

BONUS SECTION
NEW TECHNOLOGIES!

Amazing Digital Device Tames Room Acoustics!

PLUS: Home Computers, First Video Lab Tests

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High Fidelity

SPEAKER BUYING GUIDE

Lab Tests • Tips for Better Sound • Rating Speakers

Smart Speakers
Are Coming!
What Will They
Look Like?

Organize Your
Records, Tapes
by Computer



Interviewed:
Kate and Anna
McGarrigle



First A-to-Z
Test of Jensen
Audio-Video
Receiver

First Reviews
of Classical
and Pop Music
Video Discs

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DBG KP
3353 CROWN CREST ROAD
DAVID S BUCHANNAN 1 HIF
#5 13353 CR093 02816 JAN84

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Anyway you look at the NEC PJ-4000EN, it's the best looking rear-screen Video Projector around. Its slim 22" depth means that it will look better in your home. Its new dual-pattern screen gathers and disperses light more evenly so more members of the audience can get a better look at the PJ-4000EN's brilliant picture, wherever they're sitting or standing. (Its 120 degree horizontal viewing angle is the industry's widest; its 36 degree vertical viewing angle, the tallest.)

A full complement of High Video Fidelity features including 134-channel frequency synthesized tuning; two sets of video and dual-channel audio inputs/outputs, simulated stereo from mono, etc., lets you take full advantage of the PJ-4000EN's outstanding performance.



THE REAR

A glance at this rear panel indicates that the PJ-4000EN has the flexibility of a genuine video component.



REMOTE

A wireless full-function remote puts you in control.

front screen Projection TV offers greater resolution at a larger picture size than even its most esteemed competitor. The PJ-1000EN (100" diagonal) is the genuine giant screen two-piece Video Projector, not a smaller screen home unit with adapter lenses.

Whether it's picture quality, styling or features—no matter how you look at it, NEC is the one to watch.

The PJ-4000EN truly lives up to the "Best in Class" reputation established by the other models in the NEC Large Screen Video line-up. The NEC PJ-6000EN (60" diagonal) one-piece

THE PJ-6000EN AND PJ-1000EN VIDEO PROJECTORS.



NEC
THE ONE TO WATCH

THE FRONT

NEC's dual-pattern screen design gathers more light and spreads it more evenly over wider viewing angles.



THE SIDE

Measuring a mere 22" deep, the FJ-4000EN takes up little more room than a conventional console TV.

**THE BEST-LOOKING
PROJECTION TV.
FROM ALL ANGLES.**

High Fidelity

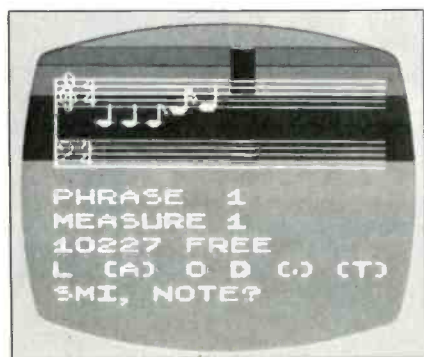
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Covering the latest developments
in digital audio, video, and
music-related home computer
applications

NEW TECHNOLOGIES

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Video
Computers
Software Reviews

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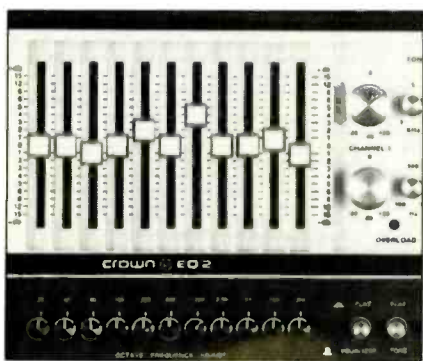
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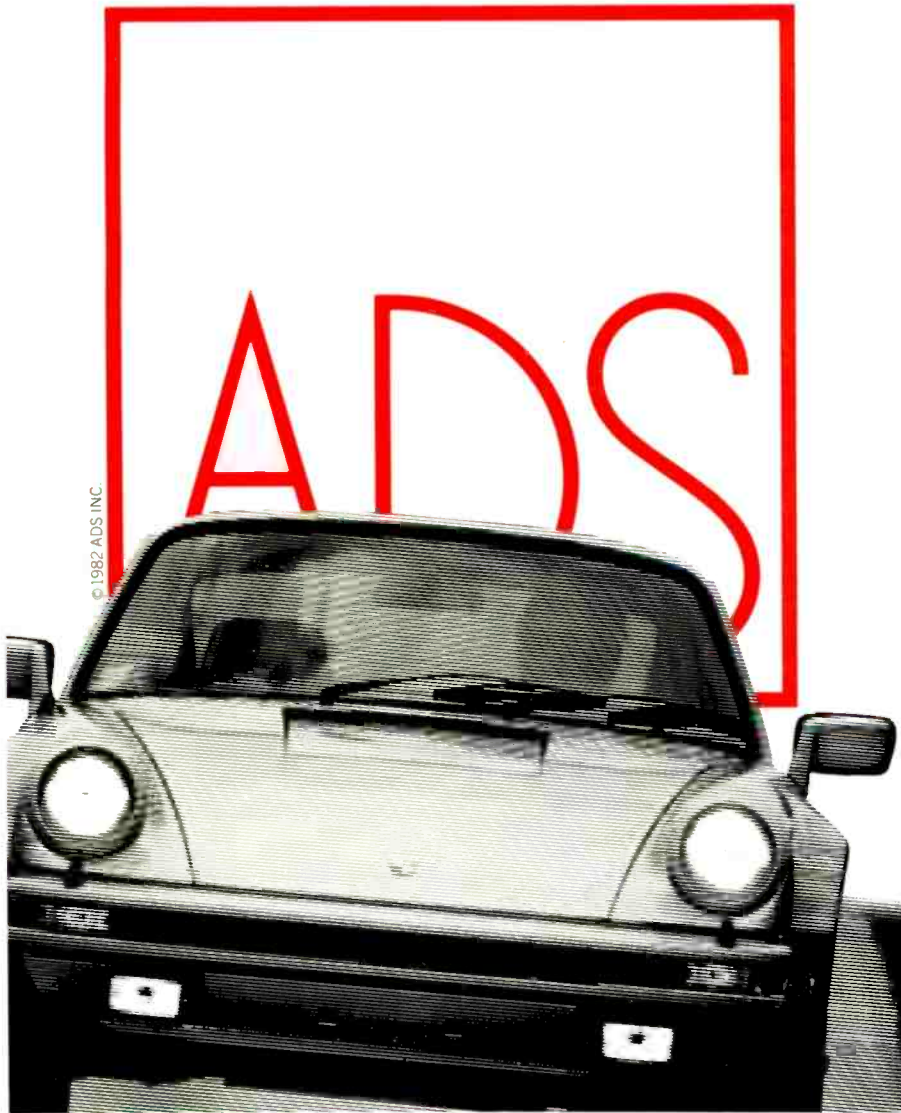


Unflagging concentration



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Technics
The science of sound

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

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

It more than meets the ultimate tape deck challenge.

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

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

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

It more than meets the needs of the audio perfectionist.

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

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

Finally, the specs everyone wants: frequency response of 30-20,000 Hz \pm 3 dB using metal or CrO₂ tape, and a S/N ratio of 78 dB with metal tape in Dolby C NR mode.

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



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About This Issue

Inside the Pages of June's High Fidelity

WITH THIS ISSUE, HIGH FIDELITY breaks out the champagne to celebrate a new sixteen-page monthly section devoted to emerging technologies. NEW TECHNOLOGIES, as it is appropriately called, will first and foremost cover the latest advances in audio, such as Acoustic Research's intriguing Adaptive Digital Signal Processor (see page 41); integral to the section, too, will be expanded video coverage, with which we move far beyond the hands-on format into formal lab tests.

Both the launching of NEW TECHNOLOGIES and our broadened testing are based on the premise that audio and video systems are merging into a single home-entertainment center, and that *all* components should be selected with the highest performance standards in mind. Of course, these components will be lab-tested according to our usual strict criteria. Our inaugural reviews address Jensen's AVS-1500 Audio+Video receiver and Audio Control's Video Soundtracker-I.

Our new section will also cover home computers—a brand-new area for us. As with video, we will focus on equipment and software that have special applications to home entertainment: We start off with a feature that reviews two music-synthesizer programs and another that explains how to organize your record and tape collections using a computer.

With the advent of Beta Hi-Fi and the growing availability of stereo music programs on video discs, high-fidelity video sound reproduction is off the drawing board and into the living room. Accordingly, NEW TECHNOLOGIES will review stereo video software. It will also carry reviews of many of the new digital Compact Discs. On pages 57 to 62 we offer an overview of current classical- and pop-music video releases.

Speakers are the focus of this month's regular audio coverage. In addition to test reports on four new models, you'll find articles on how to coax the best performance from your speakers, a look at what speakers will be like in the future, advice on when (and when not) to use an equalizer, and an inside look at how HF tests loudspeakers.

Leading off this month's classical-music coverage is a thorough review of recordings derived from recent movie and television productions of Wagner's *Parsifal* and *The Ring*. In BACKBEAT, you'll find an interview with singer-songwriters Kate and Anna McGarrigle.

Next month we'll take a hard look at Compact Disc players, both on and off the bench, and we'll feature additional road and lab tests on car-stereo systems, including Nakamichi's innovative receiver/tape deck. —W.T.



TOMY GALLUZZO

HF's Dobbin (L.) and Riggs make overtures to an Apple in preparation for this issue.

audio-talk from
audio-technica®

Number 4 in a Series

Sophisticated Styli

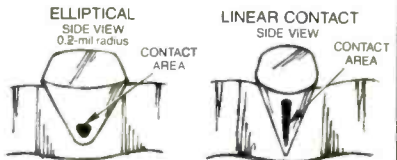
While the least expensive – and simplest – phono stylus is the spherical or UniRadial, and the most popular is the elliptical or BiRadial, both have limitations in most systems. The spherical tip can't accurately resolve the highest overtones, and the reduced contact area of the elliptical can put higher pressure on the groove, hastening record and stylus wear.

The Linear Contact Design

At Audio-Technica we pioneered in the introduction of new stylus shapes to overcome these problems. Our current Linear Contact stylus design is a development from our original Shibata stylus of almost a decade ago. Instead of the simple shapes of the past, the Linear Contact stylus features complex multi-radius contours dimensioned to the nearest *micron* (a micron is just 0.0000393")!

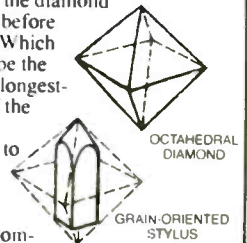
Long and Narrow

The net result is a stylus which contacts each groove wall with a "footprint" which is unusually long and narrow. Narrow to be able to respond accurately to the smallest groove modulations. Long to support the stylus over more of the groove wall surface, which reduces stylus pressure, and thus wear on stylus and record alike.



Facing Up to Wear

Because our best Linear Contact styli start as whole, natural octahedral diamonds, the grain structure of the diamond can be identified before grinding begins. Which permits us to shape the stylus so that the longest-wearing facets of the diamond contact the groove walls, to provide even longer useful life than diamonds ground from random-orientation chips or fragments.



More to Come

While the stylus tip shape is the most dramatic difference between models, other stylus characteristics are also important to overall cartridge performance. And in our next column, we'll discuss the rest of the stylus... and the difference it can make in your stereo system.

Good listening,

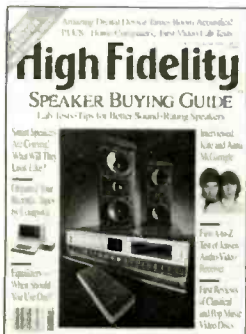
Jon R. Kelly

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

Cover photo: Chris Collins

ON THE COVER: (center) A pair of Koss M-80 minispeakers shares the spotlight with Jensen's AVS-1500 Audio+Video receiver.

Apple II Plus Computer: Photo courtesy Apple Computer

Kate and Anna McGarrigle: Photo by Britain Hill

Letters

Computers and Music

Home computers? In HIGH FIDELITY? [See "About This Issue," May.] We know what computers have in common with audio: transistors, resistors, capacitors, and other electronic parts. But most of us subscribe to HF because we are interested in music and the means to play it at home. And that means audio equipment, not video equipment, and certainly not home computers. I would have no objection, however, to articles on the musical aspects of video or on how to use home computers for designing listening rooms to eliminate standing waves, for example.

Marc Richman
Washington, D.C.

Mr. Richman and all our other readers are invited to read about the musical aspects of video—and computers—in our New Technologies section, beginning on page 41.—Ed.

Digital-Disc Explosion

I read the "Spring '83 Component Preview" report [March] with great enthusiasm: The digital countdown has me ready for CD now. However, the article refers to the Sony and Hitachi players as the only two that will be available this spring. Several months ago I received product information from Kyocera on its DA-01 digital Compact Disc player. I was so impressed by its specs and appearance that I began stowing away the bucks and praying that Uncle Sam give rather than take on April 15th so I can get one. I assumed that it was available and, since I couldn't afford it anyway, never checked. Is this unit for U.S. consumers? If so, will I need a second mortgage to finance it? And is there any chance of a comparison of the players we will have to choose from for our money (the DA-01 included, I hope!)?

Ronny A. Blacketock
Daleville, Ala.

The DA-01 is available now for \$1,050. We will be testing it and other CD players in future issues.—Ed.

In your article on Compact Discs [January] you don't say whether CDs are sonically as good as other audiophile recordings, such as digital half-speed mastered, analog half-speed mastered, direct-to-disc, or Mobile Fidelity's UHQRS. After reading your article, I still don't know what CDs sound like. Do they rival or surpass other recordings, and how?

Don Eisenberg
Boston, Mass.

Compact Discs sound exactly like the master tapes from which they are made. This is difficult to achieve with phonograph records, even the very best audiophile issues, and in whatever way an LP sounds different from the master tape (or output from the recording console, in the case of direct-to-disc), it will also sound different from its CD equivalent. The most common sonic advantages of CDs are improved bass response, greater clarity, less sense of strain at high levels, a brighter top end, and more stable imaging.

Whether you like this or not in any given case will depend mainly on the quality of the recording itself. It's a little like getting your windows washed: You can see everything better—the ugly as well as the beautiful.—Ed.

I read with interest your critics' views of the Compact Disc system [January]. The CD system was launched here in Hong Kong at the beginning of this year, and in February I bought a Sony CDP-101, partly on the strength of your glowing praise of this excellent machine.

Your critics found that it is often difficult to tell the difference between CD and the best analog discs. But I believe that they have overlooked one fact of the average audiophile's life: Most of us don't use the best analog playback equipment.

I support the contention that the Linn-Sondek LP-12 is perhaps the finest turntable on the market, and, with the SME arm, Shure V-15 Type V cartridge, and correct setup, it no doubt provides excellent reproduction.

But I, for example, use a Sony PSX-75 turntable with a Shure V-15 Type V cartridge, and, believe me, the Sony CDP-101 beats them hands down, without requiring any special setup. For the average user, CD will be a godsend, especially for taping. Dubbing CDs onto metal tape in my Nakamichi 680ZX produces remarkable results, which are a treat to listen to on my car stereo.

I suspect that most audiophiles today use Japanese direct-drive turntables with "adequate" arms and less-than-perfect cartridges (which are usually half-worn and slightly dirty), and for them CD will be a revelation.

R. M. McKay
Hong Kong

I have been looking forward to the arrival of the Compact Disc for some time, though I wonder if the digital players will have pitch control. As a musician, I consider this to be a very important feature.

Brian Graifman
New York, N.Y.

Maybe, but we doubt it. It's not a very popular feature, and it's harder to do on a CD player than on a regular turntable, where you can shift pitch simply by changing the rotation speed of the disc.—Ed.

The Aging Avant-Garde

Don Heckman's review of "I've Known Rivers" by Anthony Davis, James Newton, and Abdul Wadud [February] was extremely well written, but I think Mr. Heckman did not understand the music he was critiquing. He said, "While bits and pieces may have been precomposed, most of what happens sounds like free improvisation." In fact, most of the album is composed, with only small sections of improvisation.

Davis' music is difficult, but it is also very seriously and carefully constructed. The LP has been named Top Album of the Year by several publications. Davis was named Composer of the Year by jazz critic Leonard Feather, and has won several commissions from symphony orchestras and dance groups to compose new music. I say all this to indicate that there are many who find much in his compositions.

Mr. Heckman is a lucid writer. His critique

of Harvie Swartz's album [February] is accurate and carefully thought-out. He clarified certain aspects of the album that I had not been able to put a finger on. I hope Mr. Heckman will continue to review our jazz records, but that a writer more familiar with the idiom will review the works of our serious new-music composers.

Jonathan F. P. Rose
President,
Gramavision, Inc.
New York, N.Y.

Mr. Heckman replies: *I appreciate Mr. Rose's remarks; he is commendably supportive of Davis' work. Unfortunately, Mr. Rose has not provided us with a musical score that will confirm, one way or the other, just how many of Mr. Davis' compositions are improvised.*

The question, in any case, is academic. As I noted in my review, Davis' compositional style is one that makes use of a great number of indeterminate elements. But whether or not the performer has the option to, say, play a series of given notes in free rhythm or, perhaps, to provide his own notes for preset rhythm symbols, etc., instead of improvising freely, is not really the point. These methods, and many similar ones, have been part of the common vocabulary of composers since the days when Henry Cowell played forearm clusters on the piano, and John Cage threw coins to derive note patterns from the I Ching. Definitions of "improvisation" within such a musical universe will, of course, vary with the observer.

More important is the fact that this particular collection of musical attitudes and methods—indeterminacy, aleatorism, musical pointillism, pantonality, etc.—has proven to be a philosophical cul-de-sac for composers. Existing side by side for the last fifty years or so with the enormously productive energies of jazz, it has created almost no major works of substance. The irony of Davis' work is that he has chosen to abandon the clear jazz influences in his music for the platitudes of an aging avant-garde.

Facing Phasing

Alexander Retsoff's column on speaker phasing [April] reminds me of a trick I first read about some years ago and since have applied successfully. I've found that placing the two speakers not merely "close to each other," as Mr. Retsoff suggests, but face to face—grille cloth to grille cloth—separated by about six inches works even better. First, make certain the balance control is centered and then play a mono source. If the speakers are in phase—both bass cones moving toward the grille cloth at the same instant—the bass will be "deep, full, and rich." If they're out of phase—one cone moving toward the back of the box at the same instant the other is moving forward—bass will be canceled and the sound will be rather like an ancient, "morning-glory horn" acoustic phonograph. As Mr. Retsoff notes, the remedy is to reverse the leads to one speaker.

E. D. Hoaglan
Omaha, Neb.

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.

EVEN AT FACE VALUE, THERE'S NOT ANOTHER DECK LIKE IT.



AKAI flies in the face of convention.

Again. This time with the incomparable GX-F91. A bold new design that looks—and performs—like no other cassette deck in the world.

It is literally the face of the future. No knobs. No keys. And no clutter. Instead, a polite presentation of just the basics.

But press the “door” button and, almost by magic, the faceplate automatically lowers to reveal the main control panel.

Now, insert a cassette.

Two microcomputers take charge, first automatically setting the bias. Then, executing a 64-step

“tape tuning” analysis that makes sure the GX-F91 gets the maximum from any tape.

For superior frequency response and dynamic range, the GX-F91 is also endowed with a 3-head design,

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In short, it's the proud flagship of our entire 10-deck AKAI family. A family that now includes three outstanding auto-reversing record/play-back designs.



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Super GX
Heads and
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Plus operational features like auto-fade, auto-mute and auto-

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High Fidelity News

New equipment and developments



Servo Tonearm for Denon Classic

If the platter portion of the new DP-62L turntable looks familiar, it should, because it is based on the much-admired DP-60L and uses the same AC direct-drive servo technology. Another servo control mechanism in the tonearm damps the low-frequency resonance peak that results in any arm/cartridge combination, says the manufacturer, Denon. Thus the stiff tubular arm, which is made of lightweight alloy, can be used successfully with a full spectrum of modern cartridges. The DP-62L sells for \$595.

Circle 126 on Reader-Service Card



Versatile Pro Amp from QSC

Designed with professional requirements in mind, the first product from QSC Audio Products incorporates in a stereo power amplifier both premium components and an unusual input flexibility. There are three sets of stereo inputs: a screw-connection barrier strip for bare wires or spade lugs; 1/4-inch phone jacks for unbalanced lines; and three-pin XLR-style jacks for balanced lines. In addition, switching provisions and octal sockets allow for special interconnections with other equipment—for example, a biamping crossover. The power rating is 200 watts (23 dBW) per channel into 8 ohms, 300 watts (24 3/4 dBW) into 4 ohms, or—with the channels bridged—600 watts (27 3/4 dBW) mono into 8 ohms. The amplifier is designated the Model 1400 and sells for \$700.

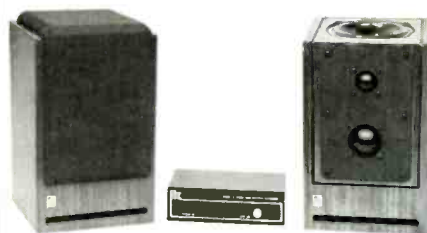
Circle 121 on Reader-Service Card



Studio-to-Go from Fostex

When the Fostex line was introduced in the U.S. about two years ago, we were stunned to find in it an open-reel deck (the A-8) that would record eight tracks on 1/4-inch tape—a sort of vest-pocket studio overdub model. Now Fostex has gone one better with the A-8LR, intended primarily for live location recording. Whereas the earlier model could record on only four of the eight tracks at a time (remember that overdubbing was the intended application), the new one will accept eight simultaneous inputs (mikes or direct connections) and record each independently. The A-8LR costs \$2,500—compared to just under \$2,000 for the A-8, which remains in the line.

Circle 125 on Reader-Service Card



Compact Speakers with Assisted Bass

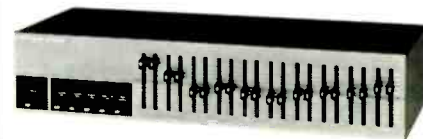
Innovative Techniques' first product, the ITC-1 loudspeaker, stands a scant foot high and uses active equalization to achieve a sixth-order bass alignment. The Bass Distortion Reducer, as the company calls the equalizer, boosts the deep bass by 6 dB at 50 Hz and rolls it off rapidly (at 18 dB per octave) below that frequency. The 5 1/2-inch Bextrene woofer fires upward; the remainder of the frequency range is handled by 1 1/2-inch and 1-inch domes mounted on the front panel. A stereo pair, including equalizer, sells for \$670.

Circle 130 on Reader-Service Card

Warner Announces First CD Release

The Warner/Elektra/Atlantic record group has announced it will have about twenty titles available on Compact Disc this summer. Since neither Warner nor any other American record label has domestic CD pressing facilities (CBS is the only one to even announce intentions to build a U.S. plant), CD manufacture will be handled by Polygram in Europe.

Warner's initial CD offerings will include: Fleetwood Mac's "Rumours"; Donald Fagan's "Nightfly"; Christopher Cross's "Another Page"; "Rickie Lee Jones"; "Devo Live"; "Rod Stewart's Greatest Hits"; Al Jarreau's "Breaking Away"; Grover Washington Jr.'s "Winelight"; George Benson's "Give Me the Night"; Joni Mitchell's "Court and Spark"; "Linda Ronstadt's Greatest Hits"; Laura Branigan's "Branigan 2"; Phil Collins' "Hello I Must Be Going"; Eddie Rabbit's "Step by Step"; "Best of the Manhattan Transfer"; Emerson, Lake & Palmer's "Pictures at an Exhibition"; AC/DC's "Back in Black"; and Randy Newman's "Trouble in Paradise."



Audio Control Equalizer/Analyzer

In the Ten Plus, Audio control combines separate octave-band EQ for two stereo channels with a warble-tone generator, analysis meter, and microphone attached with a 20-foot cable. Response analysis progresses band by band automatically to simplify the equalization process. Sliders for the two channels are paired by frequency band (simplifying identical adjustment of the two channels, where that is desired). Each is fitted with an LED that lights when the generator is producing the correct warble tone for adjustment of the slider in question. Other controls include monitor switching and switchable tape-feed equalization, plus a Tchebychev infrasonic filter with a slope of 18 dB per octave. An unusual feature—and a welcome one in many home-entertainment systems these days—is an input for TV audio. The Ten Plus sells for \$329.

Circle 117 on Reader-Service Card

Buff Stuff from TDK.



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

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

We call it the TDK Professional Reference Series.

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

die-cast metal frame.

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

 **TDK**
THE MACHINE FOR YOUR MACHINE

NO NOISE IS GOOD NOISE.



3 Heads (Ferrite Play, Sendust Rec), 3 Motors, Direct Drive Capstan Motor, Dual Capstan, dbx, Dolby B & C NR, dbx Disc Position, Manual & Reference Bias/Level/EQ Calibration, Digital Real Time Tape Counter, 30-dot FL Bar Graph Meter, Monitor Sync, Auto Tape Select, Block Repeat (Memory Repeat), Auto Locator, Memory Stop/Play, Computomatic Program System, Power Assisted Eject Door, Pitch Control, Auto Spacer, Resonance Free Diecast Chassis, Remote Control.

Teac hates noise. So we've quietly gone about our business of stamping it out.

Our new Z-6000 cassette deck has not one noise reduction circuit, but four. Both Dolby* B and Dolby C NR, plus the added benefits of dbx** and dbx disc. Features usually found only on professional equipment, now standard with Teac. So your Z-6000 will never meet a tape it doesn't like.

