to play the game of spot the references. The **Blasters'** references include Presley's first lead guitarist, Scotty Moore, Buddy Holly's rhythm riffs, and the saxophone sections of Little Richard and Fats Domino recordings. All that aside, the **Blasters** share a failing with other bands of the type: the lead vocalist has a colorless voice and a slightly sanctimonious delivery. Good intentions and rock-'n'-roll ancestor worship aren't enough. Ironically, most of the lead singers in neo-rockabilly bands also play harmonica, and they tend to be pretty damned good at it. The lead singer here is Phil Alvin, who also wrote all the original material, and he has a terrific harmonica solo on *Boomtown*, the only cut on which the band really cooks. It is dedicated to blues singer Po' Joe Williams. Alvin also dedicates *Long White Cadillac* to Hank Williams (it's supposed to be Hank's interior monologue on his last ride) and *Red Rose*, about a tryst in the weeds, to the San Gabriel River Bed (don't ask me to explain that one). J.V.

**WILLIAM BOLCOM AND JOAN MORRIS: More Rodgers and Hart.** Joan Morris (vocals); William Bolcom (piano); Max Morath (vocals, piano). *Isn't It Romantic?; My Funny Valentine; Manhattan; He and She; Nobody's Heart; Glad to Be Unhappy;*

*Thou Swell;* and five others. RCA ARL1-4676 \$8.98, © ARK1-4676 \$8.98.

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

This is the second album of Rodgers and Hart songs performed by soprano Joan Morris and pianist William Bolcom. This time they are joined by Max Morath for three numbers. As before, I find that Morris and Bolcom treat the throat-catching romanticism of Rodgers's music and the mordant sparkle of Hart's lyrics with more than a shade too much reverence. They do have their successes, among them a limpidly lovely *You Have Cast Your Shadow on the Sea* and an exuberantly ecstatic *Dancing on the Ceiling*. They completely miss, however, the Petit Guignol of *To Keep My Love Alive*, the acerbic satire of *He and She*, and the essentially dark poignancy of *Nobody's Heart*. Morath does what he can with his one solo, *I've Got Five Dollars*, and it isn't much. There's a dusty feel about the interpretations here. It's as if the Hugo Wolf Society Singers had turned their attention to the oeuvre of Smokey Robinson. P.R.

**MICHAEL BREWER: Beauty Lies.** Michael Brewer (vocals, guitar); vocal and instrumental accompaniment. *Without Love; Love's Endless War; Hearts Overflowing; Love in Time;* and five others. FULL MOON/WARNER BROS. FM 23815-1 \$8.98, © FMN 23815-4 \$8.98.

Performance: **Déjà vu**  
Recording: **Good**

Michael Brewer was half of the early-Seventies folk-rock duo Brewer and Shipley

### Explanation of symbols:

- = digital-master analog LP
- Ⓢ = stereo cassette
- Ⓣ = digital Compact Disc
- Ⓢ = eight-track stereo cartridge
- Ⓛ = direct-to-disc recording
- Ⓜ = monophonic recording

The first listing is the one reviewed; other formats, if available, follow it.

## Earl Thomas Conley



RCA Records

**E**ARL THOMAS CONLEY has been kicking around as a songwriter for about a decade now, and ever since he started making albums of his own in 1980, those of us who keep up with such things have been forecasting that he would be one of the Big Ones before long. He isn't there quite yet, but his latest, "Don't Make It Easy for Me," proves he's getting closer all the time.

Brought up on a tradition of hard-core country and pedal-pumping boogie, Conley gradually began mixing soft country-rock into his repertoire. For this, his fourth album, he relies primarily on his own introspective ballads and uptempo country-rockers (the best of which he co-wrote with Randy Scruggs, who also contributes some searing electric guitar). But, unlike the high-gloss Eddie Rabbits of modern country music, Conley has something to say. While he writes strong, commercial melodies, such as *Your Love's on the Line*, the hit single from this album, his music sacrifices none of the emotional honesty or integrity usually associated with the older, or "straighter," form.

One reason for this is that Conley sings with a doleful passion that restores some of the soul and guts to country music that seem to have been missing of late. His voice is as bittersweet and melancholy as a late October day. Although he's been criticized for borrowing too many George Jones and Merle Haggard vocal inflections, it's apparent here that he's trying to hold that to a minimum and to establish his own, unfettered style. He's still experimenting, but he's obviously a gen-u-wine, natural country boy, the kind who says "far" for "fire" and who sits down and writes a song about how the so-called progress of getting a black-top highway built through it spoiled

the beauty of the area where he grew up.

But where Conley's songwriting really excels is in examining the emotional conflicts of human relationships. Country music often deals with complex matters in surface ways, but in *Your Love's on the Line*, for example, Conley is able to convey the tension and the release, the terror and the exhilaration of meeting someone you know will come to own you, whether you want them to or not. Later, in *Changes of Love*, he expresses the unfathomable pain and despair that comes when someone like that leaves you. His subject matter goes beyond the standard boy-girl fare, however. In one of his most moving songs, *Crowd Around the Corner*, dedicated to his grandfather, Conley takes a long, slow look at what happens to people when society decides they're too old to take part: "Time's run its course and freed the horse/That pulled them through their prime/. . . But life seems twice as heavy as the plow."

There aren't many people out there singing and writing with such abundance of feeling, but, for his sake, I hope Earl Conley isn't really as long-range unhappy as he sounds in a lot of these songs. (Come to think of it, I've never seen a picture of him smiling.) Conley is in this for the long haul, and, whatever his mood, country music is lucky to have him. —Alanna Nash

**EARL THOMAS CONLEY:** *Don't Make It Easy for Me*. Earl Thomas Conley (vocals); vocal and instrumental accompaniment. *Don't Make It Easy for Me*; *Your Love's on the Line*; *Holding Her and Loving You*; *You Can't Go On (Like a Rolling Stone)*; *Crowd Around the Corner*; *Ball and Chain*; *Angel in Disguise*; *Under Control*; *Changes of Love*; *Home So Fine*. RCA AHL1-4713 \$8.98, © AHK1-4713 \$8.98.

(*One Take over the Line*, *Yankee Lady*), and, after twenty years in the business, this is his first solo effort. Produced by Dan Fogelberg, the album features mostly pretty, mellow ballads, and a lot of it sounds like an updated, adult-contemporary version of (surprise) Brewer and Shipley.

For all the fuss about Brewer's recording on his own, he still goes in for a close-harmony, duo sound. When he isn't double-tracking his own harmonies, Fogelberg does the honors, and the problem then is that the songs end up sounding like Fogelberg's. With a host of big-name pickers and singers, including Mike Hanna, Russ Kunkel, Joe Lala, Tom Scott, Terry McMillan, J. D. Souther, and Linda Ronstadt (who you'd never know was there if you hadn't read the liner), it's an agreeable album but not very memorable, and it sure does waste a lot of talent. *A.N.*

**JACKSON BROWNE:** *Lawyers in Love*. Jackson Browne (vocals, guitar); Russ Kunkel (drums); Rick Vito (guitar); other musicians. *Lawyers in Love*; *On the Day*; *Cut It Away*; *Downtown*; *Tender Is the Night*; and three others. ASYLUM 60268-1 \$8.98, © CS-60268-1 \$8.98.

Performance: **No change**

Recording: **Clean**

This is being touted as Jackson Browne's first really contemporary, hep, with-it rock record. But, although it's true that the tempos are faster and the guitars a little louder than usual, it's actually pretty much like all of his other records, with the notable exception of "Running on Empty." That is, it's confessional, earnest, vaguely melodic, and ultimately sort of dull—unless you really go for Browne's brand of winsome introspection. (A tip-off to the secondhand quality of much of his inspiration is that three of the songs are named after a book, movie, or song by someone else.)

I must admit, though, that I was much taken by the title track, which not only accomplishes the unlikely feat of sounding like both Procul Harum and the Four Seasons in the space of a single song but also features one of the most psychedelically ambiguous lyrics anyone has written since the Sixties. This song could mean almost anything, which I find rather refreshing. I also think it's hysterically funny, though I'm not so sure what Browne himself thinks. But the rest of the record comes off sounding like a wimp trying too hard to be George Raft. *S.S.*

**PEABO BRYSON AND ROBERTA FLACK:** *Born to Love* (see *Best of the Month*, page 86)

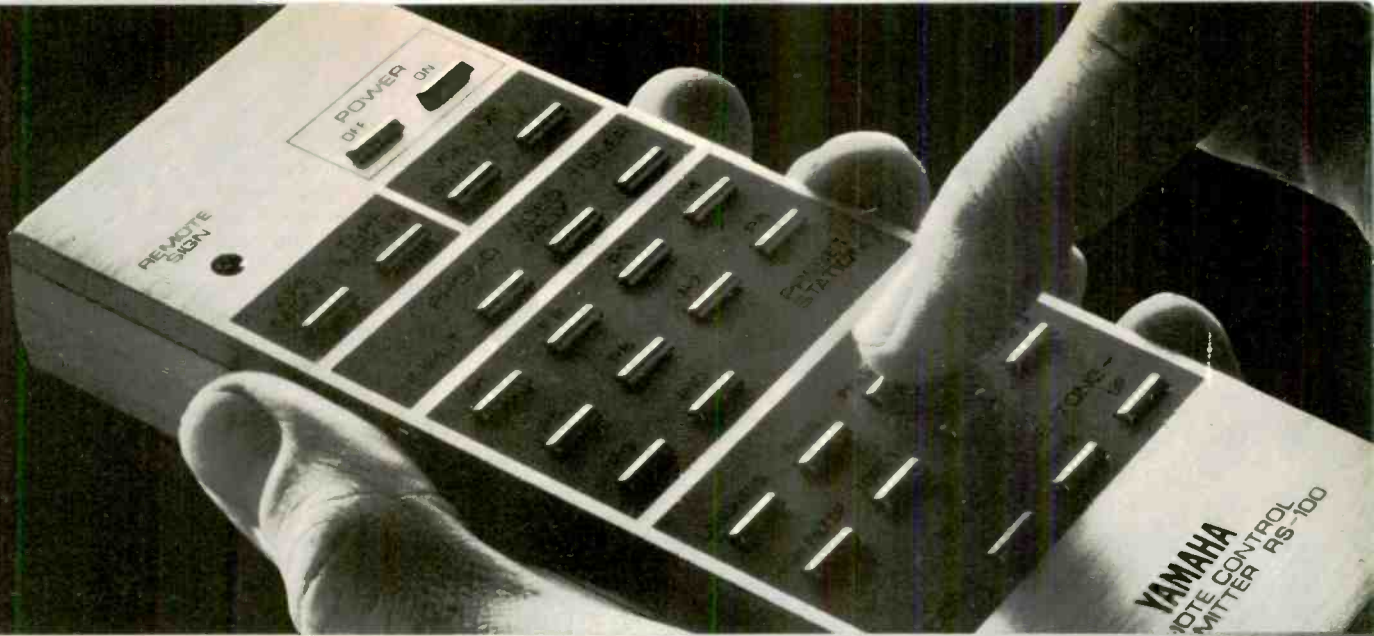
### RECORDING OF SPECIAL MERIT

**KATE BUSH.** Kate Bush (vocals and instrumentals); vocal and instrumental accompaniment. *Sat in Your Lap*; *James and the Cold Gun*; *Babooshka*; and two others. EMI/AMERICA MLP-19004 \$6.98.

Performance: **Idiosyncratic**

Recording: **Good**

Kate Bush's 1982 album "The Dreaming" was a startling revelation—a work of bizarre imagination and uncompromising originality. Her strange vocalizations,



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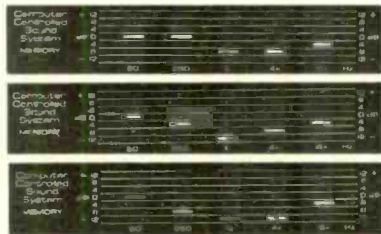


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which ranged from eerie whispers to animated shrieks, and her frantic rhythmic sense took more than a little getting used to. But once the ears made the adjustment, the music revealed a keen intelligence and captivating story-telling power. Unfortunately, few American ears made the adjustment.

This mini LP (now the music industry's marketing tool of choice for introducing new talent) is obviously an effort to give us another chance. While most minis introduce new material, "Kate Bush" reprises songs previously released in Britain and the U.S. *Sat in Your Lap* and *Suspended in Gaffa*, the quirkiest and most interesting songs here, are from "The Dreaming." Less manic and more accessible are the gutsy,

electrifying *James and the Cold Gun* in a steamy live performance; *Babooshka*, a nightmarish tale of a shattered marriage; and the haunting ballad *Un Baiser d'Enfant*. "Kate Bush" is a fairly easy entry to this strange, unique talent. The rewards are well worth the music's demands. *M.P.*

**CHARLIE.** Charlie (vocals and instrumentals). *It's Inevitable; Tempted; The Heartaches Begin*; and six others. MIRAGE 90098-1 \$8.98, © CS-90098-1 \$8.98.

Performance: **Competent**  
Recording: **Good**

Charlie's songs, made by guitarist Terry Thomas and sung by front man Terry Sles-

sar, are all about falling in love, but the subject is not addressed with any startling insight. The vocals are hearty, the arrangements capable but predictable, and the lyrics just about as riveting as a small-town newspaper's editorial on traffic lights. In short, the songs amount to textbook exercises rather than felt statements. Charlie is not an incompetent band by any means, but because of the poor material this is a point-less album. *J.V.*

**NATALIE COLE: *I'm Ready.*** Natalie Cole (vocals): vocal and instrumental accompaniment. *Too Much Mister; Where's Your Angel?; I'm Your Mirror; I'm Ready*; and four others. EPIC FE 38280, © FET 38280, no list price.

Performance: **Okay**  
Recording: **Good**

Natalie Cole has been trying to get her career back together for the last few years now, and this latest album shows some progress. After a brilliant debut in the mid-Seventies, Cole slid into a sharp decline with a series of albums that sounded as if she were just another Vegas-style girl singer. Most of her material is by Chuck Jackson and Marvin Yancy, and while it is an effective showcase for her voice it is extremely shallow. Moreover, Cole has been saddled with an overly ripe and insistent beat that tracks her every move like radar. Best cut is her own song *I'm Your Mirror*, which has an emotional depth and sincerity that nothing else on the album even tries to attain. *P.R.*

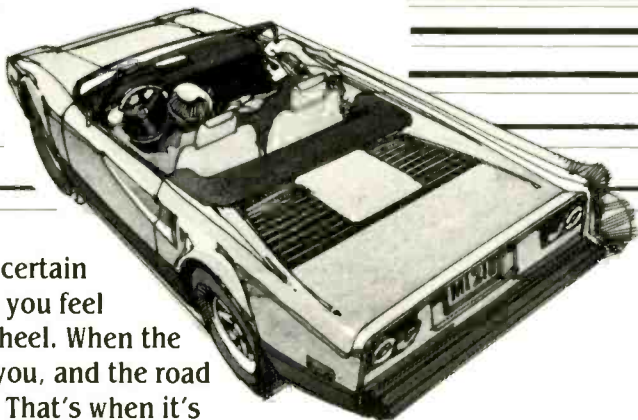
**ELVIS COSTELLO AND THE ATTRACTIONS: *Punch the Clock.*** Elvis Costello and the Attractions (vocals and instrumentals): vocal and instrumental accompaniment. *Let Them All Talk; Everyday I Write the Book; The Greatest Thing; The Element Within Her; Love Went Mad; Shipbuilding*; and seven others. COLUMBIA FC 38897, © FCT 38897, no list price.

Performance: **Not thrilling**  
Recording: **Nice**

I think I've figured out why Elvis Costello wants to be the Cole Porter of the Eighties, or at least why he says he does. It's because in 1965 Bob Dylan (remember him?) told Les Crane (or him?) that C.P. was his biggest influence. The question, of course, is whether Dylan was being ironic. Come to think of it, the same question applies to Costello's expressed ambition, because if this album is supposed to remind anyone of the composer of *I've Got You Under My Skin*, I'll be damned if I can see how. Say what you will about Porter and the tradition he came out of, at least he knew when to shut up. "Punch the Clock," however, only demonstrates that Costello has become the windiest bore since Hurricane Barry.

Song after song here (for a total of thirteen, if you can believe it) finds the former Angry Young Man suffering from a fatal inability to distinguish between a lyric and the list of ingredients on a TV dinner. (It's no accident that you practically need a magnifying glass to read the supplied lyric sheet.) As for the music, jazz trumpeter Chet Baker (of all people) contributes a lovely, limpid solo to one of the songs, but his brevity fails to provide an example to the

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nominal star. I suggest Costello try a stint as a cub reporter on a provincial newspaper—and fast. If anybody ever needed an editor . . . S.S.

**RECORDING OF SPECIAL MERIT**

**DJAVAN: *Faltando Um Pedaco.*** Djavan (vocals, keyboards); instrumental accompaniment. *Lambada de Serpente; Morena de Endoidecer; Seduzir; Meu Bem Querer; Nereci;* and five others. EMI/ODEON 31C 064 422.913 \$12.98 (from International Book & Record Distributors, 40-11 24th Street, Long Island City, N.Y. 11101).

Performance: **Moving**  
Recording: **Good**

Jazz and American pop music have been influenced by Brazilian music, and a pop import entitled "*Faltando Um Pedaco*" demonstrates the two-way flow of that influence. The artist is a young, neatly dreadlocked man who goes by the single name of Djavan, and he is a veritable explosion of talent. He wrote all of the music he performs, displaying a variety of instrumentation and mood. Djavan wrote most of the lyrics too, but, having no knowledge of Portuguese, I cannot comment on them other than to say that they *sound* right for the music. Put it all together, and the result is eloquent and beautiful. When Bessie Smith's music first gripped my emotions, many years ago, I didn't understand the lyrics either. C.A.

**AGNETHA FÄLTSKOG: *Wrap Your Arms Around Me.*** Agnetha Fältskog (vocals); orchestra. *The Heat Is On; Can't Shake Loose; Man; Stand by My Side; Once Burned, Twice Shy; Mr. Persuasion; To Love;* and five others. POLYGRAM POLS 365 \$8.98. © PMC 365 \$8.98.

Performance: **Steam over Stockholm**  
Recording: **Excellent**

Here's Agnetha Fältskog of ABBA in her first solo album. Recorded and produced, beautifully, in Stockholm by Mike Chapman, it gives her a chance to give full vent to her sex-pot side. She leaps into it with all of the enthusiasm of a cross-country Garbo, and the languid panting scarcely ever lets up. She is best, by far, on the slower numbers, such as the title song, a rhapsodic ballad. Even here, however, I could have done without her Donna Summer-like interjections. The only disaster is something called *The Heat Is On*, one of those fiercely *irrtropical* numbers so dear to the hearts of Nordics, in which Fältskog manages to produce the finest Bette Midler parody ever committed to vinyl by anyone other than Bette Midler. Despite this track, the album is a highly entertaining piece of good commercial record making. P.R.

**JON AND VANGELIS: *Private Collection.*** Jon Anderson (vocals); Vangelis (synthesizers); orchestra. *Italian Song; Polonaise; He Is Sailing; Horizon;* and two others. POLYDOR 813 174-1 Y-1 \$8.98, © 422-813 174-4 Y-1 \$8.98.

Performance: **Vapid**  
Recording: **Good**

Vangelis continues with his vapid synthesizer pyrotechnics in this new album, where

he's joined by Jon Anderson, who has provided lyrics for Vangelis's wispy melodies and sings and mutters his way through several bands. The arrangements are of the drip-drop, tick-tock variety set against marshmallow backgrounds of sound that quickly go nowhere. The entire second side is devoted to something titled *Horizon*, a twenty-three-minute tone poem with occasional interjections by Anderson. It has a possible therapeutic use as a treatment for chronic insomniacs. Music it is not. P.R.

**ALLAN JONES: *It's a Grand Night for Singing.*** Allan Jones (vocals); orchestra. *Donkey Serenade; The Song Is You; Blue Skies; The Way You Look Tonight; Così*

*Cosa; Lover; One Song; Easy to Love;* and ten others. WESTWOOD LP 505 \$7.98 (from Westwood Records, 2131 Greenfield Avenue, Los Angeles, Calif. 90025).

Performance: **Good**  
Recording: **Okay**

During the Golden Age of Hollywood in the Thirties, Allan Jones (Jack Jones's father) had a piercing but pleasing tenor voice and not very good luck. Under contract to MGM, he was manipulated as a threat to Nelson Eddy, who had already achieved star status. Jones was given only one starring role, in *The Firefly* opposite Jeanette MacDonald, but it did provide him with his one hit, *The Donkey Serenade*. It became a

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## Three Dog Night

**A** NUMBER of acts from the late Sixties and early Seventies are on the comeback trail these days, and I'm glad that Three Dog Night is among them. For "It's a Jungle," the group's new EP on Passport, all the original instrumentalists except one are on board together with front-line vocalists Cory Wells, Danny Hutton, and Chuck Negron. The record was produced by Richard Podolor, who worked on many of the group's original hits.

Three Dog Night was always fortunate in its selection of material, and this EP maintains that tradition. All the cuts are strong, but *Livin' It Up* (by Bill Labounty, Barry Mann, and Cynthia Weill) is a real dandy.

It's a sophisticated, bittersweet treat about a fellow recovering from a heartbreaking affair; the super vocal is by Chuck Negron. Record-industry economics being what they are, and the comeback trail requiring some cautious steps, I can understand why Three Dog Night issued an EP. But the band is in such fine form that I wish this had been a full album.

—Joel Vance

**THREE DOG NIGHT: *It's a Jungle*.** Three Dog Night (vocals and instrumentals). *It's a Jungle Out There; Shot in the Dark; Livin' It Up; I Can't Help It; Somebody's Gonna Get Hurt.* PASSPORT EP PB 5001 \$5.98, © PBC 5001 \$5.98.

pop classic and Jones's signature song for the rest of his long career of concert and night-club appearances. Included in this collection, it is as infectious and nonsensical as ever. The rest of the songs are from operettas and films of the Thirties and Forties, all sung out by Jones in a predictably flashy movie style. From the sound of his voice, strong from top to bottom, I would guess that the recordings were made some time in the late Forties or early Fifties, although no dates are given on the record jacket. An interesting souvenir of a singer who should have made it bigger than he did. *P.R.*

**KANSAS: *Drastic Measures*.** Kansas (vocals and instrumentals). *Fight Fire with Fire; Everybody's My Friend; Mainstream; Andi;* and five others. CBS QZ 38733, © QZT 38733, no list price.

Performance: **Mainstream**  
Recording: **Good**

It's not often that a band furnishes me with its own review, but Kansas does on this album with a song called *Mainstream*: "Just

crank 'em out on the assembly line and chart 'em higher/Just keep it simple boys, it's gonna be alright as long as you're inside the/Mainstream. . . ." Now I don't know which particular mainstream they had in mind, but the one I'm thinking about involves histrionic vocals and splashy synthesizer effects studded with thundering three-chord guitar riffs over a thudding beat. The back row of even the largest arena is too close for me when it comes to this kind of music. Like all the AOR heavyweights, Kansas survives in the Eighties because they've mastered some impressive electronic gear, including a device called the Elefantafon, named after the band's keyboard player, John Elefante. On the strength of "Drastic Measures," I'd have to put Elefante in the front ranks of AOR synthesizer players (not the most sophisticated, but possibly the most flamboyant users of the technology). The album is chock-full of strange sounds. Unfortunately, though, Elefante's large sonic vocabulary is squandered on some pretty prosaic music. Or, as the band says, "It's mainstream." *M.P.*

**GORDON LIGHTFOOT: *Salute*.** Gordon Lightfoot (vocals, guitar); instrumental accompaniment. *Salute (A Lot More Livin' to Do); Gotta Get Away; Someone to Believe In; Romance; Without You; Broken Dreams;* and four others. WARNER BROS. 23901-1 \$8.98, © 23901-4 \$8.98.

Performance: **Great first side**  
Recording: **Very good**

Love seems harder than ever to hold onto these days, and no one knows that better than Gordon Lightfoot, who's taken just about a whole album to work through the trauma and devastation of a failed relationship. The album begins with Lightfoot approaching a stranger in a bar with the opener, "I hope all the mistakes you made were a lot like mine/Lovin' girls too much sometimes they made you cry," and from there he proceeds to explore the various ways he's tried to escape his misery. First comes flight, of course, in *Gotta Get Away*, and then the retreat to nature, in *Whispers of the North* and *Knotty Pine*. In the final song he comes to the conclusion that things aren't really as bad as they seem, and he's ready to try again.

As you might expect from Lightfoot, there's some lovely imagery here, some extraordinarily beautiful and natural-sounding melodies, and some fairly cathartic emotional peaks and valleys. But there are also a couple of songs that just don't work, that seem beneath him either in conception (*Knotty Pine*) or in melodic structure (*Biscuit City*, which borrows too much from *Dixie* and *Oh! Susanna*), and a couple of lines that would even make them wince on Tin Pan Alley. But hey, when you're in this much agony, sometimes your judgment is off, you know? *A.N.*

**BARBARA MANDRELL: *Spun Gold*.** Barbara Mandrell (vocals); vocal and instrumental accompaniment. *In Times Like These; One of a Kind Pair of Fools; Overnight Sensation; Loveless; Bad Boys;* and five others. MCA MCA-5377 \$7.98, © MCAC-5377 \$7.98.

Performance: **Energized**  
Recording: **Good**

I've always liked Barbara Mandrell's throaty, throbbing voice, and I like her spunk and some of her hits, but I'm not very high on most of her albums. Their strengths usually stem from the same source as their weaknesses, which is that Mandrell's albums have been produced by the same "family" for years. Rhonda (a.k.a. "Kye") Fleming and Dennis Morgan write the bulk of the tunes; Tom Collins, who used to own the publishing company Fleming and Morgan wrote for, hires most of the back-up musicians and singers (usually the same ones) and pulls out one or two of his stock production formulas; and Mandrell tries to sound soulful and sincere. Usually an album includes one extremely strong commercial hit (here it's *In Times Like These*), and the rest of it is junked to the hilt with MOR rejects and predictable country-pop.

For some reason, however, Mandrell and Co. have ventured out of those confines a bit with "Spun Gold." Most of the same players and formulas are employed, but this time Collins has found some strong filler songs from outside writers, and Mandrell



has reached down into her own r-&-b bag a little deeper than usual. And my jaw dropped to my knees when I heard *Bad Boys*, a sassy little rock-'n'-roll number you'd expect more from Pat Benatar or Joan Jett than from the darling of the Country Music Association. Just the same, buyer beware. I have two copies of this album, and both of them skip and jump in all the same places. *A.N.*

**BETTE MIDLER: *No Frills*.** Bette Midler (vocals); orchestra. *Is It Love; Only in Miami; Let Me Drive; Heart over Head; Beast of Burden; My Eye on You*; and four others. ATLANTIC 80070-1 \$8.98, © CS-80070-1 \$8.98.

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

It seems as though every other star in the performing arts wants to be something else. The dramatic actor longs to be a clown, the clown a leading man, and the leading man a stand-up comic. Bette Midler, the most gifted singing comedienne since Fanny Brice and Sophie Tucker, has long nursed a vision of herself as a really down-with-it rock singer. That she can *act* that role, and do so superbly, she proved in the film *The Rose*. Her newest album, "No Frills," attempts to show that she can *sing* it. At times Midler comes fairly close to realizing her ambition, but not close enough to win the cigar. The problem is her voice: it just isn't capable of the gut-wrenching, throat-wrenching sounds of the true rock singer.

Nowhere is Midler's vocal limitation more obvious than in her performance of the Rolling Stones' *Beast of Burden*. She tries mightily, but even with plenty of technical support from the control room she sounds overpowered by the material. It's like listening to Debbie Boone trying to negotiate a Wagner aria. In less intense material, such as *My Eye on You* and *Let Me Drive*, she almost puts it over. Almost. Far and away the best track here is the wonderfully arranged and sung *Only in Miami*, about Cubans in Florida. It provides Midler with a strongly dramatic theme but doesn't tax her basic vocal resources. In all, an honorable try, but no more than that. *P.R.*

**STEVE MILLER BAND: *Live!*** Steve Miller Band (vocals and instrumentals). *Gangster of Love; Rock 'n Me; Living in the U.S.A.; Fly Like an Eagle; Jungle Love; The Joker*; and four others. CAPITOL ST-12263 \$8.98, © 4XT-12263 \$8.98.

Performance: **Spirited, except . . .**  
Recording: **Very good**

I've never been too big on changes (I've been wearing the same hairstyle since 1966, for example), but I think Steve Miller's about got me beat. Here we have his "new" live album, but unless I've stepped momentarily into the Twilight Zone, we've heard all of these tunes a jillion times before. This set amounts to a "greatest hits" record, and most of it seems to be played by rote without even the slightest new twist or nuance. It is clean and tight and decently recorded, with the snare almost as prominent as the bass and the vocals properly balanced, and Steve and the boys sound as if they're having a good time. It's just that they've had it before. And before. And . . . *A.N.*

**LOU RAWLS: *When the Night Comes*.** Lou Rawls (vocals); vocal and instrumental accompaniment. *Upside Down; Midnight Sunshine; I Been Him; A Couple More Years*; and six others. EPIC FE 38553, © FET 38553, no list price.

Performance: **Short-changed**  
Recording: **Good**

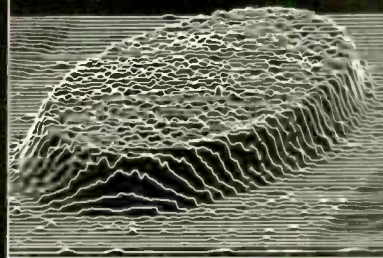
Lou Rawls has not changed his style in the more than twenty years that he has been making records, and his voice still has that deep, distinctive quality I admired on "Stormy Monday," his first album. What has changed—or broadened, I should say—is the range of material he tackles. On "When the Night Comes," he presents a

well-mixed, varied program more notable for its lyrics than its melodies. Four of these are by cartoonist-turned-songwriter/singer Shel Silverstein, whose Atlantic recordings of cleverly written satirical songs enjoyed some popularity a few years back. Silverstein's lyrics are still clever, but both the material and the voice are short-changed by some very pedestrian country arrangements. The entire set is nearly thrashed to a pulp by one of the most sadistic rhythm sections this side of the Rockies. That's too bad, because Rawls has his stuff together, and it is difficult to enjoy what he does when it is so inappropriately framed. *C.A.*

*(Continued on the next page)*

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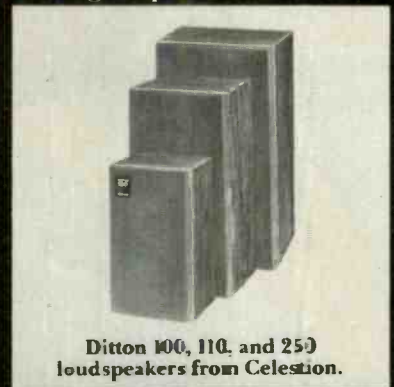
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Bill Schwarz, Miriam Sturm, and Bob Lucas

## Eclectricity

**E**LECTRICITY is the most appropriately named musical group you're ever likely to hear. Their sound borrows from a diverse range of ethnic musics, including Gypsy, East Indian, Jewish, Irish, and Balkan, with a little American jazz and traditional Anglo-American folk music thrown in for continuity. As a result, their new "Language of the Heart" on Flying Fish isn't the easiest album to listen to—I kept thinking I was playing an original-cast album and trying to figure out which character was which—but you'd never mistake it for Muzak either.

Essentially, the elements of Eclectricity are one tenor folk singer with a three-octave range (Bob Lucas), one European- and Indian-influenced instrumentalist (Bill Schwarz), and one violinist with a penchant for emotion-charged Gypsy and Jewish-style fiddling (Miriam Sturm). All three

write, and all three sing, and all three play, and the music they make is quite indescribably stirring. It warms my heart to know that someone in the heart of Indiana (Eclectricity is from Bloomington, not too far from where John Cougar comes from) is making music that's utterly untouched by whatever's happening in El Lay. And if that doesn't knock you out, the quality of Eclectricity's music will.

—Alanna Nash

**ELECTRICITY: *Language of the Heart.*** Eclectricity (vocals and instrumentals); vocal and instrumental accompaniment. *Friends; Sitting Out the Winter; Serb's Up; Moishele, My Friend; Don't Worry Mama; Goin' Back to Beethoven; Song to Itself; Fantasie Tzigane; Language of the Heart; The Dancer Inside You.* FLYING FISH FF 281 \$8.98.

**CARLY SIMON: *Hello Big Man*** (see Best of the Month, page 83)

**TACO: *After Eight.*** Taco (vocals); orchestra. *Puttin' On the Ritz; Cheek to Cheek; Thanks a Million; La Vie en rose; I Should Care; Singing in the Rain;* and six others. RCA AFL1-4818 \$8.98, © APK1-4818 \$8.98.

Performance: **Amusingly bizarre**  
Recording: **Inventive**

I don't know where Taco (Ockerse) comes from, but his cover photo—in which he looks like a cross between Conrad Veidt in *The Cabinet of Dr. Caligari* and a blood-drained Fred Astaire—gives me the feeling that the residents of whatever town it is are glad he's left. Whatever he's doing (and it's a good deal, including tap dancing) in this album recorded in Hamburg, Germany, is obviously meant to be as decadent as all get-out. Decadent, no. Bizarre, yes. He has taken a group of old standards and, with varying degrees of success, turned them into personal scenarios reminiscent of Tiny Tim, Spike Jones, skating-rink organ music, and the patchouli-laden tones of such Thirties crooners as Al Bowley and Russ Colombo. When it all works, as it does in *Puttin' On the Ritz* and *I Should Care*, it's amusing. But when it doesn't (*La Vie en rose*), it's a real mess. The production is as quirkily inventive as the star, and that's saying a good deal.

P.R.

### RECORDING OF SPECIAL MERIT

**TEARS FOR FEARS: *The Hurting.*** Tears for Fears (vocals and instrumentals); vocal and instrumental accompaniment. *The Hurting; Mad World; Pale Shelter; Ideas as Opiates; Memories Fade; Suffer the Children;* and four others. MERCURY 811 039-1 M-1 \$8.98, © 811 039-4 M-1 \$8.98.

Performance: **Bleak but convincing**  
Recording: **Very good**

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Steve Barker

Saxophonist John Lurie

## The Lounge Lizards

**W**HEN I first heard the Lounge Lizards play at a small New York City club a few years ago, looking and sounding as if they'd stepped straight out of the Fifties with their I-Like-Ike flannel suits and slick, geometric haircuts, two things about their music made a strong impression: the maniacal virtuosity of John Lurie, who played alto saxophone with total command in a sort of post-post-bop Albert Ayler vein, and the ex-

back from Pac-Man than from the person next to you in the grocery line. So I guess it's entirely natural that synth-pop musicians, who put an extra layer of electronics between themselves and the people with whom they're presumably trying to communicate, seem especially prone to alienation—and can be especially astute observers of its incidence and consequences. Tears for Fears suffers an exceptional degree of pain and disaffection, even for a synth band. Yet in spite of its pervasive melancholy, their music is strong enough to sustain the interest of even the most sanguine listener, provided he or she values thoughtfully composed and arranged songs even when they're not particularly danceable.

"The Hurting" contains some of the most intelligent use of a synthesizer that I've come across. Supporting rather than supplanting acoustic guitar and piano, it's used to paint a broad-brush harmonic backdrop for the eerie minor-key melodies of Roland Orzabal. Curt Smith's and Orzabal's vocals are a bit on the anguished side, to be sure, in keeping with such lyrics as "I find it kind of

cruciating cacophony of the rest of the band, which played with the kind of obvious incompetence that gave avant-garde jazz a bad name. Which is why I gave up going to hear the Lounge Lizards. And why their new, well-played, eminently listenable album, recorded live with the current lineup in 1982, is such an unexpected pleasure.

Lurie has largely eschewed the dense inapproachability of a few years back for a snaking, street-lamp lyricism reminiscent of such jazz expressionists as Sonny Rollins and Eric Dolphy (although there are some frantic moments here). And this group of Lizards can play: pianist Evan Lurie's bop-and-blues vamping and Tony Garnier's stalking bass are like a stroll through the pages of *True Confessions*, and the Lizards have added trombonist Peter Zummo to lend just the proper hint of sleaziness.

The tunes, which always seem to start out sounding like the music to *The Thin Man*, are full of twists and abrupt changes. A steady, pounding rhythmic figure in drums and piano is apt to dissolve into a ten-car pile-up, complete with flashing lights and ambulances, then re-form into a lazy swinging blues. A woozy, meandering alto solo breaks into *Honeysuckle Rose* for a couple of bars, then wanders off again like an old drunk. While the group occasionally runs into a little trouble (there are a few unaccountable lulls in the performances where you'd expect someone to take a solo), for the most part it's all wonderfully imaginative, energetic, and evocative. A winner.

—Mark Peel

**THE LOUNGE LIZARDS: *Live from the Drunken Boat*.** The Lounge Lizards (instrumentals). *Stompin' at the Corona; The Pedestrian; Carz-a-Poppin; Out to Lunch; Hair Street; Rangers in Paradise; In a Sentimental Mood; Loons 7*. EUROPA JP 2012 \$8.98 (from Europa Records, 611 Broadway, New York, N.Y. 10012).

funny/I find it kind of sad/The dreams in which I'm dying/Are the best I've ever had." But, perhaps because the songwriting is so economical, the tone never becomes oppressive. It makes for a powerful record and one of the real surprises of the year. *M.P.*

**CONWAY TWITTY: *Lost in the Feeling*.** Conway Twitty (vocals); vocal and instrumental accompaniment. *Lost in the Feeling; The Best Is Yet to Come; You've Got a Good Love Coming; We're So Close; Heartache Tonight*; and five others. WARNER BROS. 23869-1 \$8.98, © 23869-4 \$8.98.

Performance: **Uptown**  
Recording: **Good**

Conway Twitty has been referred to as "Mr. T" since before that character on television got his first Mohawk haircut, but "Mr. Stud" might be more fitting. Overtly sexual lyrics have been a mainstay of Twitty's music for some time now, but I can't remember a more single-minded album from him than this new one, nor can I recall a more uptown Twitty album since he hung

up his rock-idol crown in the early Sixties.

Here Twitty has adapted his country-hunk image to a slick, modern musical style. There are some borderline country numbers here, but they get a glossy treatment, and the bulk of the album features a cross of Memphis funk and such undeniably pop numbers as the Eagles' *Heartache Tonight* and the Commodores' *Three Times a Lady*. Twitty continues to be a strong chart artist, but I don't find this album satisfying. It conveys an overwhelming sense of posturing, a pretense of commitment. *A.N.*

**WAR: *Life (Is So Strange)*.** War (vocals and instrumentals). *Happiness; Shaking It Down; Summer Dreams; Life (Is So Strange)*; and two medleys. RCA AFL1-4598 \$8.98, © AFK1-4598 \$8.98.

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

War reached a high point of popularity in the early Seventies, and, although the group has continued to make successful recordings, over the years their sound has become considerably more subdued. Despite the bogey-man subtitles referring to the end of the world on the medleys *W.W. III* and *U-2*, this outing is a very laid-back affair taken at slow tempos. The "social statements" are featherweight. *Shaking It Down* is a very polite dance number, and the *Summer Dreams* instrumental is as sentimental as a greeting card.

These must be perplexing times for black bands. The thrilling days of Motown and Stax are long gone, disco is dead, black music is no longer a novelty or a cause, and the record market is soft. What is a black band to do? War's answer seems to be to speak softly and just hang in there. *J.V.*

**TOM WOPAT: Tom Wopat (vocals); vocal and instrumental accompaniment. *Up on a Hill; Sha-Marie; Nobody's Fool; (Til) I Kissed You*; and six others. COLUMBIA FC 38592, © FCT 38592, no list price.**

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

Tom Wopat is an actor and singer who plays one of the corn-cob cousins on TV's *The Dukes of Hazzard*. On this, his vocal debut album, Wopat proves he's not just another pretty TV face who thought it would be fun to cut a record. Assisted by producers Mike Post (king of the TV theme song) and Herb Petersen, who's added so much to Emmylou Harris's records, Wopat has chosen a good sampling of country-pop tunes, including Troy Seal's classic *We Had It All*, Don Everly's venerable *(Til) I Kissed You*, and three songs by Rafe Van Hoy. Wopat doesn't quite know what to do with the Seals song, but he turns in an effective performance on just about everything else. His voice hasn't much power or range, but he knows the strength of understatement and, at times, especially on *Up on the Hill*, he sounds a great deal like Jackson Browne. I can think of a lot worse albums and a lot less palatable singers. I think there's a real person under Wopat's TV shell. *A.N.*

**NEIL YOUNG: *Everybody's Rockin'* (see Best of the Month, page 85)**

(Continued on page 100)

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# JAZZ



## RECORDING OF SPECIAL MERIT

**ERNESTINE ANDERSON: *Big City*.** Ernestine Anderson (vocals); Hank Jones (piano); Monty Budwig (bass); Jeff Hamilton (drums). *All Blues; I Didn't Know What Time It Was; Spring Is Here; I'll Never Pass This Way Again; Welcome to the Club*; and four others. CONCORD JAZZ CJ-214 \$8.98, © CJ5-214 \$8.98.

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

Ernestine Anderson's voice has always appealed to me, but she has rarely sounded as good as she does on "Big City," her sixth Concord release. The accompaniment by Hank Jones, Monty Budwig, and Jeff Hamilton is superbly crafted to suit Anderson's voice, which now has a charming edge of maturity, and the program is again a varied mix of the familiar but not overdone. Anderson's rendering of Paul Simon's *The 59th Street Bridge Song (Feelin' Groovy)*

only confirms my feeling that she has the *savoir-faire* to handle any material. It augurs well for the future of American music that there is still a market for albums of such relaxed elegance. C.A.

## RECORDING OF SPECIAL MERIT

**ART FARMER QUARTET: *Warm Valley*.** Art Farmer (flugelhorn); Fred Hersch (piano); Ray Drummond (bass); Akira Tana (drums). *Moose the Mooche; Upper Manhattan Medical Group; Eclypso; Three Little Words*; and three others. CONCORD JAZZ CJ-212 \$8.98.

Performance: **Soft and superb**  
Recording: **Very good**

Art Farmer's new album, "Warm Valley," does not make any new waves, but his articulate quartet does a fine job of maintaining the high standard Farmer has been noted for since the early days of the Jazztet. A master of the mellow flugelhorn, Farmer sounds laid-back even when the tempo brings to mind the Indianapolis 500, but credit should go to all four players for making this the appealing set that it is. Adding to the pleasure is an imaginatively selected program that includes such familiar compositions from the jazz repertoire as Charlie Parker's *Moose the Mooche* and Duke Ellington's *Warm Valley* along with a rarer Tommy Flanagan tune, *Eclypso*, and Billy Strayhorn's *Upper Manhattan Medical Group* (also known as *U.M.M.G.*). My personal choice for the track to be stranded on

an island with is *Sad to Say*, a brooding piece by Farmer's former Jazztet partner Benny Golson. Played as a duet by Farmer and pianist Fred Hersch, it is devastatingly beautiful. This is an album that will always sound good. C.A.

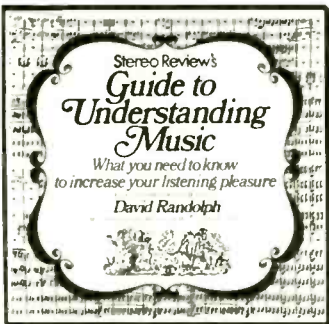
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***In Concert*.** Freddie Hubbard (trumpet); Joe Henderson (tenor saxophone); Chick Corea (piano); Stanley Clarke (bass); Lenny White (drums). *Guernica; Happy Times; Here's That Rainy Day; October Ballad*; and two others. ELEKTRA/MUSICIAN 60262-1 two discs \$9.98, © CS-60262-1 \$9.98.

Performance: **Invigorating**  
Recording: **Good remote**

The Griffith Park Band is an all-star group whose driving force seems to be drummer Lenny White. It is not a so-called working band but rather a temporary group of individuals with successful careers of their own. When its five members get together, however, the result usually belies the quintet's transitory existence. Except for an album on which pop singer Chaka Kahn destroyed a number of tunes associated with Billie Holiday, the Griffith Park Band's recorded output has been most satisfactory. And so is this new two-record set of concert performances taped in April 1983 when the group played San Francisco's Circle Star Theatre.

To mention the least satisfying aspects first, I am not terribly fond of tenor saxo-



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phonist Joe Henderson's excursions into the realm of sound effects. Placed skillfully, occasional crude noises do not bother me, but Henderson often oversteps the bounds of good taste, as he does here on *Guernica*, which otherwise seethes comfortably. Freddie Hubbard, on the other hand, is a joy throughout this set, and the rhythm section (with Chick Corea and Stanley Clarke both playing acoustic instruments) is first-class. The sound quality is good considering that the source was a cassette made by tapping into the theater's sound system. C.A.

**RECORDING OF SPECIAL MERIT**

**SHEILA JORDAN AND HARVIE SWARTZ:** *Old Time Feeling*. Sheila Jordan (vocals); Harvie Swartz (bass). *Some Other Time; I Miss That Old Time Feeling; The Thrill Is Gone; Lazy Afternoon*; and six others. PALO ALTO JAZZ PA-8038-N \$8.98 (from Palo Alto Jazz, 755 Page Mill Road, Palo Alto, Calif. 94304).

Performance: **Superb**  
Recording: **Excellent**

Sheila Jordan does not sound like any other singer I can think of. Perhaps that is why "Old Time Feeling" is her first American album in about two decades. In the past, Jordan did some interesting work with pianist Steve Kuhn, but I must say that I prefer the charm and intimacy of her singing with bassist Harvie Swartz on this new Palo Alto Jazz album. Since they have worked together before, in Kuhn's group, it is not odd

that they should have developed the strong rapport that is evident here. What I do find odd is that Sheila Jordan has received so little attention from the critics, many of whom express awe at the vocal improvisations of Betty Carter. I often find Carter's mannered style a strain to listen to, but Jordan's improvisations show unflinching taste. C.A.

**HERBIE MANN:** *Astral Island*. Herbie Mann (flute, tenor saxophone); Lou Volpe (guitar); Frank Gravis (bass); Buddy Williams (drums, percussion); Kinny Landrum (synthesizer, Roland Vocoder); Tom Malone (trombone). *Nueba; Push; Jazz Dancing; Gold Rush; Feel It All Over*; and four others. ATLANTIC 80077-1 \$8.98, © CS-80077-1 \$8.98.

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

Herbie Mann is one of the great professionals of the jazz world, and his newest album is another slick-as-spit exercise in the kind of virtuoso playing that has made and kept him a star. He throws off the enormously complex *Nueba* or the fast-changing *Jazz Dancing* with all the nonchalant ease of Dave Righetti flipping a Frisbie. Of course, no Mann is an island, and the production support provided here by Ahmet Ertegun and others is very fine indeed. P.R.

**RECORDING OF SPECIAL MERIT**

**JOHN PIZZARELLI, JR.:** *I'm Hip (Please Don't Tell My Father)*. John Pizzarelli, Jr.

(vocals, guitar); Bucky Pizzarelli (guitar); Russ Kasso (piano); Jerry Bruno (bass). *Route 66; I'm Hip; Popsicle Toes; I Like Jersey Best*; and five others. STASH ST226 \$8.98 (from Stash Records, P.O. Box 390, Brooklyn, N.Y. 11215).

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

What a family are the Pizzarellis! John Sr. (Bucky) is one of the most accomplished guitarists in the country. His daughter Mary is also a guitarist of note, and now we have his son, John Jr., who's not only more than adept on the instrument but a charming and entertaining vocalist as well.

The Pizzarellis are domiciled in New Jersey, and their residence there has led to the choice of three selections in John Jr.'s program. *A Man with One Million Dollars* and *Have Another One, Not Me* were featured by the late local light Joe Mooney. The latter tune, which Mooney wrote, is a chilling description of a man calling off an affair with an alcoholic and promiscuous girl friend. *I Like Jersey Best* is a novelty item, a joking paean to the state.

Nat Cole, whom the Pizzarellis obviously admire, is summoned up in *Route 66*, *Straighten Up and Fly Right*, and *For Sentimental Reasons*. The title tune skewers amateur liberals. John Jr. does a swell job with Michael Franks's *Popsicle Toes*—his version is more fluid than Franks's original. I repeat, what a family! J.V.

(Continued on the next page)

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## Herbie Hancock's "Future Shock"



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**H**ERBIE HANCOCK has had such a long love affair with electronic pop sounds that it no longer seems strange to hear this world-class jazz pianist playing his own sophisticated brand of synthesized funk. Moreover, his continued fine work with the jazz group V.S.O.P. and with the young jazz trumpeter Wynton Marsalis makes it easier for fans of the jazz Hancock to accept his pop experiments.

For his new pop album, "Future Shock," Hancock has dug deep into his bag of electronic tricks to produce a set that thunders, whirs, whooshes, buzzes, and bleeps with special effects. The driving beat is imaginatively varied, and the result is popular music that is effective and even intoxicating when played at high volume through a good stereo system. "Future Shock" is an apt title, for it contains familiar, earthy rhythms given a fresh, modernistic treatment. The standouts are *Autodrive*, where Hancock

turns to acoustic piano to interpolate classy jazz improvisations pitted against an insistent left-hand beat, and the title track, a sassy, finger-popping message song with lead vocalist Dwight Jackson Jr. offering a searing solo in a high falsetto reminiscent of Curtis Mayfield's *Superfly*.

This is the second consecutive pop album on which Herbie Hancock has managed to pull a varied assortment of ingredients together with exceptional skill. Perhaps the time has come to praise him for his versatility rather than lamenting that he is no longer exclusively devoted to "pure" jazz.

—Phyl Garland

**HERBIE HANCOCK:** *Future Shock*. Herbie Hancock (piano, synthesizers); vocal and instrumental accompaniment. *Rockit*; *Future Shock*; *TFS*; *Earth Beat*; *Autodrive*; *Rough*. COLUMBIA FC 38814, © FCT 38814, no list price.

Duke and Stanley Clarke among his sidemen along with Scott and Coryell. There is much here to move the body as well as much to move the emotions; *Winter in Austria* is guaranteed to perform the latter, *Seventh Heaven* the former. *Heaven*, incidentally, features a unique form of vocalese that has Guruvayoor Dorai "conversing" with drums the way Baby Cox did with Bubber Miley's cornet in the early Ellington days. This vocal technique, called *Solkattu*, is actually traditional, but Subramaniam gives it a new twist by combining it with a jazz rhythm section. Try it. C.A.

### RECORDING OF SPECIAL MERIT

**MAXINE SULLIVAN WITH TED EASTON'S JAZZ BAND:** *Maxine*. Maxine Sullivan (vocals); Bob Wulfers (trumpet) Henk Van Muyen (trombone); Frits Kaatee (clarinet, tenor saxophone); Jacques Kingma (bass); Pim Hogervorst (guitar); Ted Easton (drums). *I Cover the Waterfront*; *As Long As I Live*; *I Surrender, Dear*; *Somebody Sweetheart*; *The Lady's in Love with You*; and five others. AUDIOPHILE AP-167 \$7.98 (from Audiophile Records, 3008 Wadsworth Mill Place, Atlanta, Ga. 30032).

Performance: **Just fine**

Recording: **Good**

Recorded eight years ago in Holland, when Maxine Sullivan was a mere sixty-four, this album is only one more proof of the astonishing durability and quality of the lady's voice and performances. She drifts through such things as *Wrap Your Troubles in Dreams* and *Something to Remember You By* with the insouciant aplomb of a thirty-year-old opera singer running scales. Her voice, her swinging vitality, and her matchless phrasing are still among the wonders of the jazz world. A terrific album by a terrific singer.

P.R.

### RECORDING OF SPECIAL MERIT

**JESSICA WILLIAMS:** *Update*. Jessica Williams (piano); Dave Tucker (drums, percussion); John Wiitala (bass); Eddie Harris (tenor saxophone). *Resurrection*; *Road Runner*; *On Sonny's Side*; *Ruby My Dear*; *Sweet Potato Pie*; *Ready for Eddie*; and three others. CLEAN CUTS CC706 \$8.98.

Performance: **Fresh**

Recording: **Good**

Jessica Williams is one of jazz's better-kept secrets, which is a shame, because her simple, graceful style is enormously appealing. Her new album, "Update," contains nine original compositions, varying in mood and tempo from *Resurrection*, a bluesy ballad dedicated to Mary Lou Williams, (no relation), to the hard-bopping *On Sonny's Side*, ostensibly a nod to Sonny Rollins but with a lurching, gnarled melody that sounds more like Monk. Jessica Williams's writing and arrangements are direct, uncluttered, and invariably swinging. The quartet backing her on "Update" includes Eddie Harris on tenor saxophone. I'm not crazy about his breathy tone, but Williams herself overshadows it and everything else here. Harris could be playing a kazoo and it wouldn't matter in the least.

M.P.

### RECORDING OF SPECIAL MERIT

**L. SUBRAMANIAM:** *Spanish Wave*. L. Subramaniam (violin, viola); instrumental accompaniment. *Ninth House*; *Seventh Heaven*; *Chameleon*; *You and Me*; and three others. MILESTONE M-9114 \$8.98.

Performance: **Impressive**

Recording: **Good**

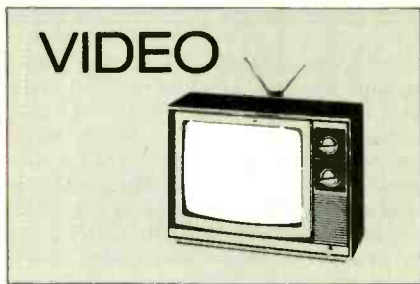
L. Subramaniam graduated from medical school and registered as general practitioner in his native India, but music held a stronger lure, so he never actually practiced medicine professionally. Ten years ago he came to this country, and, touring with George Harrison and Ravi Shankar, he fired the musical imaginations of established jazz and fusion musicians, many of whom asked him to join them at recording sessions. "Spanish Wave," his new Mile-

stone set, is not Subramaniam's first American album as a leader, but he remains relatively unknown outside of an inner circle of musicians.

"Spanish Wave" is not particularly Spanish in mood or style, but it is solid Subramaniam throughout, and that alone merits special attention. Subramaniam produced the sessions himself, and he composed and arranged all the music, but he dominates the performance only where the scenario seems to call for it. It often does, but plenty of room is given over to such sidemen as Tom Scott and Larry Coryell.

Subramaniam calls his music "neo-fusion." It is no mere blend of idioms, however, but rather an instrumental melting together. Although it is not jazz, it certainly contains elements that are traceable to jazz roots, and Subramaniam, who has worked with Herbie Hancock, includes George





**RECORDING OF SPECIAL MERIT**

**SHEENA EASTON:** *Live at the Palace, Hollywood.* Sheena Easton (vocals); instrumental accompaniment. *Prisoner; For Your Eyes Only; Modern Girl; Madness, Money and Music; Morning Train; Are You Man Enough; Wind Beneath My Wings; In the Winter;* and seven others. PIONEER LASER-Disc PA-83-045 CX stereo, extended-play \$24.95.

Performance: **Effective**  
Recording: **Fine video and audio**

Scottish singer Sheena Easton first stepped into the American music arena with a hit called *Morning Train*. Next she took her career a giant step further by singing—on the soundtrack as well as at the Oscar ceremony—the James Bond movie theme, *For Your Eyes Only*. Both hits are included on "Live at the Palace, Hollywood," her first video disc, an entertaining fifty-nine minutes taped on Easton's first trip to Holly-

wood. Easton has the beauty of a model and the presence of a seasoned star; combine that with a fine voice and excellent material, and you have the ingredients of a superb video album. Fortunately it is as well produced and recorded as it is performed. Sheena Easton is a versatile performer who can go from robotic New Wave to romantic ballads at the drop of an introductory chord, but she is also at home with contemporary country music. Clearly she is here to stay.

C.A.

**RECORDING OF SPECIAL MERIT**

**FLEETWOOD MAC:** *In Concert.* Fleetwood Mac (vocals and instrumentals). *The Chain; Gypsy; You Make Loving Fun; Sisters of the Moon; I'm So Afraid;* and four others. PIONEER LASERDISC PA-83-048 CX stereo, extended-play \$24.95.

Performance: **Consistent vitality**  
Recording: **Very good**

Fleetwood Mac has undergone stylistic as well as personnel changes since taking its first form in 1967. It is no longer all-British, and the ties to John Mayall have long since taken a back seat to a more West Coast-oriented sound. Yet the group has not totally abandoned its blues roots, and it does not appear to have any problem reaching a younger generation. "Fleetwood Mac in Concert" was taped at the Los Angeles Forum during the 1982 tour that followed the enormous success of the "Mirage" audio album. It is a solid fifty-seven minutes of

well-honed, energy-filled rock that expertly fuses the band's blues and folk experience into a very contemporary whole. As it turns out, it is the American contingent, Lindsey Buckingham and Stevie Nicks, who provide the high points of this concert—she with her rough-edged vocal on *Sisters of the Moon*, he with blues-drenched guitar work that becomes particularly electrifying on *Not That Funny* and the encore, *Go Your Own Way*. In fact, everybody in this band is terrific. How fortunate that the camera work is good and the CX-encoded sound excellent.

C.A.

**CAROLE KING:** *One to One.* Carole King (vocals, piano); vocal and instrumental accompaniment. *Jazzman; Tapestry; Locomotion; Lookin' Out for Number One; Take Good Care of My Baby; It Might As Well Rain Until September; Smackwater Jack; Hey Girl; One Fine Day;* and eight others. PIONEER LASERDISC PA-83-051 CX stereo, extended-play \$24.95.

Performance: **Variable**  
Recording: **Nice**

This video disc's title notwithstanding, there are (or were) two Carole Kings. The Sixties King wrote an astonishing number of high-quality hits for artists as dissimilar as Aretha Franklin and the Monkees, unabashedly commercial songs that were so impeccably crafted that they transcended themselves to become timeless, wonderful pop music. The Seventies King, however, churned out a series of embarrassingly

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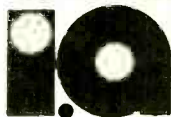


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Verve Records

## The Early Mulligan

It was some three decades ago that Gerry Mulligan, then a virtual unknown, startled the jazz world with a quartet of unusual instrumentation. Jazz quartets were nothing new, but this one had a distinct sound. To begin with, there was Mulligan's own horn, the baritone saxophone; its raspy, deep-throated tone was unexpected in the context of a quartet. Even more surprising, the horn sounded almost velvety against the sometimes sauntering, sometimes flitting rhythms of Mulligan's bassists, especially Carson Smith, and such delicate drummers as Chico Hamilton and Larry Bunker. The most radical departure, however, was the absence of a piano. Answering criticism of that omission in 1953, Mulligan noted that he did not regard the piano as an indispensable part of a rhythm section. Still, he was not anti-piano, for even then he occasionally employed such men as Jimmy Rowles, and he was not adverse to tickling a few ivories himself.

"personal" tunes, becoming the high priestess of the burgeoning Me Decade before beginning a slow, decade-long commercial fade. Unfortunately, it is the Seventies King who gets most of the time on "One to One," a concert video intercut with King's notvery-spontaneous reminiscences.

This aims to be a career retrospective, but for the most part King's Sixties material, which she obviously now feels is beneath her, is given incredibly short shrift. With the exception of a self-consciously nostalgic version of *Chains*, most of the older tunes are offered only in truncated solo run-

Now a comprehensive five-record reissue package offers us an opportunity to hear most of Mulligan's early work, with and without piano. If the set proves anything beyond the fact that Mulligan and his lyrical sidekick, trumpeter Chet Baker, were an ideal match, it is that dropping the piano was an excellent idea. As Pete Welding observes in the accompanying booklet, Mulligan's music was effective not so much because of the unorthodox instrumentation as because of the way Mulligan and his players compensated for the missing piano.

The boxed, numbered set from Mosaic Records (limited to 7,500 copies) contains sixty-three performances of fifty-three different compositions. Repetition is minimal considering that these are *all* the recordings Mulligan made for the Capitol and Pacific Jazz labels during a one-year period beginning with a session on June 10, 1952. There are several previously unissued tracks and uncut versions of takes that had been edited down for their original release.

These are not the only recordings that Mulligan and Baker made during the year covered; there were additional sides for the Fantasy and Gene Norman labels. But what we have here is a collection that superbly demonstrates the development of Mulligan's music in its important early stages. It is a great set for the scholars, but it is also a collection of fine, enduring music. The accompanying twelve-page booklet contains an authoritative essay by Pete Welding, several photographs, and as good a discography as you are likely to find for these recordings.

—Chris Albertson

**GERRY MULLIGAN: *The Original Gerry Mulligan Quartet with Chet Baker.*** Gerry Mulligan (baritone saxophone, piano); Chet Baker (trumpet); other musicians. *Get Happy; 'S Wonderful; Godchild; Haig and Haig; Bernie's Tune; Frenesi; Soft Shoe; Jeru; Walkin' Shoes; My Funny Valentine; Too Marvelous for Words; Freeway; Makin' Whoopee; Nights at the Turntable; Five Brothers; Love Me or Leave Me; The Nearness of You; Cherry; Rocker; A Ballad; Motel; Poinciana; Lover Man; My Old Flame; Westwood Walk; Flash; Ontet; Lady Be Good;* and twenty others. MOSAIC MR5-102 five discs \$42.50 (plus \$2.50 shipping and handling charge from Mosaic Records, 1341 Ocean Avenue, Suite 135, Santa Monica, Calif. 90401).

throughs by King in her living room. The newer stuff, in contrast, is done up by King and her band with such reverence that you'd be excused for thinking such ephemera as *Smackwater Jack* was of a historical importance on a par with the *Dead Sea Scrolls*.

King remains an undeniable talent, and she's been a bigger vocal influence than people give her credit for. But what's being offered here is mostly King's hippie-*manqué* act, and in 1983 it is, for me at least, a little wearing. Well shot and well recorded, however.

—Louis Meredith

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# Classical Music

## News Briefs



Angel/EMI Records

**A** NUMBER of leading opera singers and conductors will take part in a televised International Tribute on December 11 to the late soprano **Maria Callas**, who was born sixty years ago this month. The two-hour program will be aired live in Europe and will be aired in the United States by PBS on December 12 in the network's Great Performances series, funded in part by a grant from Exxon.

The gala tribute will include twenty-minute segments from four opera houses with which Callas was closely associated. From La Scala in Milan **Agnes Baltsa** and **Placido Domingo** will sing arias and a duet under the direction of **Lorin Maazel**; from the Paris Opera **Jessye Norman** and **José van Dam** will perform excerpts from Berlioz's *La Damnation de Faust* under **Seiji Ozawa**; from Covent Garden, London, **Kiri Te Kanawa** and **James McCracken** will appear in an excerpt from Verdi's *Otello*, **Sir Colin Davis** conducting; and the Lyric Opera of Chicago will contribute a segment of arias featuring **Ileana Cotrubas**, **Renata Scotta**, and **Alfredo Kraus** conducted by **Bruno Bartoletti**, the company's music director. Chicago's Lyric Opera

was the scene of Callas's American debut in November 1954 in what was the first performance in the company's very first season.

Also included in the anniversary program will be performance footage of Callas never before seen in this country. Of particular interest among these rare films is a portion of the second act of Franco Zeffirelli's 1964 Covent Garden production of Puccini's *Tosca*, the soprano's last role on stage. Her *Tosca* set for EMI/Angel in December 1964 was likewise her last recording of a complete opera (Callas died in 1977).

The photograph of Callas in concert (above) appears on the cover of "Maria Callas in Paris," an album released in this anniversary year by Angel Records, the label for which she made the most recordings. The two-disc set is made up of arias from French operas, all of them previously available on Angel except "*Mon coeur s'ouvre à ta voix*" from Saint-Saëns's *Samson et Dalila*. The album contains a color photograph of Callas by Christian Steiner for those fans who want a framable memento of the singer whom many still think of as *La Divina*. □

**O**PERA tenor **Placido Domingo** interrupted his summer shooting schedule in Spain, where he was singing Don José in a film version of Bizet's *Carmen*, to attend the farewell performance of his mother, the soprano **Pepita Embil**. A leading artist in zarzuela, a Spanish form of operetta, Mme. Embil made her final appearance at the Palacio de Bellas Artes in Mexico City.

A bit later, at the Salzburg Festival in Austria, Domingo sang two programs of zarzuela arias and duets with soprano **Pilar Lorengar**. CBS recorded both concerts for an album release next year.

A television special titled *Placido Domingo Celebrates Seville* is scheduled for December 5 on PBS. In the show Domingo will sing arias associated with Seville in one way or another. **Jean-Pierre Ponnelle** directs the show, and **James Levine** conducts the Vienna Symphony. □



Hank Schneider

**T**HE Metropolitan Opera has struck a Centennial Medallion, available in bronze (\$35), silver (\$450), or 24-karat gold plate (\$550). Along with other items celebrating the company's hundredth anniversary described in a new catalog (free on request), the medallion can be ordered from the Met's Centennial Gift Collection, 1865 Broadway, New York, N.Y. 10023. □

**A**IMED at the "knowledgeable and discriminating classical record and cassette buyer with . . . a taste for value" is CBS's Masterworks Portrait mid-price line. The initial release of forty recordings, mostly dating from the Sixties and early Seventies, will grow to a total of 250 over the next few years. □

**S**INCE 1957 the Masterwork Chorus has been performing Handel's *Messiah* in and around New York during the Christmas season, sometimes doing two performances a day. This year on December 18 in Carnegie Hall the group will give its hundredth performance of *Messiah*. Conductor **David Randolph** will have led all one hundred of them, which may well be a world record.

Randolph is the producer and narrator of "STEREO REVIEW's Guide to Understanding Music," a four-record survey of "what you need to know to increase your listening pleasure." It is available from Guide to Understanding Music, P.O. Box 555, Morris Plains, N.J. 07950, for \$21.98 postpaid. □

**W**INNERS: The first prize in the 1983 International American Music Competition is being shared by the winning violinists—**Robert Davidovici**, a native of Romania now living in Denton, Texas, and **Maryvonne Le Dizes-Richard** of Paris. The two artists will split cash awards, career-promotion funds, and a recording contract with New World Records.

The winner of the 1983 International Piano Competition sponsored by the Walter W. Naumburg Foundation is the twenty-one-year-old English pianist **Stephen Hough**. In addition to recitals at the Library of Congress in Washington and the Ambassador Auditorium in Pasadena, Cal-

ifornia, Hough's prize includes a recording on the Musical Heritage Society's Musicmasters label.

The Gold Medalist at the Busoni International Piano Competition in Bolzano, Italy, was the American pianist **Robert McDonald**, who was chosen out of a field of 188 entrants. McDonald can be heard as the collaborative artist with violinist **Elmar Oliveira** (winner of this year's Avery Fisher Prize) on "The Virtuoso Violin," a digital recording released in October by Vox Cum Laude. □

**W**ITH more than 580 concerts to its credit, the Bell System American Orchestras on Tour program comes to an end with a gala concert by the Los Angeles Philharmonic in San Francisco on December 10. The Bell program has enabled thirty of the country's major symphony orchestras to tour forty-six states, reaching more than

two million people. The five-year, \$12,000,000 commitment on Bell's part constituted the largest corporate financial program ever undertaken in support of touring orchestras. □

**H**ONORS: **Leonard Bernstein**, who celebrated his sixty-fifth birthday this year, has been made honorary president of the Santa Cecilia Orchestra in Rome, and **Giuseppe Sinopoli** has been named resident conductor. . . . **Morton Gould**, who is seventy in December, has received the American Symphony Orchestra League's Gold Baton for his "enormous contribution to the American orchestral repertory." . . . Polish composer **Krzysztof Penderecki** is being honored by the National Symphony on his fiftieth birthday, November 23, with premieres of a Requiem and a cello concerto with the orchestra's conductor, Mstislav Rostropovich, as the soloist. □



Soprano Leontyne Price with conductor Charles Dutoit

**S**OPRANO Leontyne Price won an Emmy Award this fall for her "outstanding individual performance" in a Live from Lincoln Center program on PBS last season. Her latest album is a collection of Christmas music she recorded for London Records with the conductor Charles Dutoit and

the Montreal Symphony in that city's St. Eustache Cathedral. . . . Another Emmy winner was **Luciano Pavarotti** for his *Pavarotti in Philadelphia: La Bohème*, cited as the season's "outstanding classical program in the performing arts." It was also carried by PBS. □

## Disc and Tape Reviews

By RICHARD FREED • DAVID HALL • GEORGE JELLINEK  
STODDARD LINCOLN • ERIC SALZMAN

**ADLER: Wilderness Suite.** Utah Symphony Orchestra, Charles Ketcham cond. RCA ① ARL1-4726 \$9.98, © ARK1-4726 \$9.98.

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

Richard Adler, best known as a composer of Broadway musicals (*Pajama Game*, *Damn Yankees*) and of TV film scores and commercials, here makes his disc debut as a composer of concert music for orchestra. The *Wilderness Suite* was written at the instigation of the National Park Service. The six evocative movements are titled "Daybreak at Mesa Verde," "The Anasazi of Utah" (about a tribe of Pueblo cliff dwellers), "Elegy to the Navajos" (of Canyon de Chelly), "The Big Bend" (of the Rio Grande), "The Chisos," "The Chihuahua," "The Rio Grande," and "Pele and Maui" (the gods of Hawaii's volcanos). It comes over as slightly more than a half hour of col-

orfully scored and well-crafted TV travelogue music. While no masterpiece, it is a fine display vehicle for the Utah Symphony under conductor Charles Ketcham and for the RCA production team, which did a first-rate job. *D.H.*

**C. P. E. BACH: Concerto for Harpsichord and Strings in D Minor** (see J. S. BACH)

**J. S. BACH: Concerto for Harpsichord and Strings in D Minor (BWV 1052).** C. P. E. BACH: *Concerto for Harpsichord and Strings in D Minor (W. 23).* Gustav Leonhardt (harpsichord); Leonhardt Ensemble, Gustav Leonhardt cond. PRO ARTE ① PAD 139 \$9.98, © PCD 139 \$9.98.

Performance: **Severe**  
Recording: **Bright**

Although the balance between harpsichord and strings is usually better when old instruments are used, as they are here, that advantage is lost when the soloist restricts his sound to the eight-foot stops and ignores the fours. In the concerto by J. S. Bach the harpsichord sound is a mere rustle; in the one by C. P. E. Bach it is heard slightly more if only because there are more solo passages. Nevertheless, the performances are vigorous, the string playing clean and vital. Pairing these two concertos certainly dramatizes the difference between the revolutionary son and the severe father. The sound fairly glistens. *S.L.*

**BEETHOVEN: Symphony No. 3, in E-flat Major, Op. 55 ("Eroica").** Academy of St. Martin-in-the-Fields, Neville Marriner cond. PHILIPS ① 6514 314 \$12.98, © 7337 314 \$12.98.

Performance: **Taut and trim**  
Recording: **Very good**

For a number of years both Neville Marriner and Michael Tilson Thomas have been performing Beethoven symphonies with the small orchestras current during the lifetime of the composer, though with modern instruments. The results have been thoroughly successful in the smaller-scaled and more lyrical works (Nos. 1, 2, and 4 by Marriner, Nos. 4 and 6 by Tilson Thomas) but less convincing in such "heaven-storming" masterpieces as No. 5 (Tilson Thomas).

Marriner's new *Eroica* is eminently listenable, and the more lightly scored movements, such as the virtuosic scherzo with its wealth of dotted figuration, gain significantly from the use of reduced forces. Marriner's tempos are swift and urgent, à la Toscanini, but the grandeur and drama that the legendary Italian maestro brought to the opening movement and the *Marcia funèbre* are not present here. On the other hand, the finale, taken at an unusually fast clip, comes off brilliantly. The Philips digital recording is every bit as taut, trim, and squeaky-clean as the playing. *D.H.*

(Continued on the next page)

### Explanation of symbols:

- ① = digital-master analog LP
- ② = stereo cassette
- ③ = digital Compact Disc
- ④ = eight-track stereo cartridge
- ⑤ = direct-to-disc recording
- ⑥ = monophonic recording

The first listing is the one reviewed; other formats, if available, follow it.



Laurel Record/Ernest Gilbert & Assoc.

The Pro Arte Quartet: Norman Paulu, Martha F. Blum, Richard Blum, and Parry Karp

## The Szymanowski Quartets

EVERY now and then a little spurt of attention is given to the music of the Polish composer Karol Szymanowski, but the centenary of his birth passed last fall without much notice. Now the enterprising West Coast chamber-music label Laurel Record has filled a major gap in the domestic Szymanowski discography with the release of his two string quartets in handsome, understanding performances by the Pro Arte Quartet. The album is labeled "First stereo recordings of both quartets on one record." It appears to be the first recording of No. 2 to reach us since the 1975 Muza import by the Wilanow Quartet and the first of No. 1 since the apparently still current old mono version by the Walden Quartet on Lyricord. Surely anyone hearing these works for the first time must find it mind-boggling that they have been so neglected—in recital halls as well as on discs.

The First Quartet followed shortly after the composition of the First Violin Concerto, in 1917, and like the concerto waited more than a half-dozen years for its premiere. The music is charged with the "ecstaticism" that marks the concerto and other Szymanowski works of its period. In contrast, the Second Quartet, composed ten years later, is a brilliant amalgam of this

strain with the folk-music influences Szymanowski had absorbed in the interim—influences that include in this case not only actual ethnic material from the Tatra highlands but Bartók's way of dealing with such elements in his own country's folk culture. It is a style that is at once "objective," in the sense of being extremely skillful and polished, and "passionate," in the sense of being deeply involved with the material.

The First Quartet is a splendid work; the Second Quartet is a great one. The performances by the artistic descendants of the great original Pro Arte Quartet (a chart on the album liner shows the personnel cycle since the group's founding in 1912) do honor to that illustrious name and to the music itself. They are impassioned, committed, and extremely persuasive, and they benefit from exceptionally fine pressings as well as the lifelike, well-focused sonics we have come to expect from this label. This is one of the major chamber-music releases, I would think, in a year that has not been uneventful in this area. —Richard Freed

**SZYMANOWSKI: *String Quartet No. 1, in C Major, Op. 37; String Quartet No. 2, Op. 56.*** Pro Arte Quartet. LAUREL RECORD LR-123 \$8.98.

And yet the work is entirely involving in this performance. The F Minor Sonata—with its lively and dramatic opener, intense slow movement, *Scherzo passionato*, and lively folk-inspired finale—is easier to play in the sense that it is much more dramatically organized. But it is still a large and difficult work, and it is easy to lose the inner fire in the course of the outer struggle. What happens here is on an epic scale, a dark tragedy with a happy ending. Yet it is never gloomy or agonized; the pain and struggle take place, if not quite in tranquility, in a highly poetic form. Even some of the great cellists of the past never completely mastered this sonata with the ease, reflective genius, and perfect intonation that Rostropovich displays throughout. He never flags or seems to fight for even a fraction of a note or beat. Add to this Serkin's first-rate, up-front piano playing, and you have a pair of major recorded interpretations of great music that rarely gets its due. Moreover, the digitally recorded sound is tops. E.S.

**BRUCKNER: *Motets. Locus iste; Os justi; Afferentur regi; Ave Maria; Vexilla regis; Ecce sacerdos; Tota pulchra es; Virga Jesse; Pange lingua; Inveni David; Christus factus est.*** Philip Salmon (tenor); Graham Chambers, Jeremy Gough, Martin Kelly, Christopher Stearn (trombones); Thomas Trotter (organ); Corydon Singers, Matthew Best cond. HYPERION A66062 \$13.98 (from Harmonia Mundi USA, 2351 Westwood Boulevard, Los Angeles, Calif. 90064).

Performance: **Smoldering**  
Recording: **Fine**

Those who like Bruckner in small doses (if that's not a paradox!) will welcome this wonderful album of his short religious works. The music is deeply felt, revealing his smoldering brand of mysticism. The performances by the Corydon Singers, in some cases supplemented by an organ and up to four trombones (and in *Tota pulchra es* replaced by solo tenor Philip Salmon), are sumptuous. The singers seem to contemplate each phrase as the music builds up to its inexorable climaxes. Both the performances and the recording so successfully capture the ecclesiastical ambience of these works that incense all but rises from the loudspeakers. S.L.

**CHARPENTIER: *Actéon.*** Dominique Visse (countertenor), Actéon; Agnès Mellon (soprano), Diane; Guillemette Laurens (mezzo-soprano), Juno; Jill Feldman (soprano), Arthébuze; Les Arts Florissants, William Christie cond. HARMONIA MUNDI USA HM 1095 \$11.98, © HM 40.1095 \$11.98.

Performance: **Lusty**  
Recording: **Alive**

Here, at last, is a chance to hear the secular side of Marc-Antoine Charpentier. *Actéon*, an *opéra de chasse*, is a delightful work filled with the spirit of the forest, boisterous hunters, and enticing nymphs as only the French can create them. Even Actéon's grisly fate (he is torn apart by the hounds of the goddess Diana) is deftly portrayed so as to give the work an unexpected dramatic twist.

The performance is a lusty one, full of enthusiasm and contagious rowdiness. Still,

**BIZET: *Carmen*** (see "A Quartet of Operas," page 64)

### RECORDING OF SPECIAL MERIT

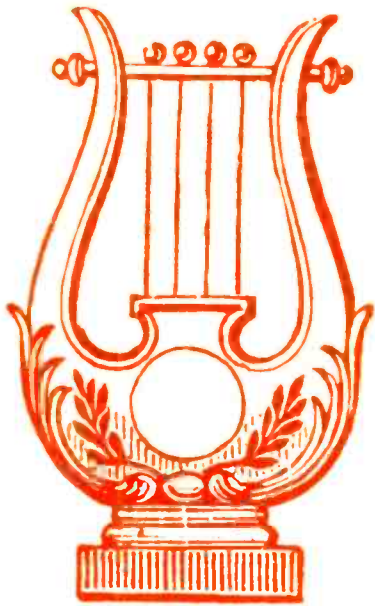
**BRAMHMS: *Cello Sonata No. 1, in E Minor, Op. 38; Cello Sonata No. 2, in F Minor, Op. 38.*** Mstislav Rostropovich (cello); Rudolf Serkin (piano). DEUTSCHE GRAMMOPHON 332 073 \$12.98, © 3302 073 \$12.98.

Performance: **Masterly**  
Recording: **Excellent**

...very great artistry to lie back and ...mate and personal without egotism.

Apparently this recording marks the first time Mstislav Rostropovich and Rudolf Serkin have ever played together as a duo (Serkin has previously performed with Rostropovich conducting), and the results are extraordinary.

The Brahms E Minor Sonata begins with a fifteen-minute *Allegro non troppo* that comes perilously close to that *Moderato non troppo* Brahms is supposed to have written. It is followed by an *Allegretto quasi minuetto* and a strong but hardly light-handed fugal finale—not exactly a collection of audience pleasers but three successive introspective movements in moderate tempo.



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although the re-creation of earlier vocal techniques is welcome and effective in this music, I wonder if the singers haven't taken it almost too far. At times Dominique Visse sounds like a parody of early singers. Jill Feldman takes some high notes that are so open and piercing they make one's ears ring. Nonetheless, the experiment must be admired. S.L.

**RECORDING OF SPECIAL MERIT**

**CHOPIN: Piano Concerto No. 2, in F Minor, Op. 21; Nocturne in C-sharp Minor, Op. posth.; Scherzo No. 2, in B-flat Minor, Op. 31; Mazurka in B-flat Minor, Op. 24, No. 4.** Berenice Lipson-Gruzen (piano); Peking Central Philharmonic Orchestra, David Gilbert cond. (in concerto). DESTO DC 7226 \$8.98, © DCX 47226 \$8.98.

Performance: **Stylish**  
Recording: **Good**

I hadn't heard of Berenice Lipson-Gruzen before I received this record, and it was a lovely surprise to encounter such stylish Chopin playing from a heretofore unknown artist. Lipson-Gruzen may not quite qualify for the AAA rating enjoyed by Arrau, Ashkenazy, and Ax, particularly in the slow movement of the concerto, but she shows a most sympathetic, authoritative, and altogether enlivening response to the Chopin idiom. She knows how to bring this music to life on its own terms; the concerto's outer movements and all three of the solo pieces are informed with a specifically Chopin-esque elegance.

David Gilbert's name is a more familiar one: a Mitropoulos Competition winner and for a full decade assistant conductor of the New York Philharmonic, he is surely one of our most capable native conductors. He was invited to spend two years in China recently, drilling the Peking (or Beijing) Central Philharmonic in a program designed to bring it up to Western standards. This appears to be the orchestra's first recording on a Western label.

Gilbert succeeds in making the orchestra's contribution here considerably more than mere accompaniment. He so successfully balances the orchestra's strengths and weaknesses, in fact, that this is one of the most satisfying of all recorded performances of the orchestral part of this work—extremely sensitive, well detailed, and splendidly integrated with the soloist. Now it would be interesting to hear the Peking ensemble in more substantial orchestral material—and, for that matter, to hear Gilbert at the helm of one of our own major orchestras. In the meantime, this is a very enjoyable record, and the sound is quite good. R.F.

**RECORDING OF SPECIAL MERIT**

**COPLAND: Short Symphony. IVES: Symphony No. 3.** St. Paul Chamber Orchestra, Dennis Russell Davies cond. PRO ARTE © PAD 149 \$9.98, © PCD 149 \$9.98.

Performance: **Richly satisfying**  
Recording: **Splendid**

Dennis Russell Davies is for me one of the most satisfying interpreters of American music around. His discography to date is small but choice, with pride of place going

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to his early digitally mastered recording for the Sound 80 label of Ives's *Three Places in New England* and Copland's *Appalachian Spring* Suite in its chamber-orchestra scoring. Thanks to Pro Arte Records, we have not only a half-speed-mastered reissue of that recording but this splendid new one by the same St. Paul group of the lovely Ives Third Symphony (1911) and Copland's rhythmically formidable and aurally fascinating *Short Symphony* (1933).

Both of these performances face strong competition from other presently available discs: Copland's own reading for Columbia of the *Short Symphony* and Neville Marriner's fine version of the Ives on Argo. I would not sacrifice either from my own collection, but I will certainly keep the new Davies disc, not only for the elegance and vitality of the performances but because of the pairing. These two works superbly illustrate the pandiatonic idiom often associated with American music of the period between the two world wars (Ives, as usual, was two decades ahead of the pack). This is only the second recording of the Copland symphony, which anticipates not only the composer's pandiatonic idiom but certain Latin-American elements most brilliantly displayed later in *El Salon Mexico*. As with the earlier Davies/St. Paul disc, the sonics here are virtually ideal for the music, and the tighter, but still warm, acoustic surround gives Davies an edge over the composer himself in the *Short Symphony*, which deserves many more concert performances than it has thus far had. *D.H.*

**DEBUSSY:** *Petite suite; Symphonie in C Minor; Six épigraphes antiques; En blanc et noir; Marche écossaise; Lindaraja*. Michel Béroff, Jean-Philippe Collard (piano, four-hands). EMI/PATHÉ MARCONI ● C069-73132 \$12.98 (from International Book & Record Distributors, 40-11 24th Street, Long Island City, N.Y. 11101).

Performance: **Detached**  
Recording: **Good**

**DEBUSSY:** *Danse sacrée et danse profane*. **RAVEL:** *Le tombeau de Couperin*. **FAURÉ** (orch. Rabaud): *Dolly Suite, Op. 56*. **IBERT:** *Divertissement*. Academy of St. Martin-in-the-Fields, Neville Marriner cond. **VANGUARD** ● VA-25019 \$8.98, © CVA-25019 \$8.98.

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

In spite of the intensely French character of the best French music, some of its best interpreters are not French. For instance, the finest Debussy pianist of an earlier generation was certainly the German Walter Gieseking, and some of his performances have probably still never been bettered. And here we have a charming record of French orchestral music from Neville Marriner and the very British Academy of St. Martin-in-the-Fields and a disappointing record of Debussy's four-hand piano music by French pianists.

Marriner and the Academy players are, of course, primarily known as Classicists, and there is a Classical streak in almost all

French art—certainly in the Ravel of *Le tombeau de Couperin*. Curiously, two of the most important elements in the renaissance of French music and the development of impressionism at the turn of the century were neo-Classicism and exoticism, both of which are well represented, and even combined, in the works of Debussy and Ravel.

The secret of much French art (I almost said French character) is the presence of Latin passion under the severest restraints. The frequent Spanish or Eastern exoticism is part of the passion, the stylistic elegance part of the restraint. Everything is possible but nothing is discussed openly, only circumvented intellectually, hinted at poetically, or covered in elegant decoration.

It is, therefore, a great mistake to confuse French Classicism or neo-Classicism with lack of involvement. Debussy wrote some of his best music for piano four-hands or for two pianos. Even such lesser-known works as the *Six épigraphes antiques* or *Lindaraja* are rich and striking. Michel Béroff and Jean-Philippe Collard play them well but at a distance; for them the music seems to be a series of rather austere keyboard landscapes set out to be admired, not loved. Only in the virtuosic *En blanc et noir*, where there are lots of notes to play with, are the emotional gaps filled, so to speak, with passagework in the modern style. Here the pianists sound comfortable and close to the musical expression. If I had planned this record, I would certainly have put this performance first. The "symphony" that fills out side one, a single movement discovered in Mos-

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cow in 1925, is little more than a curiosity piece.)

Marriner and his English musicians do have some trouble with the more restrained pieces and really cut loose only with the bawdy and irrepressible Ibert. But they also show that the right Ravel, Debussy, and Fauré (even if orchestrated by someone else) can be quite beautiful in a chamber-orchestra setting. *E.S.*

**DVOŘÁK: Czech Suite, Op. 39; Serenade in D Minor, Op. 44.** Los Angeles Chamber Orchestra, Gerard Schwarz cond. **NONESUCH** ● D-79044 \$11.98, © D4-79044 \$11.98.

Performance: **Masterly**  
Recording: **Good to excellent**

Though there are other fine recorded versions of both of these delightful pieces currently available, including Antal Dorati's digitally mastered *Czech Suite* on London, this Nonesuch issue is the only one that pairs them on one disc. The predominantly bucolic *Czech Suite* was composed one year earlier than the serenade and, except for the finale, is lightly scored. It was only in this last movement that I became aware of the slightly tight acoustics of the Ambassador Auditorium in Pasadena where the recording was made. Total sonic success is achieved, however, with the delectable Op. 44 serenade, scored for oboes, clarinets, horns, bassoons, contrabassoon, cello, and bass. It all comes across with pristine clarity—musically and sonically a joy to the ear from start to finish.

There may be more subtly idiomatic readings of these scores than what we get here, but in terms of musical execution the performances are impeccable. *D.H.*

#### RECORDING OF SPECIAL MERIT

**FALLA: The Three-Cornered Hat.** Colette Boky (soprano); Richard Hoenich (bassoon); Orchestre Symphonique de Montréal, Charles Dutoit cond. **El amor brujo.** Huguette Tourangeau (mezzo-soprano); Orchestre Symphonique de Montréal, Charles Dutoit cond. **LONDON** ● LDR 71060 \$12.98, © LDR5 71060 \$12.98.

Performance: **Top-drawer**  
Recording: **A-1**

This dream pairing on one disc of Manuel de Falla's two great ballet scores in their entirety has appeared once before, in a 1978 RCA recording by Eduardo Mata and the London Symphony. This new digital production with Charles Dutoit and his superb Montreal orchestra, however, completely eclipses that earlier disc, and the performances here also stand up very well to all other recorded competition, including the memorable 1960 Stokowski/Philadelphia Orchestra version of *El amor brujo*.

The Montreal Symphony's playing is razor-sharp from start to finish, and the sonics have just the right combination of brilliance and warmth. Mezzo Huguette Tourangeau is blessed with wonderful chest tones for her flamenco-style vocal numbers in *El amor brujo*, though I must note that

her impact is somewhat less telling in the upper reaches of her range. Colette Boky's brief soprano contributions to *The Three-Cornered Hat* are altogether lovely, emanating, as they should, from off stage. Bassoonist Richard Hoenich most certainly deserves solo billing for his virtuosic and wonderfully characterized work in the same score, and Dutoit's conducting points up the sly humor that underlies so much of it.

My only criticism of this release concerns the annotation, which is too skimpy. Important plot and character details of *The Three-Cornered Hat* are omitted, as are the titles of the thirteen episodes that make up *El amor brujo*. *D.H.*

**FAURÉ: Dolly Suite** (see DEBUSSY)

**HANDEL: Hercules** (see Best of the Month, page 84)

#### RECORDING OF SPECIAL MERIT

**HAYDN: Die Schöpfung.** Kristina Laki (soprano), Gabriel/Eva; Neil Mackie (tenor), Uriel; Philippe Huttenlocher (bass), Raphael/Adam; Collegium Vocale; La Petite Bande, Sigiswald Kuijken cond. **ACCENT ACC 8228/29** two discs \$23.96 (from AudioSource, 1185 Chess Drive, Foster City, Calif. 94404).

Performance: **Fresh**  
Recording: **Natural**

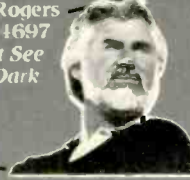
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RCD1-4413 Mozart: Symphonies No. 40 & 41/James Levine. Chicago Symphony Orchestra

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RCD1-4459 Tchaikovsky: Capriccio Italien; Mussorgsky: A Night On Bald Mountain; Dukas: Sorcerer's Apprentice; Enesco: Roumanian Rhapsody No. 1/Eduardo Mata. Dallas Symphony Orchestra

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## Messiah

ONCE, not very long ago, Handel's *Messiah* was the musical "Bible" of the English-speaking world, and the full panoply of Victorian performing forces—the finest stentorian solo voices, choirs multiplied by orders of magnitude, the glory blaze of the Romantic symphony orchestra—regularly did epic battle with this mightiest of musical hosannas. *Messiah* then meant something very specific: God's in His heaven, Britannia rules the waves, and I know that my Redeemer liveth. Going to a performance of it was as good as going to church, and a lot more amusing.

Now the Victorian verities are no longer with us, and, strangely enough, *Messiah* turns out to be a piece of Baroque music. Very long and very great, to be sure, but *Baroque*. Handel never heard a clarinet, he never had a chorus of a thousand at his disposal, and his soloists were never more than a bunch of theater singers.

Can Victorian verities be replaced by, let us say, Georgian verities? *Messiah* is a very different piece when performed by a chorus, including boy sopranos, of a couple of dozen, a barely larger orchestra using Baroque instruments, and soloists giving the arias the proper vocal embellishments. Christopher Hogwood proved that such a performance could be very believable with his Academy of Ancient Music on a L'Oiseau-Lyre recording a couple of years ago (DI89D3). His has now been joined by two more old-instrument, Baroque-style recorded performances: one by Nikolaus Harnoncourt with the Stockholm Chamber Choir and the Vienna Concentus Musicus on Telefunken, the other by John Eliot Gardiner with the Monteverdi Choir and English Baroque Soloists on Philips. A new text of *Messiah* is rapidly being created in the name of historical authenticity.

But there is, of course, no "authentic" *Messiah*. Handel had it performed many times in his life, never the same way twice. There is nothing unusual about this; it is the

normal procedure for practicing musicians and musical-theater people, and Handel was both. In a recent CBS recording, Jean-Claude Malgoire chose to perform the "original" Dublin version of *Messiah*, but that is no more "authentic" than the Foundling Hospital version of 1754, which was Hogwood's choice. Harnoncourt and Gardiner follow no single text but create their own composites from various extant versions. Hogwood uses five soloists, three women and two men, and boys for the high choral parts. Harnoncourt uses a basic solo quartet and mixed choir. Gardiner also employs a mixed choir but no fewer than six soloists, including a countertenor and a boy soprano, neither of which was very likely to have been used by Handel (one or two of the arias were arranged by him for a famous Italian castrato, but a castrato is not a countertenor). All three recordings offer the beautiful sound of eighteenth-century instruments.

The master of the eighteenth-century orchestra is undoubtedly Harnoncourt. His secret is not only the old instruments themselves and the sensuous tone that his players produce but the swell and fall of the phrasing, which is his hallmark as a conductor. All the music, vocal and instrumental, is made out of big, musical lines in which small, expressive arches, one after another, build together into bigger arches that ultimately span the whole work. *Messiah* is not the sacred monster in Central Europe that it is in the English-speaking world, so Harnoncourt, in taking a fresh approach, was quite unhindered by overfamiliarity with a thousand predecessors. His recording derives from a live performance for Swedish Radio, and while it has obviously been carefully and deeply thought out, it is dramatic, forceful, lively, and fresh.

Still, I prefer Hogwood's recording. Harnoncourt's thoughtful creativity does not, frankly, always work. "And He shall purify" certainly sounds different in Harnon-

court's slow, caressing interpretation, but it is almost certainly a mistake; the preceding text and music make clear that this is a purification by fire! The tight segues from one piece to the next seem a little pushed, and, curiously, not all of the interpretive details are musicologically up to date (the way the recitatives are handled, for example). The voices are also quite modern sounding in timbre. Harnoncourt uses excellent singers, but their vocal production is definitely post-Meyerbeer in style, and the mixed bag of accents may bother some listeners. Finally, although the live recording serves the orchestra and soloists very well, the chorus sounds a bit mushy and set back.

These criticisms are relative, but comparisons with the Hogwood recording are inescapable. Hogwood uses clear, white voices of a very beautiful timbre and achieves a full and beautiful Baroque sound with his orchestra. The voices are right, the tempos are lively, the details idiomatic yet perfectly felt, and the recording is a very good one.

The other competitor in this unexpected competition is the odd fellow out. Gardiner's interpretation is as much idiosyncratic as idiomatic. There's nothing wrong with being personal in this music; Harnoncourt is personal, and so is Hogwood. Baroque music—especially deeply felt and theatrical music like *Messiah*—is closer to Romanticism than to Classicism and demands a personal approach. But I find Gardiner's musical personality too cold. His tempos are fast and driven—except for the final "Amen," which is slow. His strange collection of soloists produces an assortment of odd vocal colors. The orchestra sounds gorgeous but emotionally distant. This story of suffering and redemption never takes on an intimate or personal tone, as it does in the Hogwood and Harnoncourt recordings, nor is it really dramatic.

Gardiner does many of the right things, but I am not won over. One feature of his version, however, is fascinating: the original 12/8 rhythm for "Rejoice greatly, O daughter of Zion" is wonderful. It ought to be done that way more often.

In sum, I think, it comes down to either the Harnoncourt or the Hogwood. The Harnoncourt for drama, liveliness, intensity, and drive, the Hogwood for overall beauty and sensitivity in a truly remarkable resuscitation and revivification. —Eric Salzman

**HANDEL: *Messiah*.** Elizabeth Gale (soprano); Marjana Lipovšek (contralto); Werner Hollweg (tenor); Roderick Kennedy (bass); Stockholm Chamber Choir; Vienna Concentus Musicus, Nikolaus Harnoncourt cond. TELEFUNKEN DAS ALTE WERK ◉ 6.35617 three discs \$38.94, ◉ 4.35617 \$38.94.

**HANDEL: *Messiah*.** Margaret Marshall (soprano); Catherine Robbin (mezzo-soprano); Saul Quirk (boy soprano); Charles Brett (countertenor); Anthony Rolfe Johnson (tenor); Robert Hale (bass); Monteverdi Choir; English Baroque Soloists, John Eliot Gardiner cond. PHILIPS ◉ 6769 107 three discs \$38.94, ◉ 7654 107 \$38.94.

crophones from a live performance in Liège, Belgium, in October 1982, this unedited presentation is fresh and exuberant, even including a bit of rain patter in the opening representation of Chaos. Like all live recordings, it has a few moments of rough ensemble and intonation, and the soloists, especially the bass, seem rather distant. The natural balance favors the instrumental ensemble—which, considering Haydn's masterly orchestration and the use of early instruments, produces thrilling results. The timpani are particularly well articulated, and, while the overall sound is dominated by the winds, the horns also are especially effective. Frankly, it takes a while to get used to the comparatively thin and pithy sound of these forces, but, once into it, you'll find your spine tingling. You realize what is lost when this music is played by a homogenized modern orchestra.

The soloists are utterly charming. Kristina Laki floats her head tones in true Classical style, and although she does not always cut through the sections with chorus, her lyric sections are so tender that one can overlook the lack of power. Neil Mackie is impressive as Uriel, and Philippe Huttenlocher makes a fine Adam, although his voice needs more virility for Raphael.

The choral singing is vital at all times, and Sigiswald Kuijken's careful observance of Haydn's dynamics and his scaling of the work's many climaxes give it power and magnificence. S.L.

**IBERT: *Divertissement* (see DEBUSSY)**

**IVES: *Symphony No. 3* (see COPLAND)**

**JANÁČEK: *Jenufa* (see "A Quartet of Operas," page 64)**

**RECORDING OF SPECIAL MERIT**

**MOZART: *Piano Concerto No. 19, in F Major (K. 459); Piano Concerto No. 22, in E-flat Major (K. 482)*.** Alicia de Larrocha (piano); Vienna Symphony Orchestra. Uri Segal cond. LONDON ● LDR 71066 \$12.98, © LDR5 71066 \$12.98.

Performance: **Distinguished**  
Recording: **Limpid**

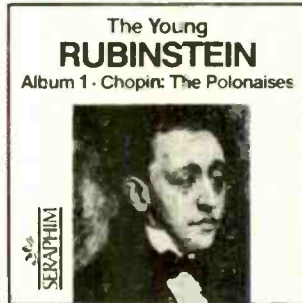
This is a very distinguished issue in every respect, surely Alicia de Larrocha's finest Mozart record and perhaps her finest concerto recording as well. Her feeling for the style is a good deal more apparent here than in her earlier recording of the Concertos Nos. 25 and 27 with Sir Georg Solti (London CS 7109), and Uri Segal is a far more sympathetic partner. Indeed, the feeling of spontaneous give-and-take between piano and orchestra in both works on the new disc is as fetching as Larrocha's crystalline projection of the solo part, complete with judicious embellishments here and there. In the very grand K. 482 concerto, accommodated here on a single side playing a bit longer than thirty-five minutes, she plays the elegant cadenzas of the late Robert Casadesu; in K. 459, she plays Mozart's and her own. Deep affection for the music shines out of these performances, together with total response to their contrasting character. The sound is limpid and well balanced. R.F.

(Continued on page 116)

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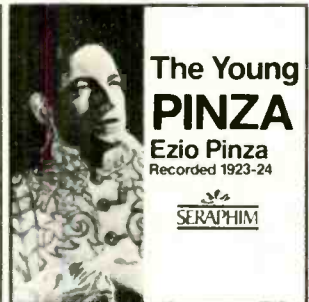
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**MOZART: *Così fan tutte*** (see "A Quartet of Operas," page 64)

**RECORDING OF SPECIAL MERIT**

**RACHMANINOFF: *Symphonic Dances, Op. 45***. **TCHAIKOVSKY (arr. Economou): *Nutcracker Suite, Op. 71a***. Martha Argerich, Nicolas Economou (pianos). DEUTSCHE GRAMMOPHON ● 410 616-1 \$12.98. © 410 616-4 \$12.98.

Performance: **Superb**  
Recording: **Excellent**

A two-piano arrangement of the *Nutcracker Suite* would not have struck me as something especially needed or very likely to be

as satisfying for the listener as it might be fun for the performers. After all, Tchaikovsky was not only a brilliant orchestrator but was intent, in creating this suite (before he completed the full ballet score), on displaying the then-new celesta and other specific orchestral sonorities. What the thirty-year-old Nicolas Economou has produced, though, is a good deal more than a two-piano "reduction" of the orchestral score: it is one of the most enchanting entries in the two-piano repertoire, filled with both charm and brilliance and worthy to stand beside the popular two-piano suites of Arensky and Rachmaninoff.

The duo version of the *Symphonic Dances*, of course, is Rachmaninoff's own,

written before he orchestrated his valedictory work, and it has been recorded before. Economou and Martha Argerich are every bit as persuasive in this music as Ashkenazy and Previn on London, and their vividly recorded performance has the advantage of fitting snugly on a single side. But the *Nutcracker* side should by itself put this album on the charts. **R.F.**

**RACHMANINOFF: *Symphony No. 3; "Youth" Symphony*** (see Best of the Month, page 86)

**RAVEL: *Le tombeau de Couperin*** (see **DEBUSSY**)

**RECORDING OF SPECIAL MERIT**

**RESPIGHI: *Il tramonto***. Renata Scotto (soprano): Tokyo String Quartet. **Songs: *Deità silvane; Ballata; Storia breve; Pioggia; L'ultima ebbrezza; Luce***. Renata Scotto (soprano): Thomas Fulton (piano). VOX CUM LAUDE ● D-VCL 9039 \$10.98, © D-VCS 9039 \$10.98.

Performance: **Fresh**  
Recording: **Excellent**

Respighi's *Il tramonto* (*The Sunset*) is a gorgeous setting of an Italian translation of a poem by Shelley in which a woman finds her lover stone dead in the morning after a night of love. The subject is very like that of Schoenberg's *Erwartung*, and it is curious to compare the two works. Schoenberg's monodrama emphasizes the lurid psychological details, giving them a morbidly dramatic expression that is at once repellent and fascinating; it is, even today, very contemporary in feeling. Respighi, in contrast, took the title literally; his work basks in the sun set glow of Romanticism.

The ten songs on side two are fresher. *Deità silvane* (*Rustic Deities*) is a cycle of five pastoral songs of great charm. Among the other songs are three recently discovered settings of poems by Ada Negri, all delightful. The remaining two, apparently early, are modest bits of lyric poetry perfectly set. Respighi studied with Rimsky-Korsakov and is best known as an orchestral composer. It is a surprise to find how Italianate his vocal writing is. *Il tramonto* and *Deità silvane* are vocal chamber music, but the melos is purely Italian.

Except in one or two places where a big, vibrato-laden, operatic sound is allowed to cut loose, Renata Scotto proves herself to be an excellent performer of these works, a vocal-chamber-music artist who is sensitive to the lyric poetry, careful about nuances, fresh and appealing vocally and interpretively. The Tokyo String Quartet and pianist Thomas Fulton are very good collaborators. The liner notes are a bit confusing, but texts and translations are provided, and the recorded sound is excellent throughout. **E.S.**

**RECORDINGS OF SPECIAL MERIT**

**SCHUBERT: *Songs. Geheimnis; Romanze aus "Rosamunde"; Auf dem Wasser zu singen; Der Winterabend; Ins stille Land; An mein Klavier; Im Abendrot; An die Nachtigall; Die Mutter Erde; Das Lied im Grünen; Liebhaber in allen Gestalten; Der Hirt auf dem Felsen***. Margaret Price (soprano); Hans Schöneberger (clarinet);

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Wolfgang Sawallisch (piano). ORFEO ● S 001811, no list price (from Harmonia Mundi USA, 2351 Westwood Boulevard, Los Angeles, Calif. 90064).

**SCHUMANN: Songs.** *Widmung; Der Nussbaum; Die Lotosblume; Lied der Suleika; Du bist wie eine Blume; Waldesgespräch; Mondnacht; Erstes Grün; Sehnsucht nach der Waldgegend; Die Kartenlegerin; Frauenliebe und Leben; Lied der Braut I and II; Die Soldatenbraut.* Margaret Price (soprano); James Lockhart (piano). ORFEO ● S 031821, no list price.

Performances: **Exquisitely sung**  
Recordings: **Over-reverberant**

Margaret Price is an exceptionally musical singer whose work is characterized by an almost instrumental precision. Her technique allows her to attack notes directly, with a minimum of portamento, and to bind them effortlessly into exquisite phrases. Her intonation is virtually unerring, and she can negotiate wide intervallic leaps—as in Schubert's *An mein Klavier* and *Der Hirt auf dem Felsen*—with total ease and accuracy. Schumann's *Mondnacht* is another example of this "instrumental" approach: its opening here is like a series of ethereal arpeggios.

I happen to derive a great deal of pleasure from singing of this kind, but I admit that it goes with a certain lack of vocal personality. The songs in both of these recitals have been wisely chosen. They are mainly joyful and meditative selections, well suited to Price's kind of restrained emotional communication. She manages the humor in Schumann's *Die Kartenlegerin* nicely, but her greeting of spring's arrival in Schubert's *Der Hirt auf dem Felsen* is not particularly rapturous.

I prefer Wolfgang Sawallisch's restrained but flexible pianism to that of the somewhat unbending James Lockhart, who finds surprisingly little poetry in Schumann's piano postludes. Technically, the recordings are clean but somewhat lacking in depth, especially on the Schumann disc. *G.J.*

**SIBELIUS: Symphony No. 2, in D Major, Op. 43.** Toronto Symphony Orchestra, Andrew Davis cond. CBS ● 1M 37801, © 1M 37801, no list price.

Performance: **Not convincing**  
Recording: **Good**

Truly convincing readings of this most popular (and, in some ways, most old-fashioned) of the seven Sibelius symphonies seem to remain within the province of the older generation of conductors—the likes of Koussevitzky, Szell, Monteux, and Ormandy. Vladimir Ashkenazy's digital recording for London is one of the least successful in his Sibelius cycle, and I don't find Andrew Davis any more successful here in identifying with the work's idiom and structure. The opening movement fails to generate real tension in its developmental episodes, and the timing of the pregnant pauses in the slow movement seems just a shade off. While there is a certain spirit and virtuosity in the scherzo and excellent woodwind work in its lovely middle section, the passage between the coda and the final movement seems painfully labored. The extended developments in the finale itself lack tension.

The recorded sound as such is good, if a bit thin in the string sections. All told, not a very satisfactory effort. *D.H.*

**STANFORD: Songs of the Sea, Op. 91; Songs of the Fleet, Op. 117.** Benjamin Luxon (baritone); Bournemouth Symphony Chorus and Orchestra, Norman del Mar cond. EMI/ANGEL ASD 4401 \$12.98, © TCC-ASD 4401 \$12.98 (from International Book & Record Distributors, 40-11 24th Street, Long Island City, N.Y. 11101).

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

Irish-born Sir Charles Villiers Stanford (1852-1924) was, next to Elgar, probably

the most influential figure in early twentieth-century England. The song cycles on this record resound with the robust Kipling-esque spirit of the old British Empire. The poems are by Sir Henry Newbolt, all hearty and straightforward ballads glorifying the seafaring life, and Stanford provided eminently fitting music for them. This is music that recalls the bold and outgoing style of such past singers as Peter Dawson and Lawrence Tibbett. Benjamin Luxon is not quite in their class; he sings with a rather loose vibrato and a tendency to lapse into *parlando* at times, but he enters zestfully into the spirit of the songs. The bolder ones bring out most of his enthusiasm, but when a lyrical meditation is called for (*The Mid-*

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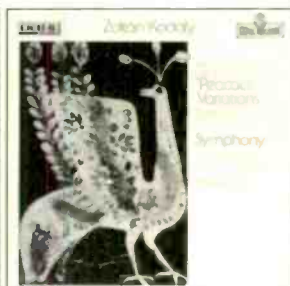
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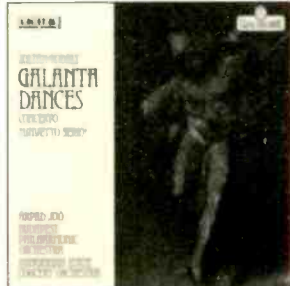
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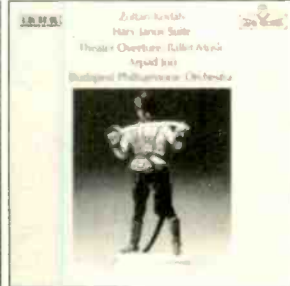
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*de Watch* in Op. 117), he responds with great skill.

The optional choral passages provided by the composer are delivered with atmospheric effect, and the orchestral setting is rousing. Although Luxon enunciates clearly, the song texts should have been included. The recorded sound, though, is rich and vivid. *G.J.*

**TAKEMITSU:** *Piano Pieces* (see WEBERN)

**TCHAIKOVSKY:** *Nutcracker Suite* (see RACHMANINOFF)

**VERDI:** *Opera Arias* (see Collections—Anna Tomowa-Sintow)

**WAGNER:** *Tristan und Isolde* (see "A Quartet of Operas," page 64)

**WAGNER:** *Tristan und Isolde: Prelude and Liebestod. Der fliegende Holländer: Senta's Ballad. Tannhäuser: Dich, teure Halle. Götterdämmerung: Brünnhilde's Immolation Scene.* Montserrat Caballé (soprano); New York Philharmonic Orchestra, Zubin Mehta cond. CBS ◉ IM 37294, ◉ IMT 37294, no list price.

Performance: **Routine**

Recording: **Very good**

These are Montserrat Caballé's second recordings of the *Tristan und Isolde* and *Tannhäuser* excerpts. They benefit from better orchestral playing and marginally better sound than on the previous occasion (RCA ARL1-3351, deleted), but the results still fall short of giving real satisfaction. Caballé displays an impressive amount of sumptuous tone and a finely molded legato, but no sign of true involvement. She also rather inartistically skips a number of low notes in *Isolde's* music to keep her voice anchored in a more comfortable tessitura. The *Immolation Scene* too ranges from impressive peaks to uninvolved sight-reading, and the singer noticeably tires toward the end. Zubin Mehta's contribution is accurate but passionless, and the orchestra is not given enough prominence in the recording. *G.J.*

**WEBERN:** *Quartet for Clarinet, Tenor Saxophone, Piano, and Violin, Op. 22; Four Pieces for Violin and Piano, Op. 7; Piano Variations, Op. 27; Three Little Pieces for Cello and Piano, Op. 11.* Tashi; Martin Krystall (tenor saxophone in Op. 22). **TAKEMITSU:** *Uninterrupted Rests, Nos. 1-3; Piano Distance; For Away; Les Yeux clos.* Peter Serkin (piano). RCA ARL1-4730 \$9.98, ◉ ARK1-4730 \$9.98.

Performance: **Very fine**

Recording: **Very fine**

Admirers of Webern will probably have all four of the works listed above in the four-disc "Complete Works, Volume 1" on CBS (M4 35193), wherein the pianist is Charles Rosen, the violin pieces are played by Isaac Stern, and the even tinier ones for cello by the late Gregor Piatigorsky. As far as performance goes, there is little to choose between those readings and these new ones by Tashi (Peter Serkin, piano; Richard Stoltzman, clarinet; Ida Kavafian, violin; and Fred Sherry, cello). RCA provides a stronger sense of presence in its recorded sound,

though, and the four contrasting works on a single side may well be the sort of sampler that provides the still-timid soul (the listener who might be frightened off by four records' worth) with an intriguing introduction to Webern's music. The concise but comprehensive annotation by Michael Steinberg is a definite asset.

The Takemitsu piano pieces on side two are an appropriate coupling. The three *Uninterrupted Rests*, composed in 1952 and 1960, are based on a poem by Shuzo Takiguchi, who Takemitsu says "influenced [him] a great deal as an artist," and *Les Yeux clos* was written in 1979 as a memorial to the poet. These and the other two works might be described as explorations in rhythm, color, and dynamics. Peter Serkin plays them as sensitively and communicatively as he and his associates do the Webern pieces, and the sound on both sides is just fine. *R.F.*

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**CARLO BERGONZI AND DIETRICH FISCHER-DIESKAU:** *Famous Duets. Verdi: La forza del destino: Solenne in quest'ora; In vano Alvaro. Otello: Si, pel ciel. I Vespri Siciliani: Quando al mio sen per te parlava. Don Carlo: Dio, che nell'alma. Ponchielli: La Gioconda: Enzo Grimaldo, Principe di Santafior. Bizet: Les Pêcheurs de perles: Au fond du temple saint. Puccini: La Bohème: O Mimì, tu più non torni.* Carlo Bergonzi (tenor); Dietrich Fischer-Dieskau (baritone); Bavarian Radio Symphony Orchestra, Jesus Lopez-Cobos cond. ORFEO ◉ S 028821, no list price (from Harmonia Mundi USA, 2351 Westwood Boulevard, Los Angeles, Calif. 90064).

Performance: **Good**

Recording: **Over-reverberant**

Echoes of immortal pairings—Caruso with Amato and Scotti, Gigli with De Luca and Ruffo, Bjoerling with Merrill—resound as one hears these great operatic moments. It is, in a way, a pity that Carlo Bergonzi (b. 1924) and Dietrich Fischer-Dieskau (b. 1925) waited this long to record them, but neither artist has been idle during the last thirty years. On this occasion, both rise to the peak of their current form. Bergonzi reaches his top notes with a certain effort nowadays, but he sings with his old refinement and with an extraordinary command of the style. Such stylistic assurance is not always present in Fischer-Dieskau's singing, but the caressing legato he brings to some of this music is a rare treat. Occasionally, though, he surrenders to his penchant for over-declamation. Vocally, the team is best in "*Solenne in quest'ora*" and in "*Au fond du temple saint*," least effective in the *Otello* duet, which is not really suited to either artist. Jesus Lopez-Cobos provides good leadership, but the orchestra sounds rather far back. *G.J.*

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## Brazilian Soul

IN his autobiography, *Notes Without Music*, Darius Milhaud recalled his discovery of Brazilian popular music when he was attached to the French legation in Rio de Janeiro during World War I: "I was fascinated by the rhythms of this popular music. There was an imperceptible pause in the syncopation, a carefree catch in the breath, a slight hiatus that I found very difficult to grasp. So I bought a lot of maxixes and tangos and tried to play with their syncopated rhythms, which run from one hand to the other. . . . One of the best composers of this kind of music, Ernesto Nazareth, used to play the piano at the door of a cinema in the Avenida Rio Branco. His elusive, mournful, liquid way of playing also gave me deeper insight into the Brazilian soul."

Few of us have had any more exposure to Ernesto Nazareth (1863-1934) than that mention of his name in Milhaud's book, but

now Pro Arte has issued a collection of his piano pieces—a dozen intriguing dances—played by Arthur Moreira Lima (born in Rio de Janeiro fifteen years after Nazareth's death) in a style evoking Milhaud's description of Nazareth's own. Our own Louis Moreau Gottschalk died in Rio when Nazareth was a boy of six, and there is much in these dances that will suggest a sort of passing of the torch.

It is possible that Nazareth was the actual "inventor" of the tango; the nine examples recorded here certainly exhibit a proprietary ease and flair, though in a more robust and nationalistic style than the more languorous Argentine genre that is so much better known in the U.S. Most of them are lively to the point of impertinence. Scott Joplin and Gottschalk seem to meet in *Odeon*, and there is a heady *batucada* feeling in *Escorregando*, the tango brasileiro that is the latest of the twelve pieces recorded here (1923). The earliest piece in this collection, and one of the most striking, is the tango *Brejeiro* of thirty years earlier. The only items that are not tangos of one sort or another are the polka *Apanhei-te, Cavaquinho*, a percussive piece with harsh, earthy effects, and the two quite expansive waltzes, *Eponina* and *Passaros em Festa*, all composed between 1912 and 1922.

In the liner notes we are advised, regarding Milhaud's response to this music, that "the final result was his *Saudades do Brasil* for piano," in which there are indeed echoes of Nazareth, but we are left to discover for ourselves that two of the tangos recorded here, the elaborate *Carioca* and the especially infectious *Brejeiro*, are directly quoted in a somewhat more familiar Milhaud work, *Le Boeuf sur le toit*. These are delightful surprises, but so is the entire program. This release is a gem—fascinating material, bewitching performances, and vivid sound (digitally recorded and mastered at half-speed). Don't wait for it to become a collector's item. —Richard Freed

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harmonia, Rouslan Raychev cond. TURNABOUT TV 34786 \$5.98, © CT 4786 \$5.98.

Performance: **Top-level**  
Recording: **Very good**

In an age when "completeness" is the order of the day, particularly in opera, aria recitals are not as common as they used to be. Nor are there many singers, to be frank, who deserve that kind of exposure. But Bulgarian soprano Anna Tomowa-Sintow is definitely one of them. It was Herbert von Karajan who put her on the international circuit about ten years ago, but she has also continued to appear in her homeland, where this recital was taped in 1977.

Tomowa-Sintow is well attuned to the

Verdi style, and her Aïda, Leonora, and Desdemona would be worth closer inspection. Her voice is firm, warm in timbre, and securely placed throughout the range, topped by a brilliant and confident high C. Her singing style is convincingly Italianate, enlivened by sensitive dynamics, well-judged portamentos, and even a touch of "messa di voce" (swelling and diminishing a tone on a single breath). The occasional attacks from below and marginal intonational flaws are very minor blemishes indeed in terms of the overall merit of this release. Tomowa-Sintow is a major artist, and this is a highly rewarding recital. The Sofia State Philharmonia provides solid backing, and the sound is very good. G.J.

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The turntable category perpetually seems to swing through design extremes with little true regard for the eventual owner. On the one hand, you find models with so many features they may actually interfere with the turntable's proper operation. Then, in the supposed pursuit of purer sound, manufacturers produce turntables so spartan that they defy any sense of pride of ownership. Denon rigorously refuses to accept such trade-offs.

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