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# HIGH FIDELITY

COMPACT DISCS!

VIDEO LAB TESTS!

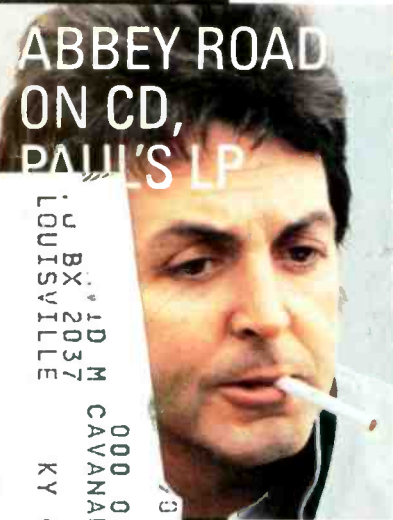
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## CASSETTE DECKS

A to Z

Basic Buying Guide

4 New Models Tested

In-Store Test Tips



**INTRODUCING DIGITAL  
ES COMPONENTS  
FROM THE PEOPLE WHO  
BROUGHT YOU THE**

**DIGITAL PLAYER,**

**DIGITAL DISC,**

**DIGITAL REVERBERATOR,**

**DIGITAL PROCESSOR,**

**DIGITAL MIXER,**

**DIGITAL RECORDER,**

**DIGITAL EDITOR,**

**DIGITAL DISC MASTERING**

When the history of music is written, the chapter on digital will read like a list of accomplishments from just one company—Sony.

And now, to meet the stringent demands of their digital creations, Sony engineers have developed an

entirely new line of high-fidelity components. The ES Series.

To handle the phenomenal dynamic range of the new CDP-701ES compact disc player and PCM-701 ES digital audio processor, ES features what *Stereo Review* calls a "truly exceptional" inte-

grated amp. One that offers "the highest dynamic headroom of any amplifier we have yet measured."

The Sony-patented Accurate Pistonic Motion (APM) speaker design has been engineered to handle prodigious quantities of



power without distortion.

Even the tuner's Direct Comparator has been designed to complement the improved FM broadcast signals that result from digital source material.

Furthermore, because no innovation, no matter how

remarkable, should force you to discard your present music collection, ES also includes a LaserAmorphous™ 3-head cassette deck and linear tracking Biotracer turntable—these are worthy challengers to anything on the market today.

To find out more information on the Sony ES Series and the name of your nearest ES dealer, call Sony toll-free at 1-800-222-SONY.

**SONY**  
THE LEADER IN DIGITAL AUDIO.™

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# HARMAN KARDON INTRODUCES THE MOST ADVANCED STATE-OF-THE-MIND RECEIVER



Thirty years ago Harman Kardon introduced the world's first high fidelity receiver. It was built on the philosophy that quality audio must evolve from creative, quality thinking.

That quality of thought has served as the foundation of all Harman Kardon audio products.

In 1958 Harman Kardon introduced the world's first stereo receiver.

In 1963 Harman Kardon introduced Ultrawideband Frequency Response and in 1970 Harman Kardon became the first company to use Dolby<sup>1</sup> in a cassette deck.

Today, Harman Kardon audio 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.

A distinct example of Harman Kardon's state-of-the-mind technology is the hk690i receiver, which leads their line of quality receivers and possesses their most important state-of-the-mind concept to date: High instantaneous Current Capability.

Harman Kardon has consistently used High instantaneous Current Capability (HCC) in all of their amplifier sections. HCC provides the instantaneous power that is vital to precisely drive and control nearly any loudspeaker system.

With its HCC of 45 amps, the hk690i will develop far more power under peak loads than its rated 60 Watts per channel<sup>2</sup> while

maintaining the low distortion and widebandwidth required for accurate sonic reproduction. This means that the hk690i gives you louder, clearer sound than any other 60 Watt<sup>2</sup> receiver.

The digital synthesized quartz-locked hk690i has an Ultrawideband Frequency Response of 0.2Hz to 150kHz, as well as low negative feedback for extremely fast and accurate transient response. The result is the virtual elimination of TIM distortion.

The phono section of the hk690i has a unique dual RIAA equalization circuitry which maintains a constant low level of negative feedback throughout the audio frequency range. An exclusive sample-and-hold MPX decoder decreases high frequency switching noise while eliminating the need for much of the filtering normally required in FM processing.

Among performance features included are: Provisions for two tape decks (with tape copy capability), switchable bass and treble turnover frequencies, a Moving Coil head amplifier, and subsonic and high cut filters.

The hk690i provides the combination of pure power and sonic excellence that the true audiophile demands.

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

1. Dolby is the registered trademark of Dolby Laboratories, Inc.

2. 60 Watts RMS per channel into 8 Ohms, 20Hz-20kHz with less than 0.6% THD.

## harman/kardon

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# HIGH FIDELITY™

VOLUME 34 NUMBER 2

FEBRUARY 1984

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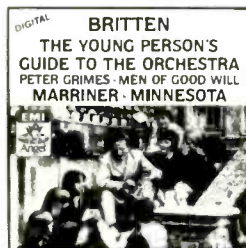
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Now that you've experienced the noiseless reproduction of today's digital technology, how does your present speaker system stack up? In designing the new Acoustat Model ONE + ONE, our reference was live music - the ultimate test. So when it came to reproducing the startling clarity and increased dynamics that digital has to offer, the music came through loud and clear.

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#### Advertising Offices

**New York:** ABC Leisure Magazines, Inc., 825 7th Ave., 7th Floor, New York, N.Y. 10019. Tel.: (212) 265-8360. James A. Casella, Advertising Director; Richard J. Marino, National Accounts Manager; Richard A. Frank, Eastern Advertising Manager; James R. McCallum, Record Advertising Manager; Cecelia M. Giunta, Classified Advertising Manager; Kathleen Davis, Director of Production; Janet Cermak, Advertising Production Manager.

**Midwest:** High Fidelity, Hitchcock Building, Wheaton, Ill. 60187. Tel.: (312) 653-8020. Starr Lane, Midwest Advertising Manager.

**Los Angeles:** ABC Leisure Magazines, Inc., 2020 Avenue of the Stars, Suite 245, Century City, Calif. 90067. Tel.: (213) 557-6482. Rite Weitzen, Western Advertising Manager.

Editorial correspondence should be addressed to The Editor, HIGH FIDELITY, 825 7th Ave., New York, N.Y. 10019. Editorial contributions will be welcomed, and payment for articles accepted will be arranged prior to publication. Submissions must be accompanied by return postage and will be handled with reasonable care; however, the publisher assumes no responsibility for return of unsolicited photographs or manuscripts.

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## The new Technics Digital Disc Players. Now lasers and computers give you the one experience your conventional audio system never could: Reality.

Reality: The duplication of a live musical performance. The most elusive goal of all. Yet reality is precisely what you hear with Technics digital disc players.

How? Technics revolutionary digital disc players have a laser instead of a conventional stylus. Because instead of conventional record grooves, digital discs have a computer code. The laser "reads" this code as a computer instantaneously translates it into music.

What you hear is not just a reproduction of the music, but a re-creation of it: reality.

And nothing touches the digital disc except the laser beam. That means there is no wear. No noise. And no distortion. All of which can plague conventional records.

All this Technics digital technology comes together in the new generation Technics digital disc players. The remarkable SL-P8 and SL-P7.

COMPACT  
disc  
DIGITAL AUDIO

You can program the SL-P8 up to 32 different ways. Play any selection you want. In any order you want. Repeat the selections you like. Even skip ones you don't.

Auto Music Scan automatically plays the first 10 seconds of every selection. So finding the selection you want is easy.

The fluorescent display shows you precisely where the laser is on the disc. So you can even find the exact notes you want to hear.

And to let you do all this from across the room, there's even an infrared remote control.

Experience the full range of Technics digital technology. Including the new SL-P8 and affordable SL-P7. The digital revolution continues at Technics.

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Buy a Technics Compact Disc Player between January 1 and May 31, 1984 and Technics will send you 5 free Digital Audio Discs. See your participating Technics dealer for details.





# About This Issue

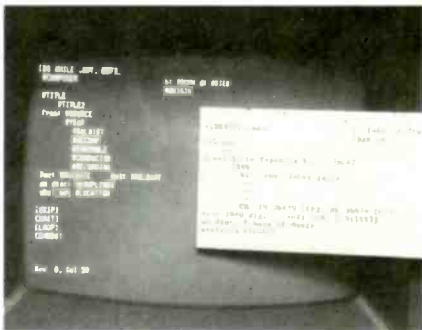
Inside the Pages of February's High Fidelity

THOUGH DIGITAL Compact Discs tend to capture the headlines these days, few of us have forsaken more traditional audio components. In fact, cassette decks and tape recording remain as popular as ever. Over the past year, we've documented several decks that have sought unique solutions to long-standing problems. In this issue, our test reports focus on autoreverse, including a radically new approach from Nakamichi.

Buying a cassette deck used to be fairly easy. There was one noise reduction system (Dolby B) and simple selector switches for matching bias and recording equalization to the tape in use. All that has changed. Even today's basic cassette decks have a wealth of features from which to choose. In "Shopping for the Right Deck," E. Brad Meyer explores the key decisions you must make, explains how to interpret HIGH FIDELITY's test reports, and tells how to conduct your own in-store evaluations.

Most of us who have even a minimal cassette tape collection have succumbed to portability, whether in a car stereo deck or one of the ubiquitous personal portables. "Tape Deck" columnist R. D. Darrell, who last year was bitten by the "Walkabout" bug, returns in "Walk on Ayre" with prerecorded cassettes he recommends for portable listening.

And anyone who listens to music—whether pop, jazz, or classical—eventually builds a record and tape collection. In the beginning, it's reasonably easy to remember where your specific recordings or performances are. But after a while, you'll probably have to resort to some filing and locating scheme, usually in the form of a card catalog. Several months ago, we reviewed a basic computerized cataloging system as an alternative to file cards (see "Let Order Prevail," June 1983.) Many of you who tried the VisiFile approach found it wanting in a number of important respects. We, too, suspected that there must be a better way, and now we think we've found it. The program we chose is dBASE II, which we turned over to music critic Allan Kozinn, who has more than 7,000 recordings. After some experimentation, he confirmed our hunch, and he reports on his experience in "Setting Up a Super Catalog."—W.T.



Cataloging by computer

STEVEN MARK NEEDHAM

audio-talk from  
audio-technica®

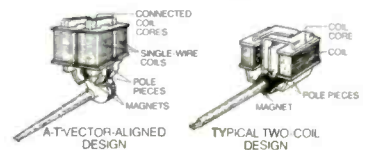
Number 12 in a Series

## COILED FOR ACTION!

The coils in a moving magnet phono cartridge are important in determining the ultimate quality possible from the unit. Their design can affect frequency response, output level, sensitivity to hum and noise, and other critical aspects of cartridge behavior.

### Two or Four Coil Design

Most modern moving magnet cartridges use either two coils (one for each channel) or four coils (a connected pair for each channel) to pick up the tiny magnetic field changes from the magnet(s) at the end of the cantilever. Inside each coil is a metal *coil core* which extends toward the magnet as a *pole piece* to sense the magnetic field and transmit its fluctuations to the coil windings. In two-coil designs the pole pieces extend from either end of each coil, while four-coil designs use a pole piece at one end of each coil, plus a metal strap to connect the two coil cores together.



### A-T High-Efficiency Design

Most Audio-Technica Vector-Aligned™ cartridges use FOUR coils, with two to pick up each stereo signal. To achieve the highest sensitivity, A-T uses a single U-shaped part to create the pair of pole pieces and coil cores, plus the connecting strap for each channel, with both coils wound directly on the same part. This eliminates the need for soldering or welding the pole pieces, coil cores, and connecting strap together, thus reducing losses. In addition, A-T winds both coils from a single, unbroken wire which is directly connected to the output terminals, again to reduce losses by eliminating unneeded internal connections.

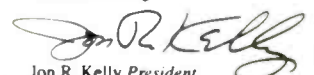
### Hum is Cancelled

Each pair of A-T coils is also wound so that external hum and electrical fields are rejected without reducing the sensitivity to magnet motion. In this "hum-bucking" design the coils in the pair are wound in opposite directions, so that any hum appearing in one coil is cancelled by the same (but opposite) hum in the other coil. A-T cartridges are also carefully shielded to lower the strength of any external hum fields reaching the coil assemblies.

### Attention to Detail

By simplifying the internal construction of Audio-Technica cartridges and eliminating usual sources of loss, high sensitivity is assured. This, in turn, provides A-T engineers greater freedom of design to provide better performance in terms of tracking, frequency response and distortion.

Good listening,



Jon R. Kelly, President  
Audio-Technica U.S., Inc.  
1221 Commerce Dr., Stow, OH 44224



audio-technica.

The World's Favorite Phono Cartridge



COVER DESIGN: Skip Johnston

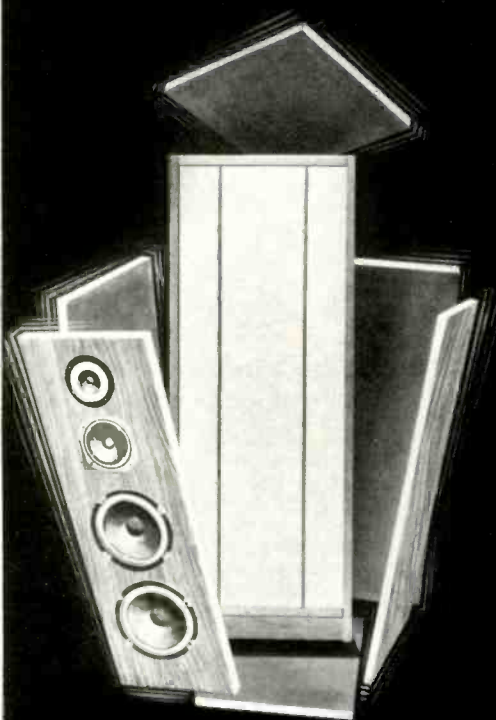
Photos: Steven Mark Needham

ON THE COVER: Nakamichi RX-202 cassette deck, JVC DD-V9 cassette deck

Paul McCartney: Photo by Paul Cox Retna Ltd.

# Unbox your sound

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To hear the  
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see dealer list  
on page 77,  
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## Letters

### Compact-Disc Skips

Chicago's WFMT always announces when its program source is a digital Compact Disc. The station has been playing CDs pretty heavily for the last several months, and I've been surprised by the number of times they've had to interrupt with apologies for a malfunctioning disc (four or five times recently when I've been listening, and who knows how often when I haven't been). Something similar happened at my local audio shop when it held the Chicago area's first demonstration of the Kyocera player. Midway through one disc, it sounded as if the stylus of a conventional turntable were bouncing and skipping across a vinyl record, and the demo had to be curtailed.

So the untold story of the Compact Disc appears to be mechanical or electronic malfunctions that we have been led to believe are impossible. You've given us editorial discussions aplenty concerning the sound quality of CDs. Now how about some attention to their shortcomings?

**G.R. Paterson**  
Evanston, Ill.

**Technical Editor Michael Riggs replies:** *The problem you describe can occur if the disc is defective, but this is very rare. (So far, we've encountered only one bad specimen.) More often it's caused by dirt or scratches on the disc surface heavy enough to overwhelm the player's error correction and concealment circuits. The usual cure—almost 100 percent effective in our experience—is to wipe the disc. Pant legs and shirt fronts are popular cleaning tools, and many players are supplied with a soft cloth for this purpose. Several companies, including Nagaoka and Discwasher, have announced liquid-cleaning systems for badly soiled CDs.*

### Wagner Dissonance

In the article on Wagner's *Die Meistersinger* and *Parsifal* ["Wagner Recordings: Passing the Torch," October 1983], Kenneth Furie states: "Listen, as he recalls the previous night's madness, to the high E of 'Jo-han-nis-nacht' magically sustained over the chirping flute, oboe, and bassoon. . . ." There is no chirping written for the bassoon here; flute, oboe, and clarinet, yes, but no bassoon. Also, the "rejuvenated C sharp" Mr. Furie refers to must sound quite extraordinary against the C-major harmony that Wagner wrote. How much more credible writers about music would be if they could only read a score!

**Douglas C. Courtright**  
Syracuse, N.Y.

**Kenneth Furie replies:** *This comes of trusting to memory when you're trying to keep simultaneous mental track of several hundred discussion threads—under extreme deadline pressure. It happens that neither error was central to the textual identifications intended (the vocal set of the Sachs phrase, and the texture of the orchestral part), but this is no excuse. When you make two dumb mistakes in a single reference, you deserve all the abuse you get.*

### Parametric vs. Graphic

The articles in the December issue by E. Brad Meyer and Robert Long on assembling a serious system are very interesting and useful. Both writers speak highly of parametric equalizers and noise reducers. I have seen the former in audio stores but know little about them and how they differ from graphic equalizers. Can you help?

**Richard C. Ver Wiebe**  
Fort Wayne, Ind.

*Both parametric and graphic equalizers enable you to adjust the relative levels of certain frequency bands. A parametric equalizer offers more control flexibility because it lets you select the widths and center frequencies of those bands. E. Brad Meyer discussed those differences as well as typical home applications for graphic and parametric equalizers in "A Question of EQ" in our June 1983 issue.—Ed.*

### Conductor Controversy

The rendition by Bernard Haitink and the Concertgebouw Orchestra of the Shostakovich Sym-



phony No. 5 was given a cool reception by John Canarina [November 1983]. He describes Haitink's performance as ". . . neither exciting nor boring—it's just there." I disagree strongly.

Haitink's brilliance is evident in this version. Like Mr. Canarina, I do not believe that a conductor must scrupulously follow the composer's markings. But Haitink respects them and still brings an inner power to the proceedings. He performs the work as a masterpiece should be performed, with introversion and sensitivity. Weren't those some of the composer's emotions during its conception?

**Andrew W. Lambert**  
Jericho, N.Y.

### A Fine Remembrance

We wish to compliment David Hamilton for his excellent article on the Fonit-Cetra set of the *Ring* ["Remembrance of Rings Past," November 1983]. Many of our members at the East Coast—who apparently received the November issue earlier than I did—wrote in glowing terms about his article in toto.

But Mr. Hamilton may be interested in knowing that a number of music lovers don't

agree with him—or me—in, say, his negative attitude toward Max Lorenz (who can't begin to approach the likes of a Laurenz Melchior). But apparently one cannot please everybody.

On behalf of our membership, again, I wish to congratulate Mr. Hamilton for a splendid piece of writing.

**Dr. Hans A. Illing**  
President

The Wilhelm Furtwängler Society

## Devoted to Carly

Steven X. Rea is to be commended for his excellent interview with Carly Simon [BACKBEAT, January '83]. She really opened up to him, and her song-by-song description of "Hello Big Man" was fascinating. Many thanks to HF for bringing me and all of Carly's fans a very candid and informative interview.

**Gerry deLuca**  
Kings Park, N.Y.

## Pink-Noise Record

In "A Question of EQ" (June 1983), E. Brad Meyer suggests using a sound-level meter and a recording of individual octave bands of pink noise to check the frequency response of a speaker. This sounds like a useful alternative to a real-time analyzer; where can I get such a recording?

**Bernie Evans**  
Burton, S.C.

*Soundcraftsmen offers one as part of its Equalization Evaluation Kit. The entire package costs \$20. Write to Soundcraftsmen, Inc. (2200 S. Ritchey St., Santa Ana, Calif. 92705).—Ed.*

## Stereo AM Barrels Ahead

A news note on page 13 of your November 1983 issue, entitled "AM Stereo Hits a Roadblock," asserts that "of the five contenders in the stereo AM race, only Harris and Kahn have actually shipped transmitting equipment." Although it is true that only Harris and Kahn manufacture transmitters, Motorola makes a stereo exciter and modulation monitor that is in use at 37 AM stations in North America. The Motorola C-QUAM exciter has been used to drive a variety of transmitter types in a wide range of broadcasting situations. By the time this letter appears, at least 40 more AM stations will be on the air in stereo with Motorola equipment.

Belar has formally withdrawn from the race. Of the four remaining contenders, only Motorola has earned commitments from major radio manufacturers to build single-system receivers. General Motors (Delco), Chrysler, Marantz, and Concord have made public declarations, and we expect others soon. Buick will start installing C-QUAM radios this spring.

**Ben Scott**

Applications Manager  
Motorola Linear & Military Products Division

*Letters should be addressed to The Editor, HIGH FIDELITY, 825 7th Ave., New York, N.Y. 10019. All letters are subject to editing for brevity and clarity.*

# COMPUTERS ARE CREATING JOBS FOR NRI-TRAINED PEOPLE.

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The U.S. Department of Labor projects job openings for qualified computer technicians will soon double. International Resource Development, Inc., estimates a 600% increase in these jobs in a decade. And most of these will be new jobs, created by the expanding role of computers.

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Many people are afraid of losing their jobs to computers, but thousands of jobs will be created for those who are prepared to meet the challenge.

With NRI training, you'll be prepared. You can have a profitable, exciting future as an expert who can handle the operational, programming and technical aspects of all kinds of microcomputers and microprocessors.

**LEARN IN YOUR SPARE TIME.**

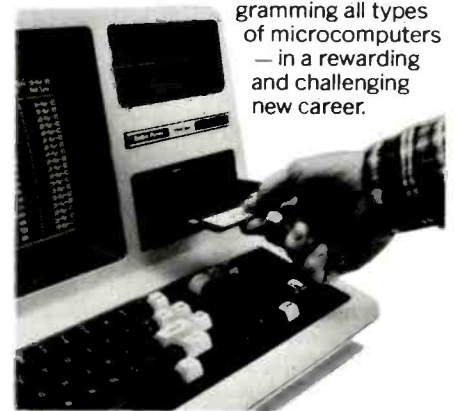
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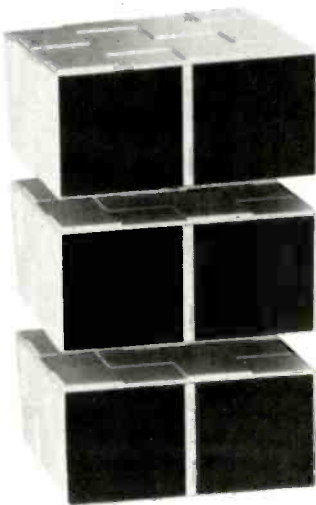
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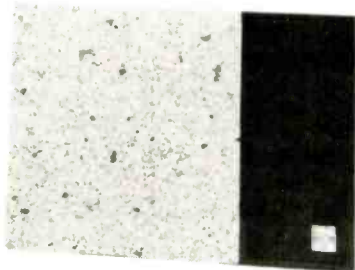
# Currents

News, new products, and new technologies

## Decorative Sound from Pioneer



Shaped like high-tech building blocks, Pioneer's Adlib speaker system consists of three interlocking cabinets that you can array horizontally or vertically. One module contains a 2½-inch tweeter and a 4-inch midrange driver. Each of the other two modules contains a flat-diaphragm woofer, which Pioneer says together equal the low-frequency radiating power of an 8¾-inch cone speaker. The Adlib system is available in a silver or black finish and costs \$320 per pair.



If space is really at a premium, you might be interested in another novel approach from Pioneer: two-way speakers just 2½ inches deep, mounted next to decorative panels. The speakers are available in two configurations—the S-5PC, with a 12-by-12-inch corkboard panel, and the S-5PG, with a similarly sized glass panel under which photographs or an album cover can be mounted. Both sell for \$180 per pair. For more information, write to Pioneer Electronics (USA), Inc. (P.O. Box 1540, Long Beach, Calif. 90801).

## Digital on Cable?

A system for transmitting digital audio, still pictures, and computer programs on unused cable-TV channels has been developed by Sony and should be operational in Japan by this summer. The Cable Digital Audio Data system is said to add little or no noise or distortion to the audio and video signals, and to be capable of carrying as many as 256 programs simultaneously. The digital encoder/transmitter will be sold to cable-TV operators, hotels, and schools at a price of about \$30,000; decoders for home use should cost about \$200. U.S. introduction of the system will probably not take place until late this year or early 1985.



## Real Sharp

Sharp's Model 20J-580 is one of the most flexible monitor/receivers we've yet seen and as such represents a space-saving alternative to a component television system consisting of a separate monitor and TV tuner. Its CRT has a square-cornered screen with a flat front surface measuring 20 inches diagonally. The design is said to lessen edge distortion and reflections from other light sources.

The tuner section is capable of receiving 72 cable channels, plus the full roster of VHF and UHF channels. In addition, the unit has three direct-video inputs—two for composite video and one for RGB. A wireless remote control enables random-access and scan tuning, activation of a sleep-timer function, and switching between RF and video inputs. The set is equipped with a small stereo amplifier, two speaker systems, and audio outputs. Although broadcast stereo TV in the U.S. is still some time away, this Sharp unit is adaptable to any of

the proposed multiplex broadcasting systems via the addition of an outboard decoder. Price is \$800. For more information, write to Sharp Electronics Corp. (10 Sharp Plaza, P.O. Box 588, Paramus, N.J. 07652).



## More, More, More

An add-on sound-enhancement system intended as a complement to whatever speakers you currently use, the ContraTech System 97 has two supertweeter modules, a large horn-loaded subwoofer, and a signal-processor/electronic-crossover. The high sensitivity afforded by the subwoofer's 17-foot-long folded horn is said to forestall significant additional strain on your system's amplifier. A car version called the Mobile Graphic is also available. Prices for the home and car systems are less than \$1,000 and less than \$400, respectively. For more information, write to ContraTech Corp. (17252 S.W. Pilkington Rd., P.O. Box 1955, Lake Oswego, Ore. 97034).

## Creating with the Commodore

The MusiCalc music-synthesis programs from Waveform promise to turn a Commodore 64 computer into a professional-caliber music synthesizer. MusiCalc 1 (\$75) is a disk-based program that provides three-voice synthesis with slider controls, modulators, and transposers. A step-sequencer function enables you to hear compositions as you create them. MusiCalc 2 (\$30) is a score-writer program that automatically notates your compositions and lets you

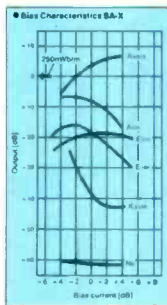
\*\*\* TDK AUDIO (MOL) TEST  
MODE \*\*\*

# Sonic Tonic from TDK



What comes out of your audio cassette deck is only as good as what goes in. And if you want unmatched dynamic performance, you need the highest performance audio cassette you can get. You need a TDK Pro Reference Series cassette. Each is designed to maximize the untapped potential of your cassette deck by generating clear, crisp, full-bodied sound.

Take our SA-X high-bias cassette. It offers you a degree of



sound clarity, quality and fidelity virtually unmatched by any other cassette on the market. Its exclusive dual coating of Super Avilyn particles provides optimum performance for all frequency ranges. And SA-X's super-wide dynamic range and higher MOL handle high signal levels without distortion or saturation.

You also get high-powered performance from TDK's famous MA-R metal and AD-X Avilyn-based normal-bias cassettes. And to make

sure the energy never fluctuates, each TDK cassette is protected by our specially engineered cassette mechanisms for reliable, trouble-free performance. Plus a Full Lifetime Warranty.

Before you waste energy on any other brand, put more life back into your cassette deck with TDK's Pro Reference Series cassettes. They're pure Sonic Tonic.

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THE MACHINE FOR YOUR MACHINE

# The leader in equalizers still stacks up best with improved specs, more features and a new look.

ADC's new line of Sound Shapers\* prove that the best just got better. Again. Our stereo frequency equalizers incorporate the superb electronics, reliability, and high performance technology that have made ADC famous. Plus we've improved them with new refinements that offer you more control and a new design that makes them look as good as they function.

Our top-of-the-line SS-315 offers a unity gain of  $\pm 1$  dB and the best signal-to-noise ratio in the industry. For the utmost in versatility, the range of each frequency control is an extra wide  $\pm 15$  dB, far more than the 12 dB of lesser equalizers. Tape monitoring and two-way dubbing capabilities for two decks are available. LED indicators for each control let you see the selected frequency curve at a glance. The SS-315 includes a built-in real-time spectrum analyzer, pink noise generator and calibrated electret microphone enabling you to attain flat response in minutes. Other features include external noise reduction and sound processor loops to accommodate time delay, subharmonic synthesizer, dynamic range expander or reverb units. There's also a subsonic filter that gets rid of damaging, power-robbing subsonic frequencies.

The other models in our Sound Shaper line offer the same fine ADC quality, with similar features geared to your equalization and budget needs.

If you've been waiting for the right stereo frequency equalizer for your system, don't wait any longer. With ADC Sound Shapers, the odds are stacked in your favor. (And if you're into video, be sure to see and hear what our new ADC Video Sound Shapers can do to improve your video performance.)

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## AUDIO/VIDEO Currents

make printouts. MusiCalc 3 (\$30) is for custom-designing your own musical keyboards. To make your work a little easier, Waveform also offers preprogrammed tunes and rhythms on disk that you can patch into your compositions. Two such templates are available: African and Latin Rhythms (\$25), and New Wave and Rock (\$25). All of these modular programs are also available as a single package for \$150. You can get some idea of the capabilities of the MusiCalc system via a demo program disk that the manufacturer offers for \$5. For more information, write to Waveform, Inc. (1912 Bonita Way, Berkeley, Calif. 94704).

### One for the Road

Bose has entered the music business, though only for owners of General Motors cars equipped with a Delco-GM/Bose car stereo system. The Private Performances Collection offers mail-order cassettes duplicated in real time on high-quality tape stock. Subscribers can select 12 cassettes a year in four categories: light classical, easy listening, soft rock, and country. Music to appear on the Bose cassettes will be chosen for, among other things, its "contribution to driving enjoyment." Each cassette costs \$13. For more information, write to Bose Corp. (100 The Mountain Rd., Framingham, Mass. 01701).

### A Luxury Lightweight

The Porta Pro is Koss's answer to comfort and high performance in a lightweight headphone. Weighing in at just 2½ ounces, it is said to offer marked improvements in dynamic range and low-bass output along with very low distortion. A three-position switch above each phone adjusts the pressure of the pad on the ear to suit your preference and head size. The collapsible Porta Pro costs \$60, including a ¼-inch plug adapter, a mute switch, a 5-foot cord, and a storage bag. For more information, write to Koss Corp. (4129 North Port Washington Ave., Milwaukee, Wis. 53212).

### Dual Redux

Dual has revamped its entire turntable line, introducing three direct-drive Series 600 models and two belt-drive Series 500 models, all said to be very resistant to acoustic and mechanical feedback. In these units, the platter, motor, and tonearm are isolated from the base by four independent shock absorbers. The top-of-the-line CS-630Q is a fully automatic design with electronic

pitch control. Its straight tubular tonearm is said to have an effective mass of just 7 grams. The CS-630Q costs \$250. For more information, write to Dual/Adcom (9 Jules Lane, New Brunswick, N.J. 08901).

## A Three-way from Bang & Olufsen

Extensive computer modeling and testing are said to have figured in the design of B&O's new S-80.2 loudspeaker. A three-way system with an 8-inch woofer, a 3-inch dome midrange driver, and a 1-inch dome tweeter, the acoustic-suspension system has a rated sensitivity ("efficiency") of 90 dB for a 1-watt (0-dBW) input. The speaker is equipped with a protection circuit that opens the amp-speaker circuit when safe drive levels are exceeded. The S-80.2 has a rosewood-veneer cabinet and costs \$600 per pair. A stand and wall-mounting kit are also available. For more information, write to Bang & Olufsen of America, Inc. (1150 Feehanville Dr., Mt. Prospect, Ill. 60056).

## Maxell Reformulates

Maxell's continuing research into audio cassette tape technology has resulted in a completely reformulated XL-IIS cassette. High-frequency sensitivity and maximum output level are said to be 2 dB better than UDXL-II tape, with less intermodulation distortion and greater resistance to print-through. Maxell claims that many of these improvements are due to the use of a new oxide particle with greatly improved shape, size, uniformity, and magnetic properties. In comparison to Maxell's standard cobalt-adsorbed oxide, the new material has a denser, smoother cobalt ferric oxide coating. The particle's increased smoothness permits a higher packing density and more uniform tape coating. The technique used to bond the particles to the polyester backing has also been changed: A new molecular fusion process, which eliminates the need for adhesives, is said to produce an extremely durable product with few drop-outs. Finally, the cassette shell has been redesigned so that interchannel phase irregularities due to tape skew are held to within 10 degrees at 6.3 kHz. Similar improvements in tape formulation and shell mechanism have also been incorporated in Maxell's super-premium Type 1 tape, XL-IS. For an evaluation of these new tapes, see "Which Cassette Tapes Perform Best?" in our August 1983 issue. More information can be obtained by writing to Maxell Corp. of America (Consumer Products Div., 60 Oxford Dr., Moonachie, N.J. 07074).

# BLESSED



CARVER M-1.5t  
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Amplifier

"...the equal of any power amplifier in transparency, focus and smoothness and, of course, far ahead of any other we tested in sheer gut-shaking power and dynamic range. We especially enjoy hearing spatial detail, instrumental definition and completely natural dynamics on familiar records to a degree we did not know was extractable from the grooves when we listened through lesser amplifiers. At this level of sonic performance, the astoundingly small size and cool operation of the M-1.5t become the icing on the cake, rather than the main attraction."

Peter Aczel *The Audio Critic* Winter 1982-83

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# AUDIOPHILE FILE™ XL-S

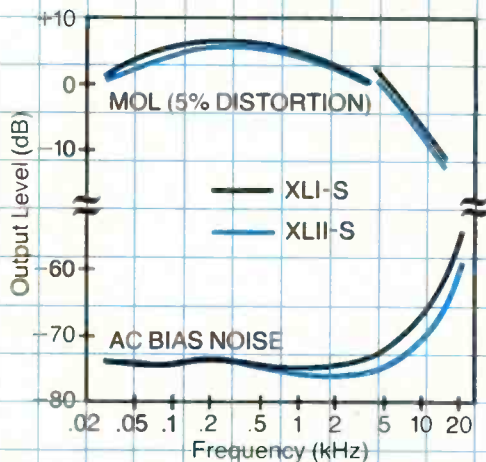
## COMPACT DISC COMPATIBLE

Maxell introduces the new XL-S audio cassettes; a series of ferric oxide tapes which deliver a level of performance that can capture the sound nuances found on Compact Discs more faithfully than other ferric oxide cassettes on the market.

There are a number of areas where this achievement is apparent.

### GREATER DYNAMIC RANGE.

Through a new formulation of our magnetic particles, we were able to reduce the perceived residual AC bias noise level by 1 dB in the critical 2 kHz to 10 kHz mid-frequency range. And simultaneously increase sensitivity and maximum output levels by as much as 2 dB.

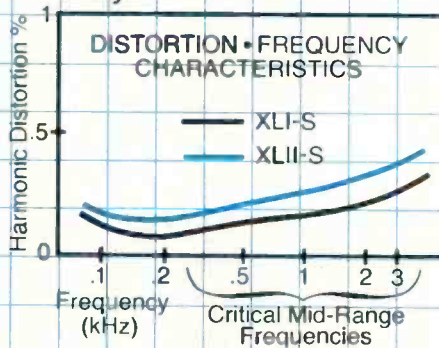


As a result, the dynamic range of each tape has been significantly expanded. So you get a

better signal to noise ratio and a fuller impact of the dynamic transients exclusively inherent to digital CD recordings.

### LOWER DISTORTION.

The newly formulated particles also contribute considerably to XL-S's low output fluctuation, as well as its virtual distortion-free reproduction, especially in the critical mid-range frequencies. This, in turn, accounts for our XL-S tape's enhanced sound clarity.



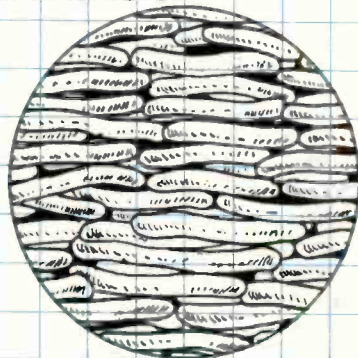
### IMPROVED MAGNETIC PARTICLES.

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This allows us to create a greater ratio of total surface area to unit weight of magnetic particles.

As a result, our XL-S

tapes now have the ability to record more information per unit area than ever before.



PACKING DENSITY OF UNIFORM PARTICLES.

Which is why Maxell high bias XLII-S and normal bias XLI-S are unsurpassed at reproducing the sound qualities found on today's finest recordings. Regardless of whether your frame of reference is analog or digital audio discs.

For technical specifications on the XL-S series, write to: Audiophile File, Maxell Corp. of America, 60 Oxford Drive, Moonachie, New Jersey 07074.



IT'S WORTH IT.

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# CrossTalk

Practical answers to your audio and video questions by Robert Long

## Too Many Speakers?

*My amp, a Yamaha M-70 rated at 200 watts per channel, is responsible for some of the most beautiful sound I've ever heard. It has a hookup for two pairs of speakers, but only one can be played at a time. The dealer I bought it from says that if I want to play both pairs at once, I'll have to buy a matcher and play in mono. (Absolutely not!) An acquaintance says he has a spatial (parametric) equalizer that gives him all four speakers at once and drops the impedance of each accordingly. But the dealer claims that if I have more than one pair of speakers playing in stereo, I will get crossover distortion. What should I do?—Robert C. Lester, Miami, Fla.*

Either you've been getting some mighty bad advice or you've misunderstood your advisors. My first question is why you're interested in playing two pairs of speakers simultaneously. If you want to open up the sound with some sort of ambience-recovery or ambience-simulation ("time-delay") device, placing the second pair at the sides or back of the room, you'll need only one pair of connections at the amp. (The other is provided by the ambience device or by a second amp connected to it.) But this has nothing whatever to do with equalizers—parametric or otherwise.

If you plan to use the two pairs in the same room without an ambience device or something comparable, you'll probably do little except degrade the stereo imaging. If you want to play music in two different rooms, perhaps you'd be best advised to do so one at a time—particularly considering your fondness for the sound of the Yamaha. Although you probably could safely run two pairs of high-impedance speakers (8 ohms or more) in parallel from the same set of output taps, you wouldn't be able to switch between them except by disconnecting one pair. I don't know what the dealer means by a "matcher," nor can I imagine what crossover distortion has to do with the situation. (Crossover distortion occurs in Class B amplifiers operated at low signal levels; its cures are well known to any good audio engineer, and it is rarely found in significant quantities in modern equipment.)

## The Water Cure

*While playing some old records that were somewhat worn and noisy, I dropped*

*water on the grooves. There was a reduction in noise, but no apparent loss of sound quality. Has this been done before?—Fred H. Riebling, North White Plains, N.Y.*

It sure has, and with similar results. But the technique seems to do more harm than good. The damping of the stylus tip's motion at high frequencies by the water's viscosity makes for a net improvement in sound while the record is still wet, but the damage that it causes *sub aqua* (so to speak) shows up when you dry the disc and play it again. If your records are worn and noisy already, the damage may not become evident as fast as it did in our tests of a few years ago, but I'd urge you not to repeat the experiment with your best LPs.

## Sensitive CD Players

*A friend brought over his Phase Linear Compact Disc player to help me decide whether or not to buy one. The sound was terrific, but when I closed the glass doors on my cabinet, the player skipped. It sounded like a cheap car cassette player on a bumpy road. My friend says it happens all the time and that a Sony model skipped in the showroom, too. Banging on a shelf with a turntable on it produces a similar effect. Is there something inherently wrong with these players? And how will manufacturers adapt such unstable units for automobile use?—Jeff Greene, Bridgewater, Mass.*

CD players vary considerably in how sensitive they are to mechanical shock. Some are virtually immune to anything short of a hammer blow, while others are quite touchy. A few models have a switch that can be set to reduce their susceptibility to vibration-induced mistracking, but at some expense to their error-correction capabilities. If you're concerned about shock sensitivity, kick the tires a little before you buy: Tap the sides and top of each player you're interested in with increasing force until you hear a skip. This will give you a pretty good feel for the relative stability of different players.

You are right that many home players would not fare too well on the road. Car players will require tracking mechanisms that are very well isolated from external shock. Philips and Sony are now at work on industry design standards that should guarantee just that.

## Tale of Two Antennas

*I'm considering getting separate UHF and VHF antennas, and I'm told I may need a separate preamp for each. Although splitters are readily available, the amps are not. Can you tell me where to get direct-mount high-power amps that attach to the antenna mast? Will performance be affected if antennas in the same band are hooked up in series (that is, with one series hookup for VHF and one for UHF), or will each require a separate download?—Jon Wright, Annapolis, Md.*

I can't imagine a purpose for multiple antennas in the same band that wouldn't be defeated by hooking them up in series. I'd certainly go for separate downloads. My local radio parts store carries Channel Master RF amplifiers and splitters, which come in a variety of configurations. I'm sure there are other brands. But the gain usually is limited to a few dB; if an antenna amp were literally "high-power," it probably couldn't pass FCC reradiation tests. I doubt that you really need such amps, anyway, unless you plan to feed multiple receivers. In all but fringe reception areas, a properly oriented high-gain antenna (or antennas) should deliver an adequate signal without electronic assistance.

## Pecking Order

*Can you tell me where in my system I should insert an SAE Impulse Noise Reduction System?—Richard Gilbert, Kew Gardens, N.Y.*

SAE intends it to go into a tape-monitor loop. To "declick" LPs (certainly its most useful application), you would have to turn your source selector to PHONO and switch in the tape loop. Some audiophiles claim better results from inserting the processor between the turntable and the phono inputs of the receiver or preamp, because there the signal's high frequencies will still be boosted by the RIAA recording equalization, emphasizing the clicks and giving the SAE a better shot at them. And I must admit that the demonstration I heard with this setup seemed impressive—though, in theory, the signal levels are too low to use the SAE's dynamic range to best advantage.

*We regret that the volume of reader mail is too great for us to answer all questions individually.*

# EVEN FANATICS CAN BE REASONABLE.



**V-300** — DC Servo Capstan Motor. Soft-Touch Transport Control. Brilliance Circuitry (High End Boost). Dolby B NR.\* 8-dot LED L & R Peak Meters. Auto MPX Filter. 3 Step BIAS/EQ Selector. Record Mute. Timer Capability. LED Lights for Rec/Rec Mute/Pause. L & R Input Level Control. **V-350C** — Same features as V-300 plus Dolby B & C NR. **V-400X** — DC Servo Capstan Motor. IC Logic Transport Control. dbx NR.\*\* dbx Disc.\*\* Dolby B NR.\* 13-dot LED L & R Peak Meters. Auto MPX Filter. 3 Step BIAS/EQ Selector. Memory Stop. Auto Rec Mute to 4 seconds. Timer Rec/Play Capability. L & R Input Level Control. Output Level Control. **V-500X** — Same features as V-400X plus Dolby C NR.\* Cobalt Amorphous Head. Multi-Electronic Counter w/TRT (Tape Run Time). Memory Play/Stop. Block Repeat.

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But even Fanatics have to be reasonable. And if we only built Teacs that encompassed everything we're capable of, you'd have an immoderately magnificent deck only a few could own. Therefore, though we never compromise, we do offer options. You can own a Teac which is merely superb. Or one that is unbearably superb. Each priced in fair proportion.

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# The Autophile

Going on the road with stereo by Gary Stock

## A Clarion Call ...and More

THERE'S GOOD NEWS from two quarters this month for those of you with high-end tastes but only a mid-fi budget. The first comes from Clarion, a company whose broadly distributed line of low- and mid-price car stereo equipment is now joined by a genuinely impressive group of components called the Audia series.

Audia models may be high-end in technology, but they're priced to compete with conventional mid-fi components. For example, the top-of-the-line DTX-1000 comes in at \$650, which is remarkably moderate when you consider what it does. This is, in fact, only the second tuner/cassette player currently available with diversity reception. (The first is Sony's XR-100, but Clarion claims to have been the first to offer such a tuner in Japan.) The concept behind diversity reception is fairly straightforward: Because multipath problems and "picket fencing" are largely the result of signal conditions that can change instantaneously as the car moves, why not give the radio a better shot at receiving a strong, undistorted signal by letting it choose between the outputs of two antennas—one mounted a few feet behind the other. Clarion's second antenna is a clear strip that mounts across the rear window.

What you need to accomplish this is a radio equipped with two tuners, one for



*Clarion Audia DTX-1000 front end: Diversity reception gives a head start in the fight against multipath distortion.*

each antenna, and a comparator circuit to choose between them for best-possible reception. Though diversity reception alone should dramatically reduce multipath problems, the DTX-1000 is also equipped with a circuit that senses remaining multipath distortion products (amplitude- and phase-modulated signals) and reduces the noise via a high-frequency rolloff.

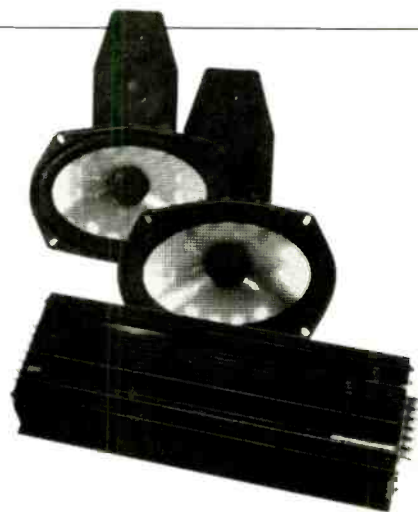
That the DTX-1000 lacks an automatic reversing tape transport is Clarion's way of adhering to the perfectionist aims of the Audia series. Rotating head assemblies or

heads equipped with two sets of playback gaps can never ensure consistency in playback from side to side. As Nakamichi has demonstrated in its TD-1200 tuner/cassette player (see test report, July 1983), only a very sophisticated servomechanism capable of monitoring and correcting variations in tape-to-head alignment can guarantee accurate high-frequency response in an autoreversing deck. Though I suspect that Nakamichi and Clarion handle the problem differently, the \$460 Audia TRX-100 is equipped with a mechanism that is said to achieve zero azimuth deviation during reverse play.

The TRX-100, like the other units in the Audia line, tackles noise reduction flexibility in a nicely logical way. Instead of including every system, the Audia front ends have just the most common one—Dolby B. If you need Dolby C, DBX, or DNR, you can add them via signal-processing modules (only the DBX module is currently available). Thus, you pay only for what you really want. The Audia line also includes some nice-looking two-way speaker systems with diaphragms made of water-resistant mica, a satellite tweeter, a seven-band graphic equalizer, and a 75-watt power amp—all definitely worth considering if you're getting set to upgrade your rig.

**Improving sound quality** with minimum fuss and expense is the theme of another new high-technology system—this one designed jointly by Audiomobile and its new corporate parent, American Antenna. Marketed under the K40 Sound System brand, the \$600 package consists of a hefty power amplifier with built-in electronic cross-overs, a pair of two-way satellite speakers, and a pair of subwoofers (either 6-by-9-inches for rear deck mounting or self-enclosed units with two 5¼-inch drivers in each box). Much of the poor sound in car stereo systems can be blamed on the inadequate power-amp sections of factory-installed front ends and the crummy little "full-range" speakers that the car manufacturers throw in. Thus the K40 setup stands a good chance of dramatically improving overall performance when used in conjunction with your existing receiver/cassette player.

I recently had the chance to audition the K40 system and found it capable of very impressive performance. The car had its factory-standard Delco radio/tape player in the dash and the original stereo speakers in the front footwell. The front end's fader



*The K40 Sound System: Dressing up factory-installed front ends.*

controlled the relative level of the forward and rear sound. Interestingly, though I expected the sound from the rear speakers to cause an unnatural spatial balance (like what you would hear at a concert if you sat with your back to the stage), by bringing up the volume of the front speakers just a little I was able to create a pleasant sound field that made up in left-to-right imaging what it lost in front-to-back depth. Especially nice was the low-bass performance: You don't realize how important the bottom octaves are until you hear a system that actually reproduces them faithfully.

According to the manufacturer, the K40 Sound System is quite easy to install, drawing power from the circuit feeding the trunk light. Setting up the satellites or the self-enclosed woofers takes only a couple of minutes, thanks to a nicely-thought-out one-screw mounting system that should leave no hideous wounds in the car if you ever remove the rig. Also, because many factory-supplied radio/tape players lack line-level outputs, the K40 amp has a special interface section that enables it to accept high-level inputs.

For even better performance, you can go all the way and invest in the K40 Signature Series (\$1,000), which adds two satellites for the front, a heftier power amp, and a separate fader module that mounts under the dash. Either way, you should look objectively at the true qualities of the front end that will supply the signal to the K40 system. Nothing will turn a sow's ear into a silk purse, and if your current front end has a lousy tuner or tends to add a bit of vibrato to all your taped music, it probably is not suitable for such goosing up. **HF**

# New Equipment Reports

Preparation supervised by Michael Riggs, Peter Dobbin, Robert Long, and Edward J. Foster. Laboratory data (unless otherwise noted) supplied by Diversified Science Laboratories.



STEVEN MARK NEEDHAM

## A Long-Play Digital Adapter from Sansui

Sansui PC-X1 Tricode PCM adapter. Dimensions: 10 1/4 by 2 3/4 inches (front panel) plus clearance for handle and connections at sides, 10 1/2 inches deep plus clearance for controls; AC-X1 AC adapter, 4 by 2 3/4 inches (front), 8 inches deep. Price: \$1,000 (including AC adapter). Warranty: "limited," two years parts and labor. Manufacturer: Sansui Electric Co., Ltd., Japan; U.S. distributor: Sansui Electronics Corp., 1250 Valley Brook Ave., Lyndhurst, N.J. 07071.

LIKE SEVERAL OTHER COMPANIES, Sansui offers a PCM (pulse-code modulation) processor that will turn a videocassette recorder—VHS, Beta, or professional U-Matic—into a digital audio recorder. All such adapters work basically the same way, following Japanese industry standards, to reformat the stream of digital bits so that it resembles a composite video signal of the type the recorder is built to handle. They also contain the conversion circuitry necessary for use with regular audio gear: analog-to-digital (A/D) for recording and digital-to-analog (D/A) for playback.

What makes the Sansui PC-X1 exceptional is that it is designed to allow glitch-free recording and playback at a VCR's slowest speed, for a maximum uninterrupted recording time of as much as eight hours (in VHS). Competing adapters are intended for use only at a VCR's top speed and thus limit recording time to about three hours at most.

The PC-X1's flexibility is further enhanced by its power-supply system. The

AC power supply, called the AC-X1, is a separate module with a 19-inch cord to connect it to the PC-X1. The processor itself accepts a 12-volt DC input from the AC-X1 or from a rechargeable battery pack. (For use near a car or van, Sansui offers a 12-volt adapter cord for automotive cigarette lighters.) Thus, you can make field recordings (using another accessory, the CV-50 shoulder strap) without the power supply. This lowers the PC-X1's weight to 5 1/2 pounds (plus that of the battery pack)—light, by the standards of single-chassis models. And when line current is used, the separate power chassis reduces the possibility of induced hum in the audio circuits.

As you face the PC-X1's control panel, the battery-pack slot and the power-supply connection are on the left side. The remaining connections are regular pin jacks at right: two pairs for the analog stereo input and output, one pair for the video output to and input from a VCR, an output for copying the digital audio signal onto a second recorder, and video connections for a tuner

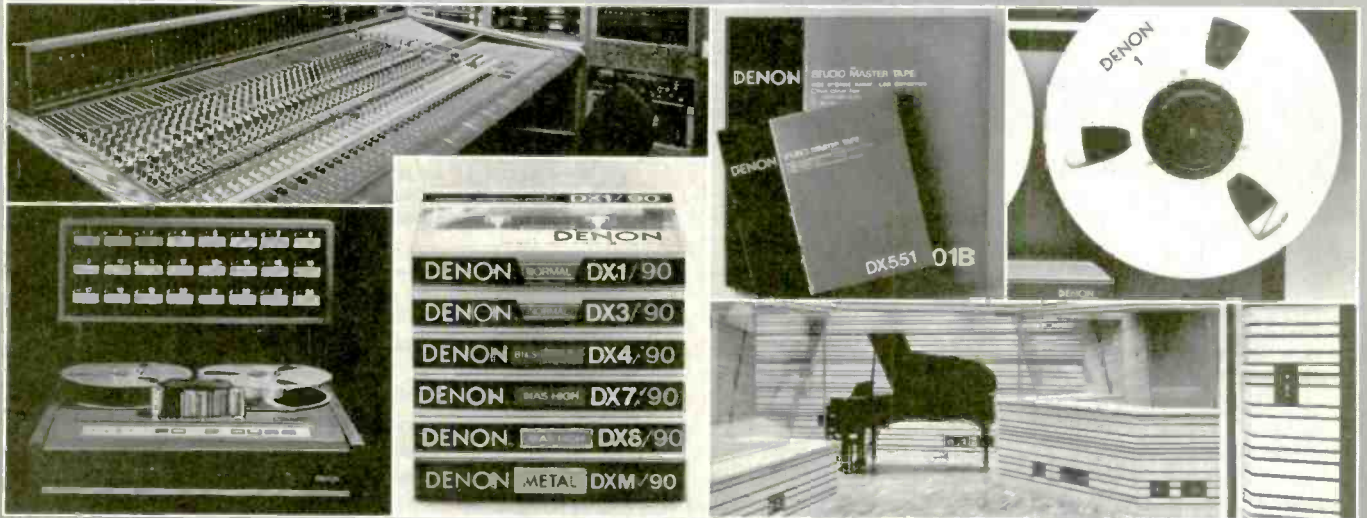
**Report Policy:** Equipment reports are based on laboratory measurements and controlled listening tests. Unless otherwise noted, test data and measurements are obtained by Diversified Science Laboratories. The choice of equipment to be tested rests with the editors of HIGH FIDELITY. Samples normally are supplied on loan from the manufacturer. Manufacturers are not permitted to read

reports in advance of publication, and no report or portion thereof may be reproduced for any purpose or in any form without written permission of the publisher. All reports should be construed as applying to the specific samples tested. HIGH FIDELITY and Diversified Science Laboratories assume no responsibility for product performance or quality.

## TO MAKE A CASSETTE TAPE SOUND LIKE MUSIC, YOU'VE GOT TO KNOW WHAT MUSIC SOUNDS LIKE.

Think about it. What other tape manufacturer also builds professional recording equipment including 24-track and digital studio tape recorders? What other tape manufacturer has 72 years of experience as a major record company? Other tape manufacturers may talk about "digital ready," but do you know Denon developed the digital recording process in 1972?

It is this unique combination of technical and musical expertise that led Denon to use Dynamic Distortion Testing to optimize DX cassette tape performance in the presence of real musical signals, not mere laboratory test tones. The result is the most *musical* of all cassette tape. Denon DX-Cassette tape. When we claim it's better, we say it with music.

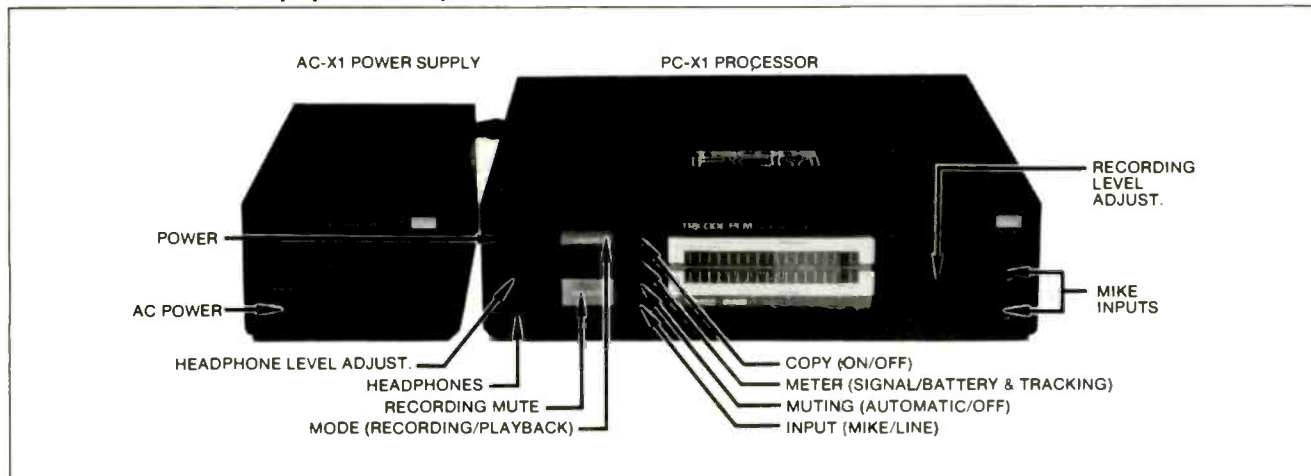


# DENON

D E S I G N I N T E G R I T Y

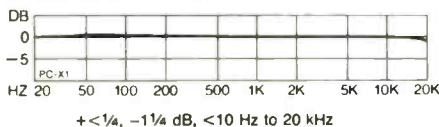
Nippon Columbia Co., Ltd., No. 14-14, 4-Chome, Akasaka, Minato-Ku, Tokyo 107, Japan

Denon America, Inc., 27 Law Drive, Fairfield, N.J. 07006 (201) 575-7810



The assumed "0 dB" reference level in the data below is at the threshold of the overload indicator on the PC-X1—not at its meter's 0-dB indication, which occurs at a level 14 1/4 dB below the reference level; see text.

RECORD/PLAY RESPONSE (at -10 dB)



ANTI\_ALIASING FILTER RESPONSE

at 15 kHz	-1/4 dB
at 20 kHz	-1/2 dB
at 22 kHz	-27 1/2 dB
at 24 kHz	-62 1/2 dB

S/N RATIO (re 0 dB; R/P)

	A-weighted	CCIR/ARM
line input	79 3/4 dB	77 3/4 dB
mike input	68 dB	65 1/2 dB
mike input, atten.	69 dB	66 dB

INDICATOR READING AT OVERLOAD

see text

DISTORTION (THD at -15 dB; 40 Hz to 20 kHz)

≤ 0.08%

CHANNEL SEPARATION

≥ 32 3/4 dB, 100 Hz to 20 kHz

INDICATOR "BALLISTICS"

Response time	3 msec
Decay time	≈ 80 msec
Decay time, peak-hold	≈ 1,100 msec
Overshoot	0 dB

SENSITIVITY (re 0 dB; 315 Hz)

line input	490 mV
mike input	2.35 mV
mike input, with attenuator	25.8 mV

INPUT OVERLOAD (at 1 kHz)

line input	> 10 volts
mike input	26 mV
mike input, with attenuator	285 mV

INPUT IMPEDANCE

line input	49.1k ohms
mike input	10.8k ohms

OUTPUT IMPEDANCE

670 ohms

MAXIMUM OUTPUT

1.54 volts

\*Most of the distortion products at 20 kHz are "birdies" caused by intermodulation between the test tone and the sampling frequency. Total harmonic distortion (THD) from 40 Hz to 15 kHz is no greater than 0.037 percent.

and monitor so that you can leave the PC-X1 plugged into your audio-video system without disturbing the attached VCR's normal operation as a video recorder. A switch near these last two jacks chooses the operating mode: TV or digital audio. Other switches on the same panel engage a high-pass filter to suppress low-frequency noise picked up by microphones or a 20-dB attenuator to prevent overload in close miking.

All this adds up to a very practical approach to the problems of recording: The full range of home applications is encompassed without adding any more switches or knobs than you really need. That is not to say that you will encounter no difficulties if you use the PC-X1 to "go digital." If you're accustomed to analog recording, you may find the new medium surprisingly intransigent. Not only does it prevent physical editing, flying starts, and other tricks that are commonplace with analog open-reel recorders, but even quick starts may be compromised by the processor's error sensing and correction systems. With the muting on AUTO, playback can be riddled with momentary silences until the recorder settles down to motional equilibrium; with the muting switched off, you may get bursts of noise instead. A/B comparisons, too, are prevented: Not only do video recorders have no separate playback heads, but even with the muting off, a gap of almost two seconds is created when you switch the PC-X1 between source (RECORDING) and tape (PLAY).

The PC-X1 also imposes some constraints on the handling of signals that encompass a wide dynamic range. One involves the meters, whose main scale stretches from -30 to +15 dB. (A subsidiary calibration puts 0 dB at the top of the range.) The top of the main scale is conceived as "maximum level" (calibrated at 0 dB on most digital adapters), but you are expected to place typical peak signal levels at that scale's 0-dB point, which is almost 15 dB below overload. A further inhibition to overaggressive recording is the spacing of the meter divisions: in 1-dB steps between -3 and +1 on the main calibra-

tion, but with a 5-dB gap between the +10 and +15 elements.

Because it is comparable to the 0-dB calibration on other units, we initially decided to use the +15-dB point as the reference level for testing. However, there also is an overload indicator just beyond the +15-dB element in each display. The manual implies that it will illuminate at a level somewhat higher than +15, but its threshold proved to be slightly lower in the test sample—at +14 1/4 dB—so Diversified Science Laboratories adopted this as the precise reference for all measurements shown in our data column.

The meters read peak values, which is particularly important in digital recording if transients are not to go "over the top" and produce gross distortion or muting. Response times are well chosen, with a "peak-hold" characteristic of approximately one second applied to the uppermost element whenever the signal is at or above the main 0-dB calibration. With much pop music, it's easy to follow the manual's dicta that most peaks be kept somewhere around 0 dB and that the overload light be allowed to flicker only occasionally. With uncompressed symphonic signals, however, levels don't stay as consistently in one area, making level setting more problematic.

Pushing as hard as we dared in normal use (remember that there's no calibration between +10 and +15 dB to help you tell exactly how high you're running the largest peaks), some fairly long stretches seldom or never triggered even the -30-dB element unless we deliberately rode gain to bring up these passages. (With unfamiliar material, such a practice might precipitate over-recording on an unanticipated outburst; an experienced recordist will try to learn enough about the music to prevent this.) If our signal stayed below the -30 calibration, it generally failed to mask the residual noise in playback.

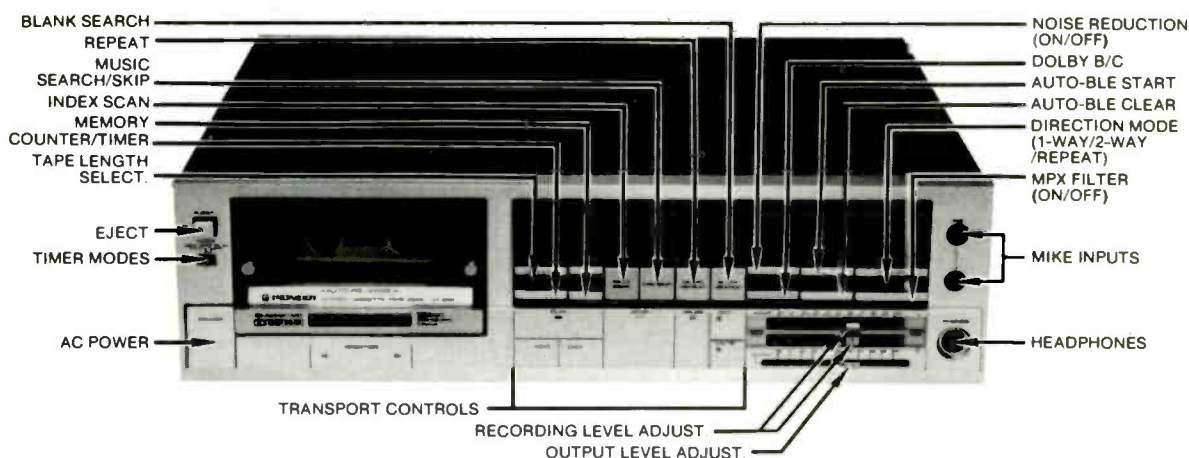
In live recording, you also must be careful not to overload the mike inputs. The switchable attenuator does help by giving you two choices of sensitivity and overload, but you may have to experiment with mike

placement (perhaps using headphones to monitor the results during a rehearsal) to make sure that you get good signal-to-noise (S/N) ratios without undue distortion of the climaxes. If you have a choice, you also might want to experiment with mikes of different sensitivities. However, a serious recordist doubtless will prefer to use an outboard mixer, feeding its output to the PC-X1 via the line inputs and thus avoiding the problem altogether.

In using the adapter, we naturally took care to compare results at the high transport speeds (in both VHS and Beta decks) with those at slow speed. True to Sansui's word, the PC-X1 seemed just as capable at the lower speeds as it did at the "standard" (Beta II and VHS SP) speeds recommended for other digital processors. With the muting on AUTO, it did seem to create more blanks at the slow speeds, but with virgin tape and sufficient time allowed for the motion to stabilize, the blanks are too rare to permit a real judgment. Sound quality itself is subjectively identical at all record-

ing speeds in both formats.

Perhaps what pleases us most about the PC-X1 is its avoidance of pretense. It is not—and doesn't try to be—a professional device (which would require an encoding scheme more sophisticated than that specified by the EIAJ standard). On the contrary, its features and connections are designed singlemindedly for home use and prove exceptionally flexible for that purpose. Connected to any VCR, the PC-X1 can give you audibly perfect reproduction, with no flutter and response that is as flat as you might expect with Compact Discs (though because of the 14-bit word, as opposed to the 16-bit encoding of CDs, noise and distortion are necessarily higher). More important for many home users, it will let you record an entire opera—or even several operas—uninterrupted on a single videocassette, costing about the same or less than the collection of premium audio cassettes that otherwise would be needed and much less than a comparable set of open-reel tapes. Now that's progress.

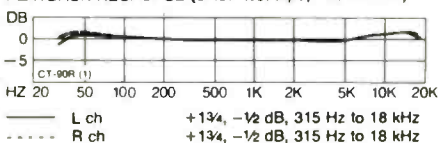


## Pioneer's "Full Deck"

Pioneer CT-90R cassette deck, with automatic-reversing bidirectional recording and playback and Dolby B and C noise reduction. Dimensions: 16½ by 4½ inches (front panel), 13¾ inches deep plus clearance for connections. Price: \$520; optional JT-216 wired remote control, \$50. Warranty: "limited," two years parts and labor. Manufacturer: Pioneer Electronic Corp., Japan; U.S. distributor: Pioneer Electronics (USA), Inc., 1925 E. Dominguez St., Long Beach, Calif. 90810.

Forward direction of tape travel shown.

PLAYBACK RESPONSE (BASF test tape; -20 dB DIN)



WHEN PIONEER SAYS that users of the CT-90R are "playing with a full deck," it's not just bandying words. This cassette deck is the top of the current line and is indeed full of features.

The transport, with three direct-drive motors, reverses automatically in both recording and playback when it encounters leader—what Pioneer aptly calls "quick reverse." The main head assembly, using the company's ribbon sendust construction, functions as a combination record/play head with a separate "read" gap for the automatic tape-matching system. Index scan samples each selection and moves on until you find what you're looking for; search/skip and blank search can be used to fast-wind over unrecorded portions or to seek out those blanks for recording. And

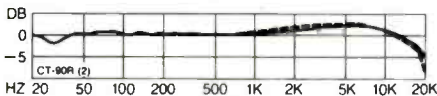
there are all the more usual goodies: Dolby B and C noise reduction, a switchable multiplex filter, timer operation, memory and repeat, a switchable counter/remaining-time display, adjustable output level, and an optional wired remote control.

Actually, the features and construction of the deck are not very different from those of the CT-9R (test report, March 1982), the flagship of a then-radical new line. The 90R retains the use of spring metal in the front panel to create compliant areas that act as switchplates, but replaces the gold finish and vertical organization of the 9R with a more mainstream layout in silver. The results may not be quite as striking, but they will blend better with other components in a mixed-brands system.

The various convenience functions

# AUDIO New Equipment Reports

## RECORD/PLAY RESPONSE, TYPE 2 TAPE (-20 dB)



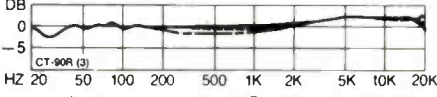
CT-90R (2)

L ch +2, -3 dB, <20 Hz to 19.5 kHz  
 R ch +2 1/2, -3 dB, <20 Hz to 18 kHz

with Dolby B noise reduction  
 R ch +2 3/4, -3 dB, <20 Hz to 16.5 kHz

with Dolby C noise reduction  
 R ch +3 1/4, -3 dB, <20 Hz to 15.5 kHz

## RECORD/PLAY RESPONSE, TYPE 4 TAPE (-20 dB)



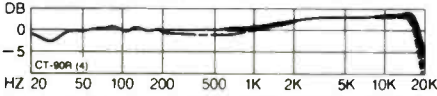
CT-90R (3)

L ch +5, -3 dB, <20 Hz to >20 kHz  
 R ch +2 1/4, -3 dB, <20 Hz to >20 kHz

with Dolby B noise reduction  
 R ch +2 1/4, -3 dB, <20 Hz to >20 kHz

with Dolby C noise reduction  
 R ch ±3 dB, <20 Hz to >20 kHz

## RECORD/PLAY RESPONSE, TYPE 1 TAPE (-20 dB)



CT-90R (4)

L ch +2 3/4, -3 dB, <20 Hz to 20 kHz  
 R ch +4, -3 dB, <20 Hz to 19 kHz

with Dolby B noise reduction  
 R ch ±3 dB, <20 Hz to 17.5 kHz

with Dolby C noise reduction  
 R ch +4, -3 dB, <20 Hz to 18 kHz

MULTIPLEX FILTER (defeatable)  
 -1/2 dB at 15 kHz; -29 1/4 dB at 19 kHz

## S/N RATIO (re DIN 0 dB; R/P; CCIR/ARM-weighted)

	Type 2 tape	Type 4 tape	Type 1 tape
without noise reduction	54 1/2 dB	53 1/2 dB	52 dB
with Dolby B noise reduction	64 1/2 dB	63 1/2 dB	62 1/4 dB
with Dolby C noise reduction	71 3/4 dB	71 1/4 dB	70 1/4 dB

## INDICATOR READINGS FOR DIN 0 dB (315 Hz)

Type 2 tape	+5 dB (with 3.4% THD)
Type 4 tape	+5 dB (with 1.0% THD)
Type 1 tape	+5 dB (with 1.6% THD)

## INDICATOR READINGS FOR 3% DISTORTION (315 Hz)

Type 2 tape	+5 dB (for -1/4 dB DIN)
Type 4 tape	+7 dB (for +2 dB DIN)
Type 1 tape	+7 dB (for +1 1/4 dB DIN)

## DISTORTION (THD at -10 dB DIN; 50 Hz to 5 kHz)

Type 2 tape	≤ 1.37%
Type 4 tape	≤ 0.49%
Type 1 tape	≤ 0.66%

ERASURE (100 Hz) ≥ 65 1/2 dB

CHANNEL SEPARATION (315 Hz) 49 dB

## INDICATOR "BALLISTICS"

Response time	6.8 msec
Decay time of main display	≈ 120 msec
Decay time of peak-hold cursor	≈ 930 msec
Overshoot	0 dB

SPEED ACCURACY 0.3% slow, 105 to 127 VAC

FLUTTER (ANSI weighted peak; R/P) ±0.08%

## SENSITIVITY (re DIN 0 dB; 315 Hz)

line input	125 mV
mike input	0.52 mV

## INPUT OVERLOAD (at 1 kHz)

line input	>10 volts
mike input	4.8 mV

## INPUT IMPEDANCE

line input	145k ohms
mike input	2.4k ohms

OUTPUT IMPEDANCE 6,700 ohms

MAX. OUTPUT (from DIN 0 dB) 1.15 volts

work together so well that their collective virtue is greater than the sum of their individual advantages. For instance, the quick reverse is particularly welcome, but in combination with the blank-search feature it enables you to find and fill the blank portion of a partially recorded tape with great ease. In many applications, the slight hiatus when the deck reverses—something on the order of one second—will go virtually unnoticed. And for a reversing deck, the controls and the manual's explanations of them pose a minimum of confusion and ambiguity. (The one remarkable exception is the manual's insistence on identifying the fast-wind modes—which are indicated on the front panel by symbols only—in terms of their forward-play names. In the reverse direction, "rewind" will move you farther along the tape; "fast-forward" is needed to back up!)

Although there is a separate playback gap in the head assembly, it cannot be used for off-the-tape monitoring while you are recording. It is reserved for the automatic tape-matching system: BLE, for bias, level, and equalization adjustment. This system was also built into the 9R, where it produced very good results. Diversified Science Laboratories, following its standard practice with decks possessing such a feature, used the system to adjust the CT-90R to each tape used for testing: Maxell UDXL-II as the basic Type 2 ferricobalt ("chrome"), TDK MA Type 4 metal, and TDK AD Type 1 ferric.

As the graphs show, record/play response with the BLE is not as flat in our sample of the 90R as it was in the 9R. All three tapes exhibit a broad rise of 2 dB or so in the 5-kHz region, with or without noise reduction. In itself, that rise would not be much cause for complaint, but there also is a premature rolloff at the high end (presumably from overbiasing) with the Type 2 tape and a marked peak (strongly suggesting underbiasing) with the Type 4 tape. Only the Type 1 appears to be accurately biased, but level adjustment (and therefore Dolby tracking) is very good in each case. And we know from the 9R results that the BLE can do better than this. If you cancel the BLE, the deck reverts to its factory settings for the tape type. Tape-type selection is automatic by means of the standard cassette-shell keyways.

Measured playback response with the BASF test tape is excellent. The deck's azimuth is apparently a close match to that used in preparing the tape, though there is some instability in the output at very high frequencies (presumably due to inconsistencies in tape-to-head contact), making the measurements in this range somewhat equivocal. Here, as elsewhere in DSL's measurements, no significant difference appeared when the results in the reverse direction were compared with those in the forward direction, and our data column shows only the latter.

The figures for 3 percent distortion (representing the third harmonic) indicate good headroom. The distortion figures at -10 dB (representing total harmonic distortion in this case) are not out of line, but they do contain more of the second harmonic than usual, suggesting that the electronics are contributing significantly to the total. (Distortion attributable to the tape consists characteristically of the third harmonic.)

But the only place where distortion might become an atypically limiting factor is in the mike preamp, whose overload point is relatively low. For home decks, manufacturers commonly assume relatively distant miking (several feet, rather than several inches) and design for low noise and cost—making the mike-preamp headroom in the majority of home decks pretty skimpy. But in most cases, the point is moot because the feature is used so little. A serious recordist will want to connect a mixer to the line inputs, rather than plug mikes directly into the 90R. The deck's input impedances are well chosen, but its output impedance is high enough that it might have trouble delivering adequate level to a preamp or receiver with an unusually low input impedance.

Some users may prefer the "different" look of the two-year-old CT-9R, though we suspect that most will welcome Pioneer's changes for the present model. And if you're looking for a reversing deck with a full complement of extras, you'll enjoy the elements that the company has *not* changed. For the convenience and extra uninterrupted (or virtually uninterrupted) recording and playing time of a bidirectional transport, we can think of no model with a more comprehensive, better integrated collection of ancillary features.

## A Quick Guide to Tape Types

Our tape classifications, Type 0 through 4, are based primarily on the International Electrotechnical Commission measurement standards.

**Type 0** tapes represent "ground zero" in that they follow the original Philips-based DIN spec. They are ferric tapes, called LN (low-noise) by some manufacturers, requiring minimum (nominal 100%) bias and the original, "standard" 120-microsecond playback equalization. Though they include the "garden variety" formulations, the best are capable of excellent performance at moderate cost in decks that are well matched to them.

**Type 1** (IEC Type I) tapes are ferrics requiring the same 120-microsecond playback EQ but somewhat high-

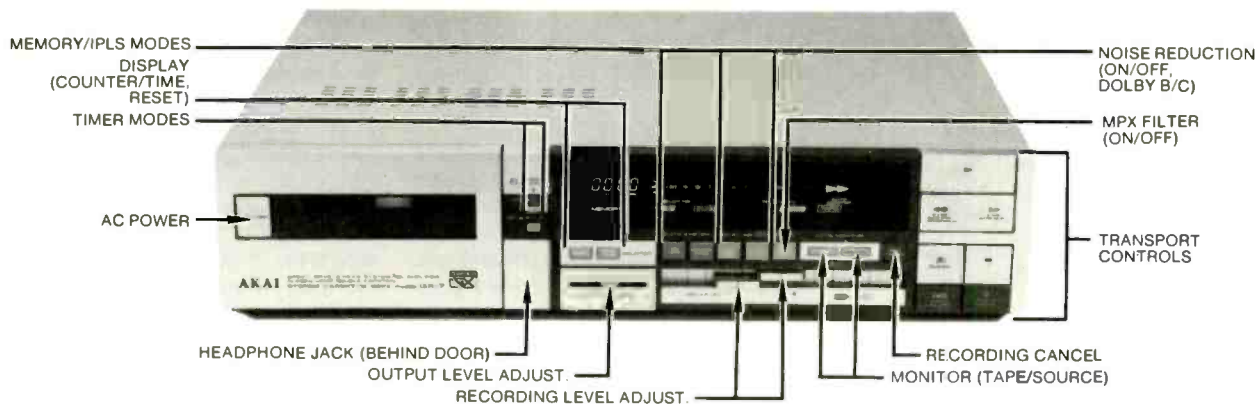
er bias. They sometimes are styled LH (low-noise, high-output) formulations or "premium ferrics."

**Type 2** (IEC Type II) tapes are intended for use with 70-microsecond playback EQ and higher recording bias still (nominal 150%). The first formulations of this sort used chromium dioxide; today they also include chrome-compatible coatings such as the ferricobalts.

**Type 3** (IEC Type III) tapes are dual-layered ferrichromes, implying the 70-microsecond ("chrome") playback EQ. Approaches to their biasing and recording EQ vary somewhat from one deck manufacturer to another.

**Type 4** (IEC Type IV) are the metal-particle, or "alloy" tapes, requiring the highest bias of all and retaining the 70-microsecond EQ of Type 2.

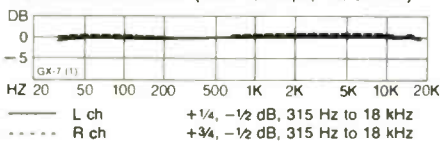




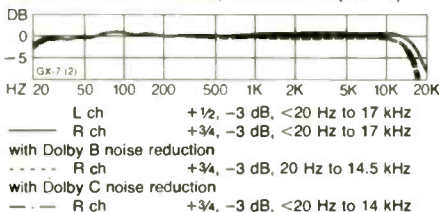
## Akai's Easy-Does-It Cassette Deck

Akai GX-7 cassette deck, with Dolby B and C noise reduction. Dimensions: 17¼ by 4 inches (front panel), 13 inches deep plus clearance for connections. Price: \$400; optional RC-32 wired remote control, \$35; optional RC-92 wireless remote control, \$115. Warranty: "limited," one year parts and labor. Manufacturer: Akai Electric Co., Ltd., Japan; U.S. distributor: Akai America, Ltd., 800 W. Artesia Blvd., Compton, Calif. 90224.

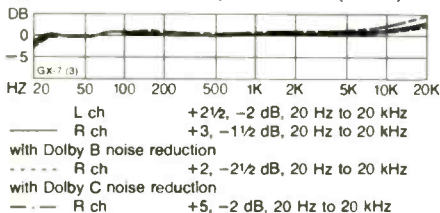
PLAYBACK RESPONSE (BASF test tape; -20 dB DIN)



RECORD/PLAY RESPONSE, TYPE 2 TAPE (-20 dB)



RECORD/PLAY RESPONSE, TYPE 4 TAPE (-20 dB)



AKAI COMPONENTS HAVE ALWAYS carried a full complement of what might be called "the amenities"—features designed to make life a little (or a lot) easier for the user. Thus, we are not so much surprised at how many things the relatively inexpensive GX-7 can do as we are impressed by the finesse with which it does them. All of its functions work smoothly, are easy to understand and operate, and almost never get in the way by trying to be *too* helpful. Yet some of them involve an unusually high degree of automation, making one step out of what normally would be two or even three.

The most obvious example of this parsimony is cassette loading: Once you've put a cassette into the holder, pressing any one of the transport keys (stop included) will close the cassette-well door, move the heads into position, and activate the selected function. (The door cannot be closed manually.) More subtle is what Akai calls "Auto Monitor," which switches the GX-7 between source and tape monitoring automatically according to operating mode. Press STOP or PAUSE, and the deck monitors the source; put it into RECORDING or PLAY, and it will immediately begin monitoring the signal off the tape. In most cases, this enables you to hear exactly what you need without forcing you to think about doing two things at once. Occasionally we wished we could turn the system off, but far more often we preferred it to conventional manual switching. And there are override buttons that enable you to switch back and forth at will for source/tape comparisons during recording.

The GX-7 determines what tape type is in use by means of the cassette-shell keyways and sets bias, recording equalization, and sensitivity (Dolby recording calibration) accordingly. There is no manual override here, but if you use name-brand cassettes made within the last few years (or

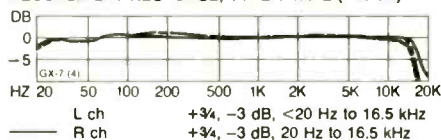
Type I ferrics of any vintage), you should encounter no difficulties.

The GX-7 also includes a full array of automatic-playback features, all controlled with the two "Auto System" buttons (just left of the noise reduction switches) and the transport keys. You can sample the first ten seconds of each selection on the tape until you reach the one you want and press PLAY. (Akai calls this "Intro Scan.") Or you can skip directly to the beginning of the current or next selection using the Instant Program Locating System (or IPLS). Both features require a blank of about four seconds between selections to work correctly (and like similar features on other cassette decks, they can sometimes be fooled by soft passages in classical music). The AUTO MUTE enables you to create such blanks wherever necessary. You also can make the deck rewind to the beginning of the tape and then go into PLAY, or fast-wind to any specified counter setting and either stop there or begin playback.

On the other side of the coin is the recording-cancel feature. At the touch of a button, the GX-7 will rewind to the start of the recording in progress, lay down a four-second blank, and go into the recording/pause mode—great for fixing mistakes. And you can set the deck to begin recording or playback automatically when triggered by an external timer.

The display panel indicates which noise reduction system (if any) is on, what tape type is in use, whether source or tape is being monitored, and what transport mode and special features are engaged. A four-digit tape counter can be set to read turns or elapsed time; the former works in all transport modes, while the latter is limited to recording and playback and stops ticking during fast-wind. The recording-level indicators are fluorescent bar meters calibrated from -20 to +8 dB, with 1-dB steps from -1 to +1 and 2-dB steps between -7

## RECORD/PLAY RESPONSE, TYPE 1 TAPE (-20 dB)



with Dolby B noise reduction  
 - - - - R ch +34, -3 dB, <20 Hz to 14.5 kHz  
 with Dolby C noise reduction  
 - - - - R ch +1 1/4, -3 dB, <20 Hz to 15 kHz

MULTIPLEX FILTER (defeatable)  
 -1 1/2 dB at 15 kHz; -21 dB at 19 kHz\*

S/N RATIO (re DIN 0 dB; R/P; CCIR/ARM-weighted)	Type 2 tape	Type 4 tape	Type 1 tape
without noise reduction	53 3/4 dB	53 3/4 dB	51 1/4 dB
with Dolby B noise reduction	64 dB	64 dB	61 1/2 dB
with Dolby C noise reduction	73 dB	73 dB	70 3/4 dB

INDICATOR READINGS FOR DIN 0 DB (315 Hz)	
Type 2 tape	+5 dB (with 2.1% THD)
Type 4 tape	+3 dB (with 1.0% THD)
Type 1 tape	+3 dB (with 0.68% THD)

INDICATOR READINGS FOR 3% DISTORTION (315 Hz)	
Type 2 tape	+5 dB (for +1 1/2 dB DIN)
Type 4 tape	+5 dB (for +4 1/4 dB DIN)
Type 1 tape	+5 dB (for +3 1/2 dB DIN)

DISTORTION (THD at -10 dB DIN; 50 Hz to 5 kHz)	
Type 2 tape	≤ 0.63%
Type 4 tape	≤ 0.51%
Type 1 tape	≤ 0.39%

ERASURE (100 Hz)	
Type 2 tape	72 dB
Type 4 tape	57 dB

CHANNEL SEPARATION (315 Hz) 41 1/2 dB

INDICATOR "BALLISTICS"	
Response time	110 msec
Decay time	=800 msec
overshoot	0 dB

SPEED ACCURACY 0.8% fast, 105 to 127 VAC

FLUTTER (ANSI weighted peak; R/P) ±0.067%

SENSITIVITY (re DIN 0 dB; 315 Hz) 130 mV

INPUT OVERLOAD (at 1 kHz) >10 volts

INPUT IMPEDANCE 72k ohms

OUTPUT IMPEDANCE 140 ohms

MAX. OUTPUT (from DIN 0 dB) 0.65 volt

\*See text.

and -1 and from +1 to +5.

A closed-loop dual-capstan tape transport with servo-controlled direct-drive motors is said to assure excellent tape-to-head contact and low flutter. Separate recording and playback heads are mounted in a single housing for consistent, correct alignment, and the recording and playback electronics are entirely direct-coupled, which Akai says reduces distortion. There are no microphone inputs, but we count that as no great loss: Few people make live recordings with cassette decks, and usually they would be better off using high-quality outboard mike preamps or mixers than plugging into the chintzy circuits found in most models. The saving from this omission undoubtedly is part of what keeps the GX-7's price so reasonable.

For its record/play tests, Diversified Science Laboratories used the tapes listed as references in the owner's manual: TDK SA as the basic Type 2 ferricobalt ("chrome"), TDK MA as the Type 4 metal, and Maxell UD as the Type 1 ferric. Playback response is extraordinarily flat and extended, indicating accurate equalization and excellent alignment of the GX-7's playback head to the BASF test tape. Record/play response also is quite smooth—especially for the Type 1 and 2 tapes—but except with the Type 4 formulation, it does not reach as far in the treble as we are used to seeing on three-head models. And indeed, with the ferric and ferricobalt tapes (but not the metal), there is a slight rounding off, or dulling, of hard high-frequency transients from demanding sources, such as Compact Discs—an effect most noticeable on cymbals. This is our

only significant reservation about the deck's performance, however. Dolby tracking is mostly quite good, showing no more than 1 or 2 dB of error even in the relatively aggressive C setting.

Because the multiplex filter follows the tape-monitor switch, DSL could not measure its response directly. The figures in our data column were derived by comparing record/play curves obtained with the filter on and off and may therefore be somewhat less accurate than usual. They indicate just a slight rolloff at 15 kHz and a sharp drop at the 19-kHz stereo-FM pilot frequency, which is good. DSL found that for all three tapes, saturation (3 percent third-harmonic distortion) occurred at +5 dB in the meters, meaning that you can let signal peaks run 2 to 5 dB higher than Akai's manual suggests without undue distortion. Erasure is very good for the Type 2 tape, but a little below par for the Type 4. This is unlikely to be a problem in normal use, but for critical recordings of unusually dynamic material, we would suggest bulk or double erasing of previously used metal tapes. All other performance characteristics are about what you'd expect from a high-quality deck in this price range—except for the distortion, which is a bit lower than average.

As we intimated earlier, the GX-7 is a pleasure to use. Its features are well conceived and logically organized, its performance is good to excellent in every respect, and it makes good copies of whatever it's fed. Other pluses include a thorough, clear owner's manual and easy access to the heads for cleaning. It all adds up to a fine example of what can be done in a modern mid-price cassette deck.

## A Bidirectional Beauty from JVC

JVC DD-V9 cassette deck, with Dolby B and C noise reduction and bidirectional automatic-reverse recording and playback. Dimensions: 17 1/4 by 4 1/4 inches (front panel), 10 1/2 inches deep plus clearance for connections. Price: \$800; optional R-70E wired remote control, \$50. Warranty: "limited," one year parts and labor. Manufacturer: Victor Company of Japan, Ltd., Japan; U.S. distributor: U.S. JVC Corp., 41 Slater Dr., Elmwood Park, N.J. 07407.

WE'VE LONG ADMIRER the styling of JVC's cassette decks. That may seem like a trivial point, but most audio equipment gets looked at as much as it gets listened to, and it doesn't have to be ugly to sound good. JVC has followed this logic in designing the DD-V9, without losing sight of such basics as performance and operating convenience.

The foremost example of the company's attention to those basics is the inclusion of its BEST (bias, equalization, and sensitivity tuning) system, which automatically adjusts the deck's recording parameters for flat response and low distortion according to whatever tape you are using. Press START (on the slide-out control shelf), and an on-board microprocessor puts the

DD-V9 through a 15-second calibration routine. During this time, a "ready" indicator flashes on the front-panel display; when the procedure is complete, it glows steadily. If the machine fails to establish a good match the first time through, it tries again. A second unsuccessful attempt—which usually means that the heads are dirty or that the tape's characteristics are beyond the system's adjustment range—sends the deck back to the factory settings for the tape type in use and lights the preset indicator.

Tape type selection—Type 1 ferric, Type 2 chrome or ferricobalt, or Type 4 metal—is determined automatically by means of the standard keyways in the cassette shell. This is a very nice convenience feature, and one that helps prevent mis-

**HEAR ALL OF THE MUSIC AND NONE OF THE TAPE**



# **SWITCH TO BASF CHROME AUDIO TAPE**

## **THE WORLD'S QUIETEST TAPE**

If you won't settle for anything less than pure music, accept nothing less than BASF Pure Chrome audio tape. Unlike ferric oxide tapes, BASF Pure Chrome is made of perfectly shaped chromium dioxide particles. And the exclusive Chrome formulation delivers the lowest background noise of any tape in the world, as well as outstanding sensitivity in the critical high frequency range. And this extraordinary tape is designed especially for the Type II Chrome Bias position. So make sure you're hearing all of the music and none of the tape. Make the switch today to the world's quietest tape. BASF Chrome.



**BASF**

Chrome Audio & Video Tapes

# The BX-100 and BX-150 Surprisingly Affordable... Unquestionably Nakamichi!



The BX-100 and BX-150 are available in black or silver to coordinate with any decor.

Think you can't afford a Nakamichi? Think again! The BX-100 and BX-150 are proofs positive that quality needn't be expensive. Compare their sound with *any* competitively priced deck (even more expensive ones) and judge for yourself. You'll find cheaper decks. You'll find similarly priced decks with more "features." But if *music* is as important to you as it is to us, you'll not find one to match the BX-100 or BX-150.

The BX-100/BX-150 emphasize essentials, not frills. No other single-capstan transport matches their microprocessor-controlled "Silent Mechanism" for the smooth, vibration-free motion that lets you hear every musical nuance. Ordinary single-capstan decks shroud music in a veil of high-frequency flutter and modulation noise that specs don't reveal. One listen to the BX-100 or BX-150 will tell you what you've been missing!

Magnetics and electronics—two other areas of particular Nakamichi expertise. Our RP-2D record/playback head not only

outperforms conventional combination heads but most "sandwich" types used on 3-head decks. Response is flat from 20 Hz to 20 kHz so you hear every musical overtone. And, on metal tape, response holds up at -20 dB and at -10 dB and (with the BX-150's Dolby\*-C circuit) at 0 dB—clear proof of superior heads and electronics.

The final essential—calibration. Inexpensive decks usually have few setup controls so performance is a matter of luck. The BX-100 and BX-150 have *two dozen* internal adjustments and undergo a 30-step alignment procedure. *Every* deck is individually calibrated on *each* track on *three* tapes before it leaves the factory to assure *you* of Nakamichi Sound.

Nakamichi Sound is unique. Measurements and specs only hint at the sound we demand of our recorders so we apply the acid test—direct comparison of live and recorded music. Our ultimate test instrument is our Concert Hall! Hear what we've been hearing! Audition a BX-100 or BX-150 at your Nakamichi dealer now.

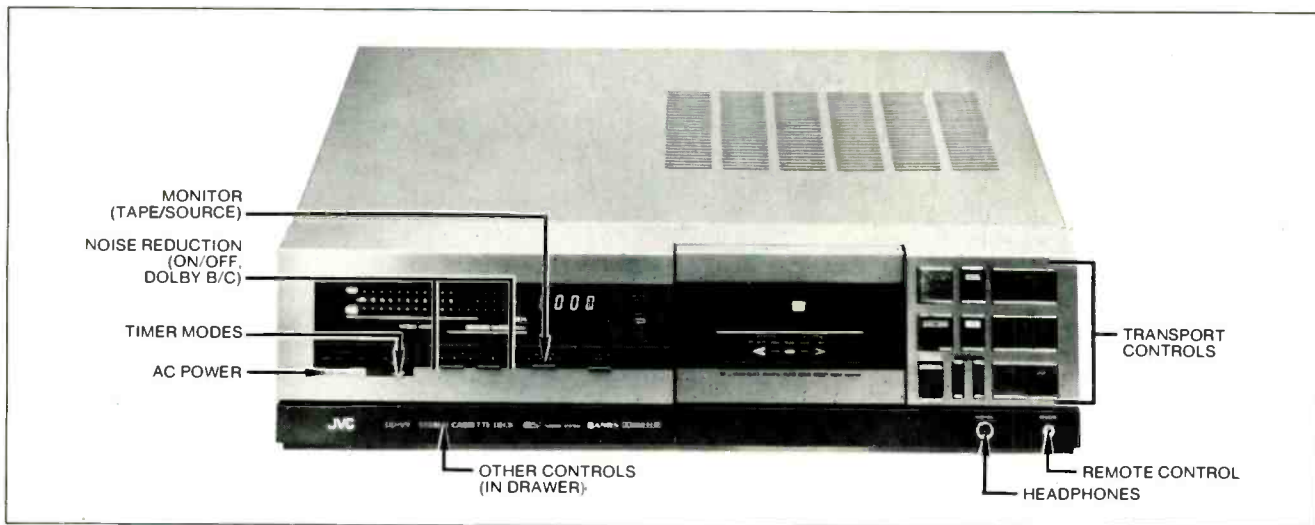


Nakamichi Sound Research Center Concert Hall

\*™ Dolby Laboratories Licensing Corporation

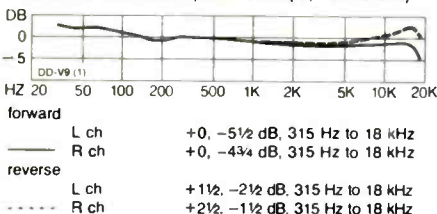
 Nakamichi

For more information, write Nakamichi U.S.A. Corporation, 1101 Colorado Avenue, Santa Monica, CA 90401.

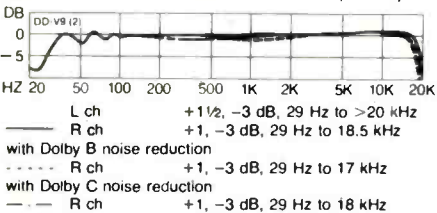


Except where noted, all data are for the forward direction of tape travel.

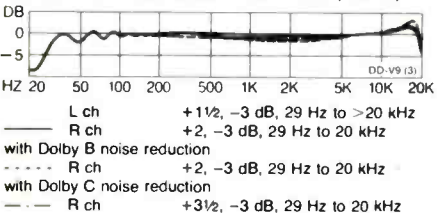
**PLAYBACK RESPONSE (BASF test tape; -20 dB DIN)**



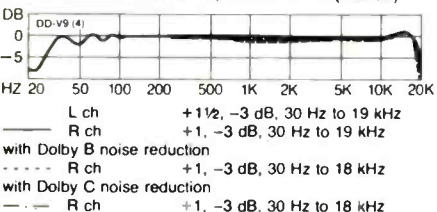
**RECORD/PLAY RESPONSE, TYPE 2 TAPE (-20 dB)**



**RECORD/PLAY RESPONSE, TYPE 4 TAPE (-20 dB)**



**RECORD/PLAY RESPONSE, TYPE 1 TAPE (-20 dB)**



**MULTIPLEX FILTER (defeatable)**  
+¼ dB at 15 kHz; -33¼ dB at 19 kHz

takes. The only drawback is that there is no manual override: If you have very old metal tapes that you want to record or play—with shells that predate the applicable keyway standards—you're out of luck. (This problem may also arise with some off-brand tapes, which you're probably better off not using, anyway.) The DD-V9 stores BEST settings for each tape type until you press START and PRESET simultaneously or turn the deck off. You can switch between the preset and BEST values simply by pushing PRESET. The owner's manual includes a tape table indicating the formulations that will work with the BEST system, those that will give the highest performance with it, and the three for which the presets are adjusted.

Another important convenience feature is bidirectional autoreverse, which allows one-way or out-and-back recording or playback and continuous-repeat playback. It is achieved by rotation of the head block, in response to either a press on the direction key in the transport control bank or a signal from an infrared end-of-tape sensor that detects the beginning of the leader. The reversal is very quick, leaving just a momentary gap. Illuminating indicators on the cassette-well door show the direction of tape travel and whether or not the deck is in the recording mode or the recording mute is on. Although they share the same housing, the recording and playback heads are separate, enabling off-tape monitoring during recording.

Most of the controls—other than those governing the tape transport, which are grouped at the right end of the front panel—are in a tray that slides out from the bottom-left of the chassis, below the display panel. Among them are paired recording-level sliders, an output-level slider, and a three-position switch for selecting the reversing mode (one-way, out-and-back, or continuous-repeat). In the middle of the tray are ten touchpads for various special features, including the BEST system, the memory

playback and search functions, and the tape counter modes.

The counter can operate as a conventional turns counter, as a time-remaining indicator, or as an elapsed-time readout ("stopwatch," as JVC calls it). The last of these modes works only during recording and playback; during fast-wind, it holds its last reading until recording or playback is resumed. However, it does keep ticking through direction reversals. The time-remaining indicator also stops during fast-wind, but when it picks up again, it shows the approximate time from that point to the end of the side. For accuracy in this mode, you must use the tape-length key to indicate the size of the cassette. The counter accommodates any standard length from C-15 to C-120.

The play-memory and stop-memory keys enable you to set counter readings at which playback will start or end automatically. And if you set start and end points, the DD-V9 will play the demarcated segment once or repeatedly, depending on the setting of the reverse-mode switch. In addition, there are several search functions that do not depend on the tape counter. Pressing BLANK SEARCH, for example, causes the transport to fast-wind until it finds an unrecorded section of tape, where it stops.

On the other hand, if you press INDEX SCAN, the deck will play back about ten seconds of the first selection it finds on the tape, fast-wind to the next one and play ten seconds of it, and so on, until you hear something you like and press PLAY. Or you can use the scan-set pad to punch up the number of selections you want skipped before playback commences. Pressing the appropriate music scan key (there are two among the transport controls, one for each direction) will then fast-wind the tape to the desired point and switch the deck into PLAY. Both of these features require interselection blanks of about four seconds. If necessary, you can create such gaps by tapping the record-mute transport key; to make a longer blank, you simply hold the key down. The

## AUDIO New Equipment Reports

### S/N RATIO (re DIN 0 dB; R/P; CCIR/ARM-weighted)

	Type 2 tape	Type 4 tape	Type 1 tape
without noise reduction	54¾ dB	54¼ dB	52¼ dB
with Dolby B noise reduction	64¾ dB	64½ dB	62½ dB
with Dolby C noise reduction	74 dB	73¾ dB	71¾ dB

### INDICATOR READINGS FOR DIN 0 DB (315 Hz)

Type 2 tape	+5 dB (with 1.7% THD)
Type 4 tape	+5 dB (with 0.7% THD)
Type 1 tape	+5 dB (with 1.2% THD)

### INDICATOR READINGS FOR 3% DISTORTION (315 Hz)

Type 2 tape	+9 dB (for +2¼ dB DIN)
Type 4 tape	>+9 dB (for +6¼ dB DIN)
Type 1 tape	+7 dB (for +2½ dB DIN)

### DISTORTION (THD at -10 dB DIN; 50 Hz to 5 kHz)

Type 2 tape	≤ 1.36%
Type 4 tape	≤ 0.66%
Type 1 tape	≤ 0.94%

### ERASURE (100 Hz)

Type 2 tape	72 dB
Type 4 tape	58¼ dB*

### CHANNEL SEPARATION (315 Hz)

	46 dB
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### INDICATOR "BALLISTICS"

Response time	4.5 msec
Decay time	≈ 680 msec
Overshoot	0 dB

### SPEED ACCURACY (forward and reverse)

0.4% fast, 105 to 127 VAC

### FLUTTER (ANSI weighted peak; R/P)

forward	±0.16%
reverse	±0.18%

### SENSITIVITY (re DIN 0 dB; 315 Hz)

	165 mV
--	--------

### INPUT OVERLOAD (at 1 kHz)

	>10 volts
--	-----------

### INPUT IMPEDANCE

	73.5k ohms
--	------------

### OUTPUT IMPEDANCE

	4,300 ohms
--	------------

### MAX. OUTPUT (from DIN 0 dB)

	0.90 volt
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\*See text.



Most functions, except those relating to the tape transport, are controlled from this slide-out tray at the bottom of the front panel.

DD-V9 also has the usual timer recording and playback options (for use with an external timer) and a front-panel jack for an optional remote control. There are no microphone inputs, however.

For its tests, Diversified Science Laboratories used tapes recommended by JVC: Maxell UD as the Type 1 ferric, TDK SA as the Type 2 ferricobalt, and TDK MA as the Type 4 metal. After BEST calibration, the record/play response measurements were very good for all three—smooth and extended with little or no evidence of Dolby mistracking. Moreover, the record/play response in the reverse direction (not shown) is virtually identical. But the differences between the forward and reverse playback-only curves (made with the standard BASF test tape) underscore the wisdom of the manual's admonition to play back tapes in the same direction they were recorded. Otherwise, head-azimuth discrepancies between the different directions may dull the treble response. The defeatable multiplex filter provides good attenuation at the 19-kHz stereo-FM pilot frequency, with virtually no rise at 15 kHz.

The DD-V9's fluorescent bar meters are calibrated from -20 to +9 dB, with 1-dB gradations from -5 to +5 and 2-dB jumps above. When you use metal tape, a small marker lights below the +9-dB point to indicate that you can allow peaks up to that level; for chrome and ferric tapes, it lights at the +5-dB point. DSL's headroom figures show that these recommendations are about right, although you could run your levels a couple of dB hotter on the

tapes used for the testing. With metal tape, however, this would put the signal off-scale, making accurate level setting impossible. A less conservative metering scale would have prevented this problem.

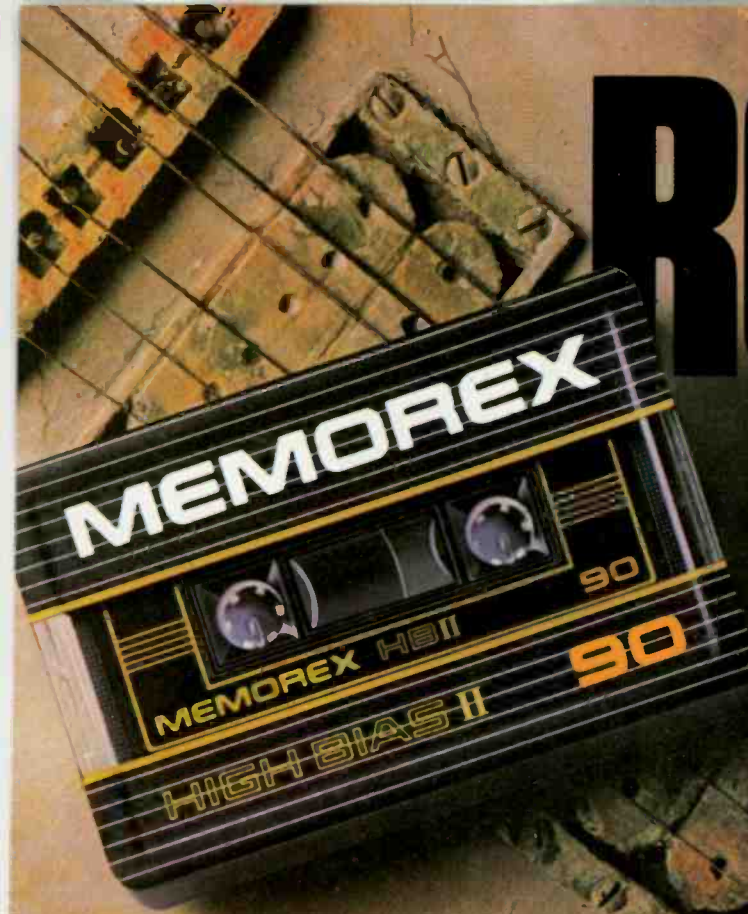
The data reveal a few other oddities, none of them serious. Distortion is a little high for a deck in this price range, especially for the Type 2 tape. Flutter is likewise higher than we would have expected, though not enough to be audible. And the erasure for Type 4 tape (always the hardest to degauss) is not as good as we would like. But this may be, at least partly, a byproduct of the way we measure erasure. We record a 100-Hz tone at increasing levels until 5 percent third-harmonic distortion is reached, and then erase the tape. The figure reported is the 100-Hz residual relative to DIN 0 dB. Because of the DD-V9's excellent mid-range headroom with metal tape, the tone may have been recorded at an unusually high level, making it abnormally difficult to remove.

In all other important respects, the DD-V9's performance is above reproach. Recordings made on it are almost indistinguishable from the originals (perhaps the highest praise for a tape deck). And apart from its poorly labeled recording and record-mute keys, it is easy to use, with a generous complement of well-conceived special features. We especially appreciate the BEST automatic tape-tuning system, which gives the DD-V9 a welcome extra measure of flexibility, and the handy time-remaining counter mode. And as we said before, it looks nice, too.

## ASC's Euro-Style Open Reeler

IF YOU'RE A NEWCOMER to home taping, the ASC 6000 Series open-reel decks may strike you as exotic. They certainly don't look like any of the Japanese models you'll

find in audio stores, and they offer some once-standard features that are generally passed over in current decks. But they represent a type of design that is well rooted in



# ROCK 'N ROLL WILL NEVER DIE

## Presenting High Bias II and the Ultimate Tape Guarantee.

Memorex presents High Bias II, a tape so extraordinary, we're going to guarantee it forever.

### We'll guarantee life-like sound.

Extraordinarily flat frequency response at zero dB recording levels, combined with remarkably low noise levels, means music is captured live. Then Permapass,<sup>™</sup> our unique oxide-bonding process, locks each oxide particle—each musical detail—onto the tape. So music stays live. Not just the 1st play. Or the 1000th. But forever.

### We'll guarantee the cassette.

We've engineered every facet of our transport mechanism to protect the tape. Our waved-wafer improves tape-wind. Silicone-treated rollers insure precise alignment and smooth, safe tape movement. To protect the tape and mechanism, we've surrounded them with a remarkable cassette housing made rigid and strong by a mold design unique to Memorex.

### We'll guarantee them forever.

If you ever become dissatisfied with Memorex High Bias II, for any reason, simply mail the tape back and we'll replace it free.

**YOU'LL FOREVER WONDER,**

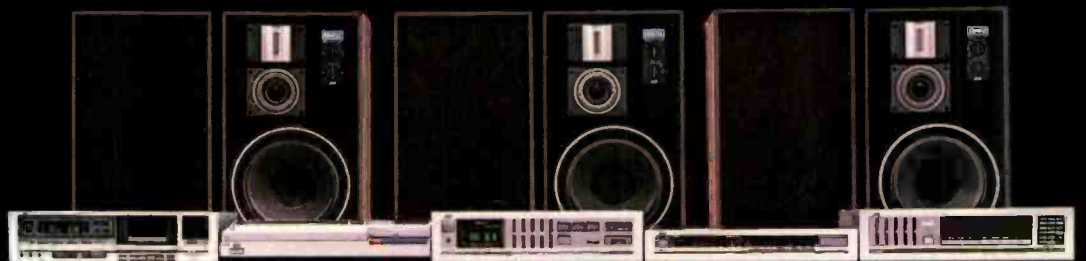
**IS IT LIVE,  
OR IS IT  
MEMOREX**





"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.

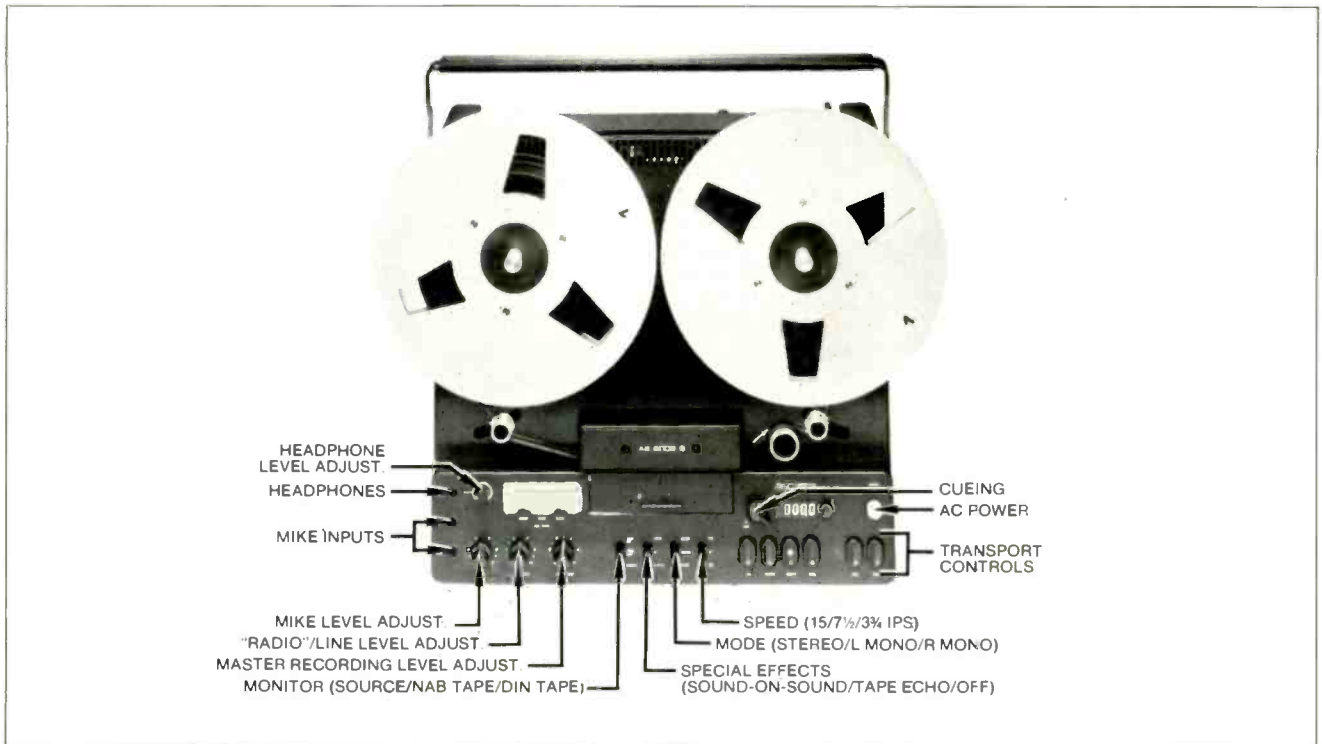
We take you there.



**JVC® JVC JVC JVC JVC JVC JVC JVC**

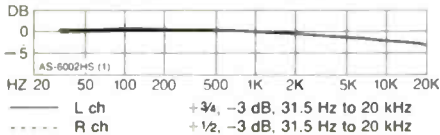
JVC COMPANY OF AMERICA, High Fidelity Division, 41 Slater Drive, Elmwood Park, NJ 07407 JVC CANADA INC., Scarborough, Ont.



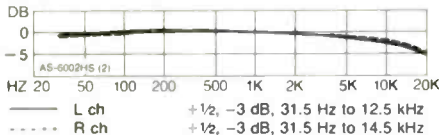


ASC AS-6002HS three-speed (15, 7½, and 3¾ ips) open-reel tape deck, with provision for reels to 10½ inches, sound-on-sound (mono overdub), and tape echo (tape-to-source signal feedback). Dimensions: 17 by 15½ inches (main panel) plus clearance for connections and large reels, 5½ inches deep plus clearance for controls. Price: \$1,795; optional ASF-6001 wired remote control, \$160; optional ASF-6010 (transmitter) and ASE-6010 (receiver) infrared wireless remote control, \$300 total. Warranty: "limited," 90 days parts and labor. Manufacturer: Audio System Componenten (ASC) GmbH & Co., West Germany; U.S. distributor: Hammond Industries, Inc., 2000 Madison Pike, Madison, Ala. 35758.

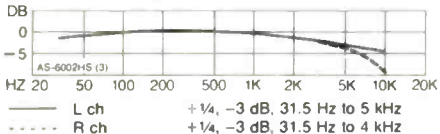
PLAYBACK RESPONSE AT 15 IPS  
(MRL 21J105 test tape; 0 dB re 200 nWb/m)



PLAYBACK RESPONSE AT 7½ IPS  
(MRL 21T104 test tape; -10 dB re 200 nWb/m)



PLAYBACK RESPONSE AT 3¾ IPS  
(MRL 21F101 test tape; -10 dB re 200 nWb/m)



ASC's home country (West Germany), and they are peculiar only to the extent that nothing similar has achieved high visibility in the U.S. recently.

We chose the AS-6002HS for review. The "2" specifies that it is a half-track stereo model, the "HS" that it embodies the higher of the two speed options (15, 7½, and 3¾ inches per second, as opposed to 7½, 3¾, and 1½ ips). The AS-6004LS (quarter track, low-speed) deck, for example, is available at the same price. Either track configuration can be fitted with an optional head block that adds a playback head for the *other* configuration—a quarter-track playback head in addition to the AS-6002's half-track erase, recording, and playback heads, for instance. According to the manufacturer's catalog, you can also buy AS-6000 Series decks with DIN recording equalization (our sample has U.S.-standard NAB recording and playback EQ, plus switch-selectable DIN playback EQ).

The AS-6002 can stand upright with the connection panel along the top back edge and the cables pointing upward, or it can lie flat with the cables in back, leading away from the operator. The reel hold-downs screw directly onto the ¼-inch shafts, which accept standard reels. The 7-inch size protrudes about ½ inch beyond the side of the deck; a 10½-inch reel needs about 2¼ inches of clearance at the side and a little more than 1 inch at the top (or back, depending on orientation). A small-hole reel of this diameter is included with the deck. If you prefer NAB reels (which have a 3-inch center hole), you'll need adapters. A twist-to-tighten design that we had handy

worked fine, but it would be a good idea to check adapters on the deck before buying them.

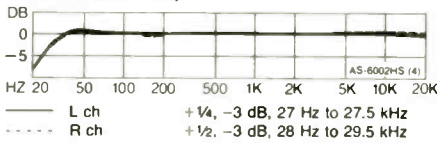
The connection panel has a five-pin DIN ("radio") input/output jack (a matching cable is supplied in case you have a DIN tape jack on your receiver or amplifier), plus the more familiar pin-jack input and output pairs, which we used in our testing. Another DIN-style socket, for connecting European mixers, is covered by a cap. There also are sockets for synchronizing slide shows to the deck (which requires accessory equipment, also listed in the catalog) and for a remote control. Two remotes are available: a wired model and an infrared wireless control/receiver combination. An output level adjustment and the main power fuse complete the connection panel.

The main control panel includes a headphone jack with its own level control (always welcome, particularly if you plan to do any live recording) and a pair of phone-jack mike inputs. There are separate level controls for the mike and "radio" (line) inputs, and a master fader to control the mix.

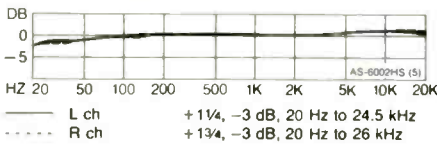
Among the levers in the middle of the panel is what the owner's manual calls the "trick mode switch." (The manual is written in German and unidiomatic, but not incomprehensible, English.) It offers two effects (plus OFF) that were standard on open-reel decks in the Sixties: sound-on-sound and tape echo, both of which will operate only in mono recording. The first is a sort of poor man's overdub. (Or so it seems today; Les Paul used comparable effects professionally.) You record on one

# AUDIO New Equipment Reports

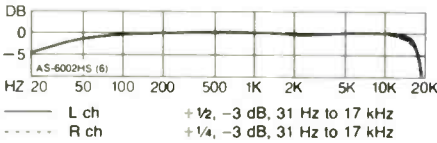
## RECORD/PLAYBACK RESPONSE AT 15 IPS (-10 dB re 400 nWb/m)



## RECORD/PLAYBACK RESPONSE AT 7 1/2 IPS (-15 dB re 400 nWb/m)



## RECORD/PLAYBACK RESPONSE AT 3 3/4 IPS (-20 dB re 400 nWb/m)



S/N RATIO (re 400 nWb/m; R/P; CCIR/ARM-weighted)\*

at 15 ips	63 3/4 dB
at 7 1/2 ips	64 1/2 dB
at 3 3/4 ips	62 1/2 dB

INDICATOR READINGS FOR 400 nWb/m (400 Hz)

at 15 ips	≈ -3 1/2 dB (with 0.32% THD)
at 7 1/2 ips	≈ -3 1/2 dB (with 0.29% THD)
at 3 3/4 ips	≈ -4 1/2 dB (with 0.22% THD)

MAXIMUM RECORDED LEVEL (3% distortion)  
re 400 nWb/m re meter 0 dB

at 15 ips, 1 kHz	+6 3/4 dB	+4 dB
at 7 1/2 ips, 1 kHz	+7 1/2 dB	+4 dB
at 3 3/4 ips, 500 Hz	+7 3/4 dB	+4 dB

DISTORTION (THD at -10 dB re 400 nWb/m)

at 15 ips	≤ 0.20%, 50 Hz to 10 kHz
at 7 1/2 ips	≤ 0.44%, 50 Hz to 10 kHz
at 3 3/4 ips	≤ 0.38%, 50 Hz to 5 kHz

ERASURE (100 Hz) 7 1/2 dB

CHANNEL SEPARATION (400 Hz) 39 dB

### INDICATOR "BALLISTICS"

Response time	11 msec
Decay time	≈ 1,000 msec
Overshoot	≈ 3/4 dB

### SPEED ACCURACY

at 15 ips	0.2% fast, 105 to 127 VAC
at 7 1/2 ips	1.1% slow, 105 to 127 VAC
at 3 3/4 ips	0.1% fast, 105 to 127 VAC

### FLUTTER (ANSI weighted peak; R/P)

at 15 ips	± 0.022%
at 7 1/2 ips	± 0.037%
at 3 3/4 ips	± 0.088%

### SENSITIVITY (re 400 nWb/m; 1 kHz)

line input	15.8 mV
mike input	0.52 mV

### INPUT OVERLOAD (at 1 kHz)

line input	6.9 volts
mike input	190 mV

### INPUT IMPEDANCE

line input	215k ohms
mike input	1.6k ohms

### OUTPUT IMPEDANCE

400 ohms

MAX. OUTPUT (from 400 nWb/m) 1.7 volts

\* Signal-to-noise (S/N) ratios are approximately 1 dB better with A weighting than with CCIR weighting.

channel, then play it back, simultaneously mixing in a new input and recording the combination on the other channel. The process can be repeated at will, "bouncing" the recording back and forth between channels as you add new material to it, but the earlier "layers" will deteriorate with each bounce. Tape echo simply recycles the signal from the playback head and mixes it into the source to create a crude reverb effect. (The slower the transport speed, the cruder it is.)

Next to this control is another that once was commonplace but now has all but disappeared: a mode switch. In STEREO (the normal position), the upper track is for the left channel, the lower one for the right channel. Another choice is UPPER, which mixes and records the input from both channels on the upper track and feeds that track to both output channels in playback. This is the normal mono configuration for a half-track recorder, but you can also select LOWER—an option that is necessary for bouncing a sound-on-sound recording back and forth.

The deck's solenoid transport controls are fairly straightforward, though they include a novel cueing feature. When you press REPEAT, the recorder starts to rewind; when you release it, the deck switches automatically to playback. Another unusual touch (for a modern deck) is the way the control-interlock scheme prevents you from going directly from recording to any other transport mode except stop. However, flying starts (going from playback into recording without stopping the transport) are possible. The counter reads in meters and decimeters of tape consumed, and it is quite reliable, even when you fast-wind through more than 2,000 feet of tape.

A particularly interesting control is the cue knob just to the left of the counter. With the transport stopped, it will retract the tape lifters so that the tape contacts the heads. (The contact is not as intimate as in regular playback, however, reducing the annoying and potentially tweeter-damaging noises that tape cueing can create.) The reels can then be "rocked" back and forth to help you locate an exact spot on the tape. If the CUE is left on and the transport started in the recording mode, a seamless electronic "splice" can be created. You can also use the CUE for relatively high-speed search. In this mode, you have to hold down the fast-forward or rewind button, which reduces the likelihood of excessively high speeds and resulting tweeter damage.

The tape-lifter assembly is covered by a little door that flips up for access to the heads for cleaning and degaussing. This also permits physical tape editing, though the space provided is somewhat cramped and awkward for any of these undertakings. In addition, the tape slot is quite narrow and encumbered with mechanical parts that, while they don't inhibit tape threading, do make it hard to get the tape out undamaged

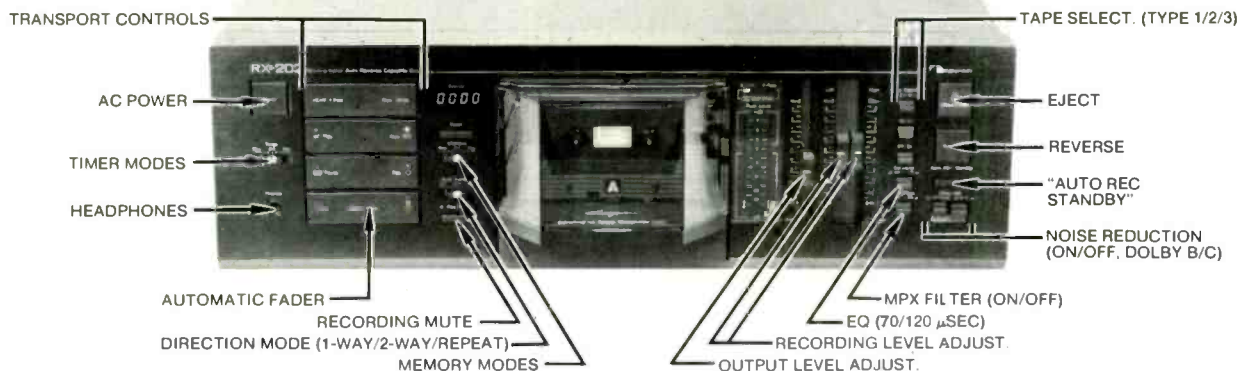
for splicing once it has been cued up. It can be done, however, which is more than can be said for some other current decks.

Diversified Science Laboratories used Maxell XL-I tape for its measurements; we chose Scotch 206 for our listening tests, with similar results. (ASC recommends only that you use a modern back-coated ferric formulation—that is, a premium tape, but not Ferrichrome or EE, which require different equalization.) Record/playback response is good at all three speeds, but the playback-only response is distinctly less attractive—apparently because of some head-azimuth misadjustment relative to the MRL test tapes. The consequences of any azimuth error are exaggerated by the half-track format, which causes the resulting treble rolloff to start roughly one octave lower in frequency than it would with quarter-track heads. Halving the speed has a comparable effect, as you can see in the graphs. But since the recording and playback heads are aligned with each other, this problem does not affect tapes recorded on the ASC.

The lab found that the AS-6002's maximum recording level is limited by its electronics, which clip before the tape reaches saturation (3 percent third-harmonic distortion). The maxima shown in our data therefore represent the clipping point. As a result, the headroom is somewhat lower than it might be if the tape were the limiting factor: recordists accustomed to pinning their meters on peaks would want to modify their technique for this deck. If you follow the advice in the manual, peaks should not be allowed beyond the 0-dB mark, which would leave 4 dB of headroom to spare.

You don't need to allow much extra headroom to compensate for the meters, which monitor the signal *after* recording equalization. This gives a more accurate indication of the signal level actually going onto the tape than do conventional meters. They are also quick on the rise, have very little overshoot, and decay slowly enough to make them fairly easy to read. (However, they're still not as good in these respects as most of the "bar-graph" meters found on cassette decks these days.) But, presumably to minimize moving mass and thereby enhance these properties, ASC has seen fit to make the meters tiny, inhibiting both viewing and calibration. The range extends from -20 to +4, with 1-dB calibrations from 0 dB up. Evidently the deck has been designed with the casual recordist in mind, rather than the semipro field worker.

Generally, though, the measurements are more than respectable. And we particularly admire the gentleness with which the AS-6002 handles tape. The wind on the reel is exceptionally smooth and neat, even at full speed. This is far more than a minor matter: Unevenly wound tapes are easily damaged in storage. In fact, we prefer not to store a tape that has been fast-wound, but the AS-6002HS could encourage us to relax this rule.



## Nakamichi's New Approach to Autoreverse

Nakamichi RX-202 unidirectional cassette deck, with automatic cassette reversing in both recording and playback, automatic tape cueing in either direction of recording, and Dolby B and C noise reduction. Dimensions: 17 $\frac{3}{4}$  by 5 $\frac{1}{4}$  inches (front panel), 11 $\frac{3}{4}$  inches deep plus clearance for cassette compartment and connections. Price: \$650. Warranty: "limited," one year parts and labor. Manufacturer: Nakamichi Research, Inc., Japan; U.S. distributor: Nakamichi U.S.A. Corp., 1101 Colorado Ave., Santa Monica, Calif. 90401.

AT FIRST ENCOUNTER, the phrase "unidirectional automatic-reverse cassette deck" seems a blatant contradiction. But it exactly describes the Nakamichi RX-202, which "reverses" by actually turning the cassette over, rather than by changing the direction in which the transport winds the tape. Nakamichi says that this approach is capable of greater mechanical precision than are the more conventional ones of rotating the head assembly or switching electrically between multiple heads (or head gaps).

As Nakamichi points out, part of the challenge of autoreverse is that the tape can be guided at only one edge. This is no problem in a unidirectional deck because its guide sees the same edge during both recording and playback. But in a conventional autoreverse machine, a tape may be recorded in one direction, with the guide contacting one edge, and then played back in the other direction, with the guide on the opposite edge. In that case, any nonuniformity in tape width (and some is inevitable) will express itself as azimuth and track-positioning errors, which will in turn cause high-frequency losses. In addition, there is the difficulty of achieving and (perhaps more to the point) maintaining precise alignment over long use with a movable head mount. The alternative of multiple head elements poses problems of head design and cost if all the gaps necessary for full bidirectional operation with a fixed head mount are to be squeezed into the available space.

To achieve unidirectional reversing, Nakamichi has designed a rotating caddy that holds the cassette in position, tape side up, until the transport takes over. A clear plastic "bay window" at the front of the deck provides enough space for cassette flipping. When you press EJECT, the entire assembly—the caddy, the miniature turntable on which it is mounted, and the bay

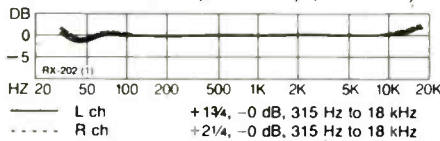
window that protects it—pops out so that you can drop in or remove a cassette. The assembly retracts automatically when you touch the transport controls, or you can tap EJECT a second time. If any object (say, your finger or an improperly inserted cassette) inhibits retraction, the assembly will pop out again before damage can occur.

In convenience, the RX-202's cassette-flipping design is fully competitive with designs that mechanically or electrically alter the head configuration. There are options for one-way or out-and-back recording or playback and for continuous-repeat playback. Automatic reverse is triggered at the end of the trailing leader (not at the end of the tape itself, unfortunately) or when the deck has been running for about 30 seconds in the playback mode without encountering any signal. Reversal can also be triggered manually, in which case the deck automatically reverts to its previous mode (recording, playback, or pause) once the cassette is flipped. Since the entire process takes only about two seconds, you need just a slight pause in the program to change sides during recording without missing a beat. Automatic playback of such a tape can leave a pause of a minute or more while the deck ascertains the no-signal condition, fast-winds to the end of the tape, reverses, and fast-winds past the leader to the beginning of the side.

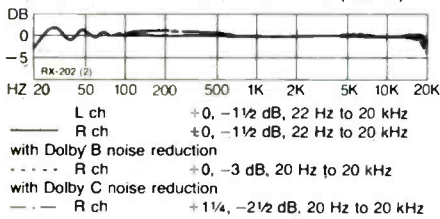
A very nice feature is what Nakamichi calls "Auto Rec Standby." At the push of a button, the RX-202 winds the tape to the leader, switches into the recording mode, and records (with no input signal) until it is some six seconds into the tape itself—and therefore beyond the area near the leader splice, where tape performance can be erratic. With one press of the button, the deck will do this on Side A; with two presses, it will address Side B instead (unless you're already on Side B, in which case

# AUDIO New Equipment Reports

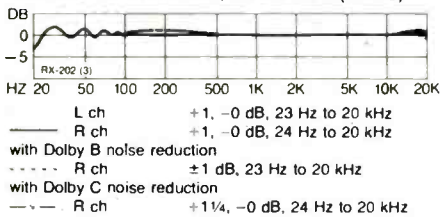
## PLAYBACK RESPONSE (BASF test tape; -20 dB DIN)



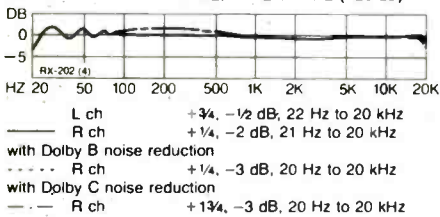
## RECORD/PLAY RESPONSE, TYPE 2 TAPE (-20 dB)



## RECORD/PLAY RESPONSE, TYPE 4 TAPE (-20 dB)



## RECORD/PLAY RESPONSE, TYPE 1 TAPE (-20 dB)



MULTIPLEX FILTER (defeatable)  
 -3/4 dB at 15 kHz; -30 1/2 dB at 19 kHz

## S/N RATIO (re DIN 0 dB; R/P; CCIR ARM-weighted)

	Type 2 tape	Type 4 tape	Type 1 tape
without noise reduction	55 1/4 dB	52 1/2 dB	51 1/4 dB
with Dolby B noise reduction	65 1/2 dB	62 3/4 dB	61 1/2 dB
with Dolby C noise reduction	74 1/2 dB	72 dB	70 3/4 dB

## INDICATOR READINGS FOR DIN 0 DB (315 Hz)

Type 2 tape	+3 dB (with 2.0% THD)
Type 4 tape	+3 dB (with 1.3% THD)
Type 1 tape	+3 dB (with 1.5% THD)

## INDICATOR READINGS FOR 3% DISTORTION (315 Hz)

Type 2 tape	+5 dB (for +1 dB DIN)
Type 4 tape	+7 dB (for +3 dB DIN)
Type 1 tape	+5 dB (for +1 3/4 dB DIN)

## DISTORTION (THD at -10 dB DIN; 50 Hz to 5 kHz)

Type 2 tape	≤ 0.67%
Type 4 tape	≤ 0.40%
Type 1 tape	≤ 0.42%

ERASURE (100 Hz) ≥ 63 dB

CHANNEL SEPARATION (315 Hz) 51 dB

## INDICATOR "BALLISTICS"

Response time	6 msec
Decay time	≈ 1,500 msec
Overshoot	0 dB

SPEED ACCURACY 0.5% fast, 105 to 127 VAC

FLUTTER (ANSI weighted peak; R/P) ≈ 0.071%

SENSITIVITY (re DIN 0 dB; 315 Hz) 78 mV

INPUT OVERLOAD (at 1 kHz) > 10 volts

INPUT IMPEDANCE 81k ohms

OUTPUT IMPEDANCE 2,100 ohms

MAX. OUTPUT (from DIN 0 dB) 0.71 volt

one tap will suffice). Also welcome is Nakamichi's automatic recording fader. A tap at the appropriate end of its rocker-arm control fades the source signal all the way in or out in about four seconds; keep the control pressed in, and it will do the job in half the time.

The RX-202 uses a single-capstan transport fitted with two heads: Nakamichi's dual-gap erase head and a laminated sendust combination (record/play) head with an effective gap of 1.2 micrometers. Typical combination heads represent a compromise between the requirements of recording (which could benefit from a wider gap, particularly in the bass) and playback (where high frequencies are most readily resolved by a narrow gap) and between the need for high flux density without saturation (to record metal tapes to their full potential) and for permeability (to achieve high sensitivity, and therefore best possible noise performance, in playback). But Diversified Science Laboratories' data demonstrate that any compromise in the RX-202 has been very canny. An example of Nakamichi's care is the design of the deck's single-capstan drive, which has four independent motor systems: one to drive the capstan, one to position the cassette caddy, one for the takeup hub, and one for the mechanical-cam control system (an important element in keeping Nakamichi transports both quieter and more precise in operation than typical solenoid-activated systems).

The recording options include Dolby B and C noise reduction, a defeatable multiplex filter, three tape settings for bias and sensitivity (Dolby) matching, and a separate equalization (70/120-microsecond) switch. Thus the RX-202 permits you to choose the "wrong" equalization for special purposes—such as 70 microseconds for ferric tapes to increase dynamic range with signals that don't require the high-frequency headroom that must be given up in the process. For tapes that will be played back on a Nakamichi recorder with this feature, it's a welcome perfectionist option, but a careless user could inadvertently produce nonstandard tapes.

The three tape settings are labeled according to Nakamichi's proprietary tape designations and (in parentheses) IEC type numbers. There are buttons for SX(II) "chrome" (our Type 2), ZX(IV) metal (our Type 4), and EX(I) ferric (our Type 1). Naturally, DSL used Nakamichi tape in all cases—including a new Type 1 ferric, the rather confusingly named EX-II. The results are superb, particularly when you consider how few other two-head decks can achieve virtually flat response to 20 kHz. Because the RX-202 records and plays both cassette sides in the same direction, measurements in the "reverse direction" are somewhat beside the point. But DSL tabulated them anyway. As predicted, they

turned out to be almost indistinguishable from the measurements on Side A (and where a nitpicker might discern a difference, even better on Side B).

The 0-dB curves (not shown) document excellent headroom at high frequencies. We've seen noticeably better results only in decks with HX Pro headroom extension; with the Type 4 tape (which, of course, outstrips the other two formulations in this respect), significant compression creeps in only above 10 kHz without noise reduction and doesn't appear at all below 20 kHz with Dolby C. In all the distortion-related measurements, only the third harmonic (which is generated by the tape medium itself) appeared in significant quantities, strongly suggesting that the deck is not the limiting factor. Flutter, though not as low as Nakamichi and others have achieved in their costliest decks, is par or better by almost any other standard and low enough that it should remain inaudible under all practical circumstances.

The metering is fine for most purposes, but again, not as refined as in the company's premium products. For example, there is no peak-hold feature, though the time constants that govern the fast response and relatively slow release make the displays easy to read. And the divisions are relatively coarse. The smallest, at the top of the scale, appear at first glance to be 1 dB apart, but the LED elements light in pairs (for 2-dB steps in this range), and the scale is clearly nonlinear below +3 dB, making assignment of specific values problematic at best. The total calibration range extends from +7 to -30 dB, which is fine for a home recorder. (Some premium models offer a little more room to spare at both ends of the range; most home decks are skimpier at the bottom end, though they occasionally reach well into overload territory at the top, where you wouldn't want to record anyway.)

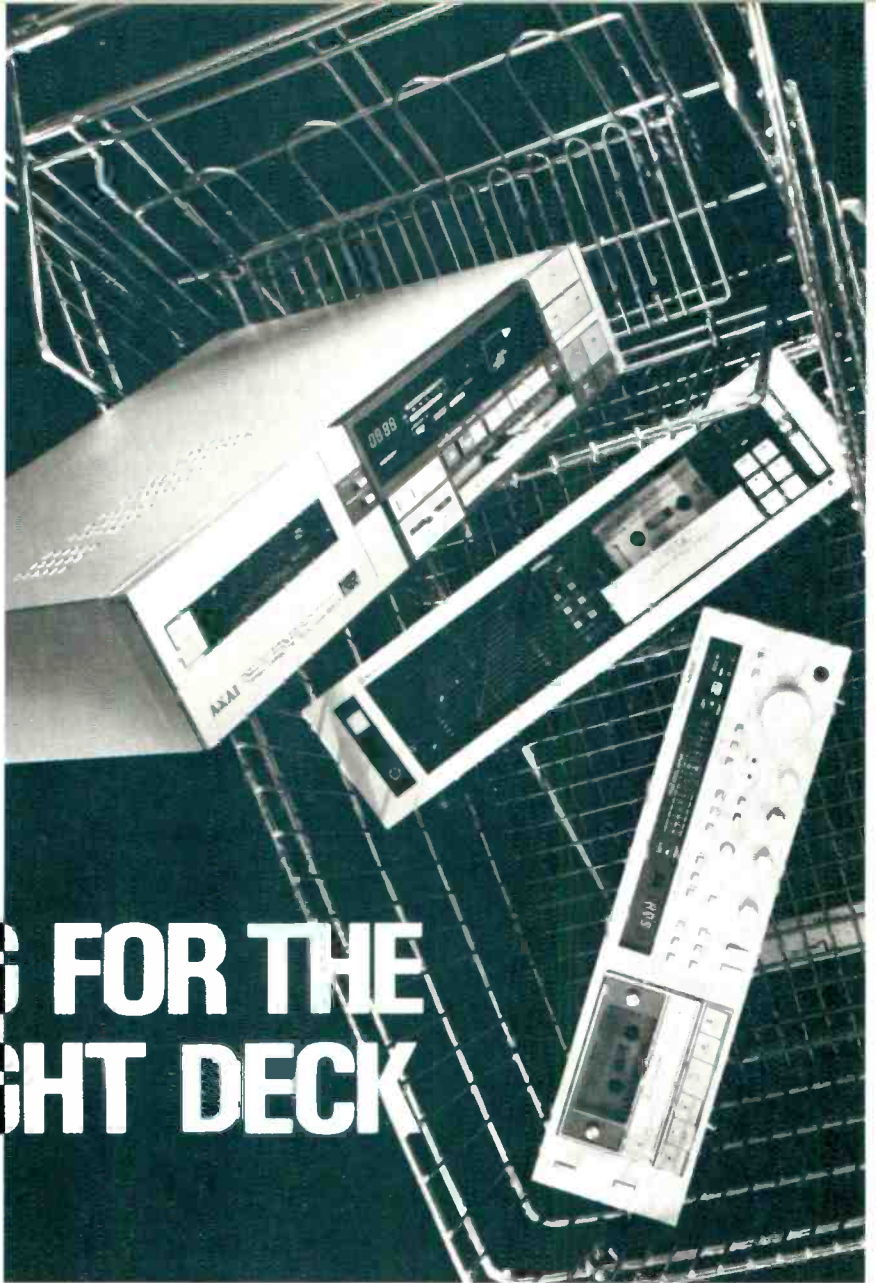
In sum, Nakamichi has once again found a unique and useful solution to one of the problems of home cassette recording. Aside from Nakamichi's own Dragon (which is far more expensive and reverses only in playback), the RX-202 is arguably the best reversing deck we've examined—the "argument" being over ancillary convenience features, whose importance you must assess according to your own priorities. Certainly, none has surpassed its basic performance in any significant respect. But we must warn against overhasty comparisons between the RX-202 and competing models. The physical arrangement mandated by Nakamichi's reversing system puts the cassette's tape opening on top and moves the tape from right to left—backward, and therefore potentially confusing if you're used to any other recent deck we know of. So it's worth taking the time required to become familiar with this exceptional product.

BY

E. BRAD MEYER

# SHOPPING FOR THE RIGHT DECK

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THE MOST IMPORTANT FEATURES, TIPS ON EQUIPMENT  
REPORTS, AND TESTS YOU CAN DO RIGHT IN THE STORE

**D**ESPITE THE ATTENTION devoted to digital audio, the real revolution in high fidelity is taking place in the analog domain. The vinyl LP is being replaced not so much by the Compact Disc as by the Compact Cassette.

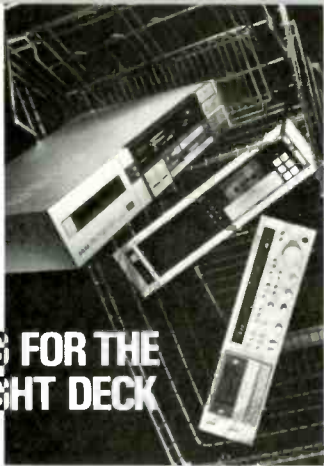
Prerecorded cassettes outsold LPs in 1983 to become the dominant music medium. But much of what gets played in cars and on sidewalks across America is recorded at home from FM, discs, and other tapes. The reasons are

clear: Cassettes are economical and convenient, they're less subject to wear, they're free from ticks and pops, and you never need to clean them. Besides, making tape recordings is fun.

So, if you don't already own one, you need a cassette deck. And if you have one that's more than three years old, it's time to check out the new machines because developments in heads, electronics, and tape formulations have significantly improved performance.

Some people shop for a tape deck as they would for a used car, opening and closing cassette-well doors and

*E. Brad Meyer is president of the Boston section of the Audio Engineering Society and a frequent contributor to these pages.*



## SHOPPING FOR THE RIGHT DECK

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listening for the most solid "clunk." Though this will tell you something about the unit's hinges, there are far more important things to check out and several revealing tests to help you do so. But before you start shopping, you must narrow your options a bit, focusing on what's available at the price you're willing to pay.

### FEATURES

A word of caution for those tempted only to buy the most features at the lowest price: Adding more features at a given "price point" costs money that might have been spent by the manufacturer for better parts, a sturdier and more reliable tape transport, or a more thorough calibration of the machine before it left the assembly line.

Here, then, are some of the important features you'll have to consider:

**Noise Reduction**—The noise reduction systems in a cassette deck are so basic to its operation that they need to be described at some length. Every deck with pretensions to high fidelity is equipped with Dolby B, which provides a very important 10 dB of noise reduction in the high frequencies. Dolby B is adequate for recording most sources, especially rock music, but if you want to tape excerpts from wide-range LPs—not to mention Compact Discs or live performances—without obviously compromising the sound quality with a haze of background noise, you need a more powerful noise reduction system. Your choices are Dolby C and DBX.

Dolby C gives an additional 10 dB of noise reduction over Dolby B. Subjectively, this is a significant improvement, enabling you to record all but the widest-range material

without audible hiss. Furthermore, the system has virtually no audible side effects. To my ears, Dolby-C-encoded tapes are bearable when played back with Dolby B decoding, although they sound shrill and compressed when played with no noise reduction at all.

There are disadvantages to Dolby C, however. At some recording levels it can exaggerate frequency-response errors by almost three times; tests conducted by audio consultant and writer Peter Mitchell and verified by me disclose that if response is down 1½ dB at 10 kHz, Dolby C may increase the error to more than 4 dB. And the recorded material must be carefully matched in level with the playback electronics or the system will mistrack, producing further frequency-

buy one of these, spend some of the money you save to have it calibrated by a good technician for one particular tape, and then use that exact brand and type exclusively. If, on the other hand, you invest in a three-head deck that has user-adjustable bias and Dolby level controls or that has a microprocessor-controlled automatic adjustment system, you usually can be confident that the Dolby C will perform properly.

The DBX system provides noise reduction of as much as 30 dB, which is enough for any source. No overall level calibration is necessary, and except on swept sine-wave test signals (which do not resemble music), the system does not exaggerate the recorder's frequency-response errors. The only demand that DBX makes of

## PAYING FOR WHAT YOU NEED



**AT \$250, THE LUXMAN K-210** is a bit more expensive than some other similarly equipped decks. It includes Dolby B and C, and there's a control for adjusting playback azimuth.



**ONKYO'S TA-2066 IS A THREE-HEAD** deck that lets you make instant tape-source comparisons. This \$480 machine also gives you Dolby B and C, a three-motor transport, a music-search function, and a bias fine-tuning calibration.



**SANSUI'S D-W9 IS ONE OF THE NEW** breed of dual-well cassette decks that make tape-to-tape dubbing a quick and simple process. The \$450 deck is equipped with Dolby B and C.

response errors.

To avoid these problems, the tape deck must have good heads and electronics and must be set up precisely for the specific brand and type of tape you intend to use. You can find Dolby C decks for less than \$200, but if you

the deck is that its basic noise level be reasonably low. If not, audible noise-pumping or "breathing" effects can occur on very-wide-range material. With most decks, this is not a problem.

The main difficulty with DBX is compatibility. DBX-encoded music is

unlistenable with anything but genuine DBX decoding. Your car deck or portable player, therefore, must also be DBX-equipped, and you may have trouble sharing tapes with friends. (DBX makes outboard decoders for home and car systems and a four-ounce battery-operated decoder for portable tape players.) Most DBX decks, which start at around \$180, also have Dolby B, and a few have both B and C.

**Two Heads or Three?**—Inexpensive decks have two heads, one for erasing the tape and another for both recording and playback. Ideally, recording and playback heads should be designed differently, so a two-head deck always involves some compromise in performance. A machine with separate heads for these two functions can offer a big improvement in playback performance and also lets you monitor the tape while recording, permitting rapid and accurate adjustments. Three-head decks can be found for about \$200, but the great majority sell for \$400 or more.

**Dual-Capstan Drive**—Unevenness of tape motion, or flutter, robs the sound of its solidity and sense of realism. If it's bad enough, you'll hear wavering in the pitch of the instruments. What keeps a tape moving smoothly is the capstan, a rotating shaft located between the heads and the take-up spool. But flutter can occur if internal friction of ill-fitting parts in the cassette shell causes uneven tape feed. Some machines, therefore, have a pair of capstans, one on either side of the tape heads, which create a "closed-loop" drive. This isolates the section of tape moving past the heads from the vagaries of the shell and also makes tension more even for better tape-to-head contact. Typical dual-capstan drive is found in decks starting at around \$500.

**Reversibility**—If you hate to get up from your chair and turn the tape over at the end of a side, consider a deck that plays in both directions automatically. Some machines can also record in both directions, allowing unattended taping of longer programs. Most two-way decks rotate the head assembly for reverse operation. Despite improvement in the reliability of the mechanisms that do this job, achieving consistent playback head alignment is not always possible—though for noncritical listening, reverse operation works well enough. The \$1,800 Nakamichi Dragon avoids the problem

with a servo-controlled mechanism that constantly corrects head alignment during playback, while the company's \$650 RX-202 actually removes the cassette and turns it over [see test report, page 33]. Autoreverse playback is available in decks beginning at \$250; bidirectional recording will cost you \$350 or more.

**Music Search**—By scanning a tape at high speed for the silent spaces between recorded selections, many decks can automatically begin play at the start of any piece. Some machines can also play selections in any desired sequence. Decks so equipped cost at least \$250.

**Dual Cassette Wells**—If you plan to copy your cassettes, some decks can save you the cost of a second machine by including two transport mechanisms, one for recording and the other for playback. More expensive versions offer double-speed operation to cut the copying time in half. Current dual-well decks have Dolby B only and start at less than \$200.

**Automatic Calibration**—As mentioned earlier, some three-head decks have microprocessor-controlled automatic calibration facilities. The machines adjust the bias, equalization, and sensitivity for each individual tape in a process that normally takes about 15 seconds. The results are usually about as accurate as you could accomplish manually without expensive test equipment, and the procedure is so convenient that you actually will find yourself doing it regularly. Decks equipped with automatic tape calibration are expensive, though. Expect to pay upward of \$575.

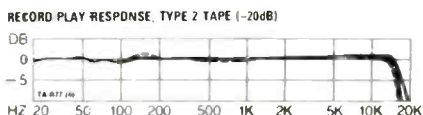
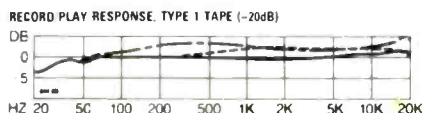
**Dolby HX Pro**—About three years ago, Dolby Labs introduced a circuit designed to increase the maximum level at which high frequencies could be recorded. A more effective circuit known as HX Professional or HX Pro has appeared on decks from several manufacturers at prices as low as \$400. Next year HX Pro will be available on a single integrated circuit, so you can expect to see it in more machines.

## TEST REPORTS

When you've decided which decks have the features you want, it's time to appraise their performance. HIGH FIDELITY's test reports can be a big help. Here are some pointers on how to make best use of them:

- First, look at the most important information: the frequency-response graphs for the different tape types, printed in the data column to the left of each report. Truly flat response to 15 kHz is superior to a curve that extends to 20 kHz but shows an overall tilt or substantial irregularity.

- Watch for consistency among the different curves on a single graph as a



*HF's record/playback curves are easy to decipher. The top graph shows reasonably flat response with no noise reduction (solid line), but extremely poor Dolby B (broken line) and Dolby C (dotted line) calibration. The bottom graph's three traces overlay each other almost completely, showing broad flat response with only a minuscule amount of noise reduction mistracking.*

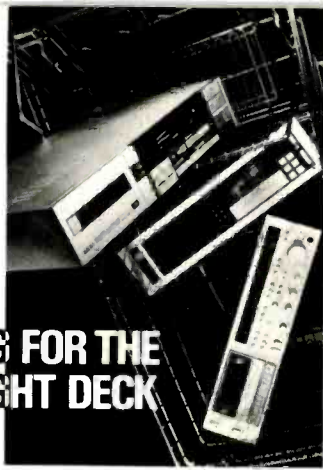
measure of how well the deck's noise reduction circuits were calibrated at the factory. (Contrary to what you might expect, manufacturers seldom tweak the machines they send in for review.)

- Check the response below 50 Hz: Most cassette decks roll off the low bass to some degree.

- Look for peak flutter of less than  $\pm 0.14$  percent, and don't confuse HF's measurement with the much lower WRMS weighted specification listed by the manufacturer. The latter always gives better-looking numbers.

- Finally, read the accompanying text. It will give you an idea of what it's like to live with the machine, especially in regard to control layout and facilities.

An electronic engineer of my acquaintance once said that coaxing good performance out of a cassette deck is like standing up in a hammock. It can be done, but it requires constant attention, and the smallest error is instantly magnified many times. Although my friend made this comparison almost 20 years ago, the principle behind it still holds: The performance of any tape recorder is determined by both the deck and the



# SHOPPING FOR THE RIGHT DECK

tape, and the two must be well matched for the system to work. The cassette's narrow tape track and slow speed make careful calibration absolutely crucial. The quality of this match between tape and machine is the main thing you'll be checking when you shop for your recorder.

## WHAT TO DO IN THE STORE

Audio stores are often noisy and confusing, and to hear how well a deck is working you need to listen closely, so take along headphones. You should be familiar with the way they sound so that you don't mistake their frequency-response aberrations for problems in the tape recorder.

First, test the playback alignment of the deck. A recorder with a misaligned head or miscalibrated electronics may sound good when playing its own tapes, but will sound poor when playing recordings made on another machine. Take a prerecorded tape of known quality with you, such as one of the audiophile releases that are duplicated in real time. Or, if you're shopping for a replacement deck, take a recording you've made on the old one to check for compatibility. Try to select a tape with some solo piano, which is the most rigorous test for wow and flutter.

To check the frequency response of the deck, insert a blank tape of the type you plan to use and connect an FM tuner to the input. Turn off the tuner's muting and set the pointer or readout above 108 MHz, or wherever you have to put it to get a steady roaring sound with no musical content. Then turn off whatever noise reduction system is built into the deck, adjust its meters to read -20 dB on both channels, and record a couple of minutes of this signal. It's important to limit yourself to a -20 dB level because FM noise is rich in high frequencies and will overstress the

system if recorded at too high a level.

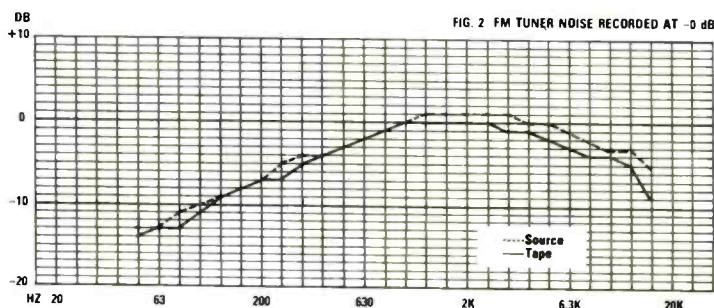
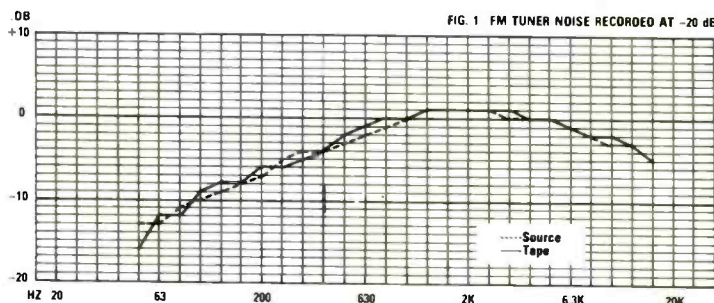
If the deck has three heads, you can compare the source and the tape by switching rapidly while recording. On a two-head deck, you'll have to rewind the tape for playback and then switch between the tuner (which should still be producing the noise) and the tape. Playback need not be very loud, but if you listen through speakers, turn up the treble to emphasize any errors in the upper octaves. Ideally, the recording should sound identical to the source, but this is a sensitive test, and the two will be indistinguishable on only the very best machines.

Now switch in the noise reduction system and record the roar again. If the sound is markedly different in playback, the machine is not calibrated

turn the recording level up to reveal just how much high-frequency headroom there is. If the highs on the tape still sound the same as the source when the meters reach 0 dB or higher, the machine is exceptional. This test also will easily reveal differences among the various types of tape.

In these operations, you will learn a great deal about the control facilities of the machine, how quickly and smoothly its transport works, and whether its tape counter is reliable. If everything is to your liking and you decide to buy it, you still have one task left—to check out the unit that the salesman brings you from the storeroom. Though unpacking it and running through the same test procedures may be inconvenient,

## IN-STORE TEST RESULTS



THESE TWO GRAPHS ILLUSTRATE what you will hear in the store when you use FM tuner noise and a pair of headphones to test a deck's frequency response. Fig. 1 shows the one-third-octave spectrum of tuner noise (dotted line) and the response of the tape deck (solid line) with the signal recorded at -20 dB, as indicated on the deck's meters. A slight difference between source and tape was audible, but in a blind test I would have had difficulty distinguishing between the two. Fig. 2 shows what happened when I raised the recording level to 0 dB. The rolloff above 1 kHz was immediately obvious through the headphones.—E.B.M.

for the tape you are using. (Remember: You must have the noise reduction engaged during recording and playback.)

By making the test recording at a level of -20 dB, you prevent high-frequency saturation of the tape. Now

sample-to-sample variations in cassette decks make this final evaluation mandatory. And by taking a few extra precautions in the beginning, you increase your chances of taking home a cassette deck that will give you years of good sound and reliable service. HF



# 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 *nvo*-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.

Call (201) 560-0060 for the name of the nearest dealer. Kyocera International, Inc., 7 Powder Horn Drive, Warren, NJ 07060.



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

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Not only is MAGIC DESK easy to use... it's hard to make a mistake! Just press the COMMODORE key and one of several "help menus" appears to tell you exactly what to do next. Special messages show you how the various picture commands work and help you when you make a mistake. Help messages also show you how to use the printer, filing cabinet, digital clock and wastebasket.

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# NEW TECHNOLOGIES

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# SETTING UP A SUPER CATALOG

BY

ALLAN KOZINN

A MUSIC CRITIC TURNS TO A COMPUTER FOR HELP IN  
ORGANIZING HIS COLLECTION OF 7,000 RECORDINGS.

**A**BOUT A DECADE AGO, when my record collection outgrew its makeshift set of shelves and graduated to a full-fledged wall unit, I realized it was time to think about cataloging it. This is a revelation that comes to all music collectors eventually, and for me it came not a moment too soon: I had just begun writing classical record reviews, and I was finding that my shelved-by-composer filing system did not always guarantee I'd find comparison performances when needed.

The file card catalog I then set up was organized along the lines David Hamilton described in his useful article, "Now Where Did I Put That Franck Sonata?" (September 1969), and it took me three years to complete. The entries were fairly simple and succinct:

**Composer**

**Title of Composition**

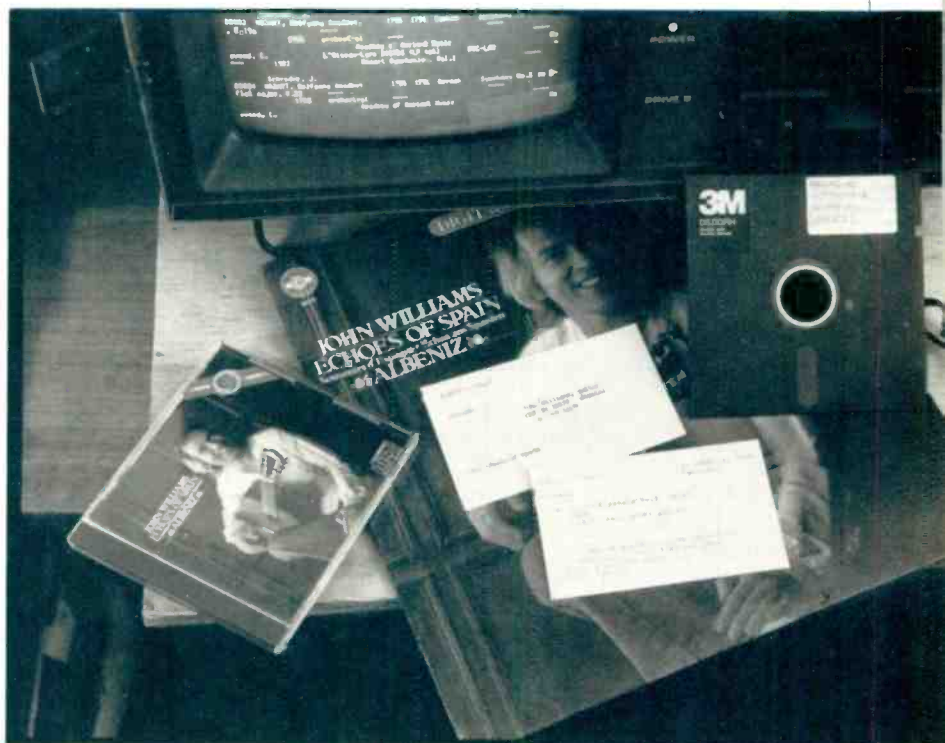
Soloist(s)/Instrument(s)

Conductor/Orchestra

Record Label & Number

**LP Title** (or other works listed on the spine)

When the job was finished, I reshelfed all my classical music discs by label and number. Because I'd had no



problem finding jazz and pop recordings using the shelved-by-performer system, I decided not to include them in my catalog.

Soon enough, though, I wanted more flexibility. When I began getting interview assignments, for instance, I realized it would be good to have the listings cross-referenced by artist; yet, having gone through the initial cataloging effort, I wasn't tempted to undertake another massive project. Instead, I relied on a reasonable knowledge of performers' label affiliations (not quite foolproof in these

software companies say, data base) can be frustrating, so I'll try to steer you around some of the stumbling blocks.

The first step is to decide what kind of information you need in the filing system—and if you can be farsighted enough, what kind of information you're ever likely to want in it. Obviously, everyone's needs are different, and mine may be more demanding than the average collector's. Still, if you're going to file by computer, you might as well use its sorting power. And that means including information that may seem

collection—for instance, an individual prelude from Bach's *Well-Tempered Clavier*)

**Year of Composition**

**Kind of Work** (chamber, violin solo, opera, etc.)

**Soloists**

**Conductor**

**Ensemble**

**Record Label, Number, and Format**

**Recording Date**

**Release Date**

**Couplings** (or disc title)

**Shelving Location** (In my case, certain kinds of recordings—classical guitar works, lute discs, and oversize box sets, for instance—are not shelved according to the label/number scheme. To indicate this, I use three-letter location codes.)

I realize that's quite a load, and some of it is pretty specialized. But using the above as an outline for a data record makes all kinds of retrieval combinations possible. For example, I can ask the computer for a list of all violin concertos written by German composers between 1752 and 1803. I can refine that list even further by asking for those concertos that are performed by Itzhak Perlman and that I have on cassette or Compact Disc. Pop and jazz entries require a different kind of data record, but a variation of this format should do quite well.

**WHICH BRINGS US TO** your next requirement—the software or program necessary to handle your data base. There are quite a few data base manager programs on the market now, and one—VisiFile, from VisiCorp Software—has already been explored in these pages ("Let Order Prevail," June 1983). For the kind of file I wanted, VisiFile's limit of 232 characters per data record was wholly inadequate, so I explored two popular filing systems with greater capabilities—Perfect Filer (from Perfect Software) and dBASE II (from Ashton-Tate).

I began with Perfect Filer because it was part of my computer's software package. As it happens, Perfect Software has done quite a good job of selling its package of word processing, spreadsheet, and data base programs to hardware manufacturers, who bundle them in with computers. Sold separately, Perfect Filer lists for \$595.



**THE AUTHOR USES dBASE II** on his Kaypro 4 portable computer. dBASE is available for most computers that use the C/PM operating system. For more information, write to Ashton-Tate, Inc. (10150 West Jefferson Blvd., Culver City, Calif. 90230).

days of nonexclusivity), supplemented by a copy of the SCHWANN ARTIST ISSUE. But what I really needed was a computer. I knew it, in fact, when I started the original project, but ten years ago home computers seemed a futuristic dream.

Fortunately, a personal computer is no longer beyond most budgets, and the Kaypro 4 that I bought last June has proved an invaluable cataloging tool. As I discovered, setting up the perfect computer file (or, as the

nonessential now but will come in handy later.

Here's the information I decided to list in my data records—a data record being the computerized description of a single composition:

**Composer**

**Born**

**Died**

**Nationality**

**Title of Composition**

**Source** (if the work is from a larger

The program, which has straightforward, well-organized documentation, is quite easy to learn: I had my music data base set up and accepting entries after only a few hours. Unfortunately, it soon became clear that the program was not flexible enough for me.

One of the chief problems with Perfect Filer is that once you enter your basic information, the data record is difficult to retrieve. In my case, I wanted to enter the information I had before me (composer, title, soloists, record number, etc.) and leave open

you to search through the rest one by one. Now, just imagine wanting to add information to your 200th entry under Beethoven.

With great expectations, I turned to dBASE II, a program with a reputation for just the kind of flexibility I needed. At a list price of \$700, it is only nominally more expensive than Perfect Filer. The current 2.4 version (updated in April 1983) comes with a logically organized, nicely printed, and fully indexed manual that runs to 500 loose-leaf pages, in which all of dBASE II's

know for music cataloging are not nearly as involved as some of the business applications you might have for dBASE. So certain shortcuts in the learning process are possible.

File structures are easy to set up and, should you change your mind or make a mistake, easy to change. I've modified my data records several times already. First, I decided that my proposed record length of nearly 1,000 characters was simply too long. Sure, it seemed nice to have the luxury of a 100-character comment field and to leave plenty of room in the composer,

```

NUMBER OF RECORDS: 00262
DATE OF LAST UPDATE: 00/00/00
PRIMARY USE DATABASE
FLD  NAME      TYPE WIDTH  DEC
001  COMPOSER   C    030
002  BORN        C    005
003  DIED        C    005
004  ORIGIN      C    010
005  TITLE       C    040
006  TITLE2      C    040
007  SOURCE      C    030
008  YEAR        C    007
009  CATEGORY    C    015
010  SOLOIST     C    035
011  ACCOMP      C    035
012  ENSEMBLE    C    035
013  CONDUCTOR   C    035
014  RECORDING   C    035
015  LOCATION    C    020
016  RECDATE     C    010
017  RELDATE     C    020
018  COUPLINGS  C    040
019  COMMENT     C    020
** TOTAL **          00468
    
```

```

RECORD # 00054
COMPOSER :ALBENIZ, Isaac_
BORN :1860 :
DIED :1909 :
ORIGIN :Spanish :
TITLE :Granada :
TITLE2 :---- :
SOURCE :Suite Espanola No.1, Op.47 :
YEAR :1886 :
CATEGORY :guitar solc :
SOLOIST :Williams, John: guitar :
ACCOMP :---- :
ENSEMBLE :---- :
CONDUCTOR :---- :
RECORDING :CBS IM 36679 (LP); MK 36679 (CD) :
LOCATION :NYC-GLC :
RECDATE :1980 dig. :
RELDATE :1981 (CD:1983) :
COUPLINGS :Echoes of Spain :
COMMENT :---- :
    
```

THE STRUCTURE LISTING (left) shows how the author's data records are organized. Each field is numbered, named, and specified as to type (in this case, "C" for alphanumeric characters) and length. When you're entering data, the program reformats the screen (right) to show a blank data record. Dashes in empty fields are important in printouts, where they neaten the layout of cards and reports.

the possibility of later adding the rest (recording and release dates, year of composition, and so forth). Unfortunately, a Perfect Filer data record can be accessed only by typing either its sequential entry number (and you're not likely to have memorized one for each performance) or the first four letters of the information in the top line or field—the composer's name, in my system. If several entries conform to the four-letter combination, Perfect Filer starts at the first, requiring

commands are explained at least twice—first in the user guide and then in an alphabetized reference section. There is also a series of onscreen help menus that can be summoned at any time to explain specific commands and their uses.

Since many users consider dBASE a programming language in its own right, mastering its command syntax takes some doing—particularly if you're a novice with computers. On the other hand, the things you need to

title, and source fields, but such largess meant that my floppy disks would be full in no time. In fact, my Bach, Beethoven, and Stravinsky sections would probably have occupied a single disk each. So I cut the data record size to about 450 characters—still quite large, but essential for the kind of sorting I described earlier. Besides, with about 7,000 recordings (figure at least 15,000 works) to catalog, I'm doomed to a multiple-disk data base anyway.

Getting the field and record lengths just right is tricky. Unlike file cards, where you can squeeze in whatever written information you need, data records and fields are finite. (You determine their length when you design your blank data record.) And though the average title may be less than, say, 40 characters, you'll eventually run into long ones. My own solution may seem a little eccentric: I opted to add a second title field, rather than lengthen the first one. That helps arrange the information for file card printouts (one

ultralong title would just print off the card's right margin), and it allows for the possibility of listing a work's nickname separately (Mozart's *Jupiter* Symphony, for instance). Similarly, I split my original soloists field in two: soloist and accompanist (shortened for data entry as "accomp"). For chamber works with performers listed separately (rather than under an ensemble name), I now have three fields in which to enter data: soloist, accompanist, and ensemble. Of course, finding recordings by specific players within

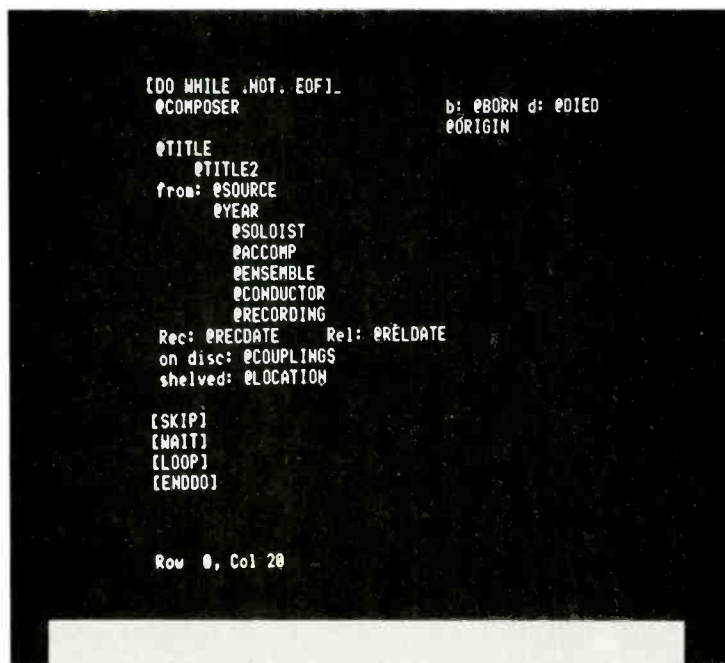
such groups means going through each of those fields.

Searching for recordings in dBASE II is extraordinarily easy. Unlike Perfect Filer, it enables you to make your request specific, and you can search for any field within a data record. Let's say that you've previously filed the John Williams recording of Albéniz's "Asturias," but you've just obtained the CD version and want to add that information to your entry. In Perfect Filer, you would have to type *ALBE* and then look through every Albéniz entry. With dBASE, you simply type *LIST for COMPOSER='Albeniz' .and. SOLOIST='Williams'*. The data and entry number will appear on your screen. All you do now is type *EDIT* and the entry number, and the modifiable data record will appear on the screen, awaiting your additions.

For a quick printout of your full collection, it's convenient to have your whole data base organized alphabetically (say, by composer, title, and soloist). With dBASE you can do just that, or you can alphabetize as you enter new data records by inserting them in the appropriate spots. Perfect Filer, on the other hand, offers no such reorganization feature, and its maze of menus makes accomplishing even simple tasks a slow procedure.

**C**ATALOGING CAN also be tedious when you're forced to repeat information from data record to data record. If you're filing ten recordings of the Beethoven Fifth Symphony, all you really need to change is the information in the conductor, ensemble, and recording-related fields. Both dBASE II and Perfect Filer provide for speeding up repetitive entries. For example, the *SET CARRY ON* command in dBASE will give you a duplicate of the data record you previously entered, ready for the necessary changes.

To use a computer's sorting power, you must allow for the machine's literal reading of your entries. For my original card file, when cataloging a piano work transcribed for guitar, I put the transcription credit on the composer line—where it makes perfect sense. If you do that on a computer, however, the machine will read the credit as part of the composer's name and will alphabetize the data record accordingly. (I now put



```

[DO WHILE .NOT. EOF]
@COMPOSER                               b: @BORN d: @DIED
                                         @ORIGIN

@TITLE
  @TITLE2
from: @SOURCE
  @YEAR
  @SOLOIST
  @ACCOMP
  @ENSEMBLE
  @CONDUCTOR
  @RECORDING
Rec: @RECCDATE   Rel: @RELDATE
on disc: @COUPLINGS
shelved: @LOCATION

[SKIP]
[WAIT]
[LOOP]
[ENDDD]

Row 0, Col 20

ALBENIZ, Isaac                          b: 1860 d: 1909
Granada                                 Spanish
-----
from: Suite Espanola No.1, Op.47
    1886
    Williams, John: guitar
-----
-----
    CBS IM 36679 (LP); MK 36679 (CD)
Rec: 1980 dig.   Rel: 1981 (CD:1983)
on disc: Echoes of Spain
shelved: NYC-GLC
    
```

**ZIP, A PROGRAM THAT COMES** with the dBASE package, lets you access your data records in whatever form you require. The offscreen photo shows the commands and format used by the author to design a file card printout. The "@" sign preceding a field name causes the program to place the data in the desired position. The computer-generated file card shows the results of this ZIP format. Note how the dashes—which were embedded in the data record for fields where the author either didn't have or need pertinent data—contribute to overall neatness.

transcription credits on my second title line). Similarly, a soloist entry like "Glenn Gould/piano" will no longer do, since the computer will sort by the first letters it sees. For computer purposes, "Gould, Glenn/piano" is much better.

**B**EAR IN MIND, too, that your entries must be consistent in every detail—words, punctuation, capitalization, abbreviation, and so on. This is particularly important with titles. In his aforementioned 1969 article, Hamilton discusses the distinction between generic and specific titles, and that distinction is even more important now. For instance, when the first word of a title is "The," I set it parenthetically at the title's end, no matter the language: "Nightingale (The)" and "Sacre du printemps (Le)." For symphonies and concertos, I've found it handy to list by genre, number, key, mode, instrumentation, and whatever musicological catalog number they carry. Mozart's 20th Piano Concerto thus appears as "Concerto No. 20 in D Minor for Piano & Orch., K. 466."

You must observe the same uniformity when calling information back. If, in the Mozart example, I told dBASE to *LIST for TITLE='Piano Concerto No. 20'*, I'd draw a blank, even though I have a recording of the work on file. I've found it handy to keep a pad near the computer for jotting down a list of abbreviations and other formats I've adopted. Eventually, using them becomes second nature, just as mastering the programming commands does, but having a list at hand prevents midcourse changes.

Luckily, there is a way around the need for utter consistency—namely dBASE II's substring operator (\$), a handy command that enables you to sort or retrieve data records by using a portion of a field entry. If I knew the Köchel Catalog number of the Mozart Concerto and didn't want to bother with the full title, I could call up the data by typing *LIST for 'K. 466' \$TITLE*. The computer would then list the entries having K. 466 somewhere in their title fields. Since dBASE's commands allow for multiple requests, the *LIST* command and the substring operator can provide precision and flexibility in finding information.

The substring also makes it possible to compile information

contained in certain fields of several data records. For example, I now list a recording's format (LP, CD, reel, cassette) parenthetically after the recording company label and number. If I want to order a list of everything I have on CD, I need only write *LIST for 'CD' \$RECORDING*.

Though I've barely skimmed the surface of dBASE II's capabilities, space dictates that I move on to ZIP, an auxiliary program that comes in the dBASE II package. Among other things, ZIP lets you customize your

onscreen data record and printing formats quickly and easily. Why do I have ZIP print cards? Well, for some reason I feel I might as well keep up the old card catalog I started all those years ago. If I wanted to, I could even order dBASE and ZIP to produce cards cross-referenced by performer, the task that in my precomputer days seemed so unachievable. But my guess is that when I want to locate a work or a performance, I'll be using the computer terminal anyway. Now, if only I had a 10-megabyte hard-disk drive. **HF**

```

[DO WHILE .NOT. EOF]_
-----
@COMPOSER
b: @BORN          d: @DIED          @ORIGIN
@TITLE
  @TITLE2
@SOURCE
@YEAR
Performers: @SOLOIST
             @ACCOMP
             @ENSEMBLE
             @CONDUCTOR

@RECORDING
rec: @RECOATE      rel: @RELOATE
on disc: @COUPLINGS
shelved: @LOCATION
notes:  @COMMENT

[SKIP]
[WAIT]
[LOOP]
[EMD00]

Row 0, Col 20

```

```

-----
ADAM, Claus
b: 1917          d: 1983          American
Concerto for Cello and Orchestra
-----
1973
Performers: Kates, Stephen: cello
-----
             Louisville Orchestra
             Mester, Jorge
Louisville LS 745 (LP)
rec: 1975          rel: 1980
on disc: Barber: Die Natali
shelved: NYC-LAB
notes:  -----
-----

```

**YOU CAN DESIGN AS MANY ZIP data formats as you need. This is a format the author uses to display data on the screen and to make printed reports (bottom). The bracketed commands in the display instruct the program to print more than one record, but to await instructions after each printout before continuing.**

# Why Your First Compact Disc Player Should Be A Second Generation Mitsubishi.

No wow. No flutter. Dynamic range over 90dB. Plus complete freedom from dust, dirt, surface noise, rumble and speaker feedback.

The truth is, the basic technology of the digital audio disc is so vastly superior to analog sound, that deciding on a player becomes very tricky indeed.

That is, until you check the record.

---

**YOU DON'T BECOME A DIGITAL AUDIO EXPERT OVERNIGHT.**

---

Most companies now introducing digital audio players were just recently introduced to digital audio themselves.

Mitsubishi has been at the leading edge of digital audio research since the beginning. Moreover, much of the second generation technology found in the Mitsubishi DP-103 compact disc player you see here is a direct result of that experience.

For example, the DP-103 employs a three-beam optical pickup in place of the conventional single beam. These two insurance beams constantly correct for imperfections in the disc, ensuring stable, error-free tracking.

The retaining springs for the laser optics pickup, which are susceptible to vibration, have been replaced by Mitsubishi's exclusive linear-sliding cylinder—in effect eliminating a problem before you've had one.

These second-generation refinements also allow simplified servo circuitry which results in fewer parts, less to go wrong.

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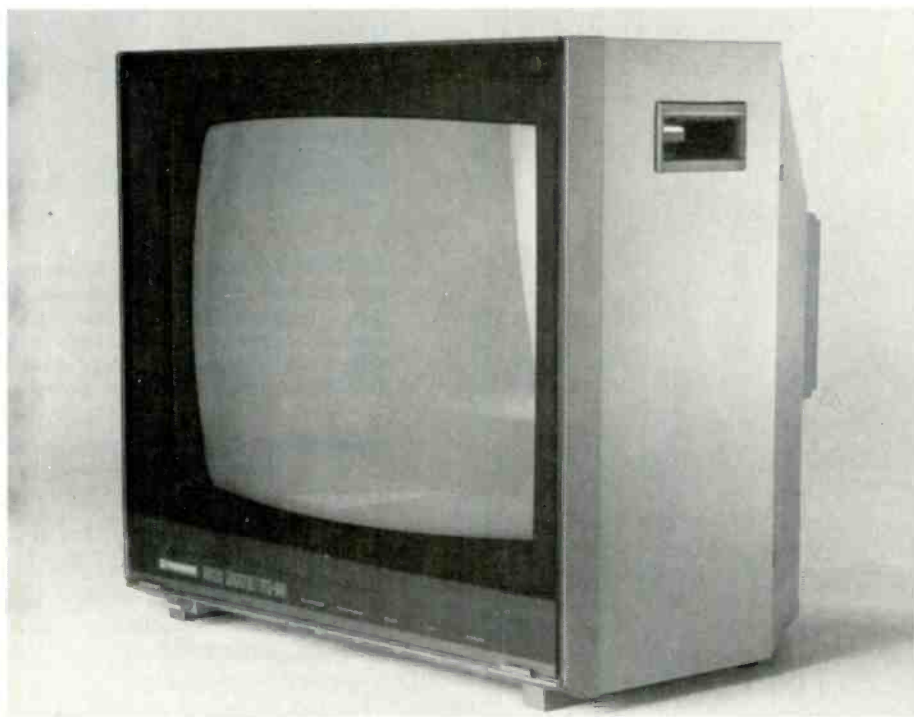




VIDEO  
EQUIPMENT  
REPORTS

## *PIONEER TVM-190 VIDEO MONITOR*

Pioneer TVM-190 19-inch color video monitor. Dimensions: 20 by 18¼ inches (front), 19¼ inches deep. Price: \$850. Warranty: "limited," two years parts and labor on the picture tube, one year parts and labor on all other components. Manufacturer: Pioneer Electronic Corp., Japan; U.S. distributor: Pioneer Video, Inc., 200 W. Grand Ave., Montvale, N.J. 07645.



STEVEN MARK NEEDHAM

**L**ONG KNOWN for its audio gear, Pioneer established a complementary presence in the emerging component-television market with the introduction of its LaserDisc players, one of which (the LD-1100) we reviewed in November 1982. Last month we tested the Pioneer VC-T700 TV tuner, and now, rounding out the

system, we turn to the smaller of the company's two color video monitors.

As monitors go, the 19-inch TVM-190 is "plain vanilla," having just the basic features necessary for high-quality video reproduction. These include an input for NTSC-composite video signals, which makes the monitor compatible with any TV tuner, VCR,

<b>HORIZONTAL RESOLUTION</b>	≈300 lines
<b>INTERLACE</b>	perfect
<b>OVERSCAN</b>	
horizontal	≈9%
vertical	≈8%
<b>CENTERING</b>	perfect
<b>BLOOMING</b>	see text

or videodisc player available in the U.S., and with a good number of personal computers as well. There is no RGB input, however, so it cannot handle the high-resolution color signals generated by some high-end personal computers. (We don't think any NTSC monitor is up to the demands of serious word processing because of the inherent limitations of the NTSC system itself, but if you don't need high-resolution displays of text or color graphics, you really don't need RGB either.)

You won't find an audio amplifier or loudspeaker in the TVM-190, nor a signal-sensing circuit to automatically turn on the monitor when video is present, nor a VIR decoder to automatically set color saturation and tint on broadcasts transmitted with a vertical interval reference. Of these

signal. Plus, the TVM-190 has its own power switch, by which it can be energized independently. So in the final analysis, these omissions can be seen in a virtuous light—as non-essentials Pioneer has stripped away to concentrate on picture quality.

And the TVM-190 did perform very well in Diversified Science Laboratories' tests. Horizontal and vertical overscan are quite modest, and the picture is perfectly centered along both axes. Convergence is exceptionally good, with color fringing visible in the test pattern only at the extreme upper-left and lower-right corners and (very slightly) over a small portion of the top-right quadrant. Even this cannot be discerned at normal viewing distance or with ordinary broadcast material. Geometric linearity is almost perfect, the only discrepancy



**THE TVM-190'S CONTROLS** are thumbwheels arrayed along the right end of the monitor's front panel, below the screen. They include adjustments for sharpness (detail), brightness, color saturation, tint, and "picture." The last is a combination control that affects both contrast and brightness. All except color and TINT have detents at their "standard" settings; these two must be adjusted by eye, since the TVM-190 has no automatic color-control or VIR circuitry to do the job for you.

wish-list omissions, only the last is of any significance, and then only on certain broadcasts. (Videotapes do not carry a vertical interval reference.)

We certainly prefer to listen through larger and better-baffled speakers than can be packed into the cabinet of a TV set—and to have more than the customary amount of built-in power and tone-control flexibility—so the lack of an amp and speaker doesn't bother us in the least. The TVM-190 can be turned on along with a TV tuner by plugging it into one of the tuner's switched outlets (assuming it has any), or if you stay within the Pioneer line, the VC-T700 will activate the monitor via a low-voltage remote-control

being a slight vertical elongation over the lowermost 10 percent of the screen.

Gray-scale linearity is excellent and black retention very good at the detent settings of the brightness and picture controls. Blooming is negligible over the full BRIGHTNESS range, but a bit higher than average over the upper 75 percent of the PICTURE range. Both of these controls have an unusually large span of adjustment and at their detent positions produce a picture that is noticeably brighter than average, with brilliant, clean whites. Pioneer attributes the "whiter whites" to its automatic color-temperature correction circuit.

Vertical interlace is spot on, and

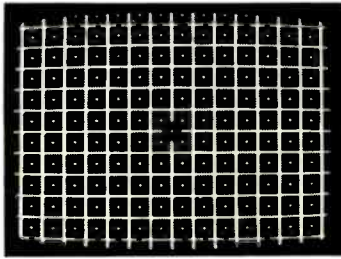
Laboratory data for HIGH FIDELITY's video-equipment reports are supplied by Diversified Science Laboratories. Preparation is supervised by Michael Riggs, Peter Dobbin, and Edward J. Foster. All reports should be construed as applying to the specific samples tested. HIGH FIDELITY and Diversified Science Laboratories assume no responsibility for product performance or quality.

red, green, and blue rasters are pure over the entire screen. After setting the color and tint controls (which have no detents) for best flesh tones on a broadcast picture, DSL found the red raster to have a bit more of an orange cast than usual and the green to be very slightly lime colored. However, these settings reproduced all of the standard color bars very well, except yellow. Pure yellow is one of the most difficult colors to create on a TV screen. On most monitors it tends to be somewhat murky (with a brown cast), and the same is true for the TVM-190. Tint does not change with scene

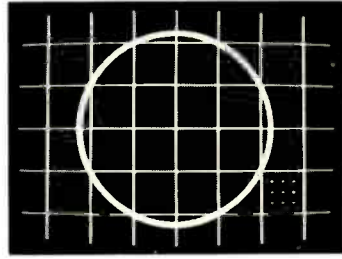
to take full advantage of the best signal normally obtainable from a TV tuner.

When advanced, the SHARPNESS mainly boosts information in the 3- to 4-MHz region; when it is turned down, considerable color moiré appears in the upper frequencies of the test pattern, even though the signal itself contains no chroma information. Since this effect is not readily apparent on broadcasts, we do not consider it a significant problem.

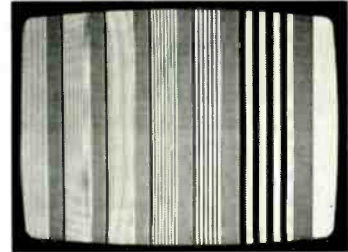
You can daisy-chain several TVM-190s together to view the same program in different rooms. The monitor has video input and output



**CONVERGENCE** is tested with this crosshatch display. Narrow, well-defined white lines indicate good convergence, with all three electron beams (for red, green, and blue) properly aimed. Wherever the monitor begins to lose convergence, the lines will broaden and become fuzzier. The TVM-190 exhibits excellent convergence, with just a very slight amount of error in two corners and a small part of the top-right quadrant.



**GEOMETRIC DISTORTION**, overscan, and centering are checked with this display, consisting of a crosshatch, a circle, and a set of dots. The TVM-190's linearity is excellent over the top 90 percent of the screen and very good over the rest, ensuring straight lines and accurately rendered shapes. Overscan is low, and the picture is perfectly centered.



**HORIZONTAL RESOLUTION** is tested with a signal consisting of six tone bursts from 500 kHz to 4.2 MHz (the upper limit of the NTSC system). The monitor's video frequency response is approximated by finding the last band in which the individual vertical lines remain clear and distinct. The TVM-190 performs very well, with clear reproduction through the 3.58-MHz band, for a horizontal resolution of about 300 lines.

brightness (testifying to negligible chroma differential phase), and the color intensity washes out only at the highest brightness step (suggesting very uniform chroma gain).

**A**t the detent setting of the sharpness control, transient response is very good, with just a trace of ringing before an abrupt black-to-white transition. Multiburst testing suggests some emphasis of information in the 2-MHz region (which adds a little extra sharpness to the picture) and a horizontal resolution of approximately 300 lines. Although this is a little shy of the 330-line limit of the NTSC system, it is good enough

jacks and a slide switch that selects the termination: a high "bridging" impedance if the signal is to be passed on to another monitor, 75 ohms if the monitor is the last in the chain. There also is a user-accessible vertical-hold control on the back of the monitor and service adjustments for vertical size and focus.

The TVM-190 is relatively expensive for so basic a monitor, but if performance is what you're after and you don't need an RGB input, it deserves a close look. You'll have to make color and tint adjustments manually but we find the controls very easy to use and quite flexible. Plain vanilla can be very tasty. **HF**

Pop and classical  
music releases  
on videodisc  
and digital  
Compact Disc

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CLASSICAL  
COMPACT DISC

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**CAGE:**

*Second Construction.*

**COWELL:**

*Pulse.*

**LUNDQUIST:**

*Sisu.*

**TAIRA:**

*Hierophonie V.*

Kroumata Percussion Ensemble and others. (Robert von Bahr, prod.) Bis CD 232, \$18.98 (fully digital Compact Disc). LP: LP-232, \$12.98 (digital recording). (Distributed by Qualiton Records, 39-28 Crescent St., Long Island City, N.Y. 11101.)

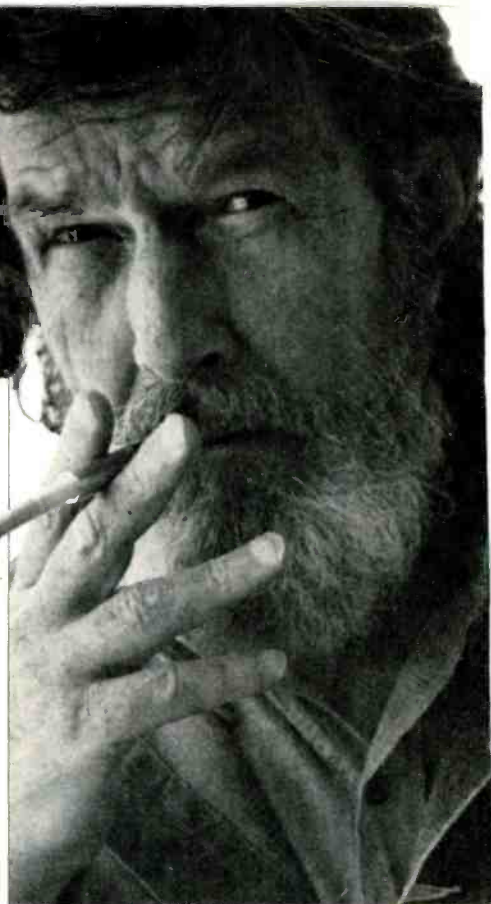
With an already sizable selection of standard repertory available on CD (and some of that in triplicate), here, finally, is an unusual contemporary program. Granted, it is a disc that has some sonic "show-off" potential—and it handles that aspect superbly—but there are musical attractions, too, and it covers a broad international/idiomatic spectrum. John Cage's *Second Construction* is an early and, for him, extremely tight, conservative work. Built on a lively rhythmic figure and an attractively simple, cyclical melody, the piece evolves slowly as the original patterns are extended and displaced. In that sense, the piece prefigures the minimalist aesthetic that was born nearly 30 years later.

Henry Cowell's *Pulse* is more outgoing and complex and builds an intriguing web of timbres and cross-rhythms. Both works are exotically, perhaps even eccentrically, scored: In the Cage, the muted banjolike sound of a "prepared string piano" makes an occasional appearance among the assorted gongs and rattles, as does a thundersheet, sometimes subtly deployed. Cowell's exoticism is more homey, his forces including brake drums, pipelengths, and rice bowls, amid standard percussion.

Torbjörn Iwan Lundquist's *Sisu*—the title being a Finnish word that, according to the notes, "is difficult of translation, but conveying persistence, fighting spirit, inviolability or something of the sort"—shares with the Cage and Cowell a steady, insistent rhythm (at first), but little else. Lundquist has conceived *Sisu* in symphonic terms, both structurally and melodically, and its ostinato figure brings to mind middle-period Shostakovich, heard via percussion rather than orchestral timbres. The outer sections are robust, relentless, and molded of the same material, while a middle section is more mysterious and subdued.

The only work here that really makes demands on patience is *Hierophonie V*, by Yoshihisa Taira, a nearly 20-minute score that accounts for the last half of the disc. Taira demands that his players scream like samurai and attack their instruments with an ear-shattering violence; and since this effect is not continuous, the listener is easily caught off-guard. Still, the karate-match sections are confined to the start and end of the piece—the latter actually an involving, virtuosic display. Between them is a lengthy section full of sliding, spooky, glassine sounds that are beguiling, if amorphous.

As a whole, and particularly in the Taira, the program offers an extraordinary array of percussive timbres and a broad dynamic range—not to mention silences contrasted with startlingly loud attacks. On both LP and CD, these elements are presented with impressive clarity, but not surprisingly the CD has the edge. Crisp and clean as the direct metal master LP pressing is, some rumble and surface noise remains; and especially in the quieter sections, or those using patches of silence between timbres, the CD is



JOHN CAGE: the seeds of minimalism

clearly preferable. It also boasts greater presence. From the first sounds, it seems as if the percussion ensemble is set up in front of your speakers—an illusion the LP does not create.

—ALLAN KOZINN

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POPULAR  
COMPACT DISC

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**THE BEATLES**

*Abbey Road.*

George Martin, producer. EMI/Dorion CP 35 3016 (analog recording, digital Compact Disc). LP: Capitol SD 00383. Half-speed remaster: Mobile Fidelity 023.

The Beatles are conspicuously absent from Capitol/EMI's initial Compact Disc schedule. This Japanese import, one of the rarer CD titles that is still available at some U.S. stores, may explain why. "Abbey Road" does benefit from digital remastering, but the album poses insoluble technical problems, even for the new laser-read digital format.

For starters, there is considerable tape noise on the master tapes. As was the case with Mobile Fidelity's 1980 landmark half-speed version of this legendary recording, the CD can't mask the 16-track master's residual hiss, a characteristic presumably

exacerbated by the quartet's lavish use of overdubs and mixing effects. Thus, *Come Together*, for example, confines its digital improvements to the cleaner ring of percussion, the grainy timbre of the guitar fills, and John Lennon's slightly crisper vocals.

The CD's improved separation is a mixed blessing here, because while the album's stereo panning effects become even more obvious, so does the lack of a natural stereo image. Some significant improvements in the lower frequencies meet or exceed the gains in Mobile Fidelity's version: Throughout, Paul McCartney's deep bass attains a visceral presence apparently beyond the limits of any LP rendering, owing to the effect of the album's extremely long playing time on disc cutting. In CD, there's no need to "squeeze" program to fit; indeed, at more than 50 minutes, this may be one of the most generous pop Compact Discs yet.

It also has something to offer in a strictly practical sense. Side 2 of the LP was influential in its creation of a pop "suite" that, by overlapping individual tracks, suggested a continuity otherwise chimerical. But would-be home disc jockeys invariably found it frustrating to cue up, say, *She Came in Through the Bathroom Window*, with only a half-second of dead air preceding it. In Compact Disc, of course, program selection is possible at any point within the eight-song medley.

Still, at \$30 (the price I paid at a Los Angeles audio store), the cost/performance ratio of this import CD seems meager compared with the Mobile Fidelity half-speed remaster. Unless you're intrigued by the aforementioned programming convenience, you'll want to wait for the more reasonably priced domestic CD.

—SAM SUTHERLAND

### CAT STEVENS: Greatest Hits.

Various producers. A&M CD 4519 (analog recording, digital Compact Disc). LP: SP 4519.

**S**inger/songwriter Cat Stevens has been out of the commercial limelight long enough to make his appearance on Compact Disc seem initially incongruous. Why should a major label inaugurate its digital disc library by trotting out a mid-Seventies compilation?

The answer lies in the fact that Stevens's impassioned baritone and

winsome guitar playing were beautifully recorded to begin with. The production values of these recordings exemplify the immaculate sonics of his career-making collaborations with producer Paul Samwell-Smith, whose close-miking techniques lent Stevens's steel string guitar and dewy vocals an overarching presence. Consequently, the songs retain intimacy amidst a wide-screen production scale.

That technical acuity survives in this Compact Disc. In fact, the reduction in tape and vinyl noise, along with better distortion characteristics, make it a decided improvement. Stevens's stary-eyed pose will seem wimpier than ever to techno-pop aficionados, but unapologetic "mellow rock" admirers will find "Greatest Hits" an attractive and appropriate CD facelift.

—S.S.

## CLASSICAL VIDEO

### VLADIMIR HOROWITZ IN LONDON.

Vladimir Horowitz, piano. [John Vernon and Peter Gelb, prods.; Kirk Browning, video dir.; Graham Haines, audio prod.] Pioneer Artists PA 82-031 (CX-encoded laser disc) [A BBC Production in association with Columbia Artists; recorded in performance, May 22, 1982]. Sony Beta Hi-Fi 96 W00009, \$35.95.

CHOPIN: Polonaise Fanteasia, Op. 51; Ballade in G minor, Op. 23; Waltz in A flat minor, Op. 69, No. 1. RACHMANINOFF: Sonata No. 2 in B flat minor, Op. 36. SCARLATTI: Sonata in A flat, L. 186; Sonata in F minor, L. 118; Sonata in F minor, L. 189; Sonata in A, L. 494; Sonata in B minor, L. 33; Sonata in E, L. 224. SCHUMANN: Kinderszenen, Op. 15. HOROWITZ: Self-Portrait.

### PAVAROTTI IN LONDON.

Luciano Pavarotti, tenor; Royal Philharmonic Orchestra, Kurt Herbert Adler, cond. [Rodney Greenburg, prod.; Graham Haines, audio prod.] Pioneer Artists PA 83-043 (CX-encoded laser disc) [A BBC Production in association with Polygram; recorded in performance, April 13, 1982].

CILEA: L'Arlesiana: E la solita storia. DECURTIS: Torna a Surriento. DONIZETTI: L'Elisir d'Amore: Una furtiva lagrima; Lucia di Lammermoor: Fra poco a me ricovero. PUCCINI: Tosca: E lucevan le stelle, Recondita armonia; Turandot: Nessun dorma. VERDI: La Forza del Destino: Overture; I Lombardi: La mia letizia infondere; Luisa Miller: Quando le sere al placido; Macbeth: Ah, la paterna mano.

**W**hen I pondered the potentials of home video for classical music a few months back, it seemed logical to assume that one of the more interesting things the medium could offer—not only for today's home audience, but for posterity—is a series of performances by preeminent recitalists. In theory, at least, I still believe that if they're done well (visually and sonically), and if the decisions are sensible (particularly about which artists and performances are so immortalized), video recitals can be both enjoyable and edifying, and perhaps even a leap beyond the two-dimensionality of the audio disc.

But having viewed the first pair of video recitals, I'm afraid that potential is still very theoretical indeed. I had

figured on some problems with recital discs, particularly this early in the game, but I expected them to be technical—how to sustain visual interest without being disruptive, that sort of thing. Strangely, it hadn't occurred to me that a far more serious threat to the medium's success could arise in the balance between commerce and art. In these two recitals, the interests of the former topple the scales.

It is, I suppose, only natural (from both a consumer's and a marketer's point of view) that superstars are the first up to bat. But there are superstars and there are superstars, and in the end, the performance itself has to count for something—doesn't it? On these two discs, what counts most is the glitter of the name and the glamour of the event, fleeting though the latter may be. The question of whether these performances are worth preserving seems to have been a secondary consideration.

"Vladimir Horowitz in London" is drawn from the pianist's Royal Festival Hall performance of May 22, 1982—a benefit for the Royal Opera House Development Appeal and a glamour event of the first magnitude, with Prince Charles in attendance. This is the concert that was televised around the world last spring, and it plays nearly two hours. Horowitz's opening group (after a simple, stately rendition of *God Save the Queen*) is a set of six Scarlatti sonatas, each played in about the same way: gently and nicely textured for the first half, sloppy and quirky for the second. Now and then, a hint of Scarlatti's crystalline formal logic shines through, and each time the pianist deludes the viewer into believing that perhaps one whole sonata will escape unscathed; but such redemption never arrives. Almost invariably, a soberly turned phrase gives way to one pushed out of shape by an impatient tempo shift or spoiled by an unevenly tossed-off ornament.

Of course, as Horowitz sees it, no one is likely to notice these minor defects. Here's what he says about the works in his extraordinarily egocentric intermission interview:

"I don't like to play hackneyed pieces. Now, every young pianist comes and plays *Waldstein*, *Appassionata*, *Moonlight Sonata* of Beethoven—to show how intellectual they are, things like that. There are

600 sonatas of Scarlatti, which nobody knows—not one. Those are the gems of the piano literature. And I will play six of them that nobody ever heard—and they are beautiful. I think and everybody thinks. And people enjoy them.”

Few will be surprised to find, upon a cursory glance at the disc's contents, that there are no rarities among these six sonatas that nobody knows and everybody loves: They are not hard to come by in harpsichord recordings; other pianists play them; and some are even familiar in arrangements for guitar.

After the Scarlatti group come impetuous renditions of the Chopin Polonaise-Fantaisie and the G minor Ballade, readings that are often quite nice but that, like the Scarlatti, inevitably degenerate. In the Ballade, for instance, the graceless opening bars are offset by a moderato section with an engaging, mysterious feeling; but as the work draws to a more heated close, all Horowitz delivers are lurching rhythms and murky chords—a shockingly generalized muddle that no other pianist would be allowed to get away with. But such is The Importance of Being Vladimir.

Presumably, there are Horowitz fanatics who can make it this far still believing that they are viewing great pianistic feats and interpretive genius. The intermission feature, “Self-Portrait”—actually, an interview cut so that only Horowitz's answers are presented—is tailor-made for them. Horowitz reminisces about the governesses he had as a child, and reveals that he particularly likes the English because they gave him a medal. Noting that, in his student years, he wanted to be a composer, he goes on to relate how fantastic a pianist he was, even then. We learn that at Horowitz's American debut Thomas Beecham didn't know the concerto he was playing, didn't have a score, and didn't care—but that, even though the performance was a mess, the audience and the critics went wild. We learn, too, that Rachmaninoff considered Horowitz the only pianist who understood his music.

The second half of the recital fares a little better than the first, partly because the pianist keeps his eccentric wanderings a little closer to home in Schumann's *Kinderscenen*, and partly

because the Rachmaninoff Second Sonata can accommodate his stormy mannerisms.

Visually—and looking at the camera work in the abstract—this is a nicely documented concert, with gently moving and interestingly handled cameras positioned to capture Horowitz's hands from both sides of the keyboard, as well as long shots of Horowitz from the end of the stage he faces. There are occasional shots of the audience and, of course, of the royal box, but by and large the focus is kept closely on the performer. In most cases, this would be perfect: We have an almost telescopic view of the keyboard, and we can see exactly how the music is coaxed from the piano. The problem here is that we can also see how the music is *not* coaxed from the piano; we see Horowitz depress keys that fail to sound, and we see him skate imprecisely across longer passages.

Sonically, there is little to write home about here. The overall sound could be sharper, and there are a few moments of unevenness—a wavering of the sound at the start of the Chopin Ballade and during the Traumerei in Schumann's *Kinderscenen*, as well as something akin to tape dropout, also in the Schumann. RCA's digitally recorded LP is far superior, not only for the more crystalline piano sound, but also because the record label's engineers have managed to do away with the audience coughing and throat-clearing that abound in the videodisc version. Both recordings claim to be from the May 22 concert, but RCA either used different takes or accomplished spectacular engineering feats.

The Pavarotti videodisc, recorded at the Royal Albert Hall a month earlier, is similar in some respects. It, too, was taped at a Royal Gala benefit concert—this one for the Royal Philharmonic, and with the queen mother in attendance. The obligatory *God Save the Queen* is performed by the orchestra only, so if you want a ceremonial equivalent of Pavarotti's *I Left My Heart in San Francisco* (from *Yes, Giorgio*), you're out of luck.

You're also out of luck if all you want is a thrilling vocal performance. Unlike Horowitz's disc, in which eccentricity is pushed to the point of irritation, this recital is perfectly sane and by no means slapdash; but it's just

plain bland. Sure, there are some lovely moments, even some subtle if hardly transcendent ones. There are also plenty of the overly manipulated turns of phrase that have led many to consider Pavarotti's performances something between superficial and gauche. Indeed, the overwhelming impression the disc leaves is of a singer who commands a great deal of vocal facility, but whose attempts to charge his interpretations with emotion ultimately leave them sounding forced and hollow. Even at that, the hour-long performance is so lacking in electricity that it's hard to get excited about it either way. Sonically, this is not at all bad; visually, things are pretty static.

Leaving aside the uselessness of the performance, though, it seems to me that the packaging and the program work at cross purposes. On the one hand, despite the inclusion of such evergreens as “*Una furtiva lagrima*” from *L'Elisir*, “*Recondita armonia*” and “*E lucevan le stelle*” from *Tosca*, and “*Nessun dorma*” from *Turandot*, the program Pavarotti sings here hardly makes this the videodisc equivalent of his “World's Favorite Tenor Arias” LP. That in itself is all well and good; except that the package seems to cry out for the middlebrow buyer who doesn't know, or want to know, much about opera, but who has heard that Pavarotti is today's Caruso (or something to that effect), and who is likely to want to hear a handful of the blockbusters. In the liner notes, we find Pavarotti—“opera's Golden Boy”—commended to us by “no less a vocalist than Frank Sinatra,” whose considered opinion is that Pavarotti is “the world's greatest singer.”

Thus, vocal collectors still willing to give Pavarotti the benefit of the doubt are likely to be put off by the hype, while the more “popular” audience is likely to pass this up because it doesn't have “*Vesti la giubba*” or the “Flower Song” on it. Which is also all to the good, because neither potential audience is missing much. Perhaps Pioneer Artists should devote some more thought to what it's trying to sell, and to whom.

—ALLAN KOZINN

Many of the Compact Discs available at the retail level are imported from Europe and Japan. Likewise, some of the CDs reviewed here are imported, and eventually may appear in the U.S. with different catalog numbers, if not on different labels.



# Walk on Ayre

A recommended repertoire for portable listening

**R**EACTIONS HAVE BEEN QUITE evenly split to my alfresco-listening paean, "Going Walkabout," of exactly a year ago. Readers who had already discovered for themselves the joys of personal portables were surprised only that it had taken me so long to catch on. Others, including many local and letter-ary friends, were incredulous, finding it hard to understand what must be my aberrant lapse into cultism or my regressive need for the reassurance of an aural security blanket.

Nothing of the kind! Only elitists who have never deigned to don "hear-through" headphones can possibly hold such misconceptions. Unlike portable boom-box radios and tape players that indefensibly inflict their too-often raucous programs on everyone within earshot, "personal" cassette players are aptly named: Only the person wearing the phones can hear the music, which, even when played back in the midst of a crowd, seems to be (and quintessentially is) performed for his sole delectation.

Wholly free from the radiations of crowd emotion so pervasive in packed concert halls and opera houses, the listener is a singular audience. And unlike chamber-recital or even home-stereo-system audition, there is seemingly no distance separating the music from one's nakedly exposed aural sensibilities.

Since I first wrote about this "most intensely personal of all the infinite varieties of musical experience," I've had ample time to ponder its distinctive powers and limitations while continuing to try out a wide range of material, lately including tapes primarily designed (in program selection or expanded playing time) for outdoor use. But I've also had to walk to the accompaniment of only my own thoughts, when winter snows and spring rains dictated protective headgear that made even the lightest headphones inconvenient to wear. During

these sessions of silent reflection, I finally realized I'd been pursuing a mirage in seeking to deduce just what specific kinds of music are best-suited for alfresco hearing. To be sure, it still seems reasonable that, while small-ensemble pieces assume enhanced intimacy, grandly dramatic works can't achieve as much weight and breadth as in powerful home-system reproduction. In any case, analytical study—indeed any kind of critical listening—is much more difficult on the road than in the home, whether because of outdoor sound-and-scene distractions or simply the incalculably intensified subjectivity of headphone audition.

It was only when I remembered my guess that maybe the best traveling companions simply are one's familiar and loved old favorites that I came finally to the conclusion most musical novices probably reached the first time they went walkabout: Any music we know and like best (especially that richly encrusted with pearly layers of

by R. D. Darrell

pleasant associations), any music that speaks most directly "*von Herzen . . . zu Herzen*," moves us even more strongly when Going Walkabout.

In my own case, I have been unexpectedly spellbound by re-encounters with Delius's *Sea Drift* and Scriabin's *Divine Poem* Symphony. These two works had intoxicated me in my earliest student days, but I've seldom heard or even thought of them in recent years, and I've long had considerable aesthetic reservations about them. So it has been scary to discover how they have reacquired—at least in highly subjective listening through headphones—the full poignancy and ecstasy they first held for me.

Even after more sober rehearing indoors, I still find it difficult to evaluate objectively the 1974 Groves/Liverpool version of Delius's setting of Walt Whitman's "Once Paumanok . . ." verse (in EMI's "Groves Conducts Delius"; see box on p. 55). The tape summons up powerful remembrances of my introduction to the uniquely haunting music of Delius via participation in a student/teacher performance of *Sea Drift* at the Surette Summer School of Music in Concord, Massachusetts. Similarly, the somewhat coarse (sonically and interpretatively) Fedoseyev/U.S.S.R. version of Scriabin's Third Symphony (on Vox Cum Laude) is now for me almost completely overlaid by reverberant echoes of the incomparably passionate and grandiose Koussevitzky/Boston live performances featuring Georges Mager's sun-flecked, stratospheric trumpet on the heaven-aspiring motto theme that so dizzily transported a once (and apparently still) susceptible listener.

Of course, the intensified emotional impact of music that has meaningful associations is a well-known psychological phenomenon. But the degree of its impact varies. For some, it may only be the delighted shock of recognition that "they're playing Our Song!" Others may be more profoundly affected, as when Proust's *petites madeleines* crumbled in tea recalled fragrances and tastes that "remain poised for a long time, like souls, ready to remind us, waiting and hoping for their moment . . . and bear unfalteringly, in the tiny and almost impalpable drop of their essence, the vast structure of recollection." Either way, the extraordinary directness and immediacy of familiar music played through headphones encourages us to hear it afresh, as if it were for the first time, and on rare, lucky occasions to re-experience, through nostalgic evocation, that initial acquaintance, those far-off days, and our younger selves.

But walkabout listening also is likely to bring us abruptly and literally down to earth, as a stumbling foot causes us to drop down from the clouds. Such returns to ground can be as salutary for us as they were reinvigorating to the mythological

giant Antaeus, especially if we're induced to choose some incisively rhythmized march and dance music for stepping out or actually dancing on the most buoyant of ayre-filled inner soles. Or we can participate vocally by lustily singing along with familiar symphonic and pop tunes.

Both march beat and fat tunefulness characterize the mostly European "Celebrated Marches," played rather coarsely but with enough spirit by the Orchestre de Liège under Paul Strauss (Musical Heritage). Some of the same symphonic favorites (by Berlioz, Bizet, and Elgar) are included in the Bernstein/New York Philharmonic "World's Greatest Marches" (CBS Masterworks). Here, programs from 1969 and '72 are combined, one of which features Sousa and other well-known band pieces, and the performances have higher-voltage virtuosity. The only current band release on hand is the historically valuable



"Doubletime March!" (from Deutsche Grammophon's Doubletime series), a Prussian and Austrian march anthology banged out in *echt Preussisches* fashion by Karajan and the wind and percussion sections of his Berlin Philharmonic. But don't forget the extensive repertory of American band recordings, of which far too many of my own preferred Fennell/Eastman examples lamentably are no longer available in tape editions.

For catchily rhythmic and tuneful symphonic dance music, Dvořák's *Slavonic* and Brahms's *Hungarian* series are inexhaustibly invigorating. For the former (complete), nothing has superseded the 1969 Szell/Cleveland set (now on Odyssey YT 34626-7, price at dealer's option). And while there's a brilliant new anniversary cassette of the latter (complete) by Abbado and the Vienna Philharmonic (on DG), I prefer the rougher, earthier set by a provincial native orchestra led by János Sándor (Hungaroton MK 1009, \$10.98; see "Tape Deck," December 1978).

Yet surely no dance is more gracefully seductive than the waltz. And the best waltz music is an irresistible invitation to flowing, twirling movement—of the soul no

less than the body. So, even if only unself-conscious alfresco listeners are like to break into circling steps, everyone can swirl inwardly to favorite piano examples by Chopin, Brahms, Schubert, and others, as played by noted pianists in the DG/Special "Souvenirs" anthology, or to any number of old and new symphonic-waltz collections. Among others, the latest Waldteufel exemplar by Kunzel and his Cincinnati Pops (Vox Cum Laude) includes toe-tickling polkas and galops as well as extended waltz sets. So do many Strauss Family programs, such as the long-outstanding ones by Willi Boskovsky for London and Angel. But I have to except, sadly, his latest Johann II all-waltz release (Angel), where he not only seems to be resting on his laurels, but unforgivably fails to supply the vital zither solo in *Tales from the Vienna Woods*. Go back to Boskovsky's earlier, authentic masterpieces, or farther back to the still matchless Fiedler/Boston Pops program featuring my own favorite, *Wo die Zitronen blüh'n*, recently reissued in RCA's bargain-price Victrola series (ALK 1-4458, \$3.98; see "Tape Deck," June 1983). And for idiomatic examples of scarcely less seductive Brazilian tangos and a couple of haunting waltzes, don't miss the Nazareth sleeper-recital by pianist Arthur Lima (Pro Arte PCD 144, \$9.98; "Tape Deck," September 1983).

Not at all incidentally, these kinetic stimulants are just what the doctor orders, both for the most delightful kind of physical exercise and, as an efficacious cure without harmful side effects, for blue moods or even severe depression. Earnest body-builders and weight-reducers always can work out to innumerable P.E.-drill and aerobic-dance courses available on cassette, but why not keep health and fitness aims incidental to musical enjoyment? Walkabouts will do well to remember (as some conductors of *Also sprach Zarathustra* fail to) Nietzsche's assertion that "I should only believe in a God that would know how to dance!"

Am I waxing pedagogic, attempting to advocate a Better Life as well as outdoor peripatetic musical fun? Or, despite all my good resolutions to spurn old classification habits, am I still obsessed with categorizing the cassette programs used for my own excursions? Either a disorderly mind can't free itself of the need for some kind of system, or the programs at hand simply insist on forming themselves into family groups. It's hard not to recognize the marked differences between music barnacled with nostalgic associations and that frankly extroverted in nature, or between either of those and common alfresco fare: music unashamedly for entertainment, diversion, daydreaming, or welcome escape from the ever-present concerns of daily life.

Such true divertimento can be anything or everything, whatever one happens



to pick from the higgledy-piggledy al fresco bouillabaisse currently available, which includes special walkabout anthologies culled from record labels' back-list catalogs. Many of these cassettes are double-plays (i.e., 90 minutes in length), handy for long walks, and may concentrate on a single composer or type of work, or be near-random collections.

Among the double-plays I've heard recently are two Miles of Music reissues from Angel: the inimitable Sir Thomas Beecham's favorite encores (the "Lollipops") and a Richard Strauss tone-poem trilogy (*Also sprach Zarathustra*, *Ein Heldenleben*, *Till Eulenspiegel*) drawn from the magisterial Kempe/Dresden series. The so-called 90-Minute reissue series on CBS

Masterworks includes the Entremont/Ormandy/Philadelphia "Gershwin Album," which augments *Rhapsody in Blue* and the Piano Concerto with the orchestral *American in Paris* and the Robert Russell Bennett-arranged *Porgy and Bess* suite. I've already mentioned the march program in DG's Doubletime series. Of the other tapes released since the first batch of a year

## A SELECTION OF WALKABOUT CASSETTES

### BACH: Suites for Orchestra, S. 1066-69.

New Bach Collegium Musicum. Max Pommer, cond. PRO ARTE/SINFONIA 2CX 700, \$14.98 (digital recording; double-play chromium cassette).

### BRAHMS: Hungarian Dances (complete).

Vienna Philharmonic. Claudio Abbado, cond. DEUTSCHE GRAMMOPHON 3309 042, \$8.98 (digital recording; chromium cassette).

Orchestrated by Brahms, Dvořák, Gál, Hallén, Juon, Parlow, Sinding.

### DELIUS: Various works. ("Groves Conducts Delius")

Soloists: Royal Liverpool Philharmonic and Chorus. Sir Charles Groves, cond. EMI TCC2 54295, \$13.98 (double-play chromium cassette). (Distributed by International Book and Record, 40-11 24th St., Long Island City, N.Y. 11101.)

Sea Drift; Eventyr; Dance Rhapsody; Cyrena: A Song of Summer; Paris: The Song of a Great City.

### GERSHWIN: Various Works. ("The Gershwin Album")

Philippe Entremont, piano; Philadelphia Orchestra, Eugene Ormandy, cond. CBS MASTERWORKS MGT 30073, price at dealer's option (double-play cassette; from CBS originals).

Concerto in F for Piano and Orchestra; Rhapsody in Blue; An American in Paris; Porgy and Bess.

### SCRIABIN: Symphony No. 3, in C minor, Op. 43 (Divine Poem).

U.S.S.R. TV and Radio Symphony Orchestra. Vladimir Fedoseyev, cond. VOX CUM LAUDE VCS 9030, \$8.98.

### STRAUSS, J., II.: Famous Waltzes (7).

Johann Strauss Orchestra of Vienna, Willi Boskovsky, cond. ANGEL 4XS 37892, \$9.98 (digital recording; ferric cassette).

### TELEMANN: Various Works.

Soloists: Academy of Ancient Music. Christopher Hogwood, cond. OISEAU-LYRE KDSDC 701, \$12.98 (digital recording; chromium cassette).

Concerto in D major for Three Trumpets; Quadro in B flat; Concerto in E minor for Recorder and Flute; Concerto Polonois; Concerto for Flute, Oboe d'Amore, and Viola d'Amore, in E major.

### WALDTEUFEL: Waltzes, Polkas, Galop, Mazurka.

Cincinnati Pops Orchestra, Erich Kunzel, cond. VOX CUM LAUDE D-VCS 9018, \$10.98 (digital recording; chromium cassette).

## COLLECTIONS

### BAROQUE HARP MUSIC.

Nicanor Zabaleta, harp. DEUTSCHE GRAMMOPHON/PRIVILEGE 3335 228, \$6.98 (from various DG originals).

Works by Bach, C. P. E. Bach, Handel, Krumpholtz, Viotti.

### CLASSICAL CAFÉHAUS MUSIC.

Salon Orchestra of Cologne. PRO ARTE PCD 136, \$12.98 (digital recording; chromium cassette).

### FILM MUSIC SPECTACULAR.

London Symphony Orchestra. Morton Gould, cond. DBX EC 7014, \$14.95 (digital recording; chromium cassette; from Varèse Sarabande VCDM 1000.20, 1979).

### MUSIC OF THE GRAND SALON.

Salon Orchestra of Cologne. PRO ARTE PCD 135, \$12.98 (digital recording; chromium cassette).

### SHÖGUN.

John Kaizan Neptune; Mu'yro Jazz Ensemble. DBX EC 7043, \$14.95 (chromium cassette; from Inner City IC 6078, 1980).

### SOUVENIRS: The World's Most Beautiful Piano Waltzes.

Various pianists. DEUTSCHE GRAMMOPHON/SPECIAL 3335 650, \$6.98 (from various DG originals).

Works by Brahms, Chopin, Grieg, Liszt, Schubert.

### WARSAW CONCERTO AND OTHER PIANO AND ORCHESTRA FAVORITES.

Robert Döcker, piano; Geoff Love Orchestra. DBX EC 7037, \$14.95 (chromium cassette; from Moss Music Group MMG 706, 1972).

## Marches

### CELEBRATED MARCHES.

Orchestre de Liège, Paul Strauss, cond. MUSICAL HERITAGE MHC 6749, \$7.75 (\$4.95 to members) (add \$1.95 for shipping; Musical Heritage Society, 14 Park Rd., Tinton Falls, N.J. 07724).

Marches by Beethoven, Berlioz, Bizet, Borodin, Chabrier, Elgar, Mendelssohn, Pierné, Prokofiev, Rimsky-Korsakov, Saint-Saëns, Schubert, J. Strauss.

### DOUBLETIME MARCH!

Berlin Philharmonic Wind and Percussion Ensemble, Herbert von Karajan, cond. DEUTSCHE GRAMMOPHON 3584 033, \$7.98 (double-play cassette; from 1976 DG originals).

Prussian and Austrian Marches.

## WORLD'S GREATEST MARCHES.

New York Philharmonic, Leonard Bernstein, cond. CBS MASTERWORKS MGT 35919, price at dealer's option (from 1969 and 1972 CBS originals).

Marches by Berlioz, Bizet, Elgar, Sousa.

## TAPE SERIES

### CLASSICS FOR JOY SERIES.

Pro Arte CFJ series, \$7.98 each (double-play cassettes; from various Supraphon, Harmonia Mundi, Reader's Digest originals). Selected listing:

CFJ 001. **Pachelbel's Canon and Other Baroque Favorites.** Don Smithers. German Bach Soloists. Collegium Aureum.

CFJ 022. **BRAHMS: Symphony No. 1, in C minor, Op. 68; TCHAIKOVSKY: Symphony No. 5, in E minor, Op. 64.** London Symphony and Philharmonia Orchestra. Jascha Horenstein, cond.

CFJ 026. **A Summer Romance.** Various works. Joseph Suk, Gustav Leonhardt, and more.

CFJ 029. **In the Park.** Various works. Jean-Pierre Rampal, Itzhak Perlman, and more.

### DOUBLETIME SERIES.

Deutsche Grammophon 3584 series, \$7.98 each (double-play cassettes; from various DG originals). Selected listing:

3584 023. **VIVALDI: Various works.** Narcisco Yepes, Maurice André, and more.

3584 036. **HANDEL: Various works.** Wenzinger, Kubelik, and more.

3584 037. **Water Music.** Works by Debussy, Handel, Respighi, Smetana, J. Strauss, Tchaikovsky, et al. Various artists.

### MILES OF MUSIC SERIES.

Angel 4XSS series, \$7.98 each (double-play cassettes; from Angel/EMI originals). Selected listing:

4XSS 32812. **Lollipops.** Various works. Royal Philharmonic. Sir Thomas Beecham, cond.

4XSS 32817. **R. STRAUSS: Also sprach Zarathustra, Ein Heldenleben, Till Eulenspiegel.** Dresden State Orchestra, Rudolph Kempe, cond.

ago, I've particularly liked the Handel and Vivaldi offerings and the *Water Music* miscellany of appropriately aqueous pieces by Debussy, Respighi, Smetana, J. Strauss, and Tchaikovsky, as well as Handel. Then, Pro Arte's extensive Classics for Joy reissue series features full-length symphonic masterpieces like the uninterrupted Brahms First and Tchaikovsky Fifth in Horenstein's justly acclaimed Reader's Digest versions. Most of the Classics for Joy cassettes are thematic anthologies of shorter pieces and excerpts drawn largely from the rich Supraphon catalog: "Pachelbel's *Canon* and Other Baroque Favorites," "A Summer Romance," and "In the Park."

My only new examples of DBX-encoded cassettes fall into the category of generally light musical entertainment. Each is notable for exceptionally dazzling sonics, sensationally exploiting a vastly expanded dynamic range from ethereal pianissimos to thunderous fortissimos. Little of this is lost in portable-deck playback, as long as one has the appropriate decoding circuit—like that in the "DBX Way" Panasonic RQ-J20X model I'm still using with unalloyed satisfaction.

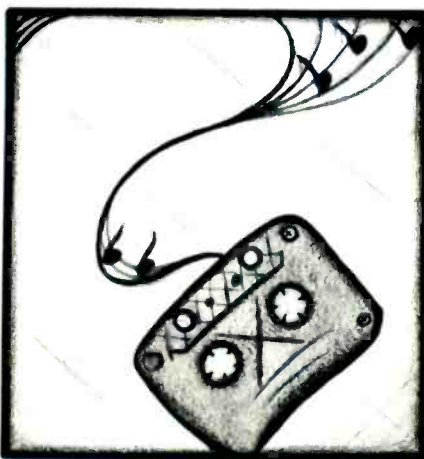
All three of the DBX releases are processed in chromium tapings, but only the "Film Music Spectacular" (also on Varèse Sarabande, 1979) is digitally recorded. Here, Morton Gould and the London Symphony perform a mélange of Gould's and others' scores, topped by excerpts from the Jerome Moross *Big Country*, the Vaughan Williams *Forty-Ninth Parallel*, and the Walton *Spitfire*. One of the analogs is a best-seller candidate I'd never heard of: "Warsaw Concerto and Other Piano and Orchestra Favorites" (from Moss Music Group, 1972), played with all stops out by Robert Ducker and the Geoff Love (who?) Orchestra. Far more stimulatingly novel is the jazz program, *Shōgun* (from Inner City, 1980), by John Kaizan Neptune and a Japanese big band. As far off my usual beat as this may be, I found it a surprisingly happy combination of straightforward American jazz and piquantly exotic Nipponese timbres and idioms, especially fascinating in the title piece, *Samurai*, *Shibumi*, and *Windows*.

(Listeners without DBX decoding facilities can find these programs in their original-companies' conventional releases: Varèse Sarabande 1000.20, MMG 706, and Inner City 6078. A complete catalog of DBX-encoded tapes and discs is available from DBX, 71 Chapel St., Newton, Mass. 02195.)

While few music lovers, whatever their tastes, can fail to be gratefully aware of (if not overwhelmed by) state-of-the-art technology, lightweight-headphone listening brings one in such close and direct contact with the essence of the music that its sonic embodiment seems to become less significant. In this respect, it might be that hear-

through headphones offer the best treatment, if not complete cure, for that dread (to some) disease, chronic audiophilia. Even so fervent a sound-fancier as myself, who keenly prizes the corporeality of music's dramatic breadth and impact, blazing high-end brilliance, and subterranean solidity, tends in walkabout listening to discount these sheerly physical elements relative to the thematic invention and texture weaving that, in sharpened focus, become so immediately accessible.

The unique kind of imaginative, wholehearted interplay between music-makers and intensely aware listeners is the most richly rewarding musical experience. And for many of us who fancy ourselves as historically minded Compleat Baroque, it's usually Bach, Handel, and their contemporaries who not only give immeasurable listening satisfaction under any conditions, but who also become incomparably



relishable when, on foot and out-of-doors, we can respond uninhibitedly and equally to both physical invigorations and intellectual fascinations.

The road never seems as smooth, resilient, and short as when I'm stepping out to Bach's *Brandenburg* Concertos or Handel's Suites or Concerti Grossi in such electrifying versions as those by Harnoncourt for Telefunken, Hogwood for Oiseau-Lyre, and Pinnock for DG/Archiv. But for anyone not yet won over to savor the raw timbres of such period-instrument recreations, I warmly commend the Pro Arte/Sinfonia cassette of Bach's *Orchestral Suites* by the New Bach Collegium Musicum under Max Pommer. A digital/chromium double-play at a budget price, this exceptionally lithe and exuberant performance by obviously youthful members of the Leipzig Gewandhaus Orchestra radiates what must be the most irresistibly infectious zest I've ever encountered in any recording.

Then, as a persuasive introduction to the pungencies of period instruments in mostly unfamiliar jewels from the High Baroque treasury, I suggest the Hogwood/Academy of Ancient Music cornucopia of Telemann Double and Triple Concertos on

Oiseau-Lyre. Even the glittering three-trumpet concerto is not Telemann's best-known one; the Concerto for Recorder and Flute, and even more that for Flute, Oboe d'Amore, and Viola d'Amore are masterpieces of inspired coloring. Moreover, there are titillating Polish folk spices in these works as well as in the explicitly titled Concerto *Polonois* for Strings.

There's novel Handel (Theme and Variations, in G minor) in the perhaps more readily appealing, mostly transcribed "Baroque [and Rococo] Harp Music" recital. This DG/Privilege tape also includes Bach's Third French Suite and Viotti's B-flat Sonata, plus two harp originals: C. P. E. Bach's elegant Sonata in G and the Czech Krumpholtz's quirky Air and Variations, in G minor. And here the strictly musical delectability is ineffably enhanced by the unexcelled grace and color-nuance of Nicanor Zabaleta's harp playing.

I could go on, but suddenly I realize that I've neglected to sound the obligatory warnings: against now-illegal headphone-listening while driving or bicycling in many localities and states, against raising the volume so high that you lose awareness of traffic dangers and risk permanent eardrum or aural-nerve damage, or against potential impoverishment from not investing in nickel-cadmium batteries and a recharger.

Probably, I should also comment on the proliferation of new battery-powered cassette players to which the pioneering Sony Walkman has given a generic name. The ever-widening choice of makes, sizes, prices, and technical features is all to the good, especially the now more frequent appearance of Dolby models, thanks to the greater availability of three-volt Dolby B decoder chips.

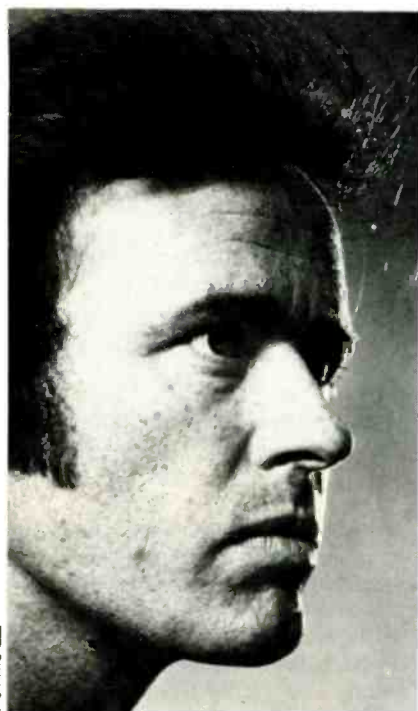
But the truth is that I'm much less interested in the technology than in the aural delights it enables us to enjoy almost anywhere. And I'm primarily intent on converting the skeptics who still doubt (without fair trial) the immeasurable rewards of Going Walkabout, and the prim listeners who continue to fear that it's beneath their dignity to appear in public wearing headphones and an out-of-this-world expression of someone who's marching to the beat of a private drum.

For the skeptical and the shy, I summon up Higher Authority: "Be not afeard; [this realm] is full of noises./Sounds and sweet airs, that give delight and hurt not./ Sometimes a thousand twangling instruments/Will hum about mine ears, and sometimes voices." And if Shakespearean encouragement is not enough, how about Mozartean? It was father Leopold who cited the family motto, but it's best observed in Wolfgang's own endlessly imaginative composing: *Non si deve lasciare strada intentata!* We must leave no avenue unexplored!

HF

# CLASSICAL

## Reviews



JACK MITCHELL

Through the Looking Glass was written for Alice Pleasance Liddell (right). Del Tredici (left) uses the preface to the Carroll tales as the text for his *Child Alice*.



THE BETTMANN ARCHIVE

## Del Tredici's Pulitzer-Winning *Alice*

Reviewed by Will Crutchfield

### DEL TREDICI: In Memory of a Summer Day (*Child Alice*, Part 1).

Phyllis Bryn-Julson, soprano; St. Louis Symphony Orchestra, Leonard Slatkin, cond. [Marc J. Aubort and Joanna Nickrenz, prods.] NONESUCH 79043, \$11.98 (digital recording).

I WAS AT THE 1976 PREMIERE performances of *Final Alice* in Chicago but have not heard any other of David del Tredici's Aliciana live. Accounts in the press and from friends don't suggest I've missed much. The composer's enormous soprano-and-orchestra fantasies on Lewis Carroll, though contrasted and complementary, bear strong family resemblance: Apparently, hearing other works in the series confirms what is best in the popular *Final Alice* without supplementing it where it was unsatisfying. At any rate, a hearing of *In Memory of a Summer Day* (not the newest installment, but the second and most recent on disc, and the one that garnered a Pulitzer in 1980), does little to suggest otherwise. Still, it provokes thought and gives pleasure.

The contrasts between this piece and *Final Alice* as I recall it are neatly summed in David Huntley's program note: "The spoken narration, the literal re-telling of a Wonderland story, even the 'folk' instruments of *Final Alice* and the earlier Alice pieces were no longer to be found; instead Del Tredici had cut himself free from the actual events of the Wonderland books and had embarked on a wide-ranging exploration of the special aura and atmosphere that those books held for him."

I can't agree with "wide-ranging,"

nor with Huntley's assertion that this amounts to "a new departure in Del Tredici's writing," and least of all that the "variety of musical Romanticism" heard here is "newly minted." It's a clutch of coins, some newer than others, not as various as those jangling in George Rochberg's pocket (but of higher denomination), and minted at various times past by Mahler and Wagner, Ives and (perhaps) Berio. The main ingredients, as before, are amplified soprano (Phyllis Bryn-Julson, very good, though she holds the pianissimos still instead of setting them afloat) and bloated orchestra (the St. Louis Symphony, not making quite the orgiastic sonic impact I recall from the Chicago in the earlier piece—I haven't sampled the record of that). The musical germs are a recurring dominant chord (E seven-nine, slightly spiced by an augmented fifth and by simultaneous major and minor ninths; Del Tredici names it "the Chord of Rapture and Regret"), and its A major answer, a pretty tune, a commonplace of four common-time bars, spun from appoggiaturas and sequences (early on it's artificially contracted to 3/4 halfway through; the inherent regularity asserts itself later). It's a nice flute melody, instantly familiar without, as far as I can recognize, being an actual quote of anything in particular. But when we hear it as a song, the words seem poorly grafted on, and when it's trumpeted, bellowed, grunted, and screamed as a nightmare Sousa march (my characterization; Del Tredici's intent is different), it sounds unbeliev-

ably trivial.

This happens at the peak of the central episode, "A Tale Is Told: Triumphant Alice." Before has gone "Simple Alice"; last will be "Ecstatic Alice (Aria)." A postlude suspended in midair is intended to lead on, after an intermission, to Part 2 of an evening-long work, *Child Alice*, of which *In Memory* is the first half. The text for all is "Child of the Pure Unclouded Brow," Carroll's preface to *Through the Looking Glass*, heard complete as a song in "Simple Alice" and repeated and reinterpreted thereafter. As suggested, the focus is not on the Alice tales themselves but on their telling, on "the idealized intensity of remembrances" (Dodgson—Carroll was a pen name—wrote the verses years after the Summer Days of storytelling with Alice Pleasance Liddell and her sisters; I quote from the composer's generous and excellent apologia, included as an insert by Nonesuch), and in particular on "the passion Carroll dared not express, or perhaps even feel waking."

This last peaks in the Aria, which has a lot of dream-Wagner in it, surging repeatedly to Liebestod climaxes on the same note. Before, when A major is regained in "Triumphant Alice," Del Tredici writes "with the clanging of an anvil. . . the listener may think he is at the sonic peak, but a succession of climaxes leading at length to a screaming siren (marked "*Climax of Climaxes*" in the score) will prove him wrong." From a standpoint of attention-span and listening comfort I would substi-

## Critics' Choice

The most noteworthy releases reviewed recently

**BEETHOVEN: Violin Concerto.** Ughi; London Symphony, Sawallisch. RCA ITALY RL 31590, Oct.  
**BRAHMS: Keyboard Works.** Zimmerman, Vás-  
 áry, Kempff. DG 2740 278 (11), Dec.  
**BRAHMS: Songs.** Norman, Fischer-Dieskau,  
 Barenboim. DG 2740 279, Jan.  
**BRITTEN: Our Hunting Fathers; Folksong  
 Arrangements.** Söderström, Armstrong. EMI  
 ASD 4397, Oct.  
**CARTER: Night Fantasies; Piano Sonata.**  
 Jacobs. NONESUCH 79047-1. Rosen, ETCETERA  
 ETC 1008, Sept.

**CRUMB: Apparition. IVES: Songs (9).** De-  
 Gaetani, Kalish. BRIDGE BDG 2002, Dec.  
**FALLA: The Three-Cornered Hat.** Boky,  
 Hoernich; Montreal Symphony, Dutoit. LONDON  
 LDR 71060, Jan.  
**FIELD: Concertos for Piano and Orchestra  
 (7).** O'Connor; New Irish Chamber Orchestra,  
 Fürst. FIDELIO CSM 55-58 (4), Jan.  
**GRIEG: Piano Sonata; Lyric Pieces.** Kocsis.  
 PHILIPS 6514 115, Nov.  
**HAHN: Ciboulette.** Mesplé, Gedda; Monte  
 Carlo Philharmonic, Diederich. EMI FRANCE 2C  
 167-731 05/6 (2), Dec.  
**MENDELSSOHN: String Quartets (com-  
 plete).** Melos Qt. DG 2740 267 (4), Sept.  
**MENDELSSOHN, TCHAIKOVSKY: Violin  
 Concertos.** Chung; Montreal Symphony, Du-  
 toit. LONDON LDR 71058, Oct.  
**MOZART: Serenade No. 10, K. 361.** Collegi-  
 um Aureum. PRO ARTE PAD 137, Oct.  
**PROKOFIEV: String Quartets Nos. 1, 2.**  
 Sequoia Qt. NONESUCH 79048-1, Nov.

**PUCCHINI: Orchestral Works; Operatic Ex-  
 cerpts.** Berlin Radio Symphony, Chailly. LON-  
 DON LDR 71107, Nov.  
**SALLINEN: The Red Line.** Valjakka. Hynnin-  
 en, Kamu. FINLANDIA FA 102 (3), Nov.  
**SCHUBERT: Songs (16).** Ameling, Baldwin.  
 ETCETERA ETC 1009, Oct.  
**SCHUBERT: Symphony No. 9.** London Phil-  
 harmonic, Boult. EMI SXLP 30558, Sept.  
**VERDI: Opera Arias.** Tomova-Sintov; Bulgar-  
 ian Radio Vocal Ensemble, Sofia State Philhar-  
 monia, Raychev. TURNABOUT TV 34786, Jan.  
**WAGNER: Operatic Excerpts.** Various. SERA-  
 PHIM IG 6139 (7), Nov.  
**WOLF-FERRARI: Sly.** Polaski, Bader, Reeh;  
 Chorus and Orchestra of Niedersachsischen,  
 Maxim. ACANTA 23.501 (3), Jan.  
**KOYAANISQATSI.** Ruiter; Philip Glass En-  
 semble; Western Wind Vocal Ensemble, Ries-  
 man. ANTILLES ASTA 1, Jan.  
**NELLIE MELBA: The American Record-  
 ings.** RCA AUSTRALIA VRL 5-0365 (5), Nov.

tute "hope" for "think" in the above, but for Del Tredici to have written it differently would have falsified the imagery. That imagery is clear, and it is not so much erotic as masturbatory, whether we think in terms of the Reverend Dodgson's forbidden passion, of Del Tredici's "rapture and regret" for his youth ("suddenly, flooded with a feeling of great happiness, the thought comes to me that I will never grow up," he writes affectingly if ungrammatically), of our own yearning for music's Summer Days and the happy voices of a golden Mahlerian afternoon, or of the unbridled indulgence of these Alice works themselves, in their endless succession, inordinate length (over an hour in the present case), and surfeit of climax.

There's a song in *Hair* that gives the right answer to any supposition that this is meant as a dismissal; *In Memory of a Summer Day* can be fun. It is certainly fun to hear, with its lush orchestration, soaring vocal lines, and satisfying reference to the familiar. I interrupted a spate of protracted Scarlatti sonata listening to hear it, and it occurred to me that many of the criticisms raised against Del Tredici could be applied as well to the Baroque master. He was stuck on one thing, that's certain: There is something limited about a composer, however inventive, who sits in his room, as it were, and doodles out hundreds of bipartite pattern-sonatas without ever following through on their implications. "Grow up," a contemporary could have said to him. "take some responsibility, stop playing with yourself ("an ingenious Jesting with Art" was Scarlatti's particular term for it), break away from your parent-queen and write some serious music." Engelbert Humperdinck (of all people!) *did* say essentially that of Hugo Wolf, with his endless short spurts of song and no *Gesamtkunstwerke*. Yet both produced masterpieces. Humperdinck himself applied Wagnerian

harmony and orchestration to the preposterously fragile substance of folktale and folksong, created a masterpiece of unforgettable beauty, and spent the rest of his life in rapture and regret, trying to recapture that particular "vanish'd summer glory."

My reaction does not persuade me that Del Tredici has hit on a *Hansel and Gretel*, but the best-seller status of *Final Alice* suggests he may have come nearer to the mark than I think. The point to be emphasized, at any rate, is that he is not a tired hack falling back on the past to recoup spent inspiration. He is obsessed. When an artist of unquestioned talent spends his life working out the images and feelings of the first few years of his childhood, we have to expect that the result will be stimulating, even if the stimulation wears thin. (J. R. R. Tolkien did essentially the same, and who but perhaps his academic colleagues would wish otherwise?) Del Tredici is dealing with potent stuff, and even if in the final analysis he has dealt with it indulgently, the power cannot but be felt from time to time.

**BACH: Concertos for Oboe, Strings, and Continuo, in D minor and E flat; Concerto for Oboe d'Amore, Strings, and Continuo, in A.**

Stephen Hammer, oboe and oboe d'amore; The Bach Ensemble. Joshua Rifkin, harpsichord and cond. [Thomas Frost, prod.] PRO ARTE PAD 153, \$9.98 (digital recording). Cassette: PCD 153, \$9.98.

All three of these works are reconstructions of "lost" concertos apparently composed by J. S. Bach early in his career and recently pieced together from movements of cantatas from the 1720s and harpsichord concertos from c. 1740. Only the Oboe d'Amore Concerto (the model for the Harpsichord Concerto S. 1055) has previously been available for inspection, and the edition prepared by Wilfried Fischer for the seventh volume of the *Neue Bach-Ausgabe*

serves as the basic text for this reading. The performing versions of the Oboe Concertos are the result of new research—by Joshua Rifkin and Werner Breig for the Concerto in E flat (parts of which Bach used in the Cantatas S. 49 and 169 and the Harpsichord Concerto S. 1053), by Rifkin alone for the Concerto in D minor (recycled in the Cantatas S. 35 and 156 and the Harpsichord Concertos S. 1056 and 1059).

None of the works has been recorded before, and thus simply by virtue of its contents this disc stands as an important addition to the catalog. But it would be appealing regardless of the repertoire's significance. Stephen Hammer plays on replica instruments he built in collaboration with Jonathan Bosworth, and perhaps his more-than-usual creative involvement accounts for some of the tender loving care that characterizes these performances. Hammer's intonation is very nearly perfect, even in chromatic passages and ornamental flourishes; his reeds speak easily in all registers, with a tone bright enough to contrast well with the accompanying string quartet and harpsichord, yet without the stridency so common to the sound of the Baroque oboe as it's played today. His virtuosity is fluent, his phrasing shapely and animated, his treatment of rhythm energetic and basically straightforward.

Hammer's performance is well matched by violinists Nancy Wilson and Anthony Martin, violist David Miller, and cellist Kenneth Slowick, all of whom use original 17th- or 18th-century instruments. Indeed, these are wholly tasteful interpretations, with swells, articulations, and embellishments in line with accepted opinion regarding Baroque performance practice but not nearly so exaggerated as in the work of some of the continental European early-music ensembles. Rifkin's argument for the authenticity of the size of the accompanying group is expressed clearly in a comprehen-

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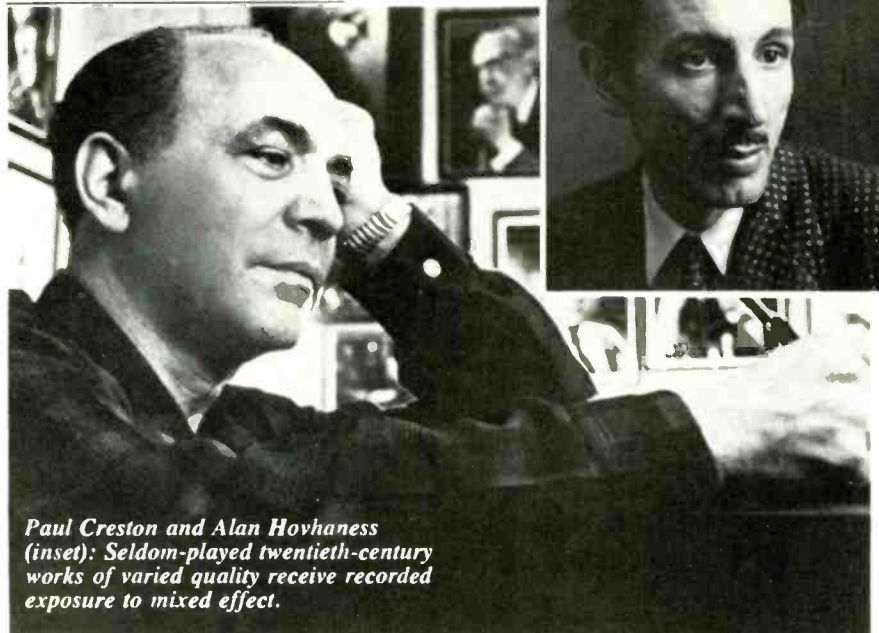
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**Paul Creston and Alan Hovhaness**  
(inset): Seldom-played twentieth-century works of varied quality receive recorded exposure to mixed effect.

sive essay on the insert sheet; the performances he supervises seem blessedly free of rhetoric, and it's with the apparent naturalness of the sonic balances that his case is most convincingly made.

The recording was made at St. Ignatius Episcopal Church in New York City, a room just resonant enough to give the sound an inviting warmth and presence. The pressing is clean, and the engineering (by Thomas Lazarus) is as inconspicuous and ultimately as successful as Rifkin's scholarship. JAMES WIERZBICKI

**BEETHOVEN: Sonata for Piano, in E flat, Op. 7.**

Arturo Benedetti Michelangeli, piano. [Karl Faust, prod.] DEUTSCHE GRAMMOPHON SIGNATURE 2543 505, \$10.98 (previously released as DG 2530 197). Cassette: 3343 505, \$10.98.

This performance strikes some listeners as bizarre, but on close analysis the only thing bizarre about it is its accuracy. Where Beethoven writes *ffp*, Arturo Benedetti Michelangeli leaves absolutely no doubt that you will hear *ffp*—well, he might throw in an extra *f* or two for good measure, but better than the timid single forte followed by a little decrescendo to mezzo-piano that we are accustomed to hearing on most recordings in, for example, the trio of the third movement.

It is a little shocking to hear those sudden roaring bass chords and the fitful stops and starts just as they appear on the page. But rather than integrating this sonata's protean dynamics, rhetorical stops, and orchestral, superpianistic textures into a lyrically polite whole, Michelangeli allows the rough edges to stand exposed. In the first movement, he even chooses a somewhat slow tempo, exaggerating the long, awkward rests.

What is not bizarre at all is the extraordinary fluidity of Michelangeli's technique.

Running passages unfold with complete clarity and evenness, and he possesses that rarest of gifts, a true legato. Indeed, his attention to fine distinctions of articulation sets this performance entirely apart from all others I know.

That is not to say that Michelangeli's playing is precious or priggish. On the contrary, it is quite gutsy. It is true that in the Rondo he doesn't match the elegance of Perahia, and in the Largo he does not approach the thoughtful probing of Brendel. But his own psychological force is unmistakable.

Though the sound is more than a dozen years old, it holds its own nicely against recent competitors. The piano tone is bright, steely, and clearly focused. MICHAEL GREENBERG

**CRESTON: Chant of 1942, Op. 33; Suite for String Orchestra, Op. 109. DELLO JOIO: Air for Strings. HOVHANESS: Celestial Fantasy, Op. 44.**

Members of the Israel Philharmonic, David Amos, cond. [Peter Christ, prod.] CRYSTAL S 508, \$8.98.

These days, when tonality and accessibility are no longer heretical ideas, it has become fashionable to speak of a new romanticism in contemporary music. But what of an older romanticism—that exemplified by an earlier generation of American composers who never hopped on the serial bandwagon, who always remained rooted in a traditionally tonal musical language? Isn't it time for a reevaluation of their work?

This disc makes a good case for a revival of music by three such American conservatives—Paul Creston, Norman Dello Joio, and Alan Hovhaness. All now in their seventies, these men are competent craftsmen who have stubbornly forged and maintained their own personal tonal idioms. The works on this disc are all (with

one exception) for string orchestra; all are unabashedly tonal; all are expressive and mostly consonant in their harmonic writing.

Creston is represented by two works, which together span 30 years of his creative output. *Chant of 1942* (completed in 1943) portrays the composer's personal reactions to the shattering global events of that fateful year. This 11-minute full-orchestra work opens with a dark, brooding introduction, gradually giving way to plaintive, chantlike melodies in the winds. Appropriately enough, hints of Jewish thematic content can be discerned. To this listener, however, the work is disfigured by the falsely triumphant concluding march, which is too easily attained and seems poorly integrated with the rest of the piece. *Chant of 1942*, though sincere, appears more like a dated pastiche of film-score material than an organic whole.

Creston's *Suite for String Orchestra* (1978), a less solemn and substantial effort than *Chant of 1942*, is more successful precisely because it doesn't aspire to grand statements. It is an unassuming, 15-minute work cast in four movements, contrasting a long-breathed lyricism with a vital rhythmic sense. This is an accessible, well-crafted piece that, though a bit long, could easily enjoy many performances by community orchestras and the like.

Dello Joio's contribution to this disc is slight: a four-minute *Air for Strings*, consisting of a lovely cantabile theme framing a more assertive central section. Upon repeated hearings, however, its overly saccharine quality strikes one as more suitable to an easy-listening station than a string orchestra collection.

Hovhaness's *Celestial Fantasy* (orchestrated in 1944) is this disc's most successful effort. Opening with a serpentine, melismatic theme, reminiscent of Eastern Orthodox chant, it gradually develops into a solemn modal fugue. Here, the ultimate glorious conclusion rings true; unlike Creston's *Chant*, we are not dealing with the supposed triumph of good over evil, but merely contemplating the spiritual beauty of the universe. The result is a small masterpiece.

The Israel Philharmonic plays competently enough (though there are recurring intonation problems) and the ensemble is well controlled due to the sensitive direction of David Amos. The recorded sound, however, leaves much to be desired, combining a thin, steely character in the upper strings with a hollow, overly prominent bass. How much of this is due to the sonic ambience of Tel Aviv's Mann Auditorium and how much to this particular recording is hard to determine. The pressing is flawless, and in general Crystal records is to be commended for pursuing an innovative recording policy that allows such deserving but seldom-played works to come before the listening public. K. ROBERT SCHWARZ

**HANDEL: Arias from *Rinaldo* (5) and other operas (4).**

Marilyn Horne, mezzo-soprano; I Solisti Veneti, Claudio Scimone, cond. [Yolanta Skura, prod.] ERATO NUM 75047. \$9.98 (digital recording).

*Rinaldo*: Or la tromba. Cara sposa; Venti, turbini; Cor ingrato; Lascia ch'io pianga. Serse: Ombra mai fu. Partenope: Furibondo spira il vento. Agrippina: Bel piacere. Orlando: Fammì combattere.

When Andrew Porter went to Ottawa for Marilyn Horne's *Rinaldo*, he reported that she had all but dropped even the pretense of acting: "She simply stands and utters." At the Met, whither production and star are bound, we'll have to watch her stand and judge for ourselves whether *Rinaldo* is before us; for now, on disc, we have the utterance, and it is grand.

By holding her ground while times have changed, Horne the Handelian has shifted her identity. In the early '60s, it is fair to say, she stood at the vanguard of the Baroque-to-bel-canto revival, showing for the first time what possibilities lay in those absurd-seeming eunuch-warrior roles (and how foolish all the critics of heroic roudade appear, from Berlioz on, once one has the opportunity of hearing roudade heroically performed). Since then we have learned much about Handel's orchestra and the manufacture, tuning, and pitching of its instruments, about vocal techniques and the specifics of idiomatic period ornamentation, about "foreshortened" recitative cadences and the like, and now Horne seems something of a reactionary.

Various complaints arising out of the above could be made here, but I'm not inclined to make them. Any style, any approach to *Aufführungspraxis*, is valid if a serious and gifted artist believes in it at the moment of performance, and Horne's Handel convinces me on its own terms. (The terms are stated clearly in the opening D major trumpet-and-drums bravura aria.)

The complaints I will make are few. There is a tenderness and delicacy in Handel (for instance, in "*Bel piacere*") that does not find a corresponding shade in Horne's voice: The program is well planned to avoid a surfeit of fireworks, but the metal in her tone cheats the light or slow pieces of their relaxant potential. I find the da capo embellishments more convincing when a sudden run or division graces what is essentially the same melody as before than when there seems to be a new tune fitted to the old harmony.

But it won't do to shake the stick of Authenticity at Horne for this: Surviving accounts and examples show that these guys were very sophisticated improvisers, who knew harmony and did not feel bound to the original contours of the melody. Horne's devices would not have seemed typical in Handel's day, but almost nothing she does here is without plausible precedent somewhere. One possible exception is the frequency with which she reroutes cadences

upward, approaching the keynote from the leading tone rather than the supertonic. And in general I question her apparent conviction that she must at some point go a good deal higher in the da capo than in the A section. Again, some precedent exists, but these flights aloft are not the most enjoyable item in Horne's stock, and the added complication and bravura are impressive enough without them.

Finally, it is also true that the divisions are not quite what they were 15 or 20 years ago for smoothness and accuracy. But when all is said and done, there is something irresistibly splendid here: Try the opening

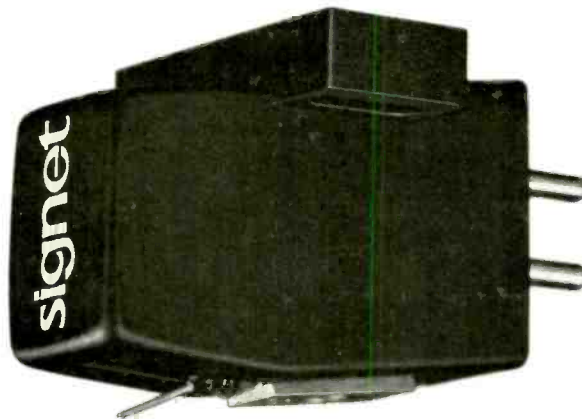
phrase of that first aria, with its fearless, trumpet-firm alternations on A and B; I'll be surprised if it doesn't make your listening faculties leap to attention, as it did mine, and salute General Horne once more.

WILL CRUTCHFIELD

**HINDEMITH: Concerto for Cello and Orchestra; Concerto for Clarinet and Orchestra.**

Tibor de Machula, cello; George Pieteron, clarinet; Concertgebouw Orchestra, Kiril Kondrashin, cond. ETCETERA ETC 1006, \$10.98. Cassette: XTC 1006. \$10.98. (Recorded from performance via NOS Hilversum Radio.) (Dis-

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## CLASSICAL Reviews

tributed by Qualiton Imports, 39-28 Crescent St., Long Island City, N.Y. 11101.)

There is much to like in these two exuberant concertos from a composer whose music is more often trenchant than charming. Hindemith's accustomed brittle neoclassicism and pungent harmonies are allied here with broad lyricism and an uncommon sense of fun. The Cello Concerto (1940) marshals some grand orchestral effects and ends in a sort of toy-soldier march that suggests the stormy climaxes of the first movement weren't meant to be taken all that seriously. The cello part is brilliant and virtuosic, but spectacle never intrudes on the integrity of the counterpoint. The Clarinet Concerto (1947) is less showy, but more humane and engaging. Though composed for Benny Goodman, it is not especially jazzy, except at the end of a brief scherzo, where the clarinetist has a fleet bit of passagework that would sound at home in any jazz club.

The recordings were made during live concerts, the Cello Concerto in 1973, the Clarinet Concerto in 1979. The former's sonics are dated, but the latter sounds just fine, and audience noise isn't obtrusive in either one.

The performances are stylish throughout. Tibor de Machula is a trifle ragged in the finale of the Cello Concerto—it was written for Piatigorsky—but spirited, committed playing is adequate compensation. George Pieteron's clarinet work is controlled, and his tone is bright and focused. The Concertgebouw provides disciplined, powerful backing, and Kiril Kondrashin's conducting is full of life.

MICHAEL GREENBERG

### MONK, MEREDITH: *Turtle Dreams*\* and other works.

Meredith Monk, vocals\*†, organ\*, piano†, mini-moog†, and casio†; Robert Een\*, Andrea Goodman\*, and Paul Langland\*, vocals; Julius Eastman, Steve Lockwood, and Collin Walcott, organs\*; Collin Walcott, didjeridoo†. [Manfred Eicher and Collin Walcott, prods.] ECM 23792-1, \$9.98.

View 1†; Engine Steps†; Ester's Song†; View 2†.

Can dance music have a life of its own? In the case of Chopin, Stravinsky, and Tchaikovsky, the answer is fairly obvious. One can even make a good case for Leonard Bernstein and Duke Ellington, who also have been known to deal with Terpsichore from time to time.

Meredith Monk, a longtime participant in New York City's avant-garde, has now elected to follow the fashionable, contemporary line of musical minimalism. We have heard enough from John Cage, Terry Riley, Philip Glass, et al. to know that none of the traditional building blocks—harmony, rhythm, melody—are safe from abandonment in this music. So, applied to the dance music of Monk, the question of independent life becomes a bit more complex.



WALTER KEANE

*Monk: effective as accompaniment*

The title track of "Turtle Dreams," composed for a Monk theater piece, is simply a rudimentary 3/4 fragment that is repeated on the piano, with various overlays, for about 17 minutes. Most of the performance is intensely boring; certain peaks of intensity become irritating. Every now and then, Monk and her associate singers strike a series of overlaid rhythms that bring pleasure. But these moments are few.

View 1, on Side 2, is a potentially more interesting piece, in part because its modally oriented melody flows in block chord patterns against a lovely piano figure. But Monk intends this figure only as a foil against which to juxtapose harsh, explosive sound effects. Still, the contrast of loud and soft, tender and violent, is effective.

*Engine Steps*, however, will be of interest primarily to those with a fondness for the sound of two-cycle engines. And the brief *Ester's Song*, played on a tinny-sounding Casio keyboard, is too short to evolve properly, despite a provocative, bagpipe melody. View 2, with its Renaissance-like ornamentations and vocal modifications, is more interesting; but again, Monk's determined nondevelopmental style distracts from the quite fascinating sounds she creates.

Does "Turtle Dreams" stand on its own, without the dance? Only partially. The long title piece will probably drive more listeners away than it attracts. And that's a shame, because View 1 and View 2 suggest an emerging talent that can, indeed, survive without visual references. Perhaps Monk should try thinking about music in its own context.

DON HECKMAN

### MOZART: Quintet for Clarinet and Strings, in A, K. 581. WEBER: Introduction, Theme, and Variation for Clarinet and Strings, in B flat.

Sabine Meyer, clarinet; Philharmonia Quartet Berlin. [Toru Yuki, prod.] DEUTSCHE GRAMMOPHON 410 670-1, \$12.98 (digital recording). Cassette: 410 6704, \$12.98.

The name of the clarinetist Sabine Meyer is unknown to the American public, but in West Germany she has become an instant celebrity because her appointment to the first chair of the Berlin Philharmonic



Orchestra was enforced by Herbert von Karajan under threat of his resignation. (The orchestra committee had rejected her candidacy for "lack of orchestral experience.") Obviously she is now fully accepted, and this recording features her debut on discs—with her color photo featured on the jacket, though she enjoys the musical collaboration of the Philharmonia Quartet Berlin. The major work, Mozart's Clarinet Quintet, has been recorded by every clarinetist of note, most recently by Richard Stoltzman and the Tashi ensemble [see following review]. I shall resist the temptation of a detailed comparison, but let it be said in general that the tempo of the German musicians is slightly more animated and less inclined toward rubato than the Americans.

Meyer has a lovely tone quality throughout the entire register of the instrument, impeccable intonation, and a ravishing pianissimo. Her phrasing is tasteful but not very flexible—perhaps in deference to the Philharmonia Quartet, which plays efficiently but a bit rigidly. Their concept of the Larghetto is interesting: Although the clarinet has the melody, the muted strings envelop the solo instrument with such warmth that it seems to be embedded. The recorded sound is beautiful throughout.

The "filler" on the second side is a nine-minute piece by Carl Maria von Weber that might not be by Weber at all but by his



JOAN PEARSON

Richard Stoltzman: rough ensemble edges

contemporary Joseph Küffner. It was rediscovered in 1943 by the distinguished Berlin musician Leopold Kohl and ascribed to Weber. All of Weber's clarinet compositions were written for the famous virtuoso Heinrich Bärmann. This piece consists of six virtuoso variations for solo clarinet accompanied by strings. The instrument used by Weber was a B-flat clarinet, while Mozart preferred the A clarinet for his quintet, the former sounding more brilliant, the latter warmer and more poetic. Sabine Meyer is a master on both.

BORIS SCHWARZ

**MOZART: Quintet for Clarinet and Strings, in A, K. 581; Quintet for Piano and Woodwinds, in E flat, K. 452.**

Richard Stoltzman, clarinet; Peter Serkin,

pianist; Tashi [Max Wilcox and Peter Serkin, prods.] RCA GOLD SEAL AGL 1-4704, \$5.98 (originally released as ARL 1-2863). Cassette: AGK 1-4704, \$5.98.

Richard Stoltzman is one of the great clarinetists of our time, and his interpretation certainly influenced the overall concept of this particular recording of Mozart's Clarinet Quintet. His tone quality, his nobility of phrasing, and his musical imagination are put to good use, but he is not alone; the sound of the string quartet (Ida Kavafian, Lucy Stoltzman, Daniel Phillips, and Fred Sherry) seldom acquires a homogeneous timbre. The vibrato of the first violinist quivers at the wrong places and a few slides could have been avoided, but technically the playing of the string ensemble is secure and polished. Phillips's viola solo (third variation of the Finale) sounds very fine; until now I knew him only as a violinist.

The pace of the entire Quintet is, as I noted above, somewhat slower and more flexible than the interpretation of the Philharmonia Quartet Berlin with Sabine Meyer; there is more freedom in the clarinet cadenza of the Larghetto and generally more relaxed music making. Occasionally, more attention could have been paid to refinement of ensemble; for example, at the return to the recapitulation in the first movement, the E in the clarinet is too loud as compared to the (more important) chro-

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matically descending notes in the first violin, which are almost inaudible. There is a click in the surface of my review copy just prior to the repeat in the first movement.

The pairing of the Clarinet Quintet with the Quintet for piano, oboe, clarinet, french horn, and bassoon is excellent; it is musically satisfying and offers a strong contrast. The piano enters as a dominant factor, and under the hands of Peter Serkin it becomes occasionally overbearing. His playing exudes leadership, intensity, and rhythmic drive, but there are a few miscalculations in dynamics. Some of the chords in the slow introduction sound too massive,

and the descending octaves in the left hand, doubled by the bassoon (mm. 12 and 13), are elephantine. (Why was the short repeat in the first movement not observed?) I also find the chords in the slow movement (right after the double bar) too hammered; even though forte and staccato, these chords are doubled by the winds and need less piano emphasis. A bit more attention could have been paid to finesse in articulation: Staccato notes in the piano should correspond in length to those in the winds, particularly when there is interplay (compare mm. 86–87 and 88–89 in the *Larghetto*); correctly, the articulation should have been the

same.

The intonation of the winds is excellent, though the quality of sound is occasionally a bit reedy. But over and above, the performance has a great deal of infectious spirit—especially in the last movement, which is exhilarating. Serkin and his ensemble play it with exuberance and joy; hearing the glistening piano passages, one can understand why Mozart himself considered the Quintet his “best piece” back in 1784. A special bravo to hornist Robert Rouch for the virtuoso passage at the end of the first movement! **BORIS SCHWARZ**



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**RACHMANINOFF: Concerto No. 3 for Piano and Orchestra, in D minor, Op. 30.**

Jean-Philippe Collard, piano; Orchestra of the Capitole de Toulouse, Michel Plasson, cond. [Eric MacLeod, prod.] EMI/ANGEL S 37923, \$9.98. Cassette: S 37923, \$9.98.

With ten or so recordings of the Rachmaninoff Third Concerto in the catalog at any given moment, one hopes for something special to set a new entry apart. But there is little in this disc to compel attention. As on his previous Rachmaninoff release—the Concerto No. 2 and the *Variations on a Theme of Corelli*—Jean-Philippe Collard's playing is precise, refined, and somewhat subdued. If you like to use Rachmaninoff as background music for ironing shirts, this recording will do nicely. But you might be happier with a more passionate, voluptuous account, such as Weissenberg/Bernstein, also on Angel.

Collard clearly has the technique to do anything he wants with his hands, except perhaps to play legato, but this performance is interpretively raw. Crescendos don't surge and swell; they just get louder. Diminuendos don't demand closer attention; they just get quieter. Missing are the sweep and scope of the music and, in the third movement, playfulness—such as that which Ashkenazy brings to his recording with Ormandy and the Philadelphians.

Then again, Collard doesn't have the Philadelphians to play with. The French ensemble is certainly adequate to the task, but it doesn't bathe the listener in gorgeous, rapturous sound, and in Rachmaninoff that's half the fun. Michel Plasson's conducting is sturdy, not at all sybaritic.

The present disc is a domestic reissue of a 1978 Pathé Marconi release, taking advantage of Collard's growing popularity in this country; I have heard better sonics in recordings from the early 1950s. The orchestral sound is tubby and strangely balanced, but the piano is quite clear.

MICHAEL GREENBERG

**SCHUBERT: Duo Sonata for Violin and Piano, in A, Op. 162. STRAVINSKY: Divertimento for Violin and Piano.**

Mihaela Martin, violin; Paul Ostrovsky,

piano. [Thomas Frost, prod.] VOX CUM LAUDE VCL 9043, \$8.98. Cassette: VCS 9043, \$8.98 (distributed by Moss Music Group, 48 W. 38 St., New York, N.Y. 10018).

Having heard Mihaela Martin's prizewinning performance in Indianapolis during the 1982 International Violin Competition and her debut recital at Carnegie Hall, I find that this premiere recording—though excellent in many ways—fails to give a full picture of her remarkable talent. She is a splendid violinist with an earthy, natural temperament, while the repertoire chosen here requires a level of sophistication that she has not yet reached. I refer to the Stravinsky *Divertimento*, which she plays with technical accuracy but a bit stiffly, without the ultimate humor and nonchalance. At present her interpretation is too studied.

The Schubert Duo fares better. Martin's playing is warm yet unsentimental, her phrasing is ingratiating and gracefully naive, and her youthful spirit matches that of the composer, who was only twenty when he wrote it. Yet this piece is hardly the appropriate vehicle for displaying Martin's rich violinistic gifts. For her next recording she should choose idiomatic violin music, for which she has particular affinity. Her piano partner, Paul Ostrovsky, is a sensitive and stylish ensemble player and his support is authoritative as well as discreet. Sound and balance of the recording are excellent.

BORIS SCHWARZ



Tennstedt and Popp: high stakes

### STRAUSS: Four Last Songs; Death and Transfiguration.

Lucia Popp, soprano; London Philharmonic Orchestra, Klaus Tennstedt, cond. [John Wilan, prod.] EMI/ANGEL DS 37887, \$12.98 (digital recording).

These magnificent songs, Strauss's musical farewell to the world, were written only a year before the composer's death in 1949 and represent the culmination of his art of combining voice with full orchestra. Indeed, with the abundance of long, difficult melismatic phrases, the voice seems to become part of the orchestra, adding a special luminosity to the recognizable Straussian color of the instruments.

Any soprano who undertakes these works must surely be aware that she is staking her claim against the two recorded ver-

sions by Elisabeth Schwarzkopf, paragons of style and beauty (especially the second one, with George Szell conducting). And what a poignant regret that one of today's ubiquitous tape recorders could not have been present at the premiere performance by Kirsten Flagstad and Furtwängler in May of 1950!

Lucia Popp's version is not without merit, although the lightness of the voice at times prevents her from giving full due to the lush, mature glory of the music. A slight harshness of timbre surfaces occasionally in *Frühling* and again in *Im Abendrot*, as does a somewhat overdone swelling on individual notes, especially in *Beim Schlafengehen*. Pleasing to hear, however, are Popp's rhythmic integrity in subtly syncopated passages and her ability to capture the songs' serenity.

Tennstedt provides a loving and pliable accompaniment, although sometimes more clarity (such as in the beginning of *Beim Schlafengehen*) would have been welcome. The horn solo that ends *September* is beguiling, as is the gently soporific quality of the violin solo in *Beim Schlafengehen*. Since Popp's coloratura quality has limited carrying power in the middle and low registers, the orchestra comes precariously close to covering her in a few places.

Tennstedt's reading of *Tod und Verklärung* on the flip side has an invigorating breadth and sweep, but one senses an inconsistency in the balance, with highs spotlighted in some passages and lows, especially timpani, predominating in others.

JOHN SCHNEIDER

### SZYMANOWSKI: Quartets for Strings: No. 1, Op. 37; No. 2, Op. 56.

Varsovia String Quartet. [A. de Wouters d'Oplinter, prod.] PAVANE ADW 7118, \$11.98 (distributed by Harmonia Mundi U.S.A., 2351 Westwood Blvd., Los Angeles, Calif. 90064).

The two string quartets by Karol Szymanowski (1882–1937) are genuine discoveries. The musical idiom of this Polish master is not unknown to the American public. Last year, in observance of his one-hundredth birthday, his opera *King Roger* was presented in concert form at Wolf Trap; other works were played at the Newport Festival, the Waterloo Village Festival, and at Carnegie Hall, among other places. Violinists program Szymanowski's shorter violin pieces and concertos (particularly No. 1) quite frequently. But the quartets have been bypassed by our major quartet organizations.

The First Quartet, Op. 37, was written in 1917. (Szymanowski spent World War I in isolation on his estate in his native Polish-Ukraine, composing diligently.) At that time his style was post-Impressionist, colorful, intense, and poetic. His treatment of the quartet idiom, without being imitative in any way, has certain affinities to Ravel's Quartet of 1903 in its coloristic string effects and voice spacing.



Bitetti: competent enough Vivaldi

Szymanowski's Second Quartet, Op. 56, was written ten years later. By then the composer had entered his last creative period: His basic context had been enriched by a new element, Polish folklore. In 1918, Poland had gained national independence, and Szymanowski—who moved to Warsaw—was soon considered the most distinguished of contemporary Polish composers. From 1927 to 1932 he was rector of the Warsaw Conservatory. He let himself be inspired by the peasant tunes of the Tatra mountain region without relinquishing his advanced compositional techniques. This lends particular charm to the Second Quartet, where reflections of folk tunes can be discerned in the second and third movements. One admires the richness and coloristic variety of sound extracted from the four stringed instruments. The Second Quartet is a very effective as well as challenging work that deserves to enter the quartet repertoire.

The Varsovia String Quartet was established in 1976 by four Polish musicians; they coached at the Yale Summer School in Norfolk, Connecticut, with Raphael Hillyer in 1977. Since then, they have returned to the U.S.A. and Canada for a concert tour in 1980 and have played successfully throughout Europe. They specialize in twentieth-century music, particularly contemporary Polish music, and have won several important awards. The first violinist, Boguslaw Bruczkowski, is concertmaster of the Warsaw Philharmonic Orchestra. This recording was made in Warsaw in 1982 and shows the Varsovia Quartet as a first-rate ensemble with a playing style especially suited for new music.

BORIS SCHWARZ

### VIVALDI: Concertos, Op. 3: No. 6, in A minor; No. 12, in E; Concertos in D and in A.

Ernesto Bitetti, guitar; I Solisti di Zagreb. TURNABOUT TV 34796, \$5.98. Cassette: CT 4796, \$5.98. (Distributed by Moss Music Group, 48 W. 38th St., New York, N.Y. 10018.)

Argentine guitarist Ernesto Bitetti plays four Vivaldi concertos in transcriptions for guitar and strings. There is neither anything very wrong with these performances nor

## CLASSICAL Reviews

anything exciting about them; they are merely another contribution to Baroque Muzak, in which the conductorless orchestra provides rather four-square accompaniments for pleasant-enough guitar solos.

Bitetti arranged the two concertos from Opus 3, the historic *L'Estro armonico*, originally scored for violin and strings. Though he is clearly in command of his instrument—he admirably makes up in lyrical phrasing what the guitar cannot produce in the way of sustained tone—one misses the violin both for fullness of tone and for timbre variety on repeated notes.

The Concertos in D and A major were

both transcribed from flute originals by the great Catalan guitarist Emilio Pujol. Their thematic similarities may lead the listener to question the wisdom of juxtaposing them on a single recording, which indeed becomes rather tedious. In the Largo of the very familiar D major Concerto, the extremely slow tempo is not supported by either the phrasing or the pulse of soloist or orchestra.

For a program consisting entirely of transcriptions, it is particularly regrettable that the liner notes do not provide catalog numbers for each composition. The correct numbers are as follows: Op. 3, No. 6, is R.

265, P. 240; Op. 3, No. 12, is R. 356, P. 1; the Concerto in D is R. 93, P. 209; and the Concerto in A is R. 82, P. 7/3.

NANCY TOFF

## Recitals and Miscellany

### MOSTLY FRENCH.

Froydis Ree Wekre, horn; Zita Carno, piano; Sequoia String Quartet\*. CRYSTAL S 377. \$8.98.

CHABRIER: Larghetto. CHERUBINI: Sonata No. 2\*. SAINT-SAËNS: Morceau de Concert. SCHUMANN: Adagio and Allegro, Op. 70. TOMASI: Danse Profane; Chant Corse.

At first glance, the choice of repertoire for this disc seems imaginative, with short French pieces and a little-known sonata by the usually operatic Cherubini complementing more substantial works by Schumann and Saint-Saëns. But the first side (Emmanuel Chabrier, Henri Tomasi *Danse Profane*, and Cherubini) can only be described as soporific. The listener is stirred from incipient slumber by the surprise of hearing the string accompaniment of the Cherubini, whose performers are mercifully anonymous in the packaging. (Crystal records advises that a sticker will be attached to current inventory identifying the Sequoia String Quartet.) The string phrasing is prosaic at best, and it lacks the schmaltz necessary to bring off this typical concert etude with its formulaic syncopations, scalar runs, and arpeggio flourishes. (Cherubini wrote the Second Sonata as a Paris Conservatory examination piece in 1804.)

Tomasi's *Chant Corse* is the most successful piece on the program; hornist Froydis Ree Wekre displays a beautiful tone and creates a lyrical melodic line. Her performance of the Schumann Opus 70, however, is plagued not only by a forced upper register, but by fuzzy syncopations and a lack of conviction in the opening fanfare of the Allegro. Saint-Saëns's *Morceau de Concert* at last demonstrates some romantic spirit, but it cannot compare to the Tuckwell/Ashkenazy version (London 6938).

Wekre, coprinicipal horn of the Oslo Philharmonic, has a pleasant, if unexceptional, midrange tone; her lower notes are labored, and downright ugly at times. There are slight splats on many entrances, thus getting phrases off to slow starts, and abrupt phrase endings; in between, however, she has a lovely legato.

Pianist Zita Carno provides a tinny, banging accompaniment and gets no help from the engineering department. A comparison of her Schumann with Ashkenazy's is proof positive of the difference between musical partnership and mere harmonic support. Overall, the microphone placement is excessively distant, and recording levels quite low.

NANCY TOFF



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# The Tape Deck

Critiques of new cassette and open-reel releases by R. D. Darrell

## Keys-Keepers

Of all wielders of the 88 keys to the realms of piano music, Artur Schnabel was surely the Grand Master. Others have been more technically dazzling and dramatically charismatic, but except for Sergei Taneyev, no virtuoso born in the 19th century has matched Schnabel's profound musicianship and versatility as composer, teacher, ensemble player, and soloist. No one has surveyed as fully the Himalayan heights of Beethoven's and Schubert's piano works. And if Schnabel's Beethoven catalog is the more famous and more often reissued, for many of us it is his smaller Schubert discography that is even more precious. Now, at last, younger generations for whom Schnabel has been only a legend can discover this for themselves in the EMI/Arabesque resurrection of that mono treasure trove, contained in two boxed sets of three cassettes or discs each.

The currently available Vol. 1 (SB 8137-3L, \$24.94; notes by Joan Chissell) includes the mid- and late-1930s-recorded *Trout* Quintet (with the Pro Arte Quartet and Claude Hobday); four-hand Marches and Rondo (with son Karl Ulrich); the solo *Moments musicaux*, Sonata in D (D. 850), and *Allegretto* (D. 915); and the first four of the 1950 *Impromptus*. (Vol. 2, coming soon, will complete these, with other four-hand works, the great last two Sonatas, and the 1932-recorded songs with Therese Behr-Schnabel.)

Considering that the original 78s (except for the *Impromptus*) were captured on short-sided wax masters, the present processings are remarkably satisfactory in continuity as well as tonal quality. But their incalculable value lies in Schnabel's incomparably magisterial eloquence, rhythmic vitality, expansiveness, and conviction. For veterans rehearsing after many years, and for younger listeners hearing for the first time, this is uniquely elevated and authoritative music-making of a true grand manner and subtle sensibility rarely if ever encountered nowadays.

Yet what our own keyboard masters can give us is considerable in itself as well as stimulatingly varied in individual personality. Today's pantheon may not be fully tape-represented this month, but we do have such notables as Claudio Arrau, Alfred Brendel, Glenn Gould, Sviatoslav Richter, and Russell Sherman in highly diversified materials.

Arrau impressively contrasts Liszt's demonic side (*Dante* Sonata and *Les Funérailles*) with the composer's gleaming arabesques on Chopin's six *Chants polonais* (Philips digital/chrome 7337 273, \$12.98). Brendel returns to the great Schumann Opus 17 Fantasia he first recorded 15 years ago, now coupled with the smaller scale Opus 12 *Fantasiestücke*, all in penetrating new if scarcely Schumannesque illuminations (7337 283). Similarly, Richter is more distinctively powerful than orthodox-Mozartean in the large-scale Piano Concerto No. 22, K. 482, offered with a less striking Riccardo Muti/Philharmonia Symphony No. 24, K. 182 (Angel digital/ferric 4XS 37740, \$9.98).

Gould's legacy gives us presumably the last additions to his tragically incomplete Beethoven canon, while Sherman continues his series begun last August (but not in European recordings, as I mistakenly reported then). Two gaps in the Gould series are filled in with lapidary, only tonally lightweight versions of the 12th (*Funeral March*) and 13th (*quasi una fantasia*) Sonatas (CBS Masterworks MT 37831, price at dealer's option). Sherman presents a remake of his *Waldstein* (1978 Advent taping, later Sine Qua Non disc) and a comparably virile, full-blooded No. 30, Op. 109 (Pro Arte digital/chrome PCD 116, \$9.98).

Orthodox connoisseurs well may be scandalized by the impudent idiosyncrasies of such talented but willful Young Lions as Ivo Pogorelich and Zoltán Kocsis. But the former finds Ravel's *Gaspard de la nuit* and Prokofiev's Sixth Sonata (Deutsche Grammophon digital/chrome 3302 093, \$12.98) far more congenial repertory than his earlier Chopin and Beethoven/Schumann releases. And if Kocsis's larger scale Chopin Waltzes are undeniably brashly Benzedrined, the quirkily rhythmic Mazurka-like examples are uncommonly haunting (Philips digital/chrome 7337 280, \$12.98).

**Truly imaginative programming** is so rare, now as always, that special kudos should go to an EMI/Pathé Marconi tribute to one of France's most admired recent composers and theorists, Charles Koechlin (1867-1950). I'd never heard his 1919 *Balade* for Piano and Orchestra, Op. 50, or 1933 *Seven Stars* Symphony, Op. 132, until these warmly empathetic, well-recorded Monte Carlo Philharmonic versions by conductor Alexandre Myrat with pianist Bruno Rigutto (Angel digital/ferric 4XS 37940, \$9.98; no notes). No master-

pieces, they are often hypnotic, Gallic mood music, distinctive for poetic scoring.

If Ernest Chausson's one-of-a-kind Concert (not Concerto) for Violin, Piano, and String Quartet is only relatively a rarity, it's a musically imaginative gem that demands a near ideal choice of performers to carry on the tradition of its Thibaud/Cortot and Heifetz/Sanromá/Musical Arts Quartet past masters. And that's exactly what it gets, along with a near ideal recording, in the new Perlman/Bolet/Juilliard Quartet version (CBS Masterworks digital/chrome IMT 37814, price at dealer's option).

**New Pro Arte open reels** from Barclay-Crocker (313 Mill St., Poughkeepsie, N.Y. 12601) feature the first digital recording of Schubert's beguiling *Rosamunde* music with its now usual *Zauberharfe* Overture (F 0106, \$9.95). Conductor Gustav Kuhn bears the responsibility for the disappointing results: Soprano Katherine Montgomery sings fervently (if shakily), the Berlin chorus and R.I.A.S. orchestra are acceptable, but the essential Schubertian lilt and buoyancy have been insensately bludgeoned to death.

Ironically, even the analog sonics are superior in both the 1977 Supraphon Chopin Preludes by Ivan Moravec (F 1032, \$9.95) and c. 1972 Melodiya Shostakovich Fifth by the U.S.S.R. Symphony under the composer's son Maxim (Quintessence/B-C E 7202, \$8.95). More significantly, each of these proffers a superb performance as well. It's fascinating to compare the former with Moravec's c. 1967 Connoisseur Society version (In Sync cassette replacing Advent's). And while there are more virtuosic and polished versions of the favorite Shostakovich Symphony, none is more powerfully moving or worthier of the present reel-ization of its full robust strength.

Also welcome is Supraphon's 1978 Suk/Czech Philharmonic/Neumann performance of Dvořák's Violin Concerto and Opus 11 Romance (F 1002, \$9.95)—more richly expansive in every way than the c. 1960 coupling under Ančerl released in the U.S. a couple of years ago in Quintessence disc/cassette editions. And now there are first-rate reel alternatives to operas reviewed as cassettes in the December 1981 and September '83 "Tape Deck" columns: Dvořák's folkish *The Jacobin* (Y 3000, \$28.95) and Donizetti's comic *Il Campanello* (F 0125, \$9.95). **HF**

# BACKBEAT

## Nile Rodgers: "Alright!"

What do Southside Johnny, David Bowie, and Diana Ross have in common?

by Davitt Sigerson

WHEN *Dance, Dance, Dance* went gold in 1977, Chic looked like one more faceless disco band. Its followup, *Le Freak*, was such an odd little record that Atlantic thought of dropping the group—until, of course, that single went on to sell more than six million copies. Since then, Nile Rodgers and Bernard Edwards, Chic's guitarist-bassist production team, have changed the

face of pop and black music in America and England. Their songs are anthems (Sister Sledge's *We Are Family*) and prototypes (*Good Times* marked the invention of "hip hop," now the characteristic rhythm for rap backing tracks); their groove is as unique and widely imitated as any in rock.

It's hard to remember all the hits: *I Want Your Love* and *Everybody Dance for*

Chic; *He's the Greatest Dancer* for Sister Sledge; *Saturday* for Norma Jean; *Upside Down* and *I'm Coming Out* for Diana Ross. Rodgers and Edwards have influenced such white artists as Queen and Blondie (Debbie Harry recorded a solo album with them in 1981) and almost every major black production team—Mtume and Reggie Lucas, Kashif and Paul Lawrence Jones, the Solar Family. Nowadays, there are few contemporary pop records that don't sound like homage à Chic.

As that group lost its commercial edge in the early '80s, Rodgers and Edwards went on to solo projects, producing, and session work. In the last year, Nile has produced albums for Southside Johnny and the Jukes ("Trash It Up"), David Bowie ("Let's Dance"), guitarist Michael Gregory ("Situation X"), and the Spoons (a Canadian band whose "Talk Back" will be released in March on A&M) and singles for Kim Wilde and INXS. He has written and performed the score for Amos Poe's film *Alphabet City*, coarranged and played on Hall and Oates's *Adult Education*, and played sessions with Bernard on Paul Simon's "Hearts and Bones."

I spoke with Rodgers at the Power Station, a New York City recording studio (see BACKBEAT, July 1982) where Chic's new album, "Believer," was recorded. As in previous meetings, he responded to my queries with characteristic grace, wit, and charm.

**Backbeat:** These days, you're a solo artist, a guitarist, a songwriter, a producer, and still a member of Chic. Do you see yourself zeroing in on any one of these roles?

**Rodgers:** They're all pretty even, although

*Davitt Sigerson is a free-lance journalist and a recording artist on Ze/Island records.*



EBET ROBERTS

the present project is always the most important. Something really peculiar about my personality is that once I finish a record I never listen to it. I don't even have a Bowie record; somebody asked me for my solo album the other day, and I said, "Damn, that's right! I *did* make a solo album." So it's always the new thing I'm doing that keeps me going.

**Backbeat:** You and Bernard developed a sound after *Le Freak* that changed the complexion of pop, and of r&b in particular. What do you think was at the heart of that?

**Rodgers:** It's easier to analyze after the fact. At the time, a lot of rhythm and blues acts were doing what we did, but now you can hear it on pop records, too. All of the parts are right there in the rhythm section. Even when there's a lot of sweetening [e.g., strings and horns], like in the old Motown records, or the early Chic, the rhythm section is still the key. So with or without the extras, people still remember the song. For instance, it's hard to sing *Good Times* without [the bass riff]: "doo doo doo, da da-da da da, da da, da da."

And that's our writing style. It started when Bernard and I were doing Top-40 gigs and had to learn to cover all the parts. If there was a rhythm part and maybe a horn line, I had to play them on the guitar.

**Backbeat:** And with all the changes you've made in your music, the rhythm-section sound is the one thing you haven't changed.

**Rodgers:** True—it became routine for us. I'm sure we weren't the only group to do that, but that was how we wrote all our really big hits. People just seem to be really comfortable listening to that formula.

**Backbeat:** Your other big contribution has been tempo. Before *Le Freak*, most disco records were over 130 beats per minute. You slowed everything down to around 110. Were you afraid that *Le Freak* would bomb because deejays couldn't segue smoothly into it from other records?

**Rodgers:** Really! When we were writing it we kept saying, "When this comes on, people are going to notice it." In the clubs, I used to see how all the deejays had marked the beats per minute on the records. They'd have bins for 125 and for 135. *Le Freak* threw them off completely.

**Backbeat:** But *Dance, Dance, Dance* was faster, wasn't it?

**Rodgers:** Yes—that song was just our way of getting in the door. Slowing the beat down on the followup was a conscious thing.

**Backbeat:** And once you slowed it down, the interplay between your guitar and Bernard's bass was featured.

**Rodgers:** Well, I don't know, because even on *Dance, Dance, Dance* we had that interplay: There's a long vamp where the guitar chucks [plays short, syncopated chords] and Bernard leads with his bass. But we did play a lot more inversions once we slowed

things down.

**Backbeat:** Speaking of those two songs, is it harder to write hits once you've had a number of them? In other words, when you have a "sound" that works, how do you tap it again without sounding stale?

**Rodgers:** It's hard to keep playing the same type of stuff over and over again, but that's what people want. There's a lot of searching involved. You really want to have a hit, but you ask yourself, "Should I do that again?" So you find different outlets; you experiment while still playing your style, but not with the exact same chord changes.

A good case in point is *Let's Dance*. I guess it's pretty obvious that the song didn't sound like it does now when Davie [Bowie] first wrote it. When he played it for me, I started chucking on guitar to it and that chuck became a basic element; I wrote the horn part to it exactly. At first the chuck filled the spaces, but after I sat down and listened to a rough take, I didn't like it because it reminded me of my typical Nile Rodgers parts. So I made it clean, no chucking between, and I don't think David dug it. He kept saying, "No, chuck through it." So finally we figured out another way to get the rhythm happening.

**Backbeat:** So you went back to your first impulse, and now the song almost sounds like a reprise from the old Chic.

**Rodgers:** I still hear those old rhythms—they're such a part of my personality—but I really try not to do them the same way.

**Backbeat:** What about *Rebels Are We*, from "Real People"? The record had some great things and some completely bizarre things on it. Was that a conscious effort to get away from what you had done before?

**Rodgers:** Absolutely. If you only knew how incredibly hard *Rebels Are We* is to play! Live, after we had played it right, we'd go into the dressing room and say, "Alright!" Forget playing the single-note stuff, just try making the chord changes

with all that off-rhythm.

**Backbeat:** Your solo album ["Adventures in the Land of the Good Groove"] was also very experimental. Can we look forward to more like it?

**Rodgers:** I made a lot of mistakes on that album. Composition-wise, in my head, I knew where I wanted to go but because of the nervousness and anxiety of doing it all myself, I was afraid. I've grown up quite a bit since then. Believe it or not, that was nothing compared to what I want to do now. For *Alphabet City* I bought a Synclavier, and that has really changed my life. I'm playing classical guitar again—I'm taking care of my fingernails. I want to make what I call higher consciousness music. I don't want to play alienating stuff, but I want to have a hard time playing the songs. I want the challenge as a musician—it's important to keep me interested.

**Backbeat:** Are some Chic songs written by Bernard and some by Nile or do you write them together?

**Rodgers:** We basically write apart, except for the big hits—those we collaborate on. When we wrote *Good Times*, Bernard and I reminded me of the old *Dick Van Dyke Show*, where there's a team of writers sitting in a room, each with his own paper and pencil, trading things back and forth. *Good Times*, *Le Freak*, and *Dance, Dance, Dance* were written that way, but then, on "Diana," Nard wrote that huge hit, *I'm Coming Out*, and I wrote *Upside Down*.

**Backbeat:** What about *We Are Family*?

**Rodgers:** I wrote that.

**Backbeat:** Going back to the Bowie album, the title track struck me as the most successful by far. Did you produce that song differently?

**Rodgers:** When we started working on the record I had a totally open mind. I'm a big Bowie fan, and I was expecting something completely off-the-wall. But I had to listen (Continued on page 79)

## Selected Discography

### CHIC

- Chic. Atlantic SD 19153; 1977.
- C'est Chic. Atlantic SD 19209; 1978.
- Risqué. Atlantic SD 16003; 1979.
- Les Plus Grands Succes de Chic/Chic's Greatest Hits. Atlantic SD 16011; 1979.
- Real People. Atlantic SD 16016; 1980.
- Take It Off. Atlantic SD 19323; 1981.
- Tongue in Chic. Atlantic 80031-1; 1982.
- Believer. Atlantic 80107-1; 1983.

### NILE RODGERS

*Adventures in the Land of the Good Groove*. Mirage 90073; 1983.

### NILE RODGERS, PRODUCER

- Michael Gregory: *Situation X*. Island 90110-1; 1983.
- Southside Johnny and the Jukes: *Trash It Up*. Mirage 90113-1; 1983.

### NILE RODGERS AND DAVID BOWIE, PRODUCERS

David Bowie: *Let's Dance*. EMI-America SO 17093; 1983.

### NILE RODGERS AND BERNARD EDWARDS, PRODUCERS

- Norma Jean. Bearsville BRK 6983; 1978.
- Sister Sledge: *We Are Family*. Cotillion SD 5209; 1979. *Love Somebody Today*. Cotillion SD 16012; 1980.
- Diana Ross: *Diana*. Motown M8 936M1; 1980.
- Sheila and B. Devotion. Carrere SD 38-124; 1980.
- Deborah Harry: *Koo Koo*. Chrysalis CHR 1347; 1981.

*Soup for One*, Original Motion Picture Soundtrack. Mirage WTG 19353; 1982.

# Reviews

## Reggae Pop, Reggae Roots

Reviewed by Steven X. Rea



EBET ROBERTS



MICHAEL PUTLAND/RETNA

Wailer (top) is reggae's blackheart man; Cliff is its sweet crooner.

**Jimmy Cliff: The Power and the Glory**

Jimmy Cliff, producer  
Columbia FC 38986

**Bunny Wailer:**

**Roots Radics Rockers Reggae**

Bunny Wailer, producer  
Shanachie 43013

Jimmy Cliff's "Wonderful World, Beautiful People" (1970) and Bunny Wailer's "Blackheart Man" (1976) stand as two of the finest reggae albums ever made and, along with various Marley discs, belong in any essential catalog of Jamaican pop music.

Unlike the street tough he played in *The Harder They Come*, Cliff has spent his recording career espousing one thing and one thing only: universal love. The quality of his work, however, has fluctuated dramatically. Most of his late '70s albums are ludicrously overproduced, zealously optimistic affairs, rife with homilies and cornball sentiment. But other LPs have managed to strike the right balance for his sweet croon of a voice: On "The Power and the Glory," seductive rhythms, big bursts of keyboards, and lean, funky guitar riffs accompany hokey but heartfelt observations about how "we all are one" and "mu-

sic is the food of love."

Part of the disc's success is attributable to Amir Bayyan and Ronald Bell (of Kool and the Gang), who produced and cowrote the opening *We All Are One* and *Reggae Night*, a party-funk groove with a walloping backbeat. The former isn't faultless (the children-at-play noises are a bit much) but its music has a tough edge, sharpened by Carl "Chinna" Smith's taut guitar and Ansel Collins's spare synthesizer.

And Cliff has tempered his proclivity for platitudes. On *Piece of the Pie*, a rebellious anthem propelled by chunky off-beat rhythms, he demands "equal rights and justice" and warns that "a hungry mob is an angry mob" (a steal from Marley). *Sunshine in the Music* mixes a near calypso breeziness with call-and-response vocals that evoke an African tribal ritual. And *American Dream* is a sharp attack on American values and hypocrisy, framed in a melody that sounds like the *The Harder They Come*.

Bunny Wailer's music is darker and more revolutionary than Cliff's. "Roots Radics Rockers Reggae," Wailer's first U.S. release in more than three years, is not "Blackheart Man." But it comes pretty close to that LP's masterful amalgam of

Rasta mysticism, mellifluous American pop, and Jamaican folk music. Accompanied by a gaggle of Jamaican sessioners—including bassist Robbie Shakespeare, drummer Leroy Wallace, guitarist Smith, and keyboardist Earl Lindo—Wailer delivers a conciliatory antiwar song (*Cease Fire*), a fervent, funky hymn (*Love Fire*), a coy, sexy tune punctuated by a popping synth-beat (*Wirly Girly*), and five other fine tracks.

Wailer, who's rumored to be reforming the original Wailers with Peter Tosh, has crafted a style that's all his own: The horns toot like wheezy kazoos, resembling a tin band in an old cartoon; the keyboards splash out skirly chords; and Wailer pounds and patters out a deft backbeat on various big and small percussion instruments, providing apt accompaniment to his smoky, tremulous voice. Unfortunately, the recording itself is flat and murky, with everything mixed down to an equal level—including his vocals. Still, this is a small complaint given the excellence of the material.

These two albums bode well for the future of reggae, and the future of popular music. Cliff appears to be widening his musical perimeters toward a global pop context, while Wailer continues to operate within his unique, self-defined stylistic boundaries.

**Carpenters: Voice of the Heart**

Richard Carpenter, producer  
A&M SP 4954

Even at the peak of their career as hit-singles artists, the Carpenters loomed as pop atavists: Richard Carpenter's sleek, string-washed arrangements, sister Karen's plush vocal style, and the duo's choice of material all echoed the mainstream-pop virtues of a generation that predated the kilowatt alternatives of the day.

American pop has softened in recent years, even with the rising tide of electronic percussion and synthesized instruments. Still, apart from Linda Ronstadt's formal valentine to '40s and '50s pop, "What's New," this posthumous album of Karen Carpenter's final studio performances belies modern comparisons.

Part of that is due to the very quality of her creamy alto. With her deliberate yet heartfelt phrasing and true vibrato-less



delivery, this child of the '60s remains more comparable to '50s stylists like Rosemary Clooney or Margaret Whiting than to any of the Carpenters' own chart rivals. "Voice of the Heart" reinforces that parallel in its emphasis on ballads and midtempo works.

In retrospect, Richard's instincts as writer and arranger seem to yield the often baffling mixture of pure corn and sophisticated pop nuance. As on earlier works, here he often falls back on tear-jerking orchestral swells or too-cute sprinkles of celeste-like electric piano, then rescues the track through a more distinctive device, such as the use of subdued steel guitars as an off-beat replacement for horns and reeds.

Such disparities have always been mitigated by his sister's delivery, which, however bathetic the songs, has consistently been sincere. That directness taps a darker, more adult quality in moments here; a sadder-but-wiser undercurrent once inconceivable for this fresh-faced pop ingenue ripples through two of the set's best songs, *Make Believe It's Your First Time* and *Two Lives*. The latter gets a much more straightforward reading than Bonnie Raitt's cover of the late '70s.

"Voice of the Heart" probably won't win the Carpenters any new fans, but neither is it a half-hearted pastiche of shelf tracks or an unfinished work delivered to

cash in on the vocalist's tragic, premature death last year. Some may wish for more uptempo material, or one of the duo's frequent cover versions of past hits, but it's unlikely anyone will dismiss these songs as below the duo's pristine pop standards.

SAM SUTHERLAND

**Los Lobos: . . . And a Time to Dance**  
T-Bone Burnett & Steve Berlin, producers. Slash 23963-1

The wild, rave-up party music of Latino-pop bands like Cannibal & the Headhunters and Sam the Sham & the Pharoahs, and the ersatz Tex-Mex of Joe "King" Carrasco & the Crowns, is all well and good. But there's something to be said for pure, simple barrio rock. Such is the fare of Los Lobos, an East-L.A. quartet whose debut offers an ebullient mix of rockabilly, blues, and Mexican polkas. In fact, the only thing wrong with ". . . And a Time to Dance" is that, at seven songs, it's way too short.

Like fellow Angelenos in the Blasters, Los Lobos is an outfit of purists. Conrad Lozano doesn't wail or whoop; he just sings in a hearty, unpretentious voice perfectly suited to the band's fast, celebratory tunes. With Lozano's rumbling, uncomplicated bass lines, Louis Perez's crisp, steady drumming, and the sprightly rhythm guitar of Cesar Rosas, things careen merrily

along, as the band jumps deftly from the '50s rock of *Why Do You Do* to the boogie-blues of *Walking Song* to the breakdown-in-the-zocalo moves of *Anselma* and *Ay Te Dejo en San Antonio*.

Over these hyper waltz rhythms, David Hidalgo offers carousing accordion, his swooping chords and tremulous riffs calling to mind a Mexican wedding bash. Indeed, Los Lobos has played its share of weddings and dances, and these tracks are rendered with the kind of proficiency and enthusiasm that comes from weekends of obliging dumb requests from Chuck Berry to Julio Iglesias.

Along with the two Mexican tunes, there's a rollicking version of Ritchie Valens's *Come on Let's Go*, propelled by Hidalgo's twangy lead-guitar lick. Most of the tracks are originals by Hidalgo and Perez, and all of them use Mexican folk instruments.

Producers T-Bone Burnett and Steve Berlin have made hard work look easy, successfully and accurately capturing the band's live, spontaneous spark with aural clarity. All that's added are a few well-placed sax breaks from Berlin, notably on *Let's Say Goodnight* and *Why Do You Do*. ". . . And a Time to Dance" is good stuff, corny and fun but straight from the heart. And straight from the streets these guys call home.

STEVEN X. REA

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## George Strait: Right or Wrong

Ray Baker, producer  
MCA 5450

Time-honored musical values are steadfastly adhered to on George Strait's new album, "Right or Wrong." He sticks to simple styles, from western swing to barstool laments, and to typical country situations, from unabashed declarations of love to ruminations on the repercussions of heart-break and adultery.

The title track of the LP was first sung by Tommy Duncan with Bob Wills's Playboys in the 1930s, then covered by Merle Haggard as a Wills tribute, and Strait's approach is essentially a continuation of that lineage. In his casual way, he links up the romping springiness of Wills with Haggard's deep-rooted sincerity. Strait's debt is sometimes too pronounced: His version of *Our Paths May Never Cross* is a virtual reproduction of Haggard's original (from "Back to the Barrooms"), and the album's producer, Ray Baker, has been working with Haggard (most recently on "That's the Way Love Goes"), further underlining the connection.

Strait couldn't have picked more worthy models, however, and on most of "Right or Wrong" his singing is skilled and self-assured. The subjects may be trite—liquor and lust, soggy regrets—but the small-combo arrangements are crisp, and there are some snazzy lyrical convolutions. The effect of one night of extramarital sex is described as *Fifteen Years Going Up (and One Night Coming Down)*, and Strait's pleasure in finding a woman to curb his hell-raising ways is delightfully expressed: "Since I've been holding an angel, a little heaven's rubbing off on me." And how's this for an opener: "Pardon me, you left your tears on the jukebox, and I'm afraid they got mixed up with mine" (*Let's Fall to Pieces Together*).

Strait sounds as believable longing for the girl he let get away (*You Look So Good in Love*) as he does seeking solace in alcohol (*80 Proof Bottle of Tear Stopper*—one song in which the lyrical conceit is a bit tortuous). Like Ricky Skaggs, he has a feeling for rollicking swing (*I'm Satisfied with You*) and a determination to keep close to the music's heritage. Strait is a crooner in an old-fashioned mold, bawling in his brew or muttering homey sentiments to his woman at home, and "Right or Wrong," without breaking new ground, is an LP that ranks him among the most appealing of country music's new traditionalists.

MITCHELL COHEN

## Jazz

Art Blakey and the Jazz Messengers:  
Art Blakey in Sweden  
Kavi Alexander, producer

Amigo AMLP 839 (Dominus Records,  
P.O. Box 48, Darien, Conn. 06820)

Since founding the Jazz Messengers with Horace Silver in 1955, drummer Art Blakey has had an amazing number of superb bands, each with a life of two to four years. But few have been as brilliant as the late '70s to early '80s Jazz Messengers, heard on this disc when they were propelled by a very young rising trumpet player, Wynton Marsalis, and a veteran alto saxophonist, Bobby Watson.

They are the dominant personalities on this recording of a 1981 concert in Sweden. Of the four sections, one (*How Deep Is the Ocean*) is basically an extended solo for Marsalis, who shows off the complete range of his playing, from soft little runs to brassy insistence and a long, big-toned cadenza. Another, *Sky Lark*, gives Watson equivalent opportunities for virtuosic display, but Watson is not Marsalis.

The other two selections are jazz standards. Bud Powell's *Webb City* demonstrates the sextet's sound and gives tenor saxophonist Bill Pierce and pianist James Williams a chance to be heard (although Williams is consistently off-mike throughout the session). Walter Davis Jr.'s *Gypsy Folk Tales* is part Blakey solo and part other band members' solos, with Marsalis quietly emphasizing his presence. He may be more florid and more of a star today, but on this

collection one hears what made people listen up in 1980 and '81. JOHN S. WILSON

## The Vinny Golia Trio:

### Slice of Life

Vinny Golia & Nels Cline, producers  
Nine Winds 0108

Unlike many of his contemporaries on the West Coast, woodwind player Vinny Golia has elected to probe deeply into free jazz expressionism. "Slice of Life," four pieces recorded at Santa Barbara in the spring of 1981, presents him on a full range of saxophones and flutes, accompanied by bassist Roberto Miranda and percussionist Alex Cline.

The primary problem with freely improvised jazz, from the listener's point of view, is the lack of familiar reference points—the harmonic schemes and regular metric patterns that provide the guideposts in more traditional jazz. Every free jazz player must find ways of dealing with their absence and in Golia's case, the solution is the use of strong, very noticeable segmentation.

The aptly titled *Bouncescrrophy* opens with atmospheric bass flute and percussion, creating a very programmatic sense of impending excitement. Mood and texture change simultaneously, with the start of Golia's abstract little jive melody on C

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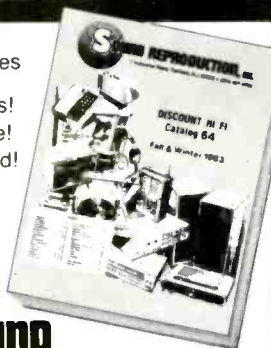
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## BACKBEAT Reviews

flute. Unfortunately, he then moves into a too-long solo that is marred by an excessive dependence on high-speed frills and furls.

*Peregrine/The Passing of the Midnight Float* is a better performance, despite its lack of organized thematic material. Appropriately dedicated to Charles Mingus, it begins with Miranda's lengthy bass solo, interleaved with fascinating percussion sounds from Cline. Golia's baritone contributes a strong blues flow over a pas-sacaglia-like bass line, as an intensifying energy builds to Cline's dramatic drum solo. In the second part of the piece, airy, free-floating percussion provides a pulse-like undercurrent for Golia's soprano saxophone. The nervously insistent, melodically appealing qualities of this *Midnight Float* section make it one of the album's highlights.

*The New Tenor Tune* opens, curiously, with a shakuhachi-sounding flute solo from Golia, accompanied by Miranda's glassy string sounds bowed high on the bridge. The meat of the track, however, is Golia's Coltrane-esque improvisation on tenor, played over a meter that moves in and out of 10/4. He has very quick fingers, but they don't always serve him well. Here, as elsewhere, he relies too much on unrelenting eighth- and sixteenth-note patterns. The solo's bell-curve buildup to (and subsequent letdown from) a furious peak of squeals, roars, rants, and raves is fairly typical of this kind of Sixties' style avant-garde jazz. But it all drops out of the consciousness as easily as last night's 11 o'clock news. The piece is ultimately saved by Miranda's stirring bass solo, a while coming but worth the wait.

Percussionist Cline is featured to considerable advantage on *Number Eight/Easter Morning*. At times, it is virtually impossible to tell what he is using to produce the extremely powerful sounds. Suggestions of rattling sheets of metal, flapping canvas, and vibrating containers of gravel combine in an explosive mixture of more traditional drum sounds. The rhythmic furnaces lit, Golia enters on soprano, playing his fiercest solo on "Slice of Life." It's a fitting coda to this provocative album from a relatively unknown but gifted young performer.

DON HECKMAN

**Charlie Haden:**  
**The Ballad of the Fallen**  
Manfred Eicher, producer  
ECM 23794-1

Bassist Charlie Haden's first album as a leader, "Liberation Music Orchestra," was recorded for Impulse records in 1969, a period of considerable political and social unrest. The recording reflected Haden's concern over that unrest, but its primary interest was his excellent work with Don Cherry, Dewey Redman, Paul Motian, Carla Bley, and others.

As in the earlier album, "The Ballad

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David Murray: awakening the optimist

of the Fallen" uses a number of "revolutionary" songs, arranged by Bley, as the basis for the Orchestra's work. This time the focus is on events in Central America, with material from Spain, Portugal, Chile, and El Salvador.

The range and diversity of sources provide a perfect challenge for Bley's unique skills. Her musical perceptions tend to fall into such predictable harmonic patterns as the cycle of fifths, which recurs in both her original *Introduction to People*, and in *La Pasionaria*. But she has a superb sense of theatrical timing, which is well suited to a program that has far more to do with the arousal of passions than it does with the solution of musical problems.

The centerpiece of the album is a long (more than 15 minutes) track that includes the title song—from El Salvador—as well as songs from the Spanish Civil War, the Portuguese Revolt of 1974, and the Chilean resistance. *The Ballad of the Fallen* is based on a poem that, according to the liner notes, was "... found on the body of a student who was killed when the United States-backed National Guard of El Salvador massacred a sit-in at the university in San Salvador." Given his presumed political orientation, it's curious that Haden has chosen to perform the piece only as an instrumental and simply print its melodramatic lyrics on the cover. The music is surprisingly warm and atmospheric, the rhythm moving through updated rumba accents, with Gary Valente's trombone and Steve Slagle's alto saxophone providing most of the melodic thrust.

The mood shifts dramatically with the arrival of *If You Want to Write Me* (from the Spanish Civil War), a bright, almost circus-sounding theme underlined with a heavy backbeat. Cherry's pocket cornet climaxes the piece with a long, free improvisation. Another scene change takes place as harmonized flutes introduce *Grandola Vila Morena* (from the Portuguese Revolt of 1974). The melody is surprisingly bright and opti-

mistic, and the piece closes with an intense trombone solo from Valente.

Without pause, the recording moves into Bley's somewhat mournful *Introduction to People*, dominated by her repeated piano triplets and featuring Mantler in a long-toned, colorless trumpet solo. The final section, a short statement of the Chilean *The People United Will Never Be Defeated*, is a spirited call to arms, beautifully orchestrated by Bley.

The album's other pieces lack the overall impact of *The Ballad of the Fallen* track, but there are some stunning moments: Haden's bass solos on *La Pasionaria* and *Els Segadors*; Mick Goodrick's lovely Spanish guitar and Redman's tenor saxophone on Haden's *La Pasionaria*; the emerging ensemble work at the close of *Too Late* (I was less impressed by that piece's lengthy duet between Bley and Haden).

Still, the title track excepted, "The Ballad of the Fallen" comes across too much like a concept album that has fallen prey to its concept. DON HECKMAN

**David Murray Octet: Murray's Steps**  
Giovanni Bonandrini, producer  
Black Saint BSR 0065

Since his recording debut eight years ago at the age of twenty-one, tenor saxophonist/bass clarinetist David Murray has established himself as a charismatic improviser, with a style that weds an Albert Ayler-like rhythmic angularity to a plum Ben Webster-like vibrato. But it has been as a composer and bandleader that Murray has won his greatest laurels, following the unveiling of his Octet on the 1981 release "Ming."

The ultimate goal of any midsize jazz ensemble should be to combine a big band's sonic horsepower with a smaller group's improvisational maneuverability, a goal handsomely realized on "Ming" and to a lesser extent on 1982's "Home." In a way, the Octet's third effort, "Murray's Steps," sounds more like a prequel than a follow-up, given its greater emphasis on long strings of solos than on orchestral interaction. But the solos are judiciously sequenced and very well paced, and the writing that launches and spells them is never merely functional. Following the examples of such models as Duke Ellington and Charles Mingus, Murray is becoming adept at revamping his earlier designs to suit the moment and the personnel at hand; three of the four pieces here initially were crafted for smaller groups, but the material never seems stretched to the breaking point, a problem that plagued "Home."

The opportunity to score for a quintet of horns awakens the optimist in Murray, judging from the rosy tone of *Flowers for Albert* and *Sweet Lovely*, both extremely dolorous in earlier incarnations. The title track sprints over a textbook chord progression similar to that on John Coltrane's

*Giant Steps*; Murray's voicing of the five horns suggests linear motion within each chord, thus imparting a sense of spaciousness to lines that, collectively, might have otherwise become too dense. The album's only completely new piece, *Sing Song*, is also the most vivacious, and it captures the sweet essence of vintage Motown love pledges like "My Cherie Amour" without becoming tangled up in a vain attempt to emulate their production formula.

The crucial ingredient missing from "Murray's Steps" is Olu Dara, the irascible cornetist who stole the show on the Octet's first two albums. Although trumpeters Bobby Bradford and Butch Morris are both engaging soloists, the contrast between them isn't as marked as that between Morris and Dara, and the brass coloration suffers accordingly. But pianist Curtis Clark, another newcomer, meshes well with bassist Wilber Morris and drummer Steve McCall in the rhythm section; and the volatile trombonist Craig Harris looses a harder improvisational sting than predecessor George Lewis. But it is still the band's saxophonists—leader Murray and jackknife-altoist Henry Threadgill—who deliver the hardest sting of all.

FRANCIS DAVIS

**Joe Sullivan: Gin Mill**

Richard B. Hadlock, producer  
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Dennis Patrick Terence Joseph O'Sullivan, better known as Joe Sullivan, was one of the most delightfully stimulating Earl Hines-influenced pianists. He grew up in Chicago in the '20s and '30s, when Hines was a primary musical force, and emerged with a galloping joy all his own. John Hammond recorded some solo sessions by him for Decca and he reached an even wider audience when he joined Bob Crosby's band in the mid-Thirties. After only a few months, tuberculosis forced him to withdraw from the band in 1937. He was replaced by Bob Zurke, who built his reputation playing original material that Sullivan had brought to the ensemble—*Little Rock Getaway*, *Just Strollin'*, *Gin Mill Blues*. Sullivan returned to Crosby in 1939, but only for a few months.

"Gin Mill" was made in 1963. (He died in 1971 at the age of sixty-five.) Part of it was recorded by Dick Hadlock when Sullivan was playing at the Trident, a club in San Francisco, the rest at the Blackhawk, which Hadlock chose for its piano. The sound is warm and full; Sullivan's playing is strong, although he sticks to relatively easy tempos and uses a subtler approach than the outgoing, torrential flow that typified his earlier work. This variation might be viewed as growth but ultimately sounds cautionary. Still, it does suggest that Sullivan had a way of playing that was rarely revealed on record. JOHN S. WILSON



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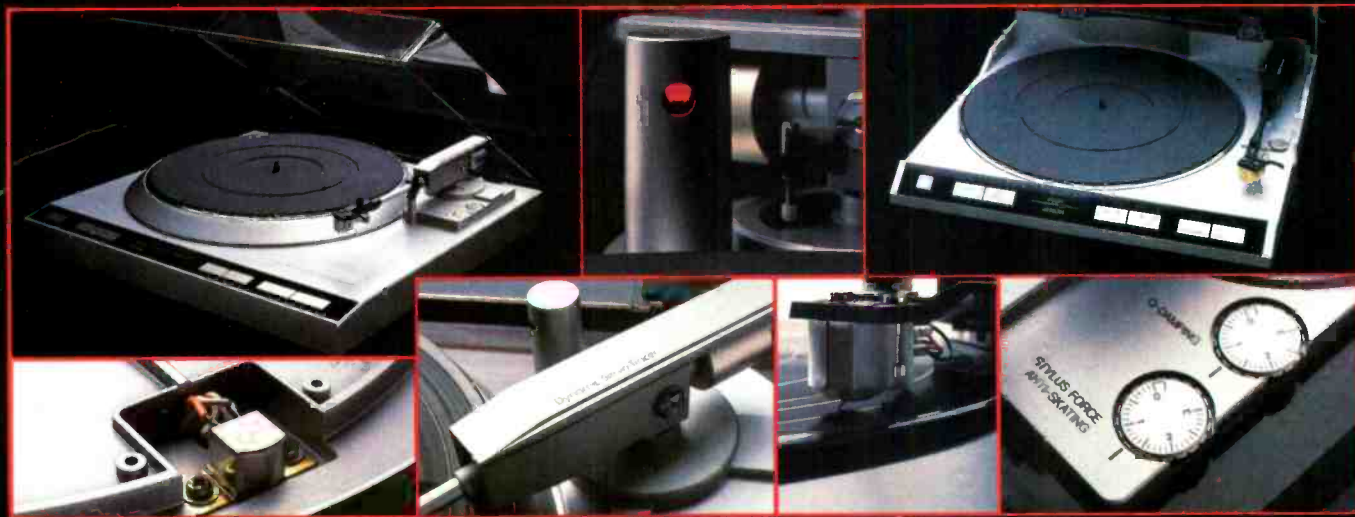
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