You can make a tape that will play on any other machine. And you can play anyone else's tape on yours. Without a lot of hiss and distortion to get in the way.

At Teac we have a passion for reproducing music precisely the way it was originally intended. One noise reduction system probably would have been enough, but we wouldn't hear of it.

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Impact Restoration by DBX

The latest in the DBX series of dynamic-range expanders, the DBX 4BX, permits remote control of all its functions. The unit includes "impact restoration" circuitry, which is said to enhance musical attacks, thereby compensating for the limiting techniques that rob signals of punch in broadcast and recording media. Audio expansion is handled separately in each of three frequency bands. The user can control volume, expansion (to a maximum of 50%), transition level (between downward and upward expansion), and the impact-restoration effect. There are switches for source/tape monitoring and pre/post processing of the signals in the tape connections. The 4BX is expected to sell for less than \$1,000.

Circle 118 on Reader-Service Card



Plexiglas Pedestals

Design-conscious audiophiles might want to investigate Sound Steps, a line of clear or opaque Plexiglas speaker stands from Braeside Studios, some of which are said to be capable of supporting as much as 200 pounds. Adjustable Plexiglas dowels at the back of the Model 1100-A (\$75 per pair) keep the speaker in place; adjustable feet compensate for nonflat floors. Also shown is Braeside's protective Plexiglas album holder/display.

Circle 129 on Reader-Service Card



Digital Yamaha for Analog Price

Replacing the T-560 analog tuner in the Yamaha line, at no increase in the \$230 price tag, is the digital Model T-500. It accommodates both AM and FM bands and stores five stations from each in its presets. Both search and manual tuning modes are provided.

Circle 127 on Reader-Service Card



A Semiprecious Dynavector

Building on the materials innovations of the superpremium DV/Karat series of pick-

ups—whose short, stiff cantilevers are fashioned of diamond or ruby—the DV-10X₃ is a moving-coil pickup of low moving mass and high output. It uses a 6.5-mm tapered aluminum-tube cantilever and an elliptical stylus. No transformer or head amp is required with typical phono inputs because of the large number of turns (400) in the precision-wound coils of silver/copper alloy wire, says the manufacturer, Dynavector. The magnet is samarium cobalt, which is reputed to retain its design flux density better than polymer-bonded magnets. The DV-10X₃ is priced at \$150.

Circle 128 on Reader-Service Card

If you use a brush to clean your records, you're not really cleaning them. That's because a brush works much like a broom; it sweeps the dirt around, but actually picks up very little.

The Nagaoka Rolling Cleaner uses a special grade of rubber non-deposit elastomer which never loses its original dust-gathering ability.

A gentle roll over the record groove, and all dust and dirt particles are picked up—with no deposits or damage from solvents, and no abrasion from pushing dirt around.

The Nagaoka Rolling Cleaner's

soft rubber surface molds itself to the very bottom of the grooves, picking up dirt that conventional cleaning devices can't even reach.

By simply washing the Rolling Cleaner with a neutral detergent, its adhesive is completely restored—a process that can be repeated over and over again, for years.

Japan leads the world in the production of hi-fi equipment. Nagaoka leads Japan in the production of accessories.

How will Nagaoka fare in the United States? The experts expect a clean sweep!

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START CLEANING.**

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Take Care

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AUDIOPHILE FILE™ XL-S

GREATER DYNAMIC RANGE

Maxell XL I-S and XL II-S are the ultimate ferric oxide cassette tapes. Precision engineered to bring you a significant improvement in dynamic range.

XL I-S provides exceptionally smooth linear performance characteristics with high resolution of sound and lower distortion.

While XL II-S has a greater saturation resistance in higher frequencies resulting in an excellent signal to noise ratio.

How did we achieve this?

IMPROVED EPITAXIAL PARTICLES.

Maxell engineers have managed to improve the Epitaxial magnetic particles used on both tapes.

By developing a crystallization process that produces a more compact, smoother cobalt ferrite layer on the gamma ferric oxide core, they've been able to pack the particles more densely and with greater uniformity on the tape surface.

This increases maximum output level and reduces AC bias noise which in turn expands the dynamic range.

IMPROVED EPITAXIAL PARTICLE CHARACTERISTICS:

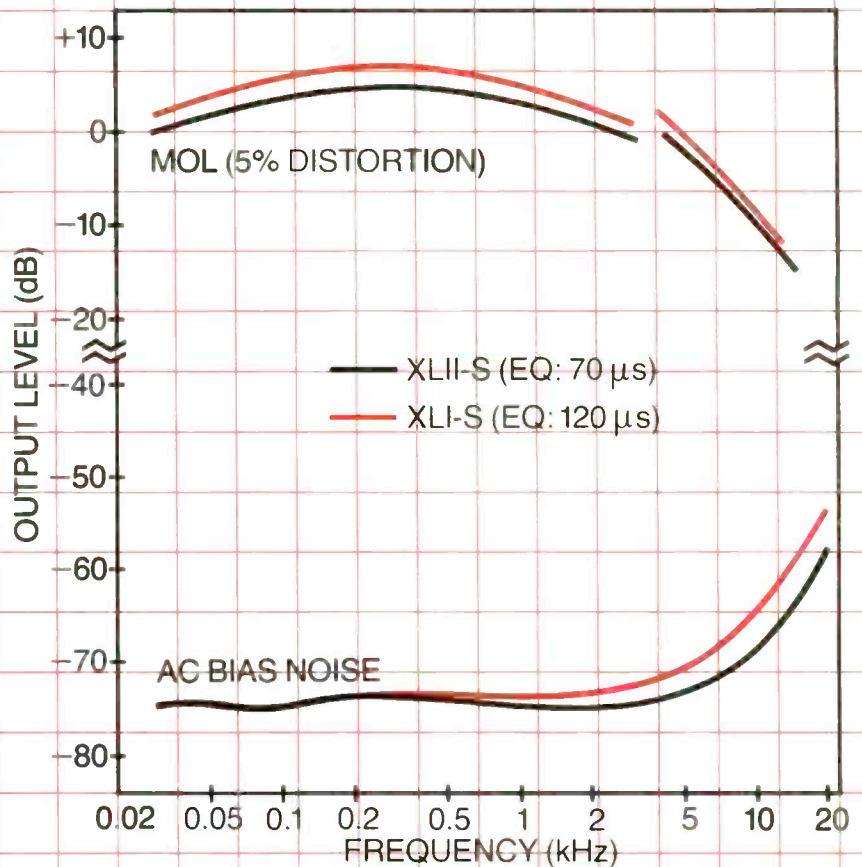
MORE UNIFORM COBALT-FERRITE LAYER

SMOOTHER PARTICLE SURFACE

GAMMA-FERRIC OXIDE

470Å

COATING THICKNESS: 10-11A (1A = 1/10,000,000 mm)



So you get a better signal to noise ratio, greater resolution of sound and higher output levels.

Of course, greater dynamic range isn't the only reason to buy Maxell high bias XL II-S or our normal bias equivalent XL I-S.

Both tapes have more precise tape travel and greatly reduced distortion levels.

You'll see both these improvements covered in detail in future Audiophile

Files. In the meantime, we suggest you listen to them.

For technical specification sheets on the XL-S series, write to:

Audiophile File, Maxell Corporation of America, 60 Oxford Drive, Moonachie, New Jersey 07074.



IT'S WORTH IT.

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CrossTalk

Practical answers to your audio questions by Robert Long

Just Compensation

If I read your report on the McIntosh C-33 preamp correctly (July 1982), you concur with the manufacturer that one should "calibrate" the loudness compensation (using one's ears) to normal maximum listening levels. I always thought loudness compensation was for low-volume listening only and invariably turn it off before I crank up the volume.—Ricardo M. Herrera, San José, Costa Rica.

You're doing it right, though your reasoning is wrong. The McIntosh loudness control is unusual in that it adds more bass as you "crank it up" (clockwise). You're supposed to use it only when listening levels are so low that the perceived sound becomes bass-shy. What we said was that this scheme *doesn't* have to be calibrated to normal maximum listening levels the way conventional loudness knobs do.

Your preamp probably uses a more conventional scheme—two volume knobs with loudness compensation built into only one. With LOUDNESS turned all the way up, the compensation is nil; bass boost (and a smaller degree of treble boost in some designs) increases as you turn down this control. To calibrate it, you turn it all the way up, then advance the uncompensated volume control until the sound is as loud as you'll ever want it. To get lower levels without compensation, you back off on the VOLUME; to inject the compensation progressively as you reduce the level, you use the LOUDNESS instead.

Behind Closed Doors

I'm searching for a high-quality stereo receiver equipped with a wireless remote control so we can operate our system without opening the glass doors of the equipment cabinet. Is such a receiver available?—R. W. Knutsen, Seattle, Wash.

Many so-called rack systems can be assembled with remote control—usually involving a separate infrared receiver and control unit that are not part of the basic package. In individual components, however, the feature is relatively rare. B&O has three receivers (the Beograms 8000, 6000, and 2400) that can be remotely controlled. And take a look at our review in this issue of Jensen's AVS-1500 Audio+Video receiver;

an infrared remote-control module is standard equipment with it. In addition, the Luxman RX-103 is a candidate, and, if you're willing to go for a tuner/integrated amp combination, the Sony TA-AX44 and ST-JX44 would qualify.

Audio Paranoia?

Am I wrong in believing salesmen who say that my present equipment is obsolete and poor in sound because it's old? It consists of a Phase Linear 700B amp, 4000 preamp, and 5000 tuner; Pioneer RT-1011L open-reel deck and CTF-700 cassette deck; Yamaha 750 turntable with Shure V-15 Type IV pickup; a DBX 224 noise-reduction unit; and Marantz HA-880 speakers. Working from the ambience circuitry in the preamp are a 40-watt Toshiba amp and Infinity Q_e back speakers.

It has a great sound, with super headroom and dynamic range, and good overall effect. Should I, or could I, really get much better sound with newer products?—Mike Kelly, Vista, Calif.

We all suffer from such nagging doubts from time to time, so I can empathize. But I'm opposed to making changes in order to satisfy somebody else's idea of what your system should be. You sound pleased with it as it is, and it includes many worthy components. I don't know the Marantz speakers (or, presumably, the unspecified Toshiba amp) from first-hand experience, but I see no reason why the system shouldn't be capable of excellent sound as long as it's in good operating trim. You might want to consider a Compact Disc player, however, now that digital audio is a reality.

How's That?

Most radiocassette portables have no pre-out/main-in connections, but they do have line outputs and aux inputs. Is there any reason a signal processor can't be inserted between these terminals? I've used this arrangement with some success on my Toshiba RT-200S.—John Livingston, East Hampton, N.Y.

The setup won't work on any model I'm familiar with because you cut off whatever signal you want to process (radio or tape) when you switch to aux to get the output of the processor. And the amplifier/speaker

systems built into most portables can't take much of the extra sock that an equalizer or dynamic-range enhancer would ask of them.

Hey, Four-Ears!

Having owned an ElectroPhonic quadriphonic receiver/changer/eight-track-deck system for some years, I now want to step up to quality components. But I find that there is no four-channel equipment around anymore. Most of the people I've talked to say: "Why do you want four speakers? You have only two ears." But I prefer quadriphonic reproduction to two-channel stereo, and I would like a receiver. What can I do?—George Glowacki, Wallington, N.J.

One reason for the disappearance of quadriphonic equipment was the witless parroting of that nonsense about two ears. Unfortunately, your only recourse today (unless you can find a good, used quad receiver) is an extra stereo integrated amp to handle the back channels and an outboard decoder to process whatever four-channel records you own. Fosgate Research of Prescott, Arizona, makes what it calls the Model 101A Tate II Surround Stereo System. It can be used to decode SQ-encoded discs and the surround tracks matrixed into the Dolby-stereo audio on some video discs and cassettes, as well as to enhance ordinary stereo sources. You might also be able to find an SQ, QS, or CD-4 decoder (whichever you need) on the used market—maybe even a quad eight-track tape player.

An alternative is to get an ambience-enhancement system, which uses two or more extra speakers at the sides or rear of the room to provide much the same effect as good "concert-hall" quad, even with ordinary stereo sources. (See "Sonic Ambience—The Missing Ingredient," October 1982.) Or you could get the best of both worlds by using the input selector on the rear-speaker amp to switch between the rear-channel outputs from an ambience-enhancement unit and those from a quad decoder or tape player, according to the source. (The Sound Concepts SD-550 ambience unit has inputs and switching to accomplish this same end, enabling you to use a power amp in the rear instead of an integrated.)

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

Retsoff's Remedies

Simple solutions to common stereo system problems by Alexander N. Retsoff

Breathing New Life into Old Speakers

AN EQUALIZER MAY HELP smooth the response of a wayward speaker, but it can't perform miracles, as Brad Meyer points out in this month's audio feature, "A Question of EQ" (page 00). In fact, if you're not satisfied with the sound of your loudspeakers, you might first want to try a few do-it-yourself procedures that involve little or no expense.

First, make sure it's the speakers that need fixing, not some other element in your system. An inferior phono cartridge—or one whose stylus has been worn or damaged—may be the culprit. If your system sounds better when listening to FM or tape than it does when playing a record, a stylus replacement or cleaning may be all that's required. Strictly electronic components like amplifiers are generally reliable and have essentially flat response, so you can pretty much assume your amplifier is not the source of any sonic inaccuracies. However, the wires connecting it with the speakers may be causing some colorations.

Though many people think that cables affect response only around a speaker's primary bass resonance—a point at which the effective damping factor of the amplifier/cable combination comes to the fore—high-frequency response can be affected as well. Some speakers exhibit a very low impedance at high frequencies; thus, cable resistance and the amplifier's high-frequency output impedance can affect the overall system response in this region. Thick, low-resistance speaker cables will mitigate the problem.

I've never been convinced that exotic speaker cable with special interleaving, shielding, and so on is worth the high cost, but heavy-gauge wire is. Monster Cable, though expensive, does provide the requisite low resistance, and it's flexible to boot. If your current system uses wire thinner than 16-gauge (remember, the higher the gauge number, the thinner the wire), I'd recommend you buy some heavier cable.

If you're still dissatisfied with the sound of your speakers, try removing their grilles. This will often brighten their sound, since almost every foam or cloth grille attenuates sound to some extent—and more so at high frequencies than at low. Of course, be sure that there is a clear path between each speaker and your listening

area. One way to kill the high end almost entirely is to aim the speaker at an overstuffed chair or sofa.

Try angling them in toward the listening area. Every speaker is directional to some extent and, again, more so at high frequencies than at low. If you listen too far off-axis, the high end is likely to be down. And don't forget the reverse side of that coin. If your speakers are presently angled in toward the listening area and they sound too bright and peaky, they may sound better balanced if toed out a bit.

You may also find that your speakers produce a more stable stereo stage (i.e., image better) with their grilles off. Many grilles have hard edges and internal struts that can interfere with high frequencies, causing the sound to reflect or diffract off and radiate as separate sound sources.

Theory advises you to bury speakers in the wall.

These secondary sound sources may reduce your ability to recreate the single, desired sonic image.

To reduce such interference without having to live with a naked loudspeaker, try applying felt to the front surface of the speaker so that sound propagating along the baffle board is absorbed before it reaches a sharp edge. Felt needn't be applied around the woofer (these problems occur only at short wavelengths), but try to surround the midrange and tweeter. Of course, be sure not to let the felt interfere with the diaphragm. If you apply it with double-sided sticky tape, you can remove it easily if you find it has no effect.

Reflections from a rear wall can also smudge the sonic image. By moving the speakers a foot or two out from the wall, you enable the direct sound to reach your ears before the reflections do. Absorbing reflections is an alternative that will let you keep the speakers up close to the wall. It involves covering the area behind them with material that absorbs sound. You can get some idea of how this will affect your speakers' sound (at virtually no cost) by hanging old blankets or draperies between the speaker and the wall. You can also try cork paneling or acoustic ceiling tiles. An extremely effective, albeit expensive,

sound-absorbing material is made for this purpose by the Sonex Corporation.

So far we have been concentrating on imaging and treble response. There's something you can do to improve bass smoothness, too—and it won't cost you anything more than time. As you probably already know, bass response is affected by speaker placement. Hanging a speaker on a sky hook in the middle of the room produces the least bass; standing it on the floor increases it, particularly against a wall; and standing the speaker in a corner will elicit the most bass.

Where you place the woofer vis-à-vis walls, ceiling, and floor not only affects overall bass response but also its smoothness. According to the image theory first proposed by two National Bureau of Standards scientists and later refined by Roy Allison, a sound source creates an image of itself in every nearby reflector. These phantom sound sources appear to be located as far behind the reflector as the real speaker is in front of it. The phantom speaker is as effective a sound source as the real one, and when its radiation adds to the real speaker's output, peaks and dips occur in the response.

The farther the reflector is from the speaker, the less effective its phantom radiation; thus, ideally, speakers should hang on sky hooks. Unfortunately, that's usually impractical, and most speakers will be noticeably bass shy without some reinforcement from the walls. A close-to-ideal solution would be to bury the speaker in the wall. Again, that's rarely practical, but it is at least approached by certain speakers designed according to the image theory—those of Allison Acoustics, and some AR, Boston Acoustics, and Snell Acoustics models. Although the design of such systems takes reflections from the rear wall (and sometimes the floor) into account, they cannot compensate in advance for side-wall reflections, for the designer simply has no control over the dimensions of your room.

Given that the speaker is going to be near some reflecting surfaces, peaks and dips in the response curve are inevitable. But you should experiment with different placements: Try varying the distances between the speaker and the rear and side walls, or raising the speaker various distances above the floor. At every step, listen to a recording with strong, smooth bass content. Since the pattern of dips and peaks will change from place to place in the room, make sure you're listening from your usual spot. **HF**



* in-no-vā-tion (a new idea, method or device)

At JVC, innovation is a philosophy that has always been translated into improved *performance*. Some of the most important improvements—innovations you may take for granted—were introduced by JVC. The list includes the world's first metal-capable cassette deck, quartz-servo controlled turntables, and fine-ceramic speaker diaphragms.

More recently, we've refined the Super-A amp circuitry we originated; it reduces six different kinds of distortion down to imperceptible.

You're also invited to consider the Jewel-Lock head assembly, as found in our auto-reverse cassette decks. It sets the standard for the next generation of audio, because it maintains peak performance in both directions of tape travel, while accomplishing reverse action silently and in no more than .4 seconds.

Now imagine a speaker system with a frequency response range from 35 Hz to 100,000 Hz. With a ribbon tweeter element weighing just 22 milligrams. The only word for its output: *pure*. The only

name on its enclosure: JVC.

The list goes on. There's the JVC turntable with a computer controlled linear tracking tonearm, and a double-servo quartz-control system that's a work of science *and* a work of art.

So is the JVC computer-controlled synthesizer tuner with four tuning modes and a highly obedient mind of its own.

But perhaps the best suggestion of all is to check it all out. Drop in at a JVC listening room.

And listen to the sound of innovation.

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DESIGN INTEGRITY:

WHAT MAKES DENON CASSETTE DECKS UNCOMMON IS HOW MUCH THEY HAVE IN COMMON.

Denon has never built multi-thousand dollar cassette decks in order to sell unrelated inexpensive machines. Instead, Denon has concentrated its full engineering effort to produce rationally-priced cassette decks that would impress serious music lovers with their sound rather than their features. Now, the new DR-M4, DR-M3 and DR-M2 cassette decks exceed Denon's previous sonic performance levels, while adding significant technological and convenience features.

Denon's Tape Tension Servo Sensor System has been further refined to provide automatic sensing and correction of tape tension for optimum tape-to-head contact throughout the entire play of each cassette. A new SF combination head extends frequency response to 23kHz (metal) with a 70dB S/N ratio (Dolby C). A new computer controlled silent tape transport mechanism provides entirely quiet and safe tape handling. An electronic computer digital counter using a laser detector system automatically indicates tape used and tape remaining information.

The DR-M Cassette Decks feature Denon's Flat Twin direct capstan drive; non-slip clutchless, beltless, reel drive mechanisms; Dolby B & C noise reduction; direct-coupled amplifier design, and separate amp/mechanical power supplies.

The DR-M3 offers computer tape tuning for bias and sensitivity. The DR-M4 adds programmable random access, stopwatch function and dual-capstan transport. Otherwise, all the Denon DR-M Series Cassette Decks are principally the same — each offering the highest performance and quality at its price in the industry.

Denon products share more than name alone.

For the best results on the new DR-M Series, or any cassette decks, for that matter, try new Denon DX-Series Cassette Tape.

Denon DR-M1 Two-Head Cassette Deck with Dolby C; Tape Tension Servo. \$299.

Denon DR-M2 Three Head Cassette Deck
with Dolby C; Tape Tension Servo; SF Combination Head.
(Side panels optional) **\$399**

Denon DR-M3 Three Head Cassette Deck
adds Computer Tuning System.
(Side panels optional) **\$499**



Denon DR-M4 Three Head Cassette Deck
adds Dual Capstan and Music Search.
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Sound Views

Opinion and comment on the changing audio scene by Robert Berkovitz

Loudspeakers: What's Next

A TECHNOLOGICAL CRISIS exists in the loudspeaker industry: Despite the fact that the design of high fidelity loudspeakers is no longer in the hands of amateurs and that substantial amounts of money are being spent on it, no one seems to know how to make loudspeakers that sound better than those we already have.

Consider recent developments in individual drivers. All the technological might of Japan (and everywhere else) has not led to a single durable improvement in driver design in the past decade, the emperor's new clothes not withstanding. We now know that loudspeakers with cones made from the wood of sacred trees or from complex, costly metal honeycomb (imported to Japan from Texas, I am told) sound much like their paper-cone counterparts. Nor does the sound produced by concave or convex domes, discs, or squares seem better than that generated by traditional shapes.

In fact, I do not foresee any drastic improvements in driver design, if only because the electrodynamic loudspeaker has already proven itself accurate, economical, and dependable. Loudspeaker systems, however, are another matter, and to understand what can be done here we must reconsider stereo itself.

No matter what we try, music reproduction can be only as good as stereo allows it to be. Quadriphony and its cousin synthetic ambience showed us a more effective technique than stereo alone for reproducing the original performance space. But since these systems have taken a background role, the listener has been left once again in his own listening room, whose acoustics thwart accurate sound reproduction. Attention, therefore, has turned to less exotic ways of suppressing the room's unwanted contribution. Roy Allison's careful and useful analysis of loudspeaker and room interaction should have inspired more home-loudspeaker designers to tackle that problem than have done so thus far.

Will the new digital technology have anything to add? Probably, and probably soon. If we can think of what we want to do



Microprocessors may give us the perfect speaker.
—Robert Berkovitz

with sound clearly enough to describe it in detail, we can do almost anything we want to the audio signal by multiplying, dividing, adding, and subtracting the numbers that constitute digital audio. This is digital signal processing, and small, relatively inexpensive microprocessors capable of doing such things in real time—while the music is playing—are just now becoming available. We can, for example, model a "perfect" loudspeaker as a set of equations stored in a computer and use these equations to correct the electromechanical behavior of a real loudspeaker.

Digital signal processing may improve stereo, as well. Feeding separate signals to right and left loudspeakers enables the brain to determine the direction and loudness of the resulting phantom sound source. A more accurate approach would be for a properly programmed digital system to anticipate the operation of the ear and brain. It could extract an azimuth (direction) signal and an amplitude signal from the stereo input, and steer the sound to the correct spot between the ends of a long loudspeaker system spread across a wall. This new system would replace the current form of stereo reproduction, in which the left and right ears each receive both the left- and right-channel signals. Instead, both ears would hear a single, precisely located source.

The merging of video and audio into an integrated home-entertainment system

should decisively influence loudspeaker design in the next decade. Indeed, with this confluence, ambience systems will make their reappearance. The surround-sound effect offered by matrixed Dolby Stereo films is not lost when the film is transferred to video. With a proper decoder, a spectator can enjoy this exciting multichannel effect in his living room—an effect that could be made even more dramatic with the addition of some delay to the rear channels. Of course, this presupposes that people will have enough room for three or more loudspeakers in addition to, for instance, a projection TV set. For practical purposes, such a system should include thinner speakers, which would require less floor space.

Indeed, if speakers could be made thinner still and mounted on the walls of rooms as sheets or strips, rather interesting and elaborate effects could be produced by control of the signal timing and spectral output of the individual speaker elements. Loudspeaker systems with variable directivity could be designed. The diffuse (total-energy) and direct (on-axis) components of sound sources could be reproduced separately, and with great accuracy.

The concept can be taken even further. By combining loudspeaker, microphone, and digital processor in a single module, extraordinary effects could be achieved. A restriction of ambience systems of the past has been their limited frequency range, due to the high cost of digital integrated circuits. As the prices of such ICs fall, truly noise-free, full-frequency-range audio delay will become feasible for home use. We can imagine, for instance, an "active boundary system," which would require that the walls and ceiling of a room be highly sound-absorbent and covered by microphone/processor/loudspeaker modules. Each microphone would pick up the sound striking the wall at that point and send it to its companion loudspeaker after processing. This would delay the apparent reflection, making the wall or ceiling appear to move away acoustically. The proper control of these delays could make the acoustic space, as perceived by the listeners, take on various shapes.

Another possibility offered by the loudspeaker/wall concept is a "participatory" music system: Add a digital synthesizer, and the modular loudspeakers could become the source of an orchestra of imaginary instruments spread about in synthesized space, each with a timbre created by the user. I do not know how far we are from such a system, but I hope that I will be here to learn to play it.

HF

Robert Berkovitz is a consultant in acoustic measurement and analysis. He has had extensive experience in the audio industry, most recently as Director of Research at Acoustic Research.

Basically Speaking

Audio concepts and terms explained by Michael Riggs

How HF Tests Loudspeakers

WITHIN THE SMALL FRATERNITY of people who make their livings testing high fidelity components, no one questions that loudspeakers present the greatest challenge. Part of the problem is simply methodological. With any other type of component, you can apply a known waveform—from a signal generator, a test record, or whatever—to an input terminal and collect what comes out the other end by means of an electrical connection to an output terminal. You then compare the output signal to the input signal in various ways, to see whether or not, or to what degree, the device is doing what it's supposed to do.

It is possible to do the same thing with a loudspeaker, up to a point. Unfortunately, that point is the input terminal. From there on, you're in trouble, because there is no output jack to plug into: The signal radiates into space from one or (usually) more points. Worse yet, it does not radiate uniformly in all directions, and the radiation pattern varies with frequency. Any measurement that is made will be with a microphone, which will have certain directional characteristics of its own (and unlike those of the human ear). And what the microphone "hears" will consist not just of the direct sound from the loudspeaker, but also of reflected energy from the floor, walls, and ceiling.

The other part of the problem is that nobody knows for sure what a loudspeaker should do. So even if we could eliminate all the measurement difficulties, the lack of an unequivocal standard of comparison would defeat any attempt at absolute performance evaluations. This is one of the reasons there are so many radically different models available: direct radiators, dipole radiators, omnidirectional radiators. Every approach has its staunch adherents who will give no quarter to the followers of any other. It is a truly bewildering situation, with sometimes only the haziest of lines separating fact from mere speculation or fantasy.

So you see, the life of a loudspeaker reviewer is not an easy one, and the temptation to surrender to expediency is great. After all, the point really is how it sounds, not how it measures. Why not just listen and report what you hear? Certainly we do that. But even this simple, apparently satisfying formula has its pitfalls. Listening can provide only a crude estimate of speaker

sensitivity, for example, and none at all of impedance. And unless stringent precautions are observed, listening tests can mislead as much as they inform. I have seen all too many purely subjective reviews damning fine products or praising mediocre ones—judgments based on incorrect setup, ignorance, or prejudice. Measurements cannot yet substitute for listening—perhaps they never will, entirely—but they can steer the careful reviewer (or reader) to sounder, more reliable conclusions.

Probably the most straightforward measurement Diversified Science Laboratories performs on loudspeakers is impedance versus frequency. The result is a curve that shows the speaker's impedance at every frequency from 20 Hz to 20 kHz, which will reveal any localized dips that might, under the right conditions, impose extraordinary burdens on amplifier output stages. DSL also performs an average-impedance measurement with band-limited pink noise to get a better idea of the load an amplifier will face when reproducing typical music signals. The frequency range used is 250 Hz to 6 kHz, which matches that used for our sensitivity measurement.

Sensitivity is nothing more than how loud a speaker will play for a given input. It is specified in one of two ways: sound pressure level (SPL) at one meter for a 0-dBW (1-watt) input, or SPL at one meter for a 2.83-volt input. The reason for the rather odd-looking voltage figure is that it happens to be equivalent to 1 watt into 8 ohms. It might therefore appear that these allegedly

different sensitivity measurements are in fact the same, but there is an important distinction. If we maintain the voltage but halve the impedance (to 4 ohms), the power will go up to 3 dBW, or 2 watts. For a true power sensitivity measurement, the voltage would be reduced to maintain 0 dBW into the speaker. Since speakers respond to power, rather than to voltage per se, the voltage-sensitivity method penalizes high-impedance loudspeakers relative to otherwise similar low-impedance models.

One can make arguments for either method, but on balance, we prefer the voltage-sensitivity technique, so that's what we use. It is easy to apply, and it is reflective of the way the speaker/amplifier interface really works. An ideal amplifier is a perfect voltage source: For a given input voltage, it will provide a given output voltage, regardless of load. (See "Basically Speaking," December 1982.) In practice, no amplifier has the infinite current capacity that implies, but most will supply increasing amounts of current (and therefore power, which is equal to voltage times current) down to 3 or 4 ohms. So to a point, low-impedance speakers do enjoy a real advantage.

The frequency range of the measurement is restricted to a band over which most speakers will be reasonably flat. This helps ensure, for example, that minispeakers will not be penalized simply for having restricted deep-bass response. At the same time, the band used encompasses most of the spectrum in which musical energy is con-

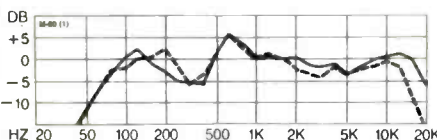


Fig. 1. Third-octave response of a typical minispeaker, tested indoors, against the back wall and about 30 inches off the floor, with the microphone 14 feet away.

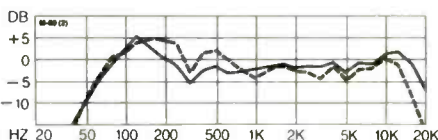


Fig. 2. Response under the same conditions as in Fig. 1, except that the speaker is on the floor.

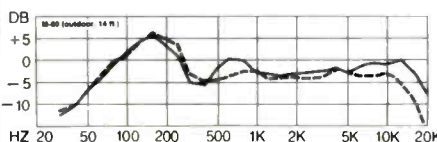


Fig. 3. Third-octave response of the same loudspeaker outdoors, against a wall and about 30 inches off the ground, with the microphone 14 feet away.

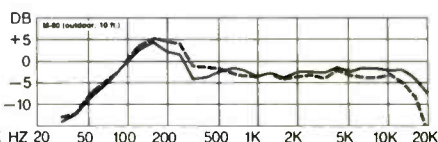


Fig. 4. Response under the same conditions as in Fig. 3, except with the microphone 10 feet away.

centrated.

Sensitivity is one determinant of a speaker's dynamic-range; the other is its power-handling capacity. We assess power-handling capacity in two ways. The cruder and more direct method is to feed 300-Hz tone bursts into the system at increasing levels until audible distortion sets in. Many present-day speakers outlast the lab's very hefty amplifier in this test.

A more subtle investigative technique is to check the harmonic distortion at various output levels and frequencies. DSL checks twenty spot frequencies, from 30 Hz to 10 kHz, at 85, 90, 95, and 100 dB SPL (at one meter). Anything below a few percent is almost certain to be inaudible on music. At 85 dB SPL, which is a moderately loud listening level, most good speakers—even small ones—exhibit less than 1% distortion above 100 Hz, and often below as well. As the level is increased, the distortion will rise with it, especially at very low frequencies. The rate at which it goes up and the point at which it becomes very high are good indicators of power-handling ability. And the shapes of the distortion curves can provide clues to specific design weaknesses.

The last, and perhaps the most important, of DSL's measurements is third-octave-band response, on-axis and 30 degrees off-axis. The way this test works represents something of a middle ground between the two extremes of speaker-response measurement. One of these is just to set up a microphone in a room and run a frequency sweep through the loudspeaker. The problem with this approach is that the results are not independent of the acoustics of the particular room in which the measurement is made. The resonances in one room, and the resulting peaks and dips in the measured response, could be totally different from those in another. At the opposite extreme are anechoic (or quasi-anechoic FFT) measurements, in which room reflections are suppressed as much as possible. This has some advantages, but it suffers severely from its artificiality. We don't listen to speakers that way, and the room does play an important role in what we actually hear.

Our method was originally developed by Acoustic Research for its loudspeaker-design program. It uses an Apple II computer to suppress most of the anomalies peculiar to the test room, while retaining the boundary-interaction effects that would appear in any room. The loudspeaker under test is set up in one of two calibrated positions—against the rear wall or with its baffle 4 feet in front of the wall—depending on the manufacturer's recommendation. The test microphone is placed 14 feet from the rear wall, approximately at listening height; for the off-axis measurement, it is simply moved 30 degrees to the right.

The test signal is pink noise fed by an

amplifier to the loudspeaker. The speaker's output is picked up by the microphone and fed to a spectrum analyzer, which chops it into thirty third-octave bands. The level in each band is then digitized and passed to the computer, where it is stored in memory. A hundred samples are taken in each band and averaged by the computer, to smooth out any instantaneous response irregularities in the noise itself. And throughout the test, the microphone is moved continuously in an imaginary foot-square window, to average out local spatial effects that might otherwise color the measurement.

The resulting composite third-octave response curves are corrected by a set of room-compensation curves, based on reverberation-time measurements for the speaker and microphone positions DSL uses for testing. These corrected curves are what you finally see in our test reports. And they should tell you what the speaker will sound like—right?

Well, yes and no. The acoustics of your listening room will make a difference. Moreover, there are some vagaries of positioning that may affect the curves. Consider, for example, the four figures shown here, all of which depict the response of the Koss M-80 minispeaker, reviewed in this issue. The first one (Fig. 1) was made the way we would normally test such a speaker, with its back against the wall and about 30 inches off the floor. As you can see, there is a dip centered on 315 Hz, followed by a peak at 630 Hz. This pattern shows up in every curve we make with a speaker in this position. It is an interference effect caused by reflections off the floor; it's really there, and you can hear it in the noise signal. But moving the speaker down to the floor (Fig. 2) eliminates the problem, yielding a very smooth response, except for the bump at 125 Hz, which is now accentuated. (It is not very likely that anyone would actually use the speakers in this position, however, which is why we don't normally use it for testing.)

The distance at which the measurement is made also has an effect. Consider the other two curves, for example. Because DSL has correction curves for only one mike position indoors, both were made outdoors with the speaker against a wall and 30 inches off the ground. The curve in Fig. 3 was taken with the mike 14 feet from the speaker (as in the indoor curves), while Fig. 4 shows the results with the mike moved up to a distance of 10 feet. Again, there is a marked difference, probably because of a shift in the interference frequencies.

This is not to say that the curves are without value, for there is much they can teach you. But you should view them as a part of a larger picture—as a clue to the speaker's character—not as the complete, revealed truth. Ultimately, there is no substitute for your own informed judgment, made with the help of your ears. **HF**

ANTICIPATION



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HIGH FIDELITY (January, 1983)

"Breakthrough in FM tuner performance: Carver TX-11."

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"A tuner which long-suffering fringe area residents and those plagued by multipath distortion and interference have probably been praying for..."

Leonard Feldman

AUDIO (December, 1982)

"...enjoy the music and forget about noise and distortion." "Under conditions of weak signal stereo reception the effectiveness is almost magical."

OVATION (December, 1982)

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

Julian D. Hirsch

STEREO REVIEW (December, 1982)

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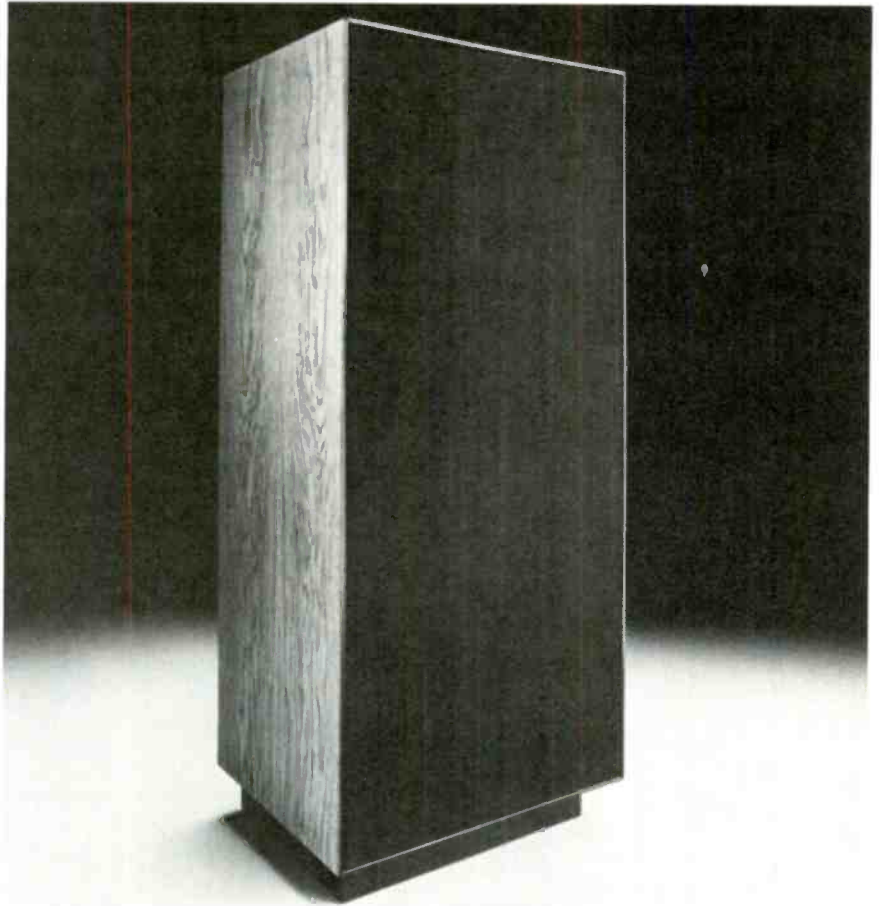
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New Equipment Reports

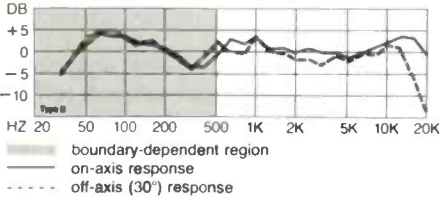
Preparation supervised by Michael Riggs, Peter Dobbin, Robert Long, and Edward J. Foster. Laboratory data (unless otherwise noted) supplied by Diversified Science Laboratories.



Snell's Superb "Simple" Speaker

Snell Type E floor-standing loudspeaker system, in wood cabinet with oak or walnut veneer finish. Dimensions: 14¼ by 33¼ inches (front), 11 inches deep. Price: \$400. Warranty: "limited," five years parts and labor. Manufacturer: Snell Acoustics, Inc., 143 Essex St., Haverhill, Mass. 01830.

ROOM RESPONSE CHARACTERISTICS



SENSITIVITY (at 1 meter; 2.8-volt pink noise, 250 Hz to 6 kHz) 89 dB SPL

AVERAGE IMPEDANCE (250 Hz to 6 kHz) 16.0 ohms

SNELL'S PREVIOUS LOUDSPEAKERS—the Type A and the Type I (test report, October 1981)—have taken different but equally radical tacks to the acoustical problems of reproducing music in the home. The basically conventional design of the Type E is therefore something of a departure for the company. It remains a characteristically Snell product, however, showing all the meticulous attention to sonic and cosmetic detail so evident in its larger, more elaborate, and more costly siblings. In return for only a small sacrifice in ultimate performance, you get a more adaptable speaker at a substantially lower price.

The Type E is a two-way system with a 1-inch soft-dome tweeter mounted approximately at ear level, directly above an 8-inch polymer-treated woofer. Its 2.3-kHz crossover is accomplished by means of a complex dividing network, each one hand-adjusted during final assembly to the characteristics of the particular pair of drivers

going into the speaker. Snell says that very high-grade components are used throughout: polypropylene capacitors in the high-pass section; precision-wound, calibrated air-core inductors of its own manufacture in the low-pass section; and heavy, stranded-copper wire for all driver connections. The beautifully finished bass-reflex enclosure—made in the company's own shop—is available in an oiled walnut veneer with a removable black fabric grille, or in white oak with a brown grille. Adjustable feet enable you to tilt the speaker backward slightly, if you like. The system's tuned port is in the front baffle, about a foot below the woofer; amplifier connections are made to sturdy, color-coded binding posts inset into the back panel.

Diversified Science Laboratories tested the system against the rear wall. In that position, its sensitivity is moderately high. Its impedance varies from a minimum of 4.6 ohms at 130 Hz to a maximum of 26.5

ohms at 1.4 kHz, averaging approximately 13 ohms over the entire audible range and 16 ohms between 250 Hz and 6 kHz (lower midrange to mid-treble). We would not expect any good amplifier to have trouble driving this load, and, in many cases, it should be possible to drive a second set of speakers in parallel.

The results of DSL's power-handling tests are also encouraging, with the Type E accepting the full 67-volt peak output of the lab's amp—equivalent to 27½ dBW (560 watts) into 8 ohms—on 300-Hz tone bursts. Total harmonic distortion is very low for a loudspeaker. At a moderately loud 85-dB sound pressure level (SPL), it averages less than ½% all the way from 30 Hz to 10 kHz (DSL's entire test range) and less than ¼% from 100 Hz up. The distortion curve is also remarkably smooth and free of peaks, rising gently from approximately ¼% at 100 Hz to a maximum of just over 2¼% at 30 Hz. At a very loud 95 dB SPL, the averages work out to slightly less than 1½% and slightly more than ¾%, respectively, with a maximum of about 5¼%, again at 30 Hz. All of this suggests very well-behaved drivers, good crossover design, and a correctly tuned enclosure.

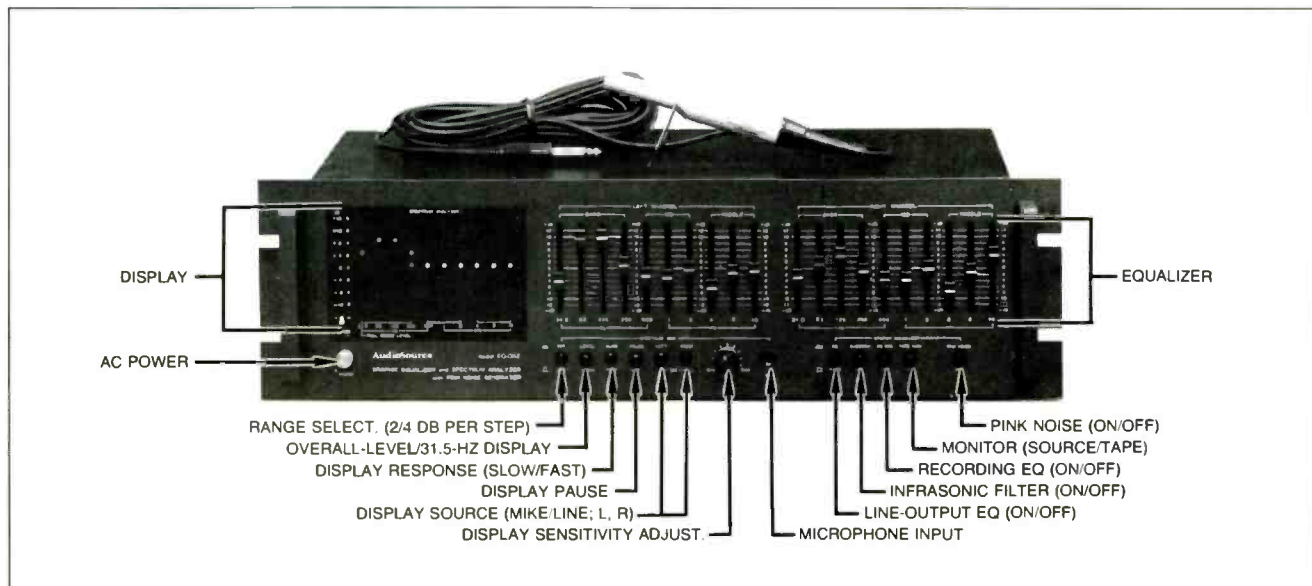
The Type E's third-octave response is

likewise very good: within a mere ±3 dB from 40 Hz to 20 kHz on-axis, and within ±4½ dB from 40 Hz to 12.5 kHz off-axis. Bass response actually holds up nicely down into the 32-Hz band. And the on- and off-axis curves are closely matched, even at fairly high frequencies, indicating good dispersion.

Listening bears out the smoothness and extension of the Snell's response. After experimenting with a variety of placements, we settled on two as the most satisfactory: against the rear wall, or (more often) out about 1½ feet and toed into the listening area, depending on the program material. The speakers were always several feet from any other walls. So positioned, the Type E strikes us as an exceedingly neutral reproducer, with a very clean, clear, and detailed sound. There is, perhaps, a tendency to leanness on some material (mainly noticeable when the speakers are away from the wall), but not to any major degree. And imaging is precise and stable, with a nice sense of openness and depth.

As must be obvious by now, we like this new Snell very much. It looks beautiful, performs superbly, and is not extravagantly priced. What more can we say?

Circle 99 on Reader-Service Card



AudioSource's Equalizer-Plus

AudioSource EQ-One graphic equalizer with built-in pink-noise generator and spectrum analyzer. Dimensions: 19 by 5¼ inches (front panel), 7½ inches deep plus clearance for controls and connections. Price: \$400. Warranty: "limited," one year parts and labor. Manufacturer: made in Japan for AudioSource, 1185 Chess Drive, Foster City, Calif. 94404.

GRAPHIC EQUALIZERS come in three operational formats these days: "computer" jobs (usually at very steep prices), which automatically adjust themselves for flattest measured frequency response; simple and often inexpensive banks of sliders, which leave you entirely on your own in determining what their best settings may be; and hybrids with built-in LED spectrum-analyzer displays to help you evaluate the response for manual equalization. The EQ-One belongs to the last category. At \$400, it costs little more than some "unaided" equalizers, yet it includes switching features for both system and program EQ.

There are ten separate octave-band sliders for each channel, centered on 31.5, 63, 125, 250, and 500 Hz and 1, 2, 4, 8, and 16 kHz—all frequencies in the ISO standard series. The first four are further identified as "bass," the next three as "midrange," and the last three as "treble." The bank of analyzer LEDs comprises ten columns (one for each octave band) and nine horizontal rows—the center one in green as a 0-dB reference. The remaining eight rows—four above and four below—are in red, representing calibrations to ±16 dB in 4-dB steps or ±8 dB in 2-dB steps, depending on the range-switch

Dolby® HX Professional

Dolby HX Professional is a program-adaptive bias technique which can significantly improve the quality of cassette recordings. High-level high frequencies can be recorded more accurately, without sacrificing signal-to-noise ratio, while such side effects of tape saturation as distortion are reduced. For both the home recordist and the duplicator of pre-recorded cassettes, Dolby HX Professional improves the performance of good conventional tapes to match that of costlier, more exotic formulations.

The problem of self-bias

Even when a cassette deck is adjusted for the nominally optimum bias for a given tape, performance is nevertheless compromised under some signal conditions.

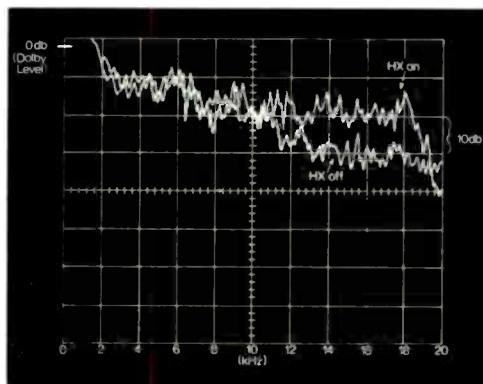
In particular, music which is rich in high frequencies has what's called a self-biasing effect. The musical high frequencies act in and of themselves as recording bias on the tape, effectively adding to the external bias supplied by the recorder's bias oscillator. The net result under such signal conditions is momentarily too much effective bias, which leads to the familiar symptoms of tape saturation. The highest frequencies don't get recorded at all, and considerable IM distortion is generated at lower frequencies.

How Dolby HX Professional deals with the problem

Dolby HX Professional is a special circuit which constantly monitors the total effective bias — a combination of bias from the recorder's oscillator and self-bias contributed by the musical signal — while the recording is being made. If it senses the total bias

increasing beyond the optimum level as a result of high frequencies in the music, it instantly compensates for the increase by lowering the bias from the recorder's oscillator, thus keeping the total effective bias constant. Even on music with a great deal of high-frequency energy, the tape remains

optimally biased, and so tape saturation and its side effects are significantly reduced. The improvement in high-frequency headroom can be 6 dB or more, depending on the particular tape formulation.



Spectral analyses of two high-speed (32 times) cassette recordings of the same selection of rock music show the highest levels accumulated over time at each frequency. Both recordings were made on conventional iron oxide tape of the type favored for commercial cassette duplicating; in this example, the high-frequency headroom improvement provided by Dolby HX Professional is as much as 10 dB.

Improve both the cassettes you make and those you buy

Dolby HX Professional, which was developed by Bang & Olufsen with the assistance of Dolby Laboratories, is provided along with Dolby noise

reduction in home cassette deck models from Aiwa, B&O and Harman-Kardon. Just as important, Dolby HX Professional can be applied to high-speed cassette duplication, where its ability to improve good conventional tape formulations is economically, as well as sonically, significant. The first commercial duplicating facility has now been equipped, and the first pre-recorded cassettes made with Dolby HX Professional (as well as Dolby noise reduction) are expected in the near future.

For further information, including a complete technical explanation of Dolby HX Professional, contact Dolby Laboratories at the address below.



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AUDIO New Equipment Reports

OUTPUT AT CLIPPING (controls at 0-dB settings)
6.8 volts

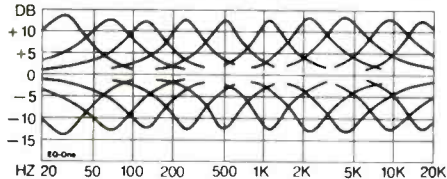
MAXIMUM INPUT LEVEL (clipping) 7.1 volts

S/N RATIO (re 0.5 volt; A-weighted; IHF loading)
all controls at 0 dB 92¾ dB
worst case (at max. above 1 kHz, others at min.) 67¾ dB

HARMONIC DISTORTION (THD; 20 Hz to 20 kHz)
at 1-volt output ≤ 0.010%
at 2-volt output ≤ 0.017%

FREQUENCY RESPONSE (with controls at 0 dB)
+0, -¼ dB, <10 Hz to 28.8 kHz;
+0, -3 dB, <10 Hz to 260 kHz

CONTROL ACTION (max. & min. with other controls at 0)



INFRASONIC FILTER +¼ dB at 35 Hz; -3 dB at 21 Hz;
18 dB/octave ultimate slope

setting. Among the spectrum-analyzer control buttons are two marked for left- and right-channel use, respectively. When one of these is pushed, the display registers only line input for the chosen channel; when both are pushed, it indicates the average of the two channels; and when neither is engaged, it shows only the output of the supplied microphone (which plugs into the front panel).

The display has two operating-mode features in addition to the range switch: LEVEL/31.5-Hz converts the lowest column—normally centered on 31.5 Hz, where there often is very little acoustic energy—to an overall level indicator, while SLOW/FAST switches the display's decay characteristic between that of a slightly slow peak meter and that of a moderately brief peak-hold meter. If you want to retain instantaneous values still longer, you can press the spring-loaded pause button, which freezes the display until you release the button.

The manual makes it clear that AudioSource envisions these controls as primarily applicable to speaker equalization. First, you set up the microphone at your listening position, turn on the pink noise, and release both channel buttons. The next step is to turn the BALANCE on your preamp or receiver to one extreme, observe the display, and adjust the VOLUME on your system and the SENSITIVITY on the EQ-One to center the response curve on the display. Then you move the sliders for the appropriate channel until you get a horizontal green line. All that's left is to turn the BALANCE to the other extreme and equalize the other channel.

At least, that's the way it works in theory. If you've ever worked with pink noise, you know that the process has got to be more complicated. Although true pink noise averages equal energy per octave, its instantaneous content is, by definition, a random mix that is anything but "flat." Even with the time constants supplied by the SLOW and with the coarser display steps, the lit LEDs in the various columns tend to bounce about as the momentary energy in their frequency bands rises and falls. So although the information is integrated to some extent by the display electronics, the user must nevertheless judge whether or not a given slider is correctly placed.

Making just the right correction is further complicated by two aspects specific to the EQ-One. First, the pink noise appears not to be perfectly flat in our test sample. With all the sliders set to their zero detents and the display sensitivity adjusted to give as close to a flat horizontal green line as possible, the 4-kHz column frequently bobs upward but never downward, while the upper three bass columns tend to bob downward more often than upward. This bias is more obvious with the display set for 2-dB steps, of course, though it still is discernible with 4-dB steps. Thus, if you want to be

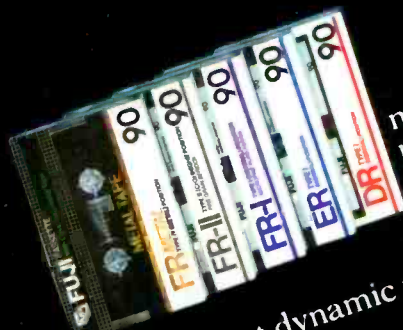
ultraprecise, you really have to allow for these idiosyncrasies and adjust the sliders until they reproduce the original pink-noise curve, rather than the perfectly flat response of the ideal. To do so, however, would be to apply the technique with more precision than it is inherently capable of.

Second, and of only slightly greater practical importance, is the misleading apparent calibration of the sliders. The extremes, marked at ±12 dB, are reasonably accurate; but the intervening steps are marked in increments of 2, implying 2 dB per step, which is not the case. As you move away from 0 dB, each marked increment produces little change in response until you approach the extreme settings, where a small change in slider position has a big effect. In the tests at Diversified Science Laboratories, for example, the 1-kHz slider produced a full center-frequency (actually at about 1.1 kHz) cut of 12½ dB at the -12 setting, only 3 dB of cut at -10, 1½ dB at -8, changes of only ¼ to ½ dB from there to +6 (with about 1½ dB of boost), 3 dB of boost at +8, 12½ dB at +10, and only a hair more at +12. This is of little practical consequence, however. Because of the interaction between control bands, adjustment of any one is never a simple matter of moving its slider by the amount seen wanting in the display: Fine-tuning by eye and ear always is in order, and that process has nothing to do with slider calibration. Just use the marks as position references and judge the results from the display.

Truly flat response is not, in fact, the end purpose of these exercises—a point made clear in the owner's manual—and the technical "accuracy" of the process is far less important than its practical utility. Many listeners, for example, find a flat top end excessively bright. (See "A Question of EQ," page 35.) The final tuning stage, therefore, consists of further adjusting the sliders to suit your taste. This can be a tricky business, but the display helps by demonstrating just how you're departing from flat response when you do and by suggesting what interactive effects between bands may require further attention.

The switching on the lower right portion of the front panel also enables you to use the equalizer/analyzer for tape recording. Like most equalizers, the EQ-One includes connectors and switching to replace the tape-monitor loop it occupies on your amp or receiver. It is unusual, however, in permitting equalization of the recording feed to the attached deck; indeed, the EQ-One will even deliver pink noise to the deck and analyze it on playback so that you can optimize the deck's record/play response. (Of course, the equalizer can't be used for system and program EQ simultaneously.)

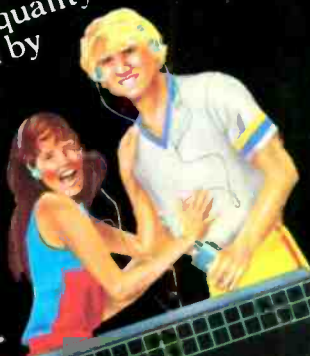
This pre-equalization feature works well and benefits from the presence of the analyzer. But there is one peculiarity of the



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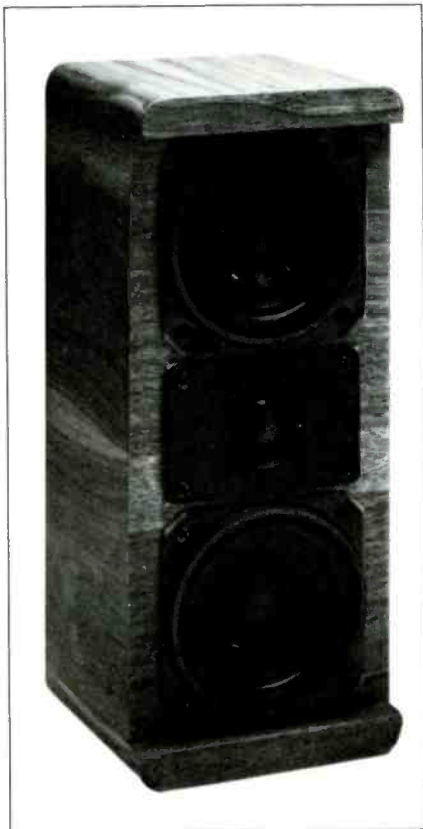
switching that you must keep in mind when you use it: When you press the button that inserts the equalizer into the tape recording feed, the equalizer's settings will influence the feed even with the EQ/OFF in the off position. And if you turn on the equalization and then set the monitor button to TAPE (with the recording feed still set for EQ), you will actually hear the equalizer's output—not the recorder's. To get full record/play monitoring under these circumstances, you must release the EQ/OFF and use the monitoring switch on the recorder.

This, too, amounts to no more than a minor wrinkle in an eminently useful component at an especially attractive price. Performance in all the usual respects—inher-

ent response, distortion, and noise—is above reproach for such a product. And not the least of the EQ-One's virtues is its ability to teach you things about the nature of sound. Can you imagine what an octave-wide noise band centered on 2 kHz sounds like? Do you know how much energy to expect in the 63-Hz band with typical symphonic music? Do you know how "unflat" you like the top end of your speakers' response to be? The EQ-One will answer these questions, along with others that you may never have thought of before. Its dancing light display on musical signals may seem like a dandy toy, but it's actually much more.

Circle 103 on Reader-Service Card

Koss Masters the Minispeaker



ALMOST A CLICHÉ of modern audio, the minispeaker is still susceptible to innovation. Koss's entry—the M-80, otherwise known as the DynaMite—is a little longer and thinner than all but a few of the genus and is encased in a walnut-veneered cabinet instead of in a common black box. More to the point, however, is its use of three drivers in a two-way configuration: a 1-inch dome tweeter at the center of the front panel, flanked by a pair of identical 4½-inch cone woofers.

This arrangement confers certain advantages over more conventional driver arrays. The dual woofers can move much more air at low frequencies than would be within the "grasp" of a single driver of comparable size, improving bass response and power-handling. And the two drivers working in tandem create an effective combined "piston" centered between them—and therefore coaxial with the tweeter. Thus, in theory, upper and lower ranges appear to emanate from the same point in space, for ideal stereo imaging.

With this in mind, we wondered what position in the room might give the M-80s their best shot at showing off their quality. The instructions say only that they are "an exciting addition to any room, shelf, or van," rather than suggesting an ideal placement. Since deep bass is generally wanting in tiny speakers, it might seem wise to place the speakers at the intersection of two walls or the floor and a wall. (Diversified Science Laboratories measured response at floor level, as well as at the usual 30-inch height.) But such placements are generally awkward with so small a speaker and often fail to provide the best possible stereo image.

After some experimentation, we found that the smoothest sound resulted from letting the speakers stand freely, away from reflective surfaces. This positioning also made for excellent stereo imaging—particularly with the speakers standing upright (though in theory performance should be almost identical with them horizontal). Without any acoustic reinforcement from

room boundaries, the M-80's bass seemed a little wanting. But when we applied some equalization boost below the bass resonance (the "bump" centered on 125 Hz in the graphs)—a procedure that the little speaker accepted with unusual grace—the results were among the best we have ever achieved with a minispeaker.

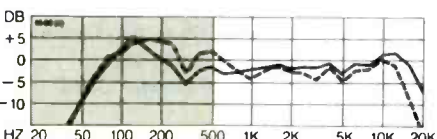
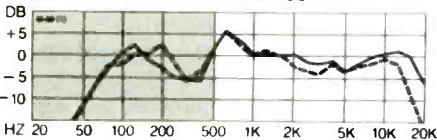
The standard placement used for the top set of graphed response measurements, with the speakers at listening height and against the back wall, actually produces the least flat curves of any that DSL made. The spread is about $\pm 5\frac{1}{2}$ dB between 80 Hz and 20 kHz on axis and about ± 6 dB between 63 Hz and 14 kHz off axis. Much of this deviation is attributable to interference effects from a reflection off the floor, which are responsible for the dip at 320 Hz and the peak an octave up at 640 Hz. (See "Basically Speaking," page 20.) Neglecting these anomalies results in an on-axis response envelope of ± 4 dB from below 80 Hz to 20 kHz and a mere $\pm 2\frac{1}{2}$ dB from 80 Hz to 16 kHz.

With the speakers on the floor (lower graph)—an acoustic position equivalent to that at the angle of two walls in terms of bass reinforcement—on-axis response is within $\pm 5\frac{1}{2}$ dB from the 63-Hz band almost to 20 kHz, with more gradual swings between the extremes, and within $\pm 3\frac{3}{4}$ dB from 200 Hz to 16 kHz. Some high-end loss is to be expected in this position because it points the tweeter along the floor, rather than upward toward the "listening" microphone, and the bump at 125 Hz is more pronounced because of the boundary reinforcement. Measurement with the speaker tilted more toward the mike resulted in similar figures but a more ragged-looking curve.

The curves that most nearly conform to our listening impression with the speakers standing free were made outdoors with the speakers 30 inches above the ground and against a wall. As measured from 10 feet away, the M-80 shows its characteristic bass-resonance peak, though centered a little higher (in the 160-Hz band) than in the

Koss M-80 DynaMite miniature loudspeaker, in wood cabinet with walnut-veneer finish. Dimensions: 5¼ by 12¾ inches (front), 5½ inches deep. Price: \$280 per pair. Warranty: "limited," five years parts and labor. Manufacturer: Koss Corp., 4129 N. Port Washington Ave., Milwaukee, Wis. 53212.

ROOM RESPONSE CHARACTERISTICS



— boundary-dependent region
 - - - on-axis response
 · · · · · off-axis (30°) response

SENSITIVITY (at 1 meter; 2.8-volt pink noise, 250 Hz to 6 kHz) 90½ dB SPL

AVERAGE IMPEDANCE (250 Hz to 6 kHz) 6.2 ohms

indoor measurements, rising about 7 or 8 dB above a remarkably flat "plateau" extending from the 320-Hz band out to 16 kHz or so. Response spread in the plateau area is only a total of 3 dB; overall, it is ±4¼ dB. In other words, response varies with placement, as always, but—aside from the deep bass, where no minispeaker can be expected to shine, and a rather prominent upper-bass range—the M-80 is unusually well behaved. And, since it is small, the speaker is easy to move when you're searching for the best position in your room.

A mark of its good behavior is its capacity to accept equalization in order to extend apparent response. Most tiny speakers are working on the ragged edge even at moderate drive levels and take on unpleasant distortion or coloration when you push them hard. From 125 Hz to 10 kHz, total harmonic distortion averages less than ½% at a sound pressure level of 85 dB, rising to about ¾% at 95 dB SPL and about 1½% at 100 dB SPL. These are excellent results for a minispeaker. And this one accepted the full output of the test amp in the 300-Hz pulse test—the equivalent of some 27 dBW (500 watts) instantaneous into 8 ohms, for a peak output of 117½ dB SPL. This test doc-

uments the speaker's dynamic range and demonstrates the reasonableness of Koss's maximum power rating for it: 30 watts (14¼ dEW) continuous or 100 watts (20 dBW) on typical music.

The actual power through the speaker in the pulse test presumably was close to 1 kilowatt, since the impedance at this frequency measures 4.0 ohms—the minimum value of the curve anywhere in the audible range. Above 1 kHz, it stays between 5.3 and 8.0 ohms; at bass resonance it rises to just under 20 ohms. The average impedance is close to Koss's 6-ohm nominal rating for the speaker. In any event, the design should be a good match for transistor amplifiers in both automotive and home systems.

Though we're no longer amazed by the big sound that a well-designed little speaker can produce, we're more than a little pleased by what we hear from the M-80. Unquestionably, the use of dual woofers helps to increase dynamic range beyond the capabilities of typical minis. And, with good placement, the stereo imaging is distinctly better than average for the format. So too is the appearance in our judgment. We would therefore rate the M-80 among the top contenders in its size class.

Circle 104 on Reader-Service Card

An Ace Bandage for Ailing Audio



Ace Audio Model 4100b active bandpass filter. Dimensions: 4½ by 5¼ inches (top), 2 inches high plus clearance for connections. Price: \$108.50, postpaid from the manufacturer. Warranty: "limited," two years parts and labor (plus 30-day money-back "guarantee"). Manufacturer: Ace Audio Co., 532 Fifth St., East Northport, N.Y. 11731.

OUTPUT AT CLIPPING > 8½ volts

S/N RATIO (re 0.5 volt; A-weighted; IHF loading) 100 dB

HARMONIC DISTORTION (THD; 20 Hz to 20 kHz)
 at 0.5 volt out ≤ 0.014%
 at 2.0 volts out < 0.01%

EVEN THE MOST ARDENT proponents of broadband audio electronics should admit that there are times when extending response below 20 Hz or above 20 kHz adds to the problems of audio reproduction: Passing "everything from DC to light," as the saying goes, can preserve signal elements that do more harm than good. Radio-frequency (RF) ultrasonics, whether from a nearby broadcast station or electrical equipment, can be a source of audible intermodulation with, for example, tape hiss, bias frequencies, or even with the audio itself. Infrasonics from warped records can overload amplifiers, push woofer cones beyond their linear operating ranges, and sometimes even damage loudspeakers. Power amplifiers and cassette decks are probably the components most likely to misbehave in the presence of excessive nonaudio signals, but no component category is entirely exempt.

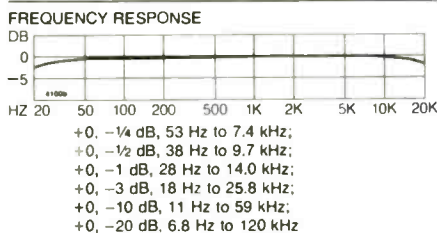
Enter Ace Audio's line of infrasonic and ultrasonic filters—including the Model 4100b bandpass filter. It is an active device with its own AC power supply, designed to achieve lowest possible distortion and phase error, says Ace. There are no operating controls; whatever signal passes through it is band-limited. It can be inserted into any line-level signal path: between the preamp and power amp (including the "jumper" connections on some receivers and integrated amps), into tape-monitor or signal-processor loops, or in series with a signal processor or tape deck that already is connected into the system. It is not intended

for use ahead of a phono input, where signal levels may be too low to suit the headroom/noise parameters chosen by the filter's designer, and input impedance (measured at 68,000 ohms by Diversified Science Laboratories) might be a hair high for very fussy pickups.

The preferred placement will depend on what you want the filter to control. If, for example, you find that warped records are overloading your tape deck with infrasonics that don't register on the deck's meters—or, conversely, that infrasonics are kicking the meters so high that you wind up using unnecessarily low recording levels—the logical spot for the filter would be between the preamp's recording output and the deck's input. If the infrasonics leave the deck unperturbed but create large woofer-cone excursions in your speakers (wasting power and creating distortion in the process), or if ultrasonics (most likely from an open-reel tape deck during audible cueing) seem to be blowing tweeters or creating slewing distortion in the amplifier, the filter should be placed between the preamp and amp, or in its own, "always-on" tape-monitor or signal-processor loop.

The 4100b is intended to correct faults in system operation and should be used accordingly. There's no reason to install such a filter "just in case": It is a cure, rather than a preventive, and the data show how effective a remedy the Ace can be. Response is exceedingly flat throughout the range where most musical energy is generated and rolls off only gradually as signal

AUDIO New Equipment Reports



ULTRASONIC FILTER ultimate slope, 12 dB/octave

INFRASONIC FILTER ultimate slope, 18 dB/octave

frequency approaches the edge of the audio band. The rate increases until the specified 18- and 12-dB-per-octave slopes are achieved, at about 10 Hz and 100 kHz respectively. The gentleness of the initial slopes, particularly at the high end, doubtless reflects Ace's care that phase shift remain minimal within the audio band.

Distortion is very low (essentially unmeasurable in any useful sense at the reference half-volt level). And the extremely high signal-to-noise ratio of 100 dB (also referred to a half volt) combined with the generous headroom limit of 8.5 volts add up to a whopping total dynamic range of

more than 124 dB. That's quite a bit more than you're ever likely to need, though signal values will seldom run above 1 volt in typical setups and will lie in a considerably lower range if you insert the filter between preamp and amplifier (that is, after the system's volume control).

Our listening tests confirmed the filter's excellence. The degree of improvement when there are problems will depend on their nature and the appropriateness of the filter's bandpass characteristics to their solution, but the 4100b is good medicine for a whole range of audio ills.

Circle 102 on Reader-Service Card

New Realism from Realistic



A COMPANY OFFERING MERCHANDISE as diverse as Radio Shack's can't be called specialized, and we don't think of it as a speaker specialist. In the Optimus T-300, however, Radio Shack has created what HF staffers agree is the most listenable speaker we have yet encountered in the Realistic line, and one that can stand comparison to models from companies that are devoted primarily to loudspeakers. It is a so-called tower—a relatively tall, narrow, floor-standing model—with a 1-inch soft-dome tweeter, a 5-inch midrange cone, and a 10-inch woofer loaded by a passive radiator. The nominal crossover frequencies are 7.6 kHz and 880 Hz; back-panel connections are the familiar spring-loaded clips.

The arrangement of the four radiating elements on the front panel is roughly vertical, but the midrange driver and tweeter are set off slightly to the left to accommodate a panel with level controls for each. Their ranges are quite limited, making gross misadjustments impossible. The tweeter control seems to do more than just increase or reduce the driver's effective sensitivity by a few dB: In Diversified Science Laboratories' measurements, the maximum adjustment curves diverge from the "flat" response curve progressively, and gradually, as frequency increases. This is generally more useful than the shelving characteristic of most other such controls. The controls themselves are L-pads mounted on aluminum heat sinks to increase their current-handling capacity and stability at high drive levels. Ferrofluid in the tweeter's voice-coil gap further enhances power handling.

With the controls at their "flat" positions and the speaker standing 3 inches in front of the wall, DSL measured response that is, indeed, quite flat. On-axis, it is within ± 4 dB from the 40-Hz band to the

16-kHz band and within 1 dB of the median reference sound pressure level in both of those extreme bands. Response off-axis is very similar, rolling off a little faster only at the very top of the range. Impedance, which is essentially unaffected by the setting of the tweeter and midrange controls, bottoms out at about 6.5 ohms just above 100 Hz and again at 2 kHz; the twin bass-resonance peaks, characteristic of ported enclosures (with or without a passive-radiator diaphragm in the port), run quite high (40 ohms or more), but the rest of the curve lies below 16 ohms. The 10-ohm average of these variations is not significantly greater than Radio Shack's 8-ohm nominal rating. Sensitivity is moderately high, which together with the reasonably high impedance should make the speaker an easy load for just about any amplifier.

The T-300's extended bass response suggests low distortion at low frequencies, and DSL's measurements confirm this. Overall distortion is not exceptionally low at a moderate sound-pressure level of 85 dB, but the average of about 1/2% THD holds up right down into the 40-Hz band. And distortion creeps upward relatively slowly as drive level is increased—to an average of only about 2% or so at 100 dB SPL. In both the pulse and tone tests at 300 Hz, the speaker accepted the maximum levels with no sign of strain.

Radio Shack's owner's manual advises that the speakers be placed as near as possible to the corners of the room. We find the bass rather overbearing in this setup and even, on some recordings, with the speakers positioned as they were for measurement—against the back wall but out from the room corners. The overall balance is generally most pleasing with the speakers pulled out a few feet from any wall—a position in which their imaging seems to be

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

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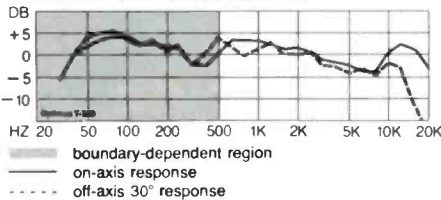
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* Available as a factory installed option on Cadillac Seville and Eldorado,
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AUDIO New Equipment Reports

Realistic Optimus T-300 floor-standing loudspeaker, in wood case with walnut-veneer finish. Dimensions: 12½ by 34 inches (front), 14 inches deep including grill. Price: \$260. Warranty: "limited," five years parts and labor. Manufacturer: Tandy Corporation/Radio Shack, 1800 One Tandy Center, Ft. Worth, Texas 76102.

ROOM RESPONSE CHARACTERISTICS



at its best as well. The T-300 sounds quite smooth, with only a very slight "thickening" of the midbass remaining when the speakers are kept away from the wall. The alterations possible with the driver controls are subtle, as they should be, and might be useful in some rooms; we generally prefer to leave them in their "flat" positions.

SENSITIVITY (at 1 meter; 2.8-volt pink noise, 250 Hz to 6 kHz) 89 dB SPL

AVERAGE IMPEDANCE (250 Hz to 6 kHz) 10.1 ohms

The high quality of these speakers prompted us to pit them against speakers costing far more, which is essentially unfair. But the T-300s came off surprisingly well in the confrontation, and they will do better still against speakers in their own price-class.

Circle 101 on Reader-Service Card

APPROX. TWEETER CONTROL RANGE (re "flat") ±3 dB above 5 kHz

APPROX. MIDRANGE CONTROL RANGE (re "flat") ±2 dB, 500 Hz to 5 kHz



Phase Tech's Urban Solution

THE POPULARITY of three-piece loudspeaker systems is understandable. Many people live in small apartments, and when floor space is at a premium, two small satellite speakers and a single compact bass enclosure make an attractive alternative to more traditional designs. Phase Technology has addressed the question of decor by crafting the PC-60/50 system with an uncommon concern for aesthetics. The satellites are veneered with oak and have beveled edges. And the matching bass module seems destined to double as a side table.

The PC-60 satellites (also sold separately as minispeakers) use a 1-inch soft-dome tweeter crossed over at 1 kHz to a 6-inch woofer. The woofer has a flat diaphragm, instead of the usual concave cone. Phase-Tech says this enables them to align

the drivers' acoustic centers for minimum phase shift without resorting to a stepped baffle, which would increase the overall size of the enclosure and perhaps cause undesirable acoustic reflections off protruding surfaces. Unlike other flat-diaphragm drivers we've seen—most of which use two or more voice coils attached to different points on the back of a rigid panel—the PC-60's woofer is a solid cone of polystyrene foam with the voice coil at its apex. The entire moving structure should therefore be exceptionally rigid and nonresonant, but still relatively low in mass.

The flat-diaphragm design also extends to the PC-50 bass module, whose 10-inch, downward-firing driver uses two coaxially mounted voice coils (one each for the left and right channels) to reproduce fre-



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tape; a 4-digit counter that's also a timer and a real-time clock; 12 LED peak meters; and audio record mute. Sansui has made high-performance recording completely effortless.

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There's a lot of the precision and operating convenience of the D-970 in every cassette deck Sansui makes. So regardless which you choose, you're assured superb recordings every time—automatically.

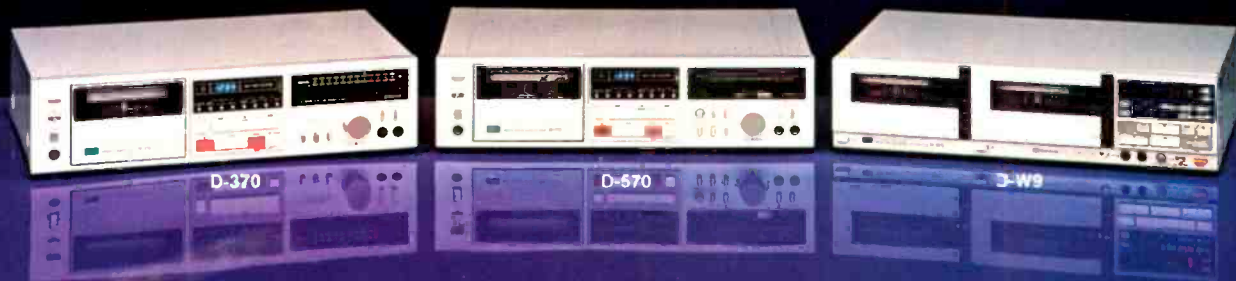
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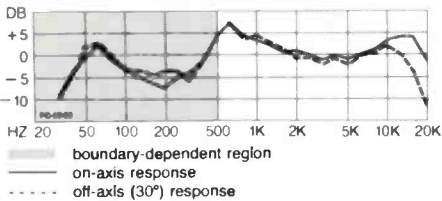
Putting more pleasure in sound



AUDIO New Equipment Reports

Phase-Tech PC-60/50 three-piece loudspeaker system. Dimensions: 8 by 13¼ inches (front), 8 inches deep (satellites); 13 by 14 inches (front), 15 inches deep (bass module). Price: \$650. Warranty: "limited," five years parts and labor. Manufacturer: Phase Technology Corp., 6400 Youngerman Circle, Jacksonville, Fla. 32244.

ROOM RESPONSE CHARACTERISTICS



SENSITIVITY (at 1 meter; 2.8-volt pink noise, 250 Hz to 6 kHz) 86 dB SPL

AVERAGE IMPEDANCE (250 Hz to 6 kHz) 11.0 ohms

APPROX. TWEETER CONTROL RANGE (re "flat") ±3 dB above 6 kHz

frequencies below 150 Hz. Tying the three elements of the system together is straightforward. Output from the amplifier is routed through the PC-50's crossover and out to the PC-60 satellites. All connections are via spring-loaded clips. Each satellite has a protective circuit breaker and a continuously variable tweeter level control, which gently boosts or cuts response up to a maximum of about ±3 dB above 6 kHz.

Diversified Science Laboratories tested the system with one satellite mounted 30 inches above the floor and against the rear wall; the bass unit was placed directly below on the floor. Power handling proved quite good, with the system accepting the full 65½-volt peak output of DSL's amp—equivalent to 27¼ dBW (530 watts) into 8 ohms—in the 300-Hz pulse test. Total harmonic distortion (THD) is reasonably low, averaging only about ¼% from 40 Hz to 10 kHz at a moderately high sound pressure level (SPL) of 85 dB. And at a very loud 95 dB SPL, it rises to just 1¾% over the same range. We are also happy to note that there seems to be no tendency toward increased distortion at the crossover points, as in many other systems. Distortion is somewhat elevated in the midrange, over the two octaves between 250 Hz and 1 kHz, relative to the rest of the band, but this is the only real oddity reflected in the data.

The system is moderately sensitive, and its impedance is well controlled, ranging from a minimum of 4 ohms at 400 Hz to a maximum of 16.9 ohms at 3 kHz (with the tweeter level control set flat). This, and a reassuringly high average impedance, suggests that the PC-60/50 will present no difficulty to any good amplifier, though some caution may be advisable if a second pair of

speakers is run in parallel.

Third-octave response is quite smooth from about 1.2 kHz up, and much of the irregularity below that is attributable to interference between the direct sound and reflections off the floor. The peak in the 630-Hz band might well vanish if the satellite were placed on the floor. Much of the trough in the upper bass and lower midrange probably would disappear as well, although the breadth of the hole may be indicative of some crossover problems, as well. In any case, we'd be careful about putting too much weight on that portion of the curves.

Our listening sessions with the PC-60/50 immediately disclosed its chief virtue: ease of placement. With the satellites mounted on stands approximately seven feet apart, we tried out many different positions for the bass module—from between the satellites to far off to one side. Even the most far-fetched placements resulted in a decent blend of high and low frequencies. With the volume turned up only as far as we thought appropriate for a typical thin-walled apartment, the overall balance was pleasant. Voices and instrumental timbres emerged quite nicely, and we were even a little surprised by the solidity and impact of the bass.

But the PC-60/50 is not at its best when reproducing a full orchestra at concert-hall levels. A raspiness creeps into loud passages, and the sound seems to shrink back, as if the system were reticent about committing itself to an all-out attack. That, however, may be a built-in safeguard for those whose neighbors don't share their musical tastes.

Circle 100 on Reader-Service Card

Manufacturers' Comments

We invite rebuttal from those who produce the equipment we review. The comments printed here are culled from those responses.

Allison Model Nine loudspeaker system, March 1983. Thank you for the nice things said about our Model Nine loudspeaker in the March issue. I am very pleased with the general tone of the review and the opinions expressed by the reviewers. However, I do think that the response curves shown ought to be interpreted with some caution—perhaps even with skepticism. Our own measurements show the total power output of the system to be quite flat, and we believe that this is the most valid measurement of the spectral balance that will be perceived by listeners. It would, for example, correlate

better with the reviewers' judgment of string-tone accuracy than would your published curves.

But total acoustic-power measurements are difficult and tedious to perform. In any case, I recognize that there are nearly as many opinions on the proper way to test loudspeakers as there are engineers who test them, and I would like to congratulate HIGH FIDELITY on having developed a test program that is among the most rational of all.

*Roy F. Allison
President
Allison Acoustics, Inc.*

A Question of EQ

When a recording needs more than a touch-up, an equalizer may be the answer.

by E. Brad Meyer

"A SONIC WINDOW" best describes an audio system. The better the system, the easier we can see through to the recording itself and evaluate the effects of such things as microphone choice and placement, hall acoustics, and production techniques on the recording's tonal balance. And should that balance need adjustment, some touch-up via your receiver's or preamp's tone controls is in order.

There are times, though, when tone controls just don't do the job. A rock & roll recording that has been engineered to have sufficient presence on a modest car-stereo system will sound very bright and harsh on good home loudspeakers. Attempting to tame the harshness by turning down the treble control can take away the highs completely, leaving the source of the problem—an exaggerated upper-presence range—unaffected. Similarly, some audiophile reissues of old master tapes are plagued by unwanted thickness in the mid-bass that cannot be attenuated without removing their nicest feature—a satisfying bottom octave. And the list goes on. In these cases you need more than tone controls—you need an equalizer.

Anatomy of an Equalizer

An equalizer is usually defined as a set of multiple tone controls. That's a useful concept, as long as you keep in mind what a bass or treble control really does. A properly designed bass control operates over a limited band of frequencies, from about 200 Hz down to 15 Hz or so. Similarly, a typical treble control affects all frequencies from about 3 to 30 kHz. Because these controls affect frequencies above and below the range of our hearing, it's easy to forget that we are dealing with limited (albeit broad) frequency bands.

What distinguishes an equalizer is that its frequency bands fall entirely within the audible range. This gives the user the flexibility necessary to reduce a peak in the upper presence range without affecting the top octave, to give a weak vocalist a better chance to be heard over the orchestra, or to attenuate a mid-bass hump in a loudspeaker's

response while boosting the very bottom end.

Equalizers are line-level devices, designed to operate at maximum levels of a volt or so. In most systems, the best place to install one is in a tape-monitor loop, between the recorder and the preamp (or receiver). In recognition of this fact, many equalizers now have a switch marked "pre/post" or "source/tape EQ" that lets you insert the unit in the signal path either before or after the tape deck, enabling corrections during recording or playback.

Most use vertical slider potentiometers, arranged from left to right in order of ascending frequency, to control the levels of the various bands. Together, the settings of the sliders form a graphic approximation of a frequency response curve—hence the term graphic equalizer.

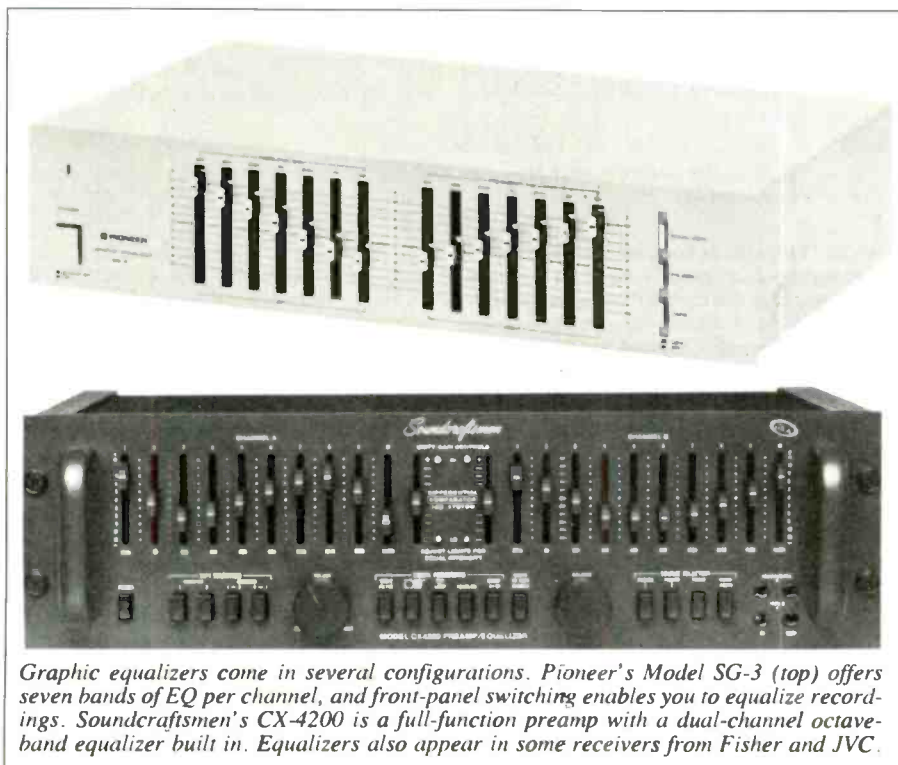
Graphic equalizers come in various configurations, depending on how much versatility you need—and on how much money you are willing to spend. Simple models for home or automotive use may have only five ganged controls, each affecting both channels. More flexible units for home use offer ten controls, spaced one

octave apart, for each channel.

The controls themselves are often located at the center frequencies specified by the International Standards Organization (ISO): 31.5, 63, 125, 250, and 500 Hz, and 1, 2, 4, 8 and 16 kHz. (These standard bands cover the range from 22 Hz to 22.72 kHz.) Graphic equalizers are offered by many manufacturers, including Audio Control, Fisher, Soundcraftsmen, MXR, JVC, Phase Linear, Pioneer, Hafler, Technics, DBX, Numark, Audio Source, Sansui, Heath, ADC/BSR, Radio Shack, and Harman Kardon.

If cost were no object, how many controls would we want on an equalizer? Experimental data suggest that the human ear is relatively (though not completely) insensitive to variations in frequency response less than one-third of an octave wide. An equalizer with one-third-octave controls requires 30 sliders to cover the ten octaves between 20 Hz and 20 kHz. Such devices, sold mainly for professional audio applications, are complex and expensive. For most home uses, an octave-band graphic equalizer is a good compromise.

Another type, often seen in profes-



Graphic equalizers come in several configurations. Pioneer's Model SG-3 (top) offers seven bands of EQ per channel, and front-panel switching enables you to equalize recordings. Soundcraftsmen's CX-4200 is a full-function preamp with a dual-channel octave-band equalizer built in. Equalizers also appear in some receivers from Fisher and JVC.

E. Brad Meyer is an independent audio consultant. He is also president of the Boston chapter of the Audio Engineering Society and serves as editor of the Boston Audio Society's journal.

An Experiment in Speaker EQ: How Much Can an Equalizer Do?

EQUALIZING A LOUDSPEAKER ROOM combination requires more than ten octave bands. In Fig. 1 we see a one-third-octave plot of the response of a loudspeaker in a room. The microphone was placed in a normal listening position and left there throughout the experiment.

The large irregularities in the curve below 500 Hz are fairly typical of what happens in real

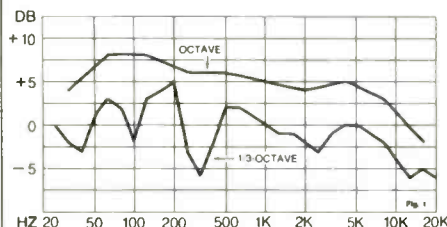


Fig. 1: Loudspeaker response with no equalization

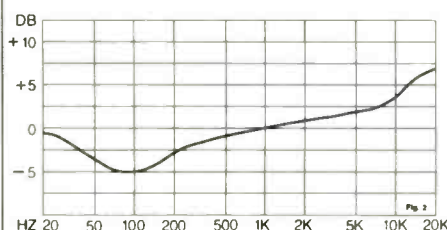


Fig. 2: Octave-band correction EQ

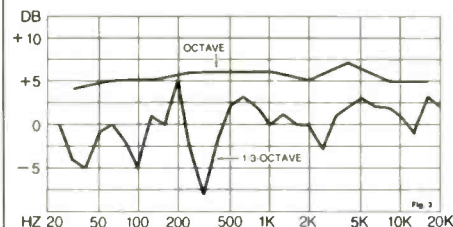


Fig. 3: Loudspeaker response after the addition of octave-band EQ

rooms. [To dramatize response irregularities, we have expanded the vertical scale of the accompanying graphs so that each division equals $2\frac{1}{2}$ dB, instead of the 5 dB on our equipment-report graphs.] The speaker sounded quite good at the measured location, however. The curve's most prominent features, besides the generally rolled-off high frequencies, are a large peak in the band centered at 200 Hz and an adjacent valley centered at 315 Hz. There are other irregularities in the bass, as well as a trough at 2.5 kHz followed by a broad rise from 3 to 8 kHz. Note that the octave-band response, which is the upper plot, shows little of the detail disclosed in the bottom curve.

I attempted to make the response at this particular microphone location as flat as possible—not to make the speaker sound better, but to judge the effects of equalization. Flat response would not guarantee good sound, even at the exact location of the microphone. Systems equal-

ized for flat room response sound too bright due to the nature of modern commercial recordings. (A rolloff of 2 dB/per octave beginning at 4 kHz is a good compromise for most recordings.)

First, I used an octave equalizer with ISO center frequencies. After about five minutes of adjustments, the loudspeaker produced the curves in Fig. 3. (The equalizer's correction curve is shown in Fig. 2.) This was a quick fix—the entire region below 500 Hz needed to come up a bit—but the important thing is that the roughness in the response was still there. The equalizer's octave bands are simply not fine enough to correct the narrow peaks and dips, especially in the bass, even though the octave-band response now looks quite smooth. Incidentally, you may notice that the curve in Fig. 2 doesn't look like the composite of a group of single one-octave filters. This is because the equalizer, like most home units, is of variable-Q design, in which the filter bandwidths narrow as the amount of boost or cut is increased.

Next, I used a five-band parametric model for the same job. The equalizer's response is given in Fig. 4, the resulting system curve in Fig. 5. Three of the equalizer's five bands were used to counteract the two peaks and the intervening valley between 160 Hz and 1 kHz. A broad rise was added to the whole top end, with a small, narrow dip to flatten the peak at 5 kHz. The result is

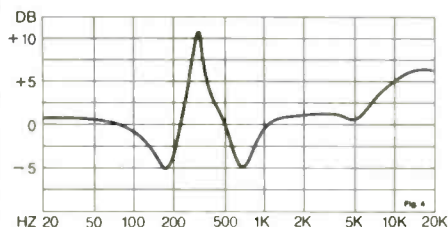


Fig. 4: Parametric correction EQ

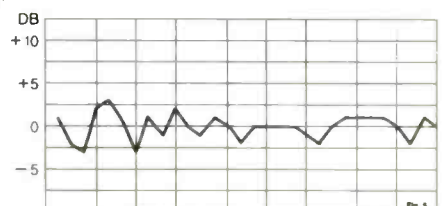


Fig. 5: Loudspeaker response after addition of parametric EQ

distinctly better than the original curve. The overall balance is much improved, and the worst peaks and dips are smoother. There are some large irregularities in the bass, but there were no bands left over with which to go after them.

Fig. 6 shows the combined correction achieved with the octave-band and parametric units working together. The former is used for broad corrections, the latter to clean up the details. This correction applied to the loudspeaker resulted in the flattest system response (Fig.

7), especially above 500 Hz. So should you buy two equalizers and use them this way? Not for speaker EQ.

One reason why is shown in Fig. 8, which

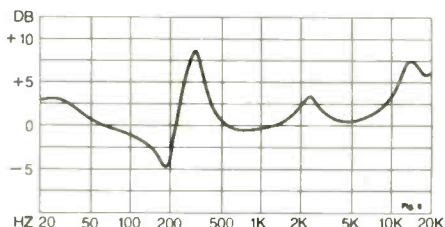


Fig. 6: Octave-band and parametric correction EQs combined

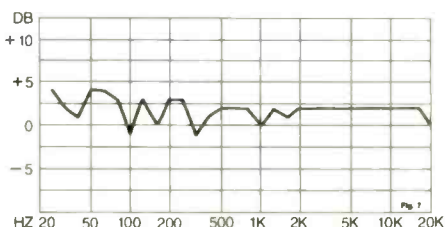


Fig. 7: Loudspeaker response after addition of combined EQs

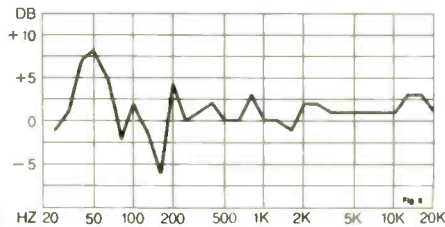


Fig. 8: Loudspeaker response after addition of combined EQs; microphone moved three feet to the left

shows the results of a test that was made under the same conditions as Fig. 7's except that the microphone was moved three feet from the original measuring position. The bass anomalies I took such pains to remove are so strongly dependent on the listening position that correcting them at one spot is likely to make things worse elsewhere. Neither the big peak at 46 Hz nor the dip at 160 Hz are present at all in Fig. 1.

And there's more. Pink noise is a steady signal, so these measurements do not differentiate between the direct radiation from the speaker and the effects of the room. Room resonances, especially in the bass, take time to build up; they may actually occur many milliseconds after the system "speaks." Correcting the combined response of speaker and room together may worsen the response of the first arrival of the sound from speaker to listener. What effect this has is still the subject of debate, but many people feel that both the perceived frequency response and the stereo image are strongly affected by the first arrival from the speaker. —E.B.M.



SAE's E-101 (top) is a two-band parametric with microprocessor controls; ten settings in each band can be stored in memory. Crown's EQ-2 is a ten-band parametric design, combining features of parametric and graphic equalizers.

sional applications, has been adapted for home use: A parametric equalizer is so-called because the basic parameters of its internal filters can be altered by the user. It has fewer bands—usually four to six—than an octave-band graphic, but each band can be shifted in frequency (typically over several octaves), and can also be made wider or narrower.

To understand the theoretical advantage of parametric EQ, consider a recording in which a vocalist's microphone has a 6-dB peak, half-an-octave wide, that falls just above 11 kHz. This frequency lies on the boundary between the top two bands on a standard octave equalizer; to attenuate it you must reduce the level of all frequencies between 5.7 and 23 kHz. With a parametric equalizer, however, you can adjust the top-most band to provide a response cut of matching frequency, bandwidth and depth. Home parametric equalizers are available from such companies as SAE, Phase Linear, Phoenix Systems, NEI, and Sony; professional units can be bought from White, Orban, Sontec, and others.

The main difficulty with parametrics is in using them to good advantage. In most situations it takes a good ear and lots of practice to make effective use of parametric EQ. The technique is used mainly by professionals, and mostly for altering the sound of individual tracks rather than for changing the balance of an entire mix.

Some graphic equalizers have borrowed from parametric designs and are called, not surprisingly, parametric equalizers. Models such as the ADC Sound Shaper Three and the Crown EQ-2 look like ordinary graphic equalizers but have under each slider a control that adjusts the center

frequency of each band over a small range, thus extending their versatility.

Applications

How many bands an equalizer should have—and where in the spectrum they should be located—depends on its intended use. Equalization falls into two broad categories of application: system EQ and program EQ.

To use an equalizer to correct the response of your loudspeakers, you must be able to test the performance of the system in the room. This can be done with a real-time analyzer, which contains a calibrated microphone with an amplifier and a set of filters. Each filter is connected to its own LED display. The analyzer gives a simultaneous measurement of the level in each frequency band, in effect drawing a constantly changing frequency-response graph with its field of LEDs. The signal source for this test is a pink-noise generator, whose output—which sounds very much like a large waterfall—consists of random noise with equal energy in every octave band. If the system has flat response at the microphone, the analyzer will display a level line. If not, the equalizer's sliders are adjusted until the display appears satisfactorily flat. (If you can't afford an analyzer, you can buy a simple sound-level meter and use a record containing individual octave bands of pink noise to measure the levels one band at a time.)

There are equalizers with built-in analyzers and pink-noise generators from Soundcraftsmen, Sansui, DBX, Numark Electronics, and Audio Control. Some of these come complete with a calibrated microphone. Two models, the Sansui SE-9

and the DBX 2020, boast automated operation, setting their sliders automatically to produce flat response at one microphone position (Sansui) or an average of several microphone locations (DBX).

Getting a flat response won't cure all your audio woes, however. The frequency response of any system changes so much with listening position that correcting the response in one spot won't necessarily correct it a few inches away. And to attain the degree of flatness we are accustomed to seeing in tape recorders and electronics at even a single location would require complex and expensive filters. An even more fundamental problem is that our ears distinguish between the direct, first-arrival sound from a loudspeaker and the reflections from walls, floor, and ceiling that make up the reverberant field in the listening room. Real-time analyzers lump the two together in a way that may not reflect either accurately, and conventional equalizers can't change the frequency response of one without applying the same alteration to the other as well. The result can be the audio equivalent of robbing Peter to pay Paul: In particular, flattening the composite speaker/room response may create significant alterations in the first-arrival response, possibly to the extent of making the sound worse than it was before equalization. [Acoustic Research has been experimenting with digital filtering techniques to address these problems, and Michael Riggs evaluates the company's prototype design on page 41.—Ed.]

An equalizer can, however, be very useful for correcting broad errors in speaker response, particularly in the upper mid-range and higher. Old speakers that to modern ears seem to lack transparency can undergo a startling transformation with the addition of a 3-dB boost from 2 kHz on up. But in such an application the equalizer must be set up very carefully and then tucked out of sight, away from prying eyes and hands. Unless you're prepared to buy two, you'd be better off to forego speaker adjustment in favor of better speakers and keep the equalizer out where you can play with it, especially considering what it can do to improve bad recordings.

Program EQ

The principal requirement for program EQ is the ability to make relatively broad changes in overall frequency balance, for which an octave-band equalizer is well suited. What the equalizer is really doing here is making up for the differences in judgment—and in loudspeakers and listening room—between the recording producer/engineer and the home user. Decreasing the response in a broad region between 2 and 10 kHz can mitigate the overly aggressive sound engineered into many pop, rock, and jazz recordings. A downward push on the
(Continued on page 99)

Environments

Bringing technology home by Christine Begole

Audio Goes Avant-Garde

VIEWED FROM A DISTANCE, ADS's new Atelier audio system seems more a piece of sculpture than a stack of components seated atop a pedestal. Dark and handsome with a definite European look, it projects that ineffable charisma and—to be candid—sex appeal that attracts male and female music lovers alike. Indeed, after glimpsing it across the room at an ADS press party, I couldn't resist requesting that it move in with me for a while to see whether my first impressions could be trusted.

The product of a collaboration between ADS and Braun of West Germany, the basic Atelier system (\$1,580) is composed of a receiver, cassette deck, turntable, and pedestal base. ADS informs me that it plans to offer an integrated amp and tuner as an alternative to the receiver; a Compact Disc player styled to match the other components is on the drawing board.

The system arrived in several boxes, and it took some effort to achieve the neat, ship-shape arrangement pictured here. Wire-concealment suggestions and stacking instructions were scattered among several owner's manuals. What I eventually determined was that interconnect cables could be neatly tucked away behind flip-down panels on the back of each component. Another nice touch is the inclusion of four AC outlets, mounted on the back of the pedestal. This means that power can be brought to the system with just one AC cord. There's also a thick, striated umbilical cord, which ADS supplies to camouflage part of the length of the speaker wires and power cord. I rather like the industrial look the tube lends to the ensemble, though I must admit that a friend or two inquired why I had left the vacuum hose out in plain view. *Chacun à son goût.*

Getting comfortable with a new audio system usually requires some habit changing (a requisite in any new relationship): Buttons are not where you think they'll be, and, with the Atelier components, some controls are identified differently from those on typical Japanese gear. The receiver's volume control, for instance, is labeled "level," and instead of a loudness button there's a control marked "linear." The latter merits a bit of explanation: In this receiver, the loudness compensation is turned on in the normal mode, but can be disengaged via LINEAR.



Atelier from ADS: a one-brand system that makes visual and functional sense.

The 35-watt (15½-dBW) receiver includes an amplifier clipping indicator (two red LEDs, one for each channel) and a filter to cut out the low-frequency rumble that is often endemic to old recordings. There's provision for two tape recorders and switching for dubbing in either direction. Though the receiver has a five-digit frequency display, tuning is accomplished with a conventional variable-capacitor front end. To help you tune precisely, the front panel has both a three-element lighted center-channel indicator and a five-LED signal-strength meter.

In addition to a knob for manual tuning, there are five station presets. Assigning a station to "memory" is a different procedure from that commonly used on frequency-synthesis receivers. Here you insert a small key into a hole beneath each preset button and turn it until the desired station frequency appears in the display window. The key stows in a compartment in the front panel.

The Atelier's two-head cassette deck derives its ultraslimness from an unconventional, horizontal tape-transport arrangement: Press a button, and a drawer slides out to accept a cassette. It is interesting to note that ADS has chosen to place tape-type selectors and noise-reduction controls on the drawer's top surface, just ahead of the cassette well. Though you can get to these controls only when the drawer is open, the

front panel remains uncluttered and the tradeoff seems worthwhile. Two controls that are mounted on the front panel—MEMO and REPEAT—are very useful: Used singly or together, they provide either automatic playback of a single side, or rewind and play (or stop) from a predetermined tape position.

The system's direct-drive, semi-automatic turntable is a joy to use. The unit I worked with came supplied with an Ortofon cartridge premounted in a headshell. (Thank you, ADS, for freeing us from the tiresome chore of cartridge mounting.) For those who prefer to select their own pickups, the company offers a similar turntable without a cartridge. All controls are accessible with the dustcover closed, and there's a strobe and a speed-adjustment knob to help you maintain rotational accuracy.

After a week of cohabitation, I can safely say that the Atelier system is more than just a handsome face: Its overall performance is beyond reproach. For those who lack the floor space for pedestal mounting, the system is available without the base. In fact, ADS offers the components separately, as well—R1 receiver, \$500; C2 cassette deck, \$550; P2 turntable, \$400; and B2 pedestal, \$130. And finally, the design elements that make the Atelier so successful as a freestanding system make it equally at home on a bookshelf. **HF**
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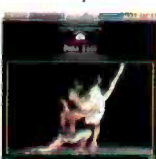
Manhattan
Transfer



Little River Band
Live Exposure



Stevie Nicks



Swan Lake

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PIONEER

NEW TECHNOLOGIES

Digital Audio

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Software Reviews

SIGNAL *enters* DIGITAL PROCESSING *the* AGE

BY

MICHAEL RIGGS

AR'S ADSP OPENS THE DOOR TO TRULY EFFECTIVE SPEAKER/ROOM EQUALIZATION—AND MORE.

DIGITAL TECHNOLOGY is far more than a handmaiden to sonic purity and permanence (a la Compact Disc): It is also a fantastically supple means of signal manipulation, capable of feats altogether impracticable with analog techniques. Indeed, Acoustic Research's investigations into the possibility of applying the number-crunching capabilities of a computer to solving the heretofore intractable problems of speaker/room equalization may well prove a signpost for one of audio's main paths in the years to come.

Out of AR's investigations has emerged what it calls the Adaptive Digital Signal Processor, or ADSP. Still in the development stage, the ADSP serves as a kind of super-equalizer that overcomes two of the most serious shortcomings of the conventional analog equalizers with which we are all familiar. For one, it can create filters of almost any shape: Their center frequencies, bandwidths, and slopes are not fixed. Nor is there any limitation on the number of peaks or dips it can introduce into the response.

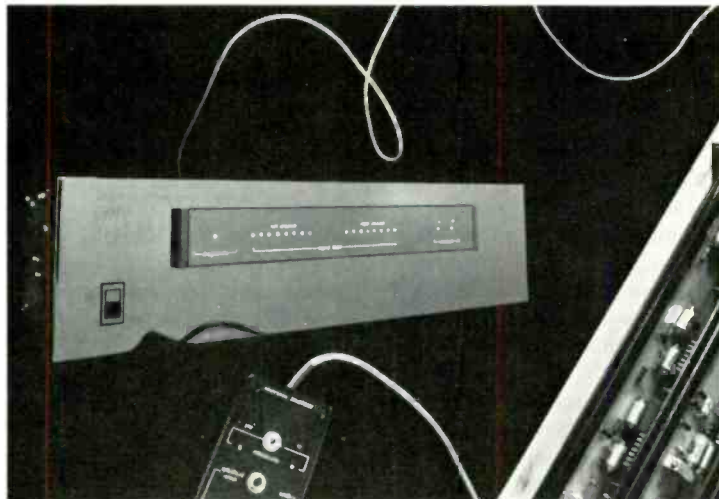
But the more basic advantage of the ADSP is that it can correct errors in the reverberant-field response (i.e., of the total sound at the listening position) without compromising the first-arrival sound from the loudspeaker, and vice versa—and all at

once. Paradoxically, it accomplishes this without paying any attention at all to frequency response as such. The response corrections are obtained by getting things right in what's known as the time domain, rather than by attacking them directly in the frequency domain, as do conventional equalizers.

In its present, prototype form, the ADSP consists of a large box crammed with integrated circuit (IC) chips,

connected by a long umbilical to a smaller hand-held box with a couple of switches on top and a small microphone diaphragm at the front. At the push of a button, the ADSP injects a random-noise signal into the system—first into the left channel, then into the right.

The output from the speakers is picked up at the listening position by the microphone, filtered to remove



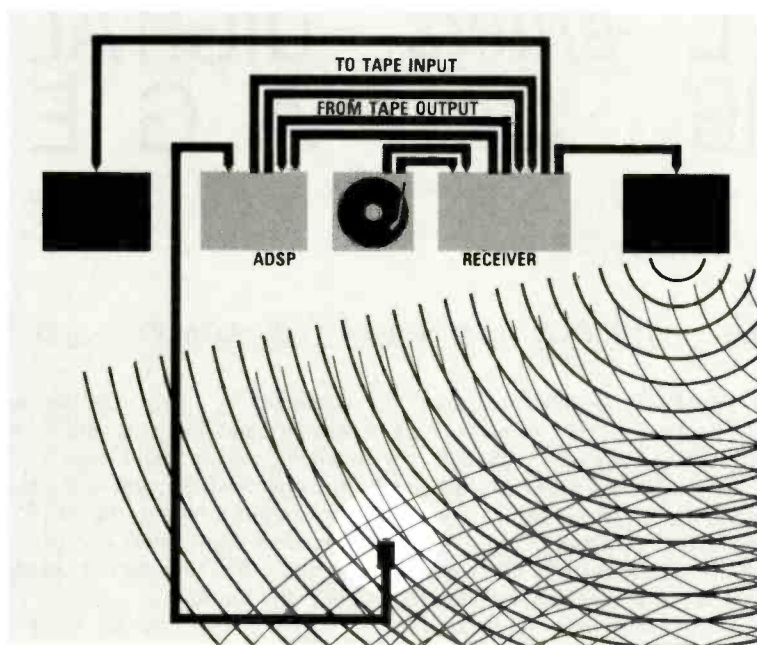
AR's Adaptive Digital Signal Processor (ADSP) and hand-held microphone module

information above the desired maximum operating frequency (1 kHz in the prototype), and passed on to an analog-to-digital (A/D) converter in the main chassis. The converter electronics sample the signal at a rate somewhat greater than twice the highest frequency of interest, measure the voltages of the samples, and translate the resulting values into a binary code.

nonlinearities, are consistent and therefore predictable, imposing a recognizable pattern on the noise. This pattern can be thought of as a complex filter function, whose effects can be canceled by a reciprocal filter.

Using the data from the random noise signals, the ADSP builds just such an inverse filter—digitally. A digital filter differs from an analog

ADSP treats it as a sequence of events in time. To smooth out a dip or a peak in a speaker's inherent response, the ADSP would introduce delayed replicas of the original signal timed to provide exactly the right amount of constructive or destructive interference to correctly augment or attenuate the output at the offending frequencies. To eliminate an unwanted reflection, it would emit an



ADSP IN ACTION. The ADSP's "mainframe" is hooked into an ordinary tape-monitor loop. During the testing phase, it sends a noise signal through each loudspeaker in turn. Their outputs are picked up by a microphone at the listening position and returned to the ADSP, which uses that information to generate a very precise digital filter for each channel to correct for room- and loudspeaker-response anomalies in the bass and midrange. Once the filters are built, all music signals pass through them before going to the speakers. The correction is accurate only in the vicinity of the microphone. The area of effectiveness varies with frequency, reducing to a sphere about a foot in diameter at 1 kHz.

The ADSP stores this sequence of numbers in its random-access memory (RAM) for analysis.

Each channel is tested separately. Once the necessary data have been collected, an on-board microprocessor executes a program that hunts for any pattern in the data held in RAM. (Technically, it applies linear prediction analysis to the time series.) Since the input signal is random, the output from a perfect speaker/room "system" should also be random: It should be impossible to predict from any amount of accumulated data what the next data point will be.

But since there are no perfect acoustical systems, the output will never match the incoherence of the input. The response irregularities created by multiple reflections off the room's floor, walls, and ceiling, along with the speakers' inherent

filter in that it is basically nothing more than a list of numbers that are multiplied by the numbers representing the signal. The ADSP calculates the necessary filter and stores it in RAM for application by the microprocessor.

When you play music through the ADSP, it converts the signals to digital form (just as it did the noise during the test phase) and multiplies the numbers by the filter coefficients. The results are passed through digital-to-analog (D/A) converters and out into your amplifier. Because of the "pre-distortion" applied to the signals, the effect of the speakers and room is to restore flat response, rather than to spoil it.

This might appear to be the same thing that an ordinary equalizer does, but there is a key difference here. An equalizer treats a signal as a collection of tones of different frequencies; the

out-of-phase signal timed to arrive at your ears at the same instant as the reflection, so that the two cancel without either being heard.

An equalizer can't treat these phenomena separately. The only way it can deal with the consequences of room reflections is to alter the response of the loudspeaker—something you don't want to do if the speaker's direct radiation is naturally flat (or if its aberrations are to some extent the opposite of those of the reverberant-field response) at the frequencies of interest. And, if used to correct the speaker's coherent first-arrival response, it may worsen the effects of a room resonance on the diffuse sound field in the vicinity of the listener.

For the past few months, we've had an opportunity to play with a prototype ADSP. And although its

capabilities are significantly more limited than a production version's would be, it remains a fascinating instrument. The machine takes about ninety seconds to synthesize each channel's filter. Its effect ranges from subtle to dramatic, depending on the loudspeakers used. Those with relatively poor deep-bass response (such as minispeakers) or with severe bass or midrange response anomalies benefit the most. Even with good, full-range speakers there is some change, though not nearly as marked—usually a mild improvement in balance combined with a slightly sharper focus in the stereo image. (The latter is no doubt the result of more nearly identical response from the two speakers, each of which is independently corrected by its own digital filter, and the removal of confusing early reflections.)

The company is substantially improving the effectiveness of the ADSP with all speakers. Its filter resolution depends on the speed of its electronics and the bandwidth over which they must operate. The ADSP is not yet fast enough to perform very complex filtration if the frequency range is extended above about 300 Hz; its present use up to 1 kHz therefore entails some compromise in the completeness and accuracy of its response corrections. Production ADSPs will be capable of full performance probably up to about 700 to 800 Hz, which is very nearly the limit to which any sort of speaker/room equalization can be usefully applied without locking the listener's head in a single position. This situation arises not from the design of the ADSP, but from the simple physics of the situation. The width of a human head is equal to about a half-wavelength at 1 kHz, which means that a movement of just a few inches will take the ears out of the region in which the equalization provides accurate correction at that frequency. And as the frequency goes up, the wavelength and the consequent tolerance go down.

The ADSP is still at least a few years away from commercial introduction, even as nothing more than a speaker-response/room-acoustics compensator. But it's easy to think of other applications for the technology behind it. Once a signal is digitized, it can be manipulated in almost any way

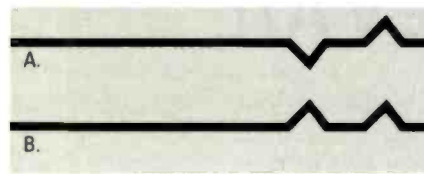
imaginable. For example, one could do image enhancement with a vengeance. Another possibility is highly sophisticated, programmable dynamic-range expansion and peak unlimiting with almost boundless flexibility and no distracting side effects. Improved ambience-enhancement systems, full-range program equalizers capable of storing correction curves for every

recording in your collection, and extremely effective single-pass noise reduction also come to mind. Eventually, you might even be able to get all of that in one box.

Of course, the ADSP as currently configured can't do any of this (except the speaker/room EQ). But it is a peephole into audio's future—and what an exciting future that is!

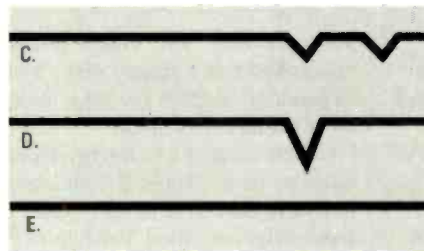
HF

FACEOFF: ADSP VS. THE EQUALIZERS



A. Hypothetical first-arrival response of loudspeaker

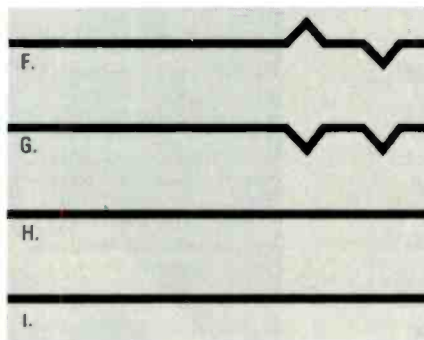
B. Hypothetical integrated far-field response in listening room



C. Correction applied by conventional equalizer, based on far-field measurement

D. First-arrival response after equalization

E. Integrated far-field response after equalization



F. Effective correction applied by ADSP to loudspeaker's first-arrival response

G. Effective correction by ADSP to far-field response

H. First-arrival response after ADSP correction

I. Integrated far-field response after ADSP correction

INITIAL RESPONSE. These idealized curves represent the hypothetical first-arrival and reverberant-field responses of a loudspeaker in a room. The charts extend from 20 Hz at the far left to 1 kHz at the far right.

EQUALIZER CORRECTION. A conventional equalizer correction curve, based on a reverberant-field response measurement, would look something like C. This flattens the far-field response (E), and one of the dips in the first-arrival curve, as well, but at the expense of doubling the size of the other (D). The result may or may not be a sonic improvement.

ADSP CORRECTION. The ADSP can fix the first-arrival and reverberant-field responses independently, as illustrated by the effective-correction curves F and G. As you can see from H and I, there is no trade-off—and no doubt that the result is an improvement.

LET Order PREVAIL

BY

ROGER PARKER

FROM ABBA TO ZAPPA, A PERSONAL COMPUTER CAN ORGANIZE AND CROSS-REFERENCE YOUR RECORDINGS.

KEEPING TRACK of an extensive music collection can be tiresome. The traditional method is to assemble a card catalog organized by composer, title, or musical form with listings referenced to an LP- and tape-numbering scheme. For the system to be truly useful, however, it should be regularly updated and incorporate extensive cross-referencing—jobs that keep librarians busy but scare most of us off.

The remedy is obvious—at least to a technophile like me. A personal computer equipped with the right program can help you organize even the most daunting collection of tapes and discs and will cross-reference your listings automatically and with more speed and accuracy than a convention-hallful of librarians.

Choosing which computer to use for this job is secondary to selecting the right program. The more than 100 programs that fill the bill—known generically as data-base managers—are usually organized along the following lines: Information relating to a specific topic is assigned its own “file folder” or “record”; within the record, these data are arranged into separate fields. For instance, a specific album would constitute a single “record” with fields

for each song. The “filing cabinet” in this scheme is a floppy disk, which, depending on each record’s length, can store hundreds of them.

The setup I use for my filing consists of an Apple II Plus computer, two disk drives, a monitor, and a data-base program called VisiFile (\$250 from VisiCorp Software). I selected the

computer and the program, not for their specific music-filing virtues (which proved to be considerable), but because I had already bought both the hardware and the software for business use and saw no reason why they couldn’t moonlight for music-filing purposes.

SETTING UP THE SYSTEM

Since few people share the same music-listening or music-collecting habits, your filing and retrieval systems must be constructed according to your specific need. Computer-based filing enables you (with some exceptions) to start out with simple listings and add more data to the files as time and need dictate. You’d be well advised, however, to anticipate to some extent the direction your cataloging might eventually take: Though information can be added or deleted from a file, the overall design of a record (i.e., its field designations and lengths) is not easily modified. The record’s design is always the first and most important step in setting up a music filing system.

VisiFile offers a maximum of twenty-four separate fields for each record. That sounds like you can enter lots of information (and you can), but there are limits. Any one field can hold a maximum of 128 characters, but a record can store no more than 232

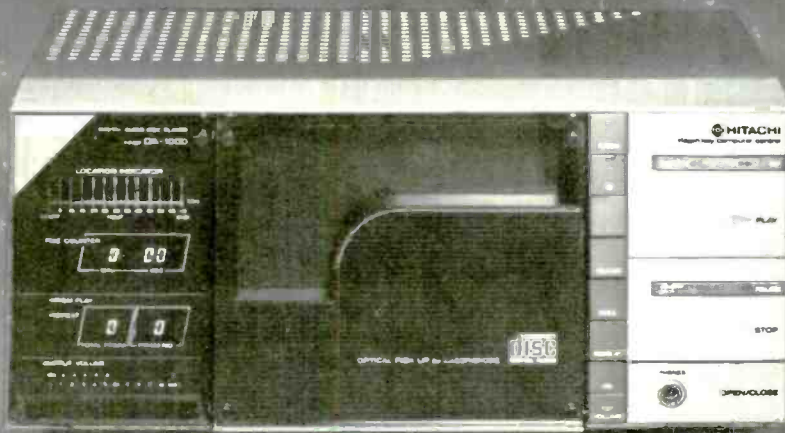


AN APPLE II PLUS computer readily performs music-filing chores. Two disk drives and a high-resolution monitor are necessary extras for this application.

Roger Parker runs his own advertising agency in Hampton, New Hampshire.



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better than either ever could.



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DA-1000

Unlike records, unlike tape, the sound quality of our new compact audio disc player surpasses anything you've yet to hear.

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characters. Obviously, if you were to use 128 characters in your first field you would not even be able to squeeze two fields into a record. Designing your electronic index cards, therefore, involves a bit of arithmetic: Since most last names rarely exceed twelve or so characters—plus a few more for first-name initials—why allocate more than eighteen characters to a composer or performer field? Here's how a pop-music file might be organized. (Remember: The goal is to get the most information into the file without exceeding the program's record-length limitations.)

Album Title — twenty-five characters.

Performer — eighteen characters.

Format/Noise Reduction — four characters. This field tells you whether the recording is on LP or tape. An entry such as "CDBX" would indicate that the recording is a DBX-encoded cassette.

Volume — one character. This field designates recordings that stretch over two or more cassettes or discs.

Selections — six fields of thirty characters each. Of course, most pop LPs have more than six songs on them, but VisiFile cannot accommodate any more characters. Though other data-base programs support longer files, chances are you won't want to enter every song on the album. You could, however, shorten field lengths and still have room for long song titles if you make a consistent policy about abbreviations: Deleting all vowels except *i*, for instance, might enable you to double the number of song fields.

Reference Number — four characters.

Reference numbers should be affixed to each LP or cassette, arranged on a shelf or in a storage case in consecutive order. For cassettes that contain a full LP's worth of music on each side, consecutive numbers should be assigned to each side. Also, if your files fill up one floppy disk, remember to pick up where you left off on a new disk.

Total Record Length — 232 characters.

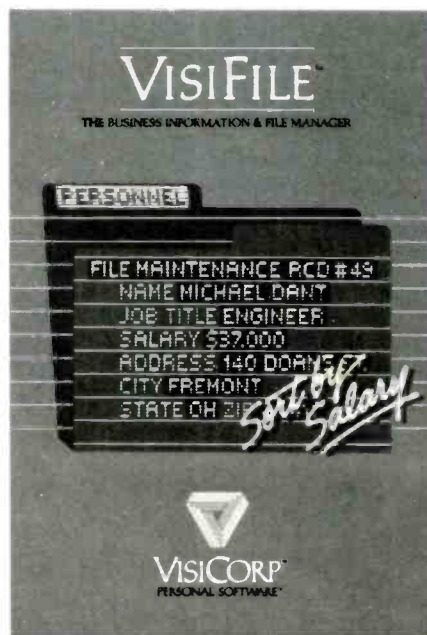
For classical music, the foregoing design is inappropriate. Instead of "wasting" space on six fields for

musical selections you'd probably want to set aside space for performers, catalog number, and information about when and where the recording was made.

For some insight into what could profitably be included in a classical-music-filing system, you might want to reread David Hamilton's article on indexing a music collection ("Now Where Did I Put That Franck Sonata?" HF, September 1969). Though Hamilton tackled the problems inherent in nonelectronic filing, many of his insights are relevant to our discussion here. [We will be happy to supply copies of David Hamilton's article to those who include with their request a

could easily file my LPs in this basic form, it seems important now to include information on what songs each contains. I am presently in the process, therefore, of redoing my files. (Again, not thinking far enough ahead can double your work in the long run.)

For finding cassettes, however, the computer has proved a great asset. Once a month I order a full print-out and place the sheets in a three-ring binder. This becomes my music bible, and the reference numbers for each recording provide an unerring guide. And, if I want to see which Bach-Bernstein pairings are currently in my collection, I can order the computer to



LIKE OTHER DATA-BASE MANAGER programs, VisiFile readily adapts to a variety of applications. It will not run, however, on computers other than the Apple or the IBM PC. Not to worry, though: Scores of similar programs are available for a wide variety of computers.

stamped, self-addressed envelope.]

I am, however, writing this article with the benefit of hindsight. In retrospect my basic filing system on the Apple now seems inadequately planned. I have fields only for composer, performer/conductor, title, musical genre (folk, classical, etc.) and reference number. Because I set out with the sole purpose of getting my extensive cassette collection in some sort of usable order and did not have proper notes on all the music each tape contained, I neglected to set aside fields for musical selections. Though I

sort through its files and find listings that contain just that combination. VisiFile would, in fact, let me search through my files to find as many as ten field combinations, though such cross-referencing is well beyond the scope of my basic listings.

Finally, the whole exercise has had a wonderful influence on my family. Everyone seems much more respectful of the music that the computer has made so accessible, perhaps because it's so easy for me to determine which cassettes have wandered out in someone's Walkman. HF

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HIGH C'S FROM IC'S

BY

MYRON BERGER

A PERSONAL COMPUTER AND AN INEXPENSIVE PROGRAM CAN OFFER FAIRLY SOPHISTICATED COMPOSING CAPABILITIES.

IT IS UNLIKELY that an Apple II will ever replace a Stradivarius, but it can do many things a Stradivarius can't—and at a much lower cost. A computer, however, can't make a sound unless it is told how. In fact, a computer can't do anything unless it gets a very specific and, usually, complex set of instructions—called a program or software. If you are under eighteen years old, you probably already know how to write your own computer programs. The rest of us must go to a store and buy them.

Happily, music-synthesis programs for Apple and Atari—two of the more popular computer brands—are available at very reasonable prices. Atari's Music Composer program runs about \$40 and the Electric Duet (distributed by Insoft, Portland, Ore.) for the Apple about \$30. Of course, you will need a computer in order to run the programs. I used an Apple II Plus with disk drive and monitor, all of which can be had for about \$1,500 total at discount. I also tried the Atari 800 with disk drive—about \$1,000 at discount—and a regular TV set. The Atari Music Composer comes in a cartridge (similar to video-game packaging) and plugs into a slot in the computer, but you need a disk drive or cassette tape deck to save the musical masterpieces you compose with it. Many personal computers can use a standard mono or stereo cassette deck to store digital data. If you play a data cassette through your stereo system, however, the digital information—

Myron Berger is a syndicated columnist for the Chicago Tribune.

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ATARI MUSIC
EDIT MUSIC
ARRANGE MUSIC
SAVE
RETRIEVE
DOS
LISTEN
COPYRIGHT ATARI 1979
WHICH?
  
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ARRANGE MENU
COUNT
DISPLAY
GOTO LINE
M FOR THIS MENU
PLAY PHRASE
STOP
TRANPOSE
VOLUME
SPACE BAR TO GO ON
  
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RETRIEVE MUSIC
E EVERYTHING
AP ALL PHRASES
AV ALL VOICES
PX PHRASE X
VX VOICE X
S STOP
FN?
  
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ATARI'S MUSIC COMPOSER program relies on menus to guide you through an elaborate protocol. From the main menu (top), you enter the first letter of the desired option. "A" elicits the "arrange music" submenu (middle), while "R" calls up the choices you can make when retrieving a composition stored on tape or disk.

regardless of what it is—will sound like a sputtering of randomly generated high-frequency tones.

When you compare the two computers as music synthesizers, exclusive of the programs, the Atari scores better on one point, while the Apple wins on another. The Atari has a more sophisticated sound-generation system. In particular, it can synthesize four voices, or tones, simultaneously, though it normally produces them through the television set's tiny (and usually tinny) speaker. The Apple, on the other hand, has a cassette output jack that can be connected to the tape inputs of your stereo system to reproduce the music in glorious two-channel high fidelity mono—which is a bit of overkill, considering the less than luscious quality of the generated tones. The Apple does, however, have a built-in speaker, which is convenient, but of limited quality. The Atari can also be linked to a stereo system, but only by looping it through the TV set, which serves as its "screen."

The Electric Duet, the synthesizer program for the Apple II Plus, offers four more or less distinct functions. First is what the program calls its "jukebox," which is just what it sounds like. A number of programmed selections, ranging from Scott Joplin's *The Entertainer* to J.S. Bach's *Jesu, Joy of Man's Desiring*, can be summoned forth from the disk. The program manages to coax two voices, each with a five-octave range, out of the computer.

Second, the program enables you to create two-voice, five-octave musical compositions by entering a complex alphanumeric code at the keyboard. For example, "2., 4B 1, 2G#" is the notation for the two voices. Translation: a half-note (2)—dotted to increase duration by 50% (.)—of the B natural in the fourth octave (4B) and played as the first voice. The second voice, as you should be able to figure out, is a second-octave G sharp whole note. I found this method of entry slow and cumbersome.

A much simpler composition method is offered in the third function: "piano player." The computer displays a piano keyboard with the musical notes below each key and the computer key used to generate that note. The first voice is on the left side of the

keyboard, the second on the right. Since all five octaves cannot be displayed simultaneously, the keyboard must be slid "manually" (by pushing computer keys) to the left or right to change octaves. Note duration is entered after the notation is completed.

In either method of composition, music may be edited by transposing, adding notes, combining parts, changing notation, and so on. Some of this is easy; some is not. The composition is displayed on the screen using the computer's notation system, described earlier.

The fourth function of Electric Duet permits computer programmers to manipulate the music in the computer language called Basic, rather than in the aforementioned notation system. One drawback of this program is that a 14,080-Hz carrier tone, used to generate the two voices, can frequently be heard during pauses.

The Atari Music Composer is, in some ways, more sophisticated graphically (as well as musically) than the Electric Duet. The notes you enter (again, in an alphanumeric code) are displayed on a musical staff complete with all the standard symbols of music notation. If you are more interested in music than in computers, this approach has considerable appeal. And it makes use of the Atari's inherently more flexible sound generation capabilities; compositions with four separate voices can be created.

Composition in the Atari program involves the use of a series of "menus," which list a number of choices for further action. The main menu offers these possibilities: EDIT MUSIC, ARRANGE MUSIC, SAVE, RETRIEVE, DOS, LISTEN. All should be fairly obvious with the exception of DOS—a computer acronym for "disk operating system"—which, if chosen, lets you exit from the program.

Once you are in the edit-music mode—the composition function—you are faced with another menu, this one offering PHRASE, METER, KEY SIG., TEMPO, CHECK MEASURES, STOP. Assuming that you are ready to enter your first composition, you type "phrase." A couple of choices later, you are faced with an empty staff, the information that 18,424 spaces are free for storing notes, and finally the question "Note?" As you enter each note ("C4T" for middle C, thirty-second note), it is displayed on the



TO BEGIN COMPOSING with the Atari program, you enter "E" from the main menu, which elicits the "edit music" submenu (left). You then tell the computer what phrase you are starting, and the screen will display a clean staff (see screen below) ready to accept your notation.



NOTES ARE ENTERED on the staff via alphanumeric keyboard commands. A display below the staff tells which phrase and measure is being written and how many notes can be entered into memory. The general form of the keyboard notation is contained in the cryptic line "L (A) O D (.) (T)." And the bottom line offers a number of options, including an invitation to add a note.

staff above. As in the Electric Duet, several editing possibilities are available during or after composition.

The two programs, despite their many differences, struck me as only marginally dissimilar in terms of their usefulness to a music writer or student. The Atari Music Composer's music-notation display is, of course, a distinct advantage, as is its ability to manage four-voice counterpoint.

There are a number of other music-synthesis and composition programs available for the Apple and Atari aside from the two discussed here. Though they won't turn your computer into an electronic organ or provide the complex compositional options of professional music-computer systems, they are fun and educational.

Atari offers a program through APX (Atari Program Exchange), an organization that makes available programs written by amateur and

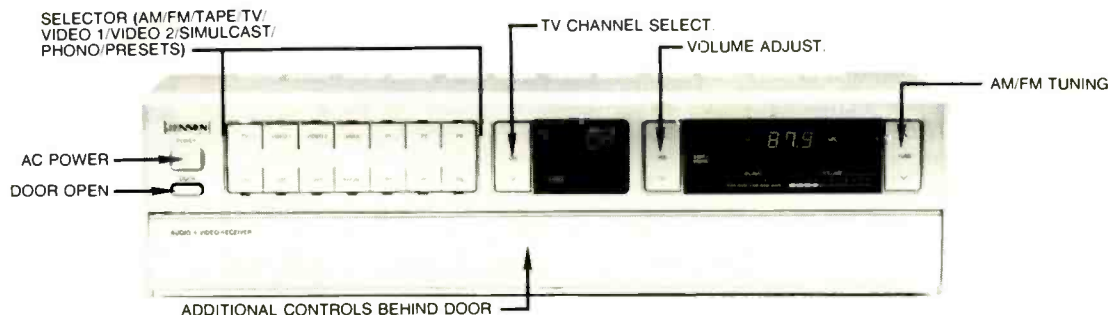
semiprofessional software authors. Its \$30 Advanced Musicsystem comes on disk and requires 32,000 bytes of computer memory (which means it will run on the Atari 800, but not the 400). Some of its features actually are much more sophisticated than those of the more expensive Music Composer program. For example, it follows the separate voices of the music with individual colors on the monitor. It is most definitely worth consideration.

For songwriters, the Apple has a very inexpensive program called Forte, available from Artsci (North Hollywood, Calif.). Priced at only \$20, it is available on disk and can store lyrics as well as music.

Your computer can even be persuaded to perform like a dedicated music synthesizer. The CMU-8000 (\$495) from Roland Corp. will turn your Apple or NEC computer into an eight-voice synthesizer with an additional seven-voice drum section. **HF**

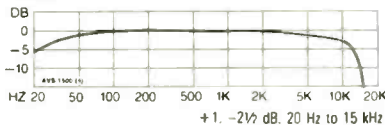
JENSEN AVS-1500 AUDIO+VIDEO RECEIVER

Jensen AVS-1500 Audio+Video receiver. Dimensions: 17 by 4¼ inches (front panel), 16¼ inches deep plus clearance for connections. AC convenience outlets: one switched (200 watts max.), one unswitched (200 watts max.). Price: \$990. Warranty: "limited," one year parts and labor. Manufacturer: made in Japan for Jensen Sound Laboratories, 4136 North United Parkway, Schiller Park, Ill. 60176.

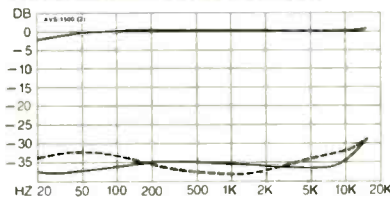


FM TUNER SECTION

MONO FREQUENCY RESPONSE



STEREO RESPONSE & CHANNEL SEPARATION



Frequency response

— L ch +1/2, -2 1/2 dB, 20 Hz to 15 kHz

- - - R ch +1/4, -2 1/2 dB, 20 Hz to 15 kHz

Channel separation

≥ 35 dB, 200 Hz to 3.5 kHz;
≥ 25 dB, 20 Hz to 15 kHz

MULTIPURPOSE VIDEO PRODUCTS that do one or two things well, but fail to address the "big picture," are all too common, each one representing a failure to think completely through the requirements of its assigned tasks. And a product like Jensen's AVS-1500 Audio+Video receiver—intended as no less than the centerpiece of a comprehensive audio-video home-entertainment center—might have proved a similar disappointment in other hands. That it, instead, succeeds so well is a tribute to the planning that went into its creation.

Essentially, the AVS-1500 combines a full-fledged audio receiver with a TV tuner and video switcher. Although it is cosmetically matched with the other Jensen AVS video components (VCR, monitors, and speakers), it can be used with any NTSC video source, any loudspeakers, and any standard TV monitor—or even with a conventional TV set. An advantage of using one of the Jensen monitors, however, is that the receiver will switch it on and off automatically according to whether or not you are using the TV tuner or one of the two

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.



SECONDARY CONTROLS are behind a flip-down door at the bottom of the front panel. At the far left is a headphone jack, with its own input selector and volume control. Toward the middle of the console are the speaker-selector buttons, the tone (bass and treble) and balance controls, and the threshold adjustment for the DNR single-pass noise reduction system.



THE RIGHT END of the console holds the switches for acoustic enhancement and synthetic stereo, loudness compensation, mono, automatic-scan FM tuning, memory-set for the AM and FM presets, cable/broadcast selection, and pay-TV decoder selection.

video inputs. And the AVS-series speakers are magnetically shielded so that they can be snuggled right up to a monitor or television set without causing color distortion.

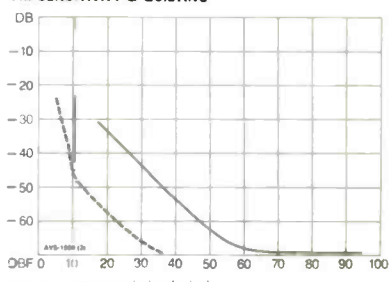
As an audio receiver alone, the AVS-1500 offers a fairly extensive complement of features and, more important, a high level of performance. Digital frequency-synthesis tuning is used for both the AM and FM bands, with six station presets for each, as well as manual tuning and automatic sequential search for the next strong station. All three tuning modes are accessible both at the receiver's front panel and from the R-1500 remote-control unit. The FM tuner is as sensitive as the best conventional products; its response and separation are impeccable; and its selectivity, capture ratio, distortion, and suppression figures are respectable, to say the least.

The amplifier section carries a rating of 17 dBW (50 watts) per channel into 8 ohms, which it betters by a dB on a continuous basis and by a trifle more dynamically. Damping factor is more than adequate; frequency response—both from the high-level inputs (tape and video) and from

phono—is quite flat; and distortion, though not immeasurable, is below the threshold of audibility. The phono-overload margin is generous and unlikely to be a constraint. Phono input impedance is close to the target in its resistive component, but a little higher than we'd like to see (though not atypically so) in shunt capacitance. And the signal-to-noise (S/N) ratio is respectable, considering all that is going on in this box.

One thing we miss is an effective infrasonic filter, and others might find the lack of a high-cut filter bothersome (although the built-in DNR circuit will serve as well or better in many circumstances). But these and a second set of tape jacks are about the only significant audio features Jensen has omitted from the AVS-1500. Its tone controls are always in the circuit, but response is indeed flat when they are set to their center positions. Both controls are detented, creating relatively subtle and smoothly changing alterations in tonal balance through the first four steps either side of center, over a range of about ± 5 dB at 100 Hz and 10 kHz. The final positions on either control abruptly double the boost or cut to 10 dB. Except at the extreme

FM SENSITIVITY & QUIETING



Stereo sensitivity (for 50-dB noise suppression)

36¼ dBf at 98 MHz, with 0.36% THC+N
137½ dBf at 90 MHz; 35¾ dBf at 106 MHz

Mono sensitivity (for 50-dB noise suppression)

12¾ dBf at 98 MHz

Stereo threshold 19 dBf

Stereo S/N ratio (at 65 dBf) 68¾ dB

Mono S/N ratio (at 65 dBf) 71½ dB

CAPTURE RATIO 2 dB

SELECTIVITY

alternate channel 57 dB

adjacent-channel 8¾ dB

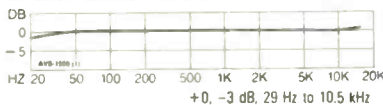
HARMONIC DISTORTION (THO+N)

	stereo	mono
at 100 Hz	0.22%	0.088%
at 1 kHz	0.11%	0.056%
at 6 kHz	0.34%	0.125%

STEREO PILOT INTERMODULATION	0.15%
IM DISTORTION (mono)	0.014%
AM SUPPRESSION	63 dB
PILOT (19 kHz) SUPPRESSION	66½ dB
SUBCARRIER (38 kHz) SUPPRESSION	> 88 dB

TV TUNER SECTION

AUDIO FREQUENCY RESPONSE



AUDIO S/N RATIO (A-weighted)	59 dB
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VIDEO FREQUENCY RESPONSE

at 500 kHz	-¼ dB
at 1.5 MHz	-1¾ dB
at 2.0 MHz	-1¼ dB
at 3.0 MHz	-2¼ dB
at 3.58 MHz	-3¼ dB
at 4.2 MHz	-13 dB
LUMINANCE LEVEL	≈ 28% high
LUMINANCE NONLINEARITY (worst case)	≈ 11%
CHROMA DIFFERENTIAL GAIN	≈ 21%
CHROMA DIFFERENTIAL PHASE	≈ ± 6°

AMPLIFIER SECTION

RATED POWER	17 dBW (50 watts)/channel
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OUTPUT AT CLIPPING (both channels driven)

8-ohm load	18 dBW (63 watts)/channel
4-ohm load	19¼ dBW (84 watts)/channel
16-ohm load	16 dBW (40 watts)/channel

DYNAMIC HEADROOM (re rated power, 8-ohm load)

	+ 1¼ dB
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HARMONIC DISTORTION (THD, 20 Hz to 20 kHz)

at 17 dBW (50 watts)	≤ 0.058%
at 0 dBW (1 watt)	≤ 0.037%

FREQUENCY RESPONSE

+0, -¼ dB, 24 Hz to 25.1 kHz;
+0, -3 dB, < 10 Hz to 74.2 kHz

RIAA EQUALIZATION

± ½ dB, 20 Hz to 20 kHz;
-4¼ dB at 5 Hz

INPUT CHARACTERISTICS (re 0 dBW; A-weighting)

	sensitivity	S/N ratio
aux input	21.5 mV	74 dB
phono input	0.36 mV	70 dB

PHONO OVERLOAD (1-kHz clipping)	155 mV
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PHONO INPUT IMPEDANCE

48.3k ohms; 300 pF

OUTPUT IMPEDANCE (at tape out)

from aux	2,220 ohms
from phono	1,600 ohms
from FM	3,200 ohms

DAMPING FACTOR (at 50 Hz)	70
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clockwise and counterclockwise notches on the TREBLE, the controls provide a response that shelves below 100 Hz and above 5 kHz.

The loudness control boosts response by 5 dB at 200 Hz and 15 kHz, and by almost 10 dB below 50 Hz. The contour is essentially unchanged when the VOLUME is adjusted ± 10 dB relative to Diversified Science Laboratories' standard setting. Volume is controlled in steps via rocker switches on the front panel and the remote control. Over most of the range, the steps are smaller than 2½

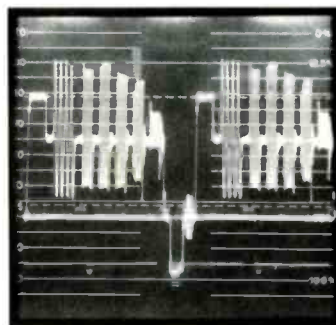


FIG. 1. MULTIBURST RESPONSE. Video frequency response, which determines horizontal resolution, is normally measured with a multiburst test signal consisting of a reference "white bar" followed by a sequence of bursts at different frequencies. This photo shows the AVS-1500's multiburst response for two complete horizontal-scan lines on a waveform monitor. The monitor's sensitivity was reduced to compensate for the tuner's high luminance level, bringing the white bar (far left) down to the top dotted line at 77 IRE. The bursts that follow are at 500 kHz, 1.5 MHz, 2.0 MHz, 3.0 MHz, 3.58 MHz (the color-burst frequency), and 4.2 MHz (the upper limit of the NTSC system). Ideally, each burst should extend from the line just above the lower dotted line (10 IRE) to the third line above the upper dotted line (100 IRE). Burst width is insignificant. The two scan lines are separated by a horizontal-sync pulse, which extends down to -40 IRE, and a chroma burst, at 0 IRE.

dB, which ensures reasonably smooth action. A muting button on the remote enables you to silence the receiver instantly without changing the volume setting.

A glance at the AVS-1500's front panel reveals that it is designed to accommodate only one audio tape deck. But in a pinch you can use one of the "video" inputs to make audio tape-to-tape dubs. This is made possible by the receiver's elaborate audio-video switching facilities. When you select a video source, its audio track appears at the audio tape-output jacks. Since VIDEO-1 and VIDEO-2 are provided with direct stereo inputs (equivalent to the aux inputs on an ordinary receiver), you can connect a tape player to either of them and dub onto a recorder connected to the audio-tape jacks. (These are low-noise, low-distortion inputs with flat frequency response over the entire audio band.)

You can monitor the recording you are making via the AVS-1500's headphone amplifier, which has its own input selector and volume control behind a flip-down door on the front panel. In fact, that's the only way you can monitor a recording, since pressing TAPE on the main selector cuts off whatever source the receiver was originally set to. The main audio controls—volume, balance, tone, and so forth—have no effect on the headphone output. The headphone amplifier provides plenty of drive for typical phones (145 milliwatts into 50-ohm loads), but is 3 dB down at 130 Hz and rolls off at 6 dB per octave below that point.

Jensen truly has designed the AVS-1500 for double duty—not only to serve as a normal audio receiver, but to handle the audio portion of a video program as well. Accordingly, it has several audio features specifically addressed to video needs: DNR (Dynamic Noise Reduction), synthetic stereo, and "acoustic enhancement." The DNR circuit is a dynamic noise filter whose bandwidth is controlled by the characteristics of the program. When the source material lacks highs, bandwidth automatically narrows to reduce hiss. When there are enough highs to mask the hiss, the filter opens up to let them through. A threshold control enables you to establish how aggressively the system lops off highs. Used judiciously, DNR can be beneficial in quieting the sound of a noisy broadcast or tape.

Tests performed by DSL suggest that the acoustic-enhancement system feeds a controlled amount of out-of-

phase information from left channel to right and vice versa. In addition, about 6 dB of bass boost is applied. The result is a pleasant mellowing of tonal character and an apparent reduction in hiss. Acoustic enhancement and synthetic stereo are either-or-neither choices: You can have one or the other, but not both. On TV broadcasts or mono video tapes we prefer the pseudo-stereo, which divides a mono signal between the left and right channels via reciprocal comb filters. True stereo it is not—at least in the sense of being able to place sound sources to the left or right—but it does add a pleasing ambience that is most welcome on mono music sources.

Even without the assistance of these signal-processing options, the sound delivered by the AVS-1500's TV tuner is quite good. Response is virtually dead flat through most of the audio band, reaching its 3-dB-down points at 29 Hz and 10.5 kHz. (The high frequency limit is imposed by a sharp notch filter at the 15.7-kHz horizontal-scan rate, which otherwise might produce a continuous, annoying whistle.) And the signal-to-noise ratio strikes us as very good considering that the maximum modulation level for TV sound is 9½ dB lower than that for FM broadcasts.

The AVS-1500 is "cable-ready," with provisions for receiving a total of 133 channels: standard VHF and UHF channels (2 through 83), as well as cable midband (A5-A1 and A1), superbands (J-W), and hyperband (AA-WW). With the "CATV/TV" button released, the AVS-1500 accesses the regular broadcast channels; with it depressed, the VHF channels are still received, while the cable channels are assigned to UHF channels 14 through 64.

There are several tuning options: manual, by means of successive presses on the remote or front-panel channel-select rocker; automatic (skipping over unused channels), by depressing SCAN, on the console behind the flip-down door, and briefly pressing the channel selector in the desired scan direction; or random access, by entering the desired channel number on the remote control's numeric keypad. Pressing SIMULCAST on the console or remote unit enables you to watch any desired TV channel while listening to a stereo-FM

simulcast. You simply tune the two stations independently on the TV and FM tuner sections. A secondary advantage of this arrangement is that it enables you to videotape the program with the sound from the FM broadcast.

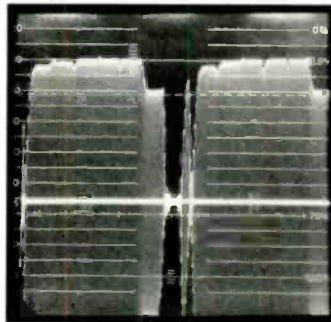


FIG. 2. CHROMA DIFFERENTIAL GAIN. This measurement indicates how chroma amplitude (color saturation) is affected by changes in luminance (brightness). The test signal consists of six luminance levels (increasing from left to right) with a constant chroma level. In this waveform-monitor photo, two horizontal scans are shown side by side, separated by a chroma-sync burst. Transitions between luminance levels are indicated by the small glitches along the top of the signal. Ideally, chroma level should stay the same at all luminance levels. The AVS-1500 does very well up to maximum brightness, where the chroma level drops slightly. This indicates that colors will be slightly less saturated in very bright picture areas than in darker ones.

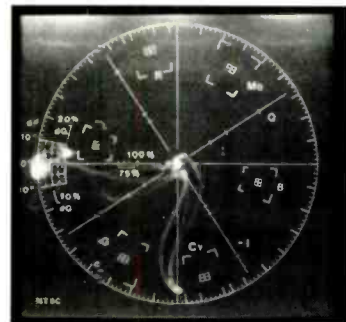


FIG. 3. CHROMA DIFFERENTIAL GAIN AND PHASE. One advantage of a waveform monitor is that it can tell you not only how great the differential gain is, but where it occurs, as well. A vector-scope can tell you only the magnitude. On the other hand, it can also show the chroma differential phase, which indicates shifts in hue at different brightness levels. The test signal is the same as the one used to obtain Fig. 2; only the display is different. Saturation is indicated by the length of the color vector (how far the dot is from the center of the screen), while hue is indicated by the angle of the vector (the dot's rotational displacement relative to the 0-degree axis, at 9 o'clock).

Ideally, three dots should appear: one at the center, one on the line at 6 o'clock, and one on the outer circle at precisely 9 o'clock. But only the last of these is important. A single, correctly positioned dot (an unlikely occurrence) would indicate both zero differential gain and phase. In practice, the radial spread of dots along the 0-degree axis indicates differential gain, their angular spread, differential phase. The target area encompasses a 20% gain change and ± 10 degrees of phase shift. As you can see, all vectors land within or very close to the target. Careful reading suggests a differential phase of approximately ± 6 degrees and a differential gain of about 21%.

The AVS-1500 also provides a convenient means for patching in and selecting a cable or broadcast pay-TV decoder. The decoder is permanently wired between the receiver's decoder

RF output and its auxiliary RF input. It is activated by pressing DECODER on the console or remote control.

Alternatively, any TV RF source—such as a game console or computer—can be connected to the input and selected via the button. In sum, the AVS-1500 has an eminently well-conceived RF switching system built in.

In addition, it offers two-in/one-out direct-video switching via the "Video 1" and "Video 2" pads on the console. Together with the "TV" pad, these enable you to view (and hear) a broadcast or either of two direct-video sources, such as a VCR, video-disc player, game console, or computer that has a direct-video output. Since each of the direct-video inputs has an associated set of stereo audio inputs, you'll hear true stereo from any source

demodulation process. Each of the direct-video groups has a pair of stereo output connectors for direct audio recording.

The AVS-1500 also performs quite respectably as a TV tuner. Video frequency response—which determines horizontal resolution—is essentially flat to the color-burst frequency (3.58 MHz), falling off only at the 4.2-MHz upper limit of the NTSC broadcast system (Fig. 1). Gray-scale (luminance) linearity—a measure of how accurately brightness changes are executed—is off target by 11% in the worst case, which occurs in about the middle of the luminance range. Chroma differential gain—a measure of how color saturation varies with scene brightness—is about 21% at the highest luminance level; but over most of the range it is negligible, indicating very uniform color saturation in all but the brightest scenes (Fig. 2). Differential phase (indicating how hue, or tint, changes with scene brightness) is within ± 6 degrees—a good figure, suggesting that color tints remain uniform with changes in scene brightness (Fig. 3).

Luminance is about 28% greater than standards call for, which means that the receiver supplies a signal level greater than a properly adjusted monitor will expect. But it may be possible to correct for this by reducing the monitor's contrast setting. Chroma level, on the other hand, is about 20% lower than standard, indicating that the monitor's color control should be advanced somewhat to produce proper color saturation. Indeed, when DSL simulated this condition and shifted chroma phase (tint) by a mere 2 degrees, the color vectors came in on the money (Fig. 4).

The Jensen AVS-1500 Audio+Video receiver is amazingly well thought out; indeed, its flexibility and provisions for future expansion put it in a class by itself. (You know, for example, that you can buy it and not kick yourself six months later for lacking foresight.) That, together with respectable performance in all areas and superior performance in many, makes the AVS-1500 a remarkably attractive piece of gear—even if you forget its very reasonable price. It is a system that demands to be taken seriously.

Circle 107 on Reader-Service Card

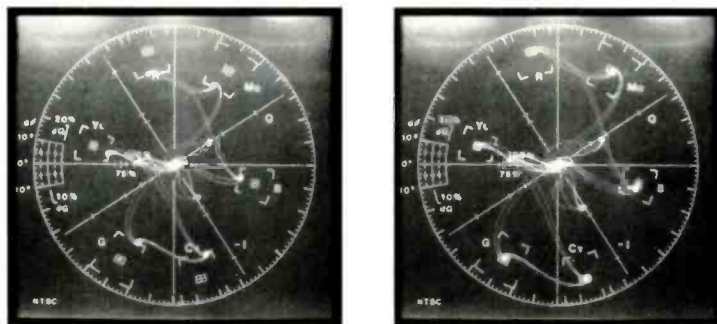


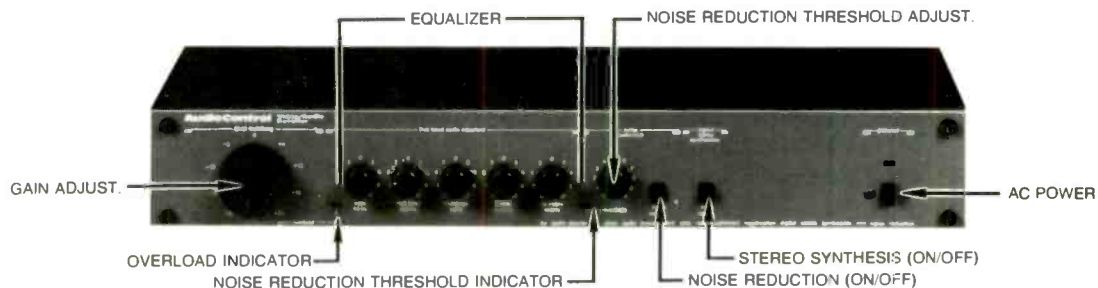
FIG. 4. COLOR ACCURACY. A vectorscope and a color-bar generator are used to determine color accuracy. The EIA color-bar signal puts six bars—magenta, blue, cyan, green, yellow, and red—in the upper portion of a TV screen, with black, white, and two special signals, $-I$ and Q , below. On a vectorscope, these should appear as follows: one dot at the center (black), one on the 0-degree axis at 9 o'clock (white), one on the Q axis (at about 5 o'clock), and one in each of the six target areas. Each target is designated with an abbreviation of its color (clockwise from 12 o'clock in the order given above). The outer targets encompass a spread of ± 10 degrees and ± 10 IRE and suggest acceptable performance. The inner targets cover much smaller areas within ± 2.5 degrees and ± 2.5 IRE. In the photo at left, each of the color vectors just about makes it into its outer target area. The shortfall is a sign of low chroma level (i.e., low color saturation).

The photo at right was taken with the vectorscope's gain increased to compensate for the low chroma level and the phase shifted by approximately 2 degrees. (Note that the "white" setup dot now lies slightly above the horizontal axis, reflecting the scope's deviation from correct calibration.) These changes—equivalent to ones you might make with the color and tint controls on a monitor—put the color vectors inside their small targets, which is excellent performance.

providing such a feed. And, since VIDEO 1 is provided with a direct-video output as well, you can record from it directly onto a VCR without going through a needless modulation/

AUDIO CONTROL VIDEO SOUNDTRACKER-1

Audio Control Video Soundtracker-1 audio signal processor for television-sound enhancement. Dimensions: 17 by 2½ inches (front panel), 6 inches deep plus clearance for controls and connections. Price: \$150. Warranty: "limited," one year parts and labor. Manufacturer: Audio Control, 6520 212th S.W., P.O. Box 3199, Lynnwood, Wash. 98306.



AUDIO CONTROL'S VIDEO Soundtracker-1 is a five-band audio equalizer cum noise-reduction system cum stereo synthesizer at a single-package price. Although the Soundtracker-1 operates exclusively on the audio signal, its manufacturer claims that the processing characteristics have been tailored specifically to improving television sound, which, in our opinion, usually needs it badly.

The five equalizer bands, labeled "bass," "mid bass," "midrange," "treble," and "hi treble," are accurately centered on 60 Hz, 250 Hz, 1 kHz, 3.5 kHz, and 10 kHz, respectively. These extend neither as low nor as high as those on more typical equalizers, but they are eminently well designed for spiffing up the audio that accompanies most video, in which there's rarely much information below 40 or 50 Hz or above about 12 kHz. In fact, the Soundtracker-1 has a sharp notch at the horizontal scan rate to remove any leakage into the audio. Diversified Science Laboratories found the trap well adjusted, with a rejection of 21¼ dB at the scan rate (15,734 Hz) compared to a maximum rejection of 23½ dB at 15,977 Hz.

Although the controls lack center detents or a defeat switch, response is

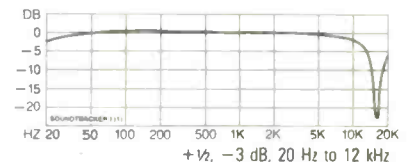
very flat when they are set to their nominal center positions. And their effect varies smoothly with degree of rotation, so that the markings correspond quite well to the actual amount of boost or cut (in dB) at those positions—a characteristic seldom found even in more expensive equalizers. The maximum boost or cut varies slightly from band to band but is at least 11 dB in either direction—which is more than sufficient.

To optimize signal-to-noise ratio, there is a level-matching control that adjusts input gain by almost ±20 dB. An input-overload LED warns of imminent danger; Audio Control advises adjusting it until the input-overload LED flashes only occasionally on signal peaks. This needs to be done only when changing sources, since any particular TV receiver, VCR, or video disc player will have a fairly constant audio-output level. The Soundtracker-1's high overload margin, together with its high input impedance and low output impedance, ensures that there should be no problem patching the unit into any video setup.

Total harmonic distortion (THD) is quite low by any standard. Noise is also well controlled. With the level control at 0 and the equalizer set flat, A-weighted noise is a very satisfactory 78¼ dB below 0.5 volt, deteriorating

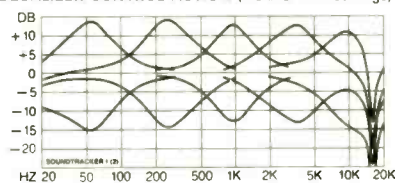
ALL DATA SHOWN here except those for gain and equalizer control action were taken with the level-match and equalizer controls set to zero and the noise reducer and stereo synthesizer defeated.

FREQUENCY RESPONSE



OUTPUT AT CLIPPING	5.7 volts
GAIN	-19¼ to +19½ dB
S/N RATIO (re 0.5 volt; A-weighted)	78¼ dB
HARMONIC DISTORTION (THD; 20 Hz to 10 kHz)	
at 0.5 volt output	≤ 0.029%
at 2 volts output	≤ 0.090%
OUTPUT IMPEDANCE	150 ohms
INPUT IMPEDANCE	49k ohms

EQUALIZER CONTROL ACTION (max. & min. settings)



to -66 dB when all equalizer sections are set for maximum boost and improving to -83 dB at maximum cut. Switching on the stereo synthesizer does little to degrade the excellent signal-to-noise ratio.

The stereo synthesizer works by taking a mono signal and distributing it between the left and right outputs as a function of frequency in such a way that the overall frequency response is unchanged but the responses of the two channels are different from each other. Apparently, a delay line is used to create the comb filters that perform the distribution. Since acoustical reflections within a concert hall or a good recording studio create a similar comb-filter effect (a series of evenly spaced notches in the frequency response), the synthetic stereo provides a sort of "you are there" ambience. But don't expect to follow the action and place voices to the left and right of the screen as the actors move about: Only real stereo will let you do that.

The noise-reduction system senses the amount of treble energy in the program and automatically rolls off the high-frequency response to reduce hiss whenever the signal contains little or no information in that range. Such a single-pass system works on any program material but is not as effective as compander noise reduction systems like Dolby and DBX. A threshold knob controls how aggressively the Soundtracker-I clips off the highs, while a companion LED indicates when noise reduction is taking place. Push-button defeat switches enable you to turn off the noise reduction and stereo-synthesis systems.

With the right ancillary equipment, installing the Soundtracker-I is a breeze. Its left and right outputs connect to an auxiliary input pair on your stereo system with standard audio cables. A mono sound source from your TV receiver, VCR, or video disc player is connected to Input 1. Wiring to a regular television set may be a bit tricky, however. Audio Control suggests you use the earphone jack—provided your set has one—but warns not to do so if the unit lacks a power transformer. Caveat tinkeror!

There is a second input jack (marked "2"), which the wiring diagram suggests can be used with a stereo VCR or video disc player. But

when it is, you lose true stereo. A mono source fed into either input appears at both outputs and produces a mono image when the synthetic stereo is switched off or a pseudo-stereo image when the special circuitry is activated. A stereo source produces either a mono output or a synthetic-stereo image, depending on the switch setting—but not real stereo. Audio Control says that the Soundtracker-I is intended specifically as a budget unit for use with mono VCRs and the like, and that the forthcoming Soundtracker-II will accommodate stereo sources.

Soundtracker-I does go a long way toward making TV sound more listenable. Our auditioners are unanimous in preferring the synthetic stereo to mono whenever watching a musical program: It creates a pleasant ambience and a sensation that the music is more alive. But the same auditioners have had mixed reactions to the synthesized stereo when watching drama. Some complain that it reduces intelligibility by making voices seem wider than the visual clues suggest they should be.

Almost the opposite could be said of the noise-reduction system. With musical sources, any perceptible reduction in noise is almost always accompanied by a noticeable (and variable) dulling of the sound. Some listeners prefer to save the highs and suffer the noise. Diddling with the THRESHOLD can minimize the effect, but not eliminate it, and some critical ears are bothered by the slight variation in tonal balance with loudness. The system is at its best with dramatic shows, and, with a proper setting of the THRESHOLD, few listeners can "hear it work."

The equalizer gets high marks all around. Even those purists who normally shun tonal tampering in their stereo systems will find the Soundtracker-I's controls a great boon in improving the sound associated with normal video fare. Of course, the better the source material, the less alteration required.

The Soundtracker-I is not all things to all programs, and it is not a "set-and-forget" device (the switches and controls are there to be used). But it does so much for so many mono programs, and at such an attractive price, that it deserves your serious consideration.

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REVIEWS

*Pop and classical
music releases
on video disc
and cassette*



H I G H F I D E L I T Y S O U N D C O M E S T O V I D E O R E C O R D I N G S

HIGH FIDELITY STEREO AUDIO IS BECOMING MORE GENERALLY AVAILABLE ON A WIDE RANGE OF PRERECORDED MUSIC-ORIENTED VIDEO RELEASES. WE WILL NOW BEGIN REVIEWING THESE REGULARLY, INCLUDING MATERIAL ON BOTH LASER AND CED VIDEO DISCS, AND SOON ON BETA HI-FI VIDEO CASSETTES (SEE "SPRING EQUIPMENT REPORT," APRIL). AS A STARTING POINT, HF CONTRIBUTING EDITOR ALLAN KOZINN PROVIDES A CLASSICAL-MUSIC REVIEWER'S PERSPECTIVE ON PROBLEMS ENCOUNTERED IN BLENDING AUDIO AND VIDEO INTO STIMULATING RECORDINGS; IRA MAYER, MANAGING EDITOR OF *VIDEO MARKETING NEWSLETTER*, BRINGS INSIGHT FROM WITHIN THE VIDEO INDUSTRY TO HIS DISCUSSION OF THE CURRENT STATE OF POPULAR-MUSIC VIDEO.

POPULAR

DURING the five years since the first video disc system came on the market, music programming has become increasingly important to the marketers of both laser and CED formats. As with prerecorded video cassettes, the bulk of the disc catalogs and sales consists of big-league Hollywood hits. But the higher audio quality and lower price of the video disc have long suggested that it would be the more likely context for the mating of music and video.

Pioneer Artists, the laser-disc programming arm for U.S. Pioneer, has been the most aggressive in touting music as a primary means of expanding the laser player's popularity. Pioneer Video president Ken Kai has even called the disc system a "music machine," a statement based in part on the relatively high number of music discs sold by his company. While classical and pop titles accounted for approximately

Continued on page 60

CLASSICAL

VIRTUALLY from the time television became a fixture in the American living room, classical music and the small screen have been at odds. There have always been well-intentioned producers interested in transmitting the experience of the concert hall into the home. Frustrating their efforts, however, was the music itself: Leaving aside the limitations of early camera technique and television equipment, the most serious factor militating against presentation of classical music on television was the medium's low-fidelity sound. Even today, the average television speaker can barely reproduce a solo piano satisfactorily, let alone symphonic music or opera. But then, in television's embryonic years, recorded sound itself left much to be desired, even on disc.

Of course, disc sound soon outstripped its television counterpart—a discrepancy partially remedied by the advent of FM simulcasting in the early 1970s. Simulcasting is awk-

ward, however, since it requires that the viewer-listener be within receiving range of both the television signal and an FM station carrying the audio; and it leaves viewers who tape these programs on video cassette recorders, either for their permanent collections or for viewing at a more convenient time, back at square one sonically.

But now sonic parity between performances one can watch on one's television screen and those one can only listen to on one's turntable is at

hand; indeed, on the first video discs I've sampled—all in the laser-disc format—the sound has been generally impressive, given that most are concert recordings rather than studio productions. In a sense, these discs are logical extensions of audio-only recordings in that they offer everything an LP does plus the visual dimension.

With audio problems no longer so daunting, therefore, the ball reenters the video court, raising questions crucial to the medium's success. What,

for instance, does the classical-music audience want to see? The experience of televised concerts teaches more about what viewers tire of seeing or do not want to see at all (camera-aided displays of performer ego) than about what they might cheerfully accept. And more elemental: What can producers do with this video capability? Are there enough visual choices inherent in classical-music performances to make a large catalog of video discs a plausible prospect, let alone an exciting one?

For ballet and opera recordings—so far, the bulk of the classical-video catalog—some answers are obvious: These are theatrical as well as musical arts, and home-video equipment can restore the part of the performance missing from audio discs. Of course, at the other end of the production-consumption chain, the problems increase many times over. Opera recording for home video is no longer simply (!) a question of assembling the right cast, vocally, and putting a competent audio producer at the controls. Set and costume design, stage and camera direction, and audio and video editing all come into play (as they do in dance). Producers can take one of two approaches: The more efficient is to shoot an actual "prefabricated" production in performance. The more elaborate is to stage and film the work as if it were a movie, using studio sets, outdoor spaces, and elaborate production techniques to create idealized performances that could not be reproduced live.

Both approaches have figured in the simulcasts of the past few years, and presumably many of these televised operas will eventually make their way onto disc and tape. Both have advantages and drawbacks. Live-performance films often convey a production's flavor, if not always its grand scale, and approximate, at closer-than-life range, the feeling of a continuous, living and breathing performance; their audio, however, lacks some of the polish we're used to from studio recordings. The often lavishly produced studio opera films show the opposite traits: Since studio soundtracks are used, the audio part of the production is smoother; but the miming singers too frequently look detached from their recorded vocal performances.



PREFABRICATED PRODUCTION: Gelsey Kirkland and Mikhail Baryshnikov in the American Ballet Theater rendition of Tchaikovsky's *Nutcracker*, from Pioneer.

So far, the one company that has made anything near a serious commitment to opera and dance on video disc is Pioneer Artists, the software arm of one of the laser-disc player manufacturers. Thus far it has kept to the prefab route, releasing a series of opera and ballet discs filmed at Covent Garden and produced jointly by Covent Garden Video Productions, Ltd., and the BBC. The casts are fairly starchy, and the repertory is nicely balanced for a first release: Puccini (*La Bohème*, with Neil Shicoff and Ileana Cotrubas) and Offenbach (*Tales of Hoffmann*, with Plácido Domingo, and an introduction by John Gielgud) provide the war-horses, while entries by Saint-Saëns (*Samson et Dalila*, with Jon Vickers and Shirley Verrett) and Britten (*Peter Grimes*, also with Vickers) indicate that video vinyl will see more than the standard blockbusters. Outside this series, Pioneer also offers an *Aida*, filmed at an outdoor performance at the Arena di Verona. The dance menu leans more heavily to the standard, with Royal Ballet performances of *Swan Lake* and *La Fille mal gardée* and the Baryshnikov/American Ballet Theater *Nutcracker* the only laser-disc offerings thus far.

By contrast, companies producing discs in the stylus-played CED format are producing precious little classical music, and there is equally scant action on video cassettes, although a small company called Kultur offers a Kirov *Swan Lake*, some Bolshoi Ballet excerpts, and a pair of tapes featuring Fernando Bujones in *Sleeping Beauty* and *Coppélia* (available through Musical Heritage Society, 14 Park Rd., Tinton Falls, N.J. 07724). Kultur also offers a series of performer-oriented semidocumentaries. We'll be looking in greater depth at the more interesting of these tapes, and at the laser discs mentioned above, in future issues.

For the moment, though, let's return to the question of visual choices. If opera and ballet offer their own solutions, what will symphonic music on video disc look like? Here video producers are caught between two goals that, though they should not conflict, often do—the desire, on the one hand, to produce something visually exciting and, on the other, to maintain the integrity and seriousness the music demands.

Compared with their pop



VIDEO VÉRITÉ: a straightforward presentation of Horowitz' London concert.

colleagues, symphonic-video producers seem strapped. Look at the contrasting possibilities: Rock bands now spin out prodigious numbers of short clips designed to promote their latest records. Many are simply "play-alongs"—either concert footage synced with the record or studio setups. Many others, though, are brief fantasy dramas, which may or may not take the song's lyrics as a point of departure. Some are ambitiously staged and costumed, others merely strange. The best of them—fun, pure and simple—stand up to repeated viewing (assuming, of course, that one likes the music).

Symphonic music offers less scope for such freedom, and perhaps the very nature of the music rules it out entirely—although a few analogous approaches come to mind. The most obvious is Walt Disney's in *Fantasia*; a bit more sadistically quirky is Stanley Kubrick's in *A Clockwork Orange*. And, movies aside, few seriously object to ballet versions of works not intended for the dance—the *Goldberg Variations*, for instance—unless the choreographer dismantles the music to suit his own purposes.

Still, symphonic-video producers have tended to treat abstract music more straightforwardly, showing the performance itself but using two basic modes of presentation, intercut in varying proportions. The first, and least satisfying, concentrates the camera on the conductor, showing him in deep transport, in calm omnipotence, or straining at the bit in a series of sweaty balletic gyrations; this camera-conscious mugging often gets in the way of the music more than Disney's dinosaurs did. The second is

the Norton Study Score approach, which—like those scores that shade the page gray but highlight principal themes in white—centers on the orchestra itself, following the themes from one instrument to another. The latter approach dominates in Pioneer's pairing of cello concertos—the Dvořák B minor and the Saint-Saëns First, with Mstislav Rostropovich as soloist and Carlo Maria Giulini conducting the London Philharmonic—where it works quite well.

Pioneer also has an import line that includes three Czech Philharmonic performances—Smetana's *Má vlast*, and Dvořák's *Slavonic Dances* and *New World Symphony*. These productions take a slightly different approach, calling in a bit of travelogue footage deemed appropriate for this nationalistic music.

Yet another angle crops up in an independently produced laser disc featuring Ars Musica, an early-music group based in Ann Arbor, in a movement from Mozart's Piano Concerto No. 17, K. 453. The straight performance (on original instruments) is followed by a discussion of various historical and formal aspects of the work, and then by a second performance in which a split screen shows both the orchestra and a highlighted score. This disc, which should be out by mid-1984, is intended primarily for educational use but may be released commercially. In any case, it represents a creative use of the medium that may have more general applications.

The problems posed by solo recitals are similar to those of symphonic music, and possibly more

severe, since there is little material for visual contrast. Yet presentations have varied over the years. Kultur offers a series of 1950s period pieces in which performances are given a bit of dramatic context. Someone, for instance, walks up to Arthur Rubinstein, introduces himself, and explains that he wants to make a film about the celebrated pianist. "Who, me?," Rubinstein says, and, while considering the prospect, he plays a bit of Chopin or Liszt. Today's solo presentations drop the dramatic pretensions and straightforwardly deliver, for instance, Horowitz' London concert of a year ago, with an interview as an intermission feature. Of course, corny as some of the older films are, they afford nostalgic as well as musical fascination now, and one can only hope that video producers will not neglect the material that rests in television and film-company archives.

Finally, video offers—or can offer, if production companies can be made to see the merits—extraordinary opportunities to living composers, many of whom have definite ideas about how they would like their music documented visually as well as sonically. Some—particularly those who work in avant-garde circles in Manhattan's lower reaches—have been combining video imagery with their music for years. One home of music/video experimentation, the Kitchen, is working to produce commercial video cassettes, with a projected market date late next year. Current projects include Robert Ashley's video opera, *Perfect Lives/Private Parts*, in a production to be filmed next fall under the joint auspices of the Kitchen and Britain's new Channel 4. Other tapes of video art are already available from Electronic Arts Intermix (84 Fifth Ave., New York, N.Y. 10011).

As in any new medium, there remains considerable room for development and refinement. Yet the potential for rewarding classical-music video productions certainly exists. Whether composers, performers, and video producers will find the best ways to tap this potential and be able to escape past constraints without compromising the musical content remains to be seen. That, in fact, will be the subject of our investigations in future months. **HF**

POPULAR

Continued from page 57

13% of Pioneer's 1982 catalog, they also managed to rake in 35% of the company's software revenues. Furthermore, Pioneer's ten best-sellers for 1982 were evenly split between music and movies, with Michael Nesmith's *Elephant Parts* and Olivia Newton-John's *Physical* outsold only by *Star Wars* and *Close Encounters of the Third Kind*. *The Music of Melissa Manchester*, *Kenny Loggins Alive*, and *America Live in Central Park* occupied Nos. 7, 8, and 10 on the list.

The Grammy-winning *Elephant Parts*, though admittedly a mix of pop music and comedy, represents one of the best uses of the medium to date. Most of the less than three-minute sketches were produced for use as cable-network filler or as *Saturday Night Live* segments, so you can turn it

OLIVIA'S Grammy-winning *Physical* was an expensive production.



on, watch a few bits, and come back another time for more.

Because of its success on disc and cassette, segments of *Elephant Parts* will also be one of Sony's first Video 45s—ten- to twelve-minute video-tape equivalents of the three-minute audio singles. Priced at \$15 in Beta and \$20 in VHS, Video 45s are also designed to demonstrate the sonic superiority of Sony's new Beta Hi-Fi video-cassette format. (Pioneer promises a short-form laser disc for later this year: It will be about eight inches in diameter, sell for around \$15, and have twelve to fifteen minutes of playing time.)

Though the visual content of CED pop music parallels laser discs', there aren't nearly as many music programs to choose from. Of the 400 titles in the current CED catalog, only about 8% are music, none of them classical (though a Vladimir Horowitz disc is promised). This is at least partly due to the fact that the first players were mono, something for which RCA was severely criticized within the music industry. But, as it turned out, the CED system has won more customers in two years than has the more expensive stereo laser player in five.

The best-selling CED music titles (between 9,000 and 11,000 copies each) thus far are, in descending order, Blondie's *Eat to the Beat* (in mono), Paul McCartney's *Rockshow*, Rod Stewart's *Tonight I'm Yours*, the Who's *The Kids Are Alright*, and Paul Simon in *Concert*. The Blondie program, which was touted as the first full-length rock video, applies the concert and concept approach to songs on the album of the same name—to decidedly mixed effect. *The Kids Are Alright*, originally released as a feature film about five years ago, is an amusing Who documentary that combines old television footage—including segments from *The Smothers Brothers*—with recent interviews. (The Who's final concert will be out soon in both cassette and disc formats on CBS/Fox and will be reviewed subsequently.)

RCA is working on raising its percentage of music discs and Pioneer Video says it will have at least three dozen new stereo, CX-encoded music programs this year. Both companies' catalogs reflect a strong orientation toward middle-of-the-road pop, which is disappointing from an artistic viewpoint, though understandable from

a marketing one: Until now, with only limited disc-manufacturing capacity in both formats, the primary interest has been to increase the number of players sold. The high cost of the machines has meant that buyers are in their



DEBBIE HARRY: *Eat to the Beat*, in mono, is CED's top music seller.

thirties and forties (eighteen-to-twenty-four-year-olds make up the majority of LP and audio-cassette buyers), so it's not surprising to find a hootenanny disc featuring the Kingston Trio, the Limelighters, and Glenn Yarbrough on Pioneer or *Pippin* and *Eubie* on RCA.

But things are looking up for contemporary-pop fans: RCA recently recorded Lou Reed live, for instance, while Pioneer has hard rock from Billy Squier and April Wine and r&b from Ashford and Simpson. Also, Pioneer, RCA, and CBS have said that they are now willing to manufacture video discs for other companies. That means that anyone with the capital can put out a video disc under his or her own label. Remember that in the record business, the independent companies traditionally have been the ones prone to experimentation and innovation.

Discs of general interest include Fleetwood Mac concerts on CED and laser, and the Stevie Nicks solo laser disc. The former include some backstage scenes; the latter is a concert

performance in which Nicks whirls, twirls, and cries hysterically at the end. Though technically fine from both the audio and video standpoints, the Nicks set exudes a quasi-mystical aura that wears thin on even the most ardent fan (including this one). Far more original is Mick Fleetwood's *The Visitor* (CED). Recorded in Ghana during his trip to record the album of the same

name, Fleetwood's disc mixes local ethnic music with the styles of the rock musicians who traveled with him. Unfortunately, those interested in this sort of rock-ethnic combination will find the disc's rather severe sync problem very disconcerting.

Newton-John's *Physical* is, thus far, atypical of such full-length home video programs as Nicks's,

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Manchester's, Loggins', or America's in that Newton-John illustrates her songs (mostly by swimming) rather than merely sings them in concert. It's also atypical because the video and audio disc were released simultaneously. Concept programs, as *Physical* would be called by video producers, are more expensive to make than straight concert footage, which is why the latter is more prevalent.

Generally, the most interesting video music has been created by lesser-known artists experimenting in the medium. Some of these tapes find their way onto Music Television (MTV), Warner-Amex's all-music cable television service, but most of it can be found only in clubs. The themes tend toward sado-masochism because, to put it bluntly, s&m is very visual. Duran Duran's *Girls on Film* made it onto MTV in edited form, and the R-rated version is available on a Video 45.

The more sexually explicit or violent tapes aren't likely to make it onto MTV, and most won't be marketed for home video in the near future because of monumental copyright problems. The music-video work you see on MTV, in a club, or in an in-store demonstration is created for promotional purposes only; there are no royalty arrangements that would



KENNY LOGGINS: a savvy marketing decision that paid off.

compensate the songwriters for their work. Music publishers, afraid of making deals that would set a precedent at this stage, are wary of "giving away" anything.

Of course, much of the material available on CX-encoded laser and CED discs is also available on standard VHS and Beta cassettes—which have not figured prominently in this discussion because VCRs have had such dreadful sound. Sony hopes to change that with Beta Hi-Fi, and rumors in the industry have the VHS camp following suit later this year with its own "new, improved" stereo

system. As mentioned, Sony hopes to show off Beta Hi-Fi with Video 45s by Duran Duran (*Hungry like the Wolf* along with *Girls on Film*), Nesmith, and Scottish "singer/video artist" Jesse Rae. Rod Stewart and Elton John are also promised, but the biggest names—Billy Joel (whose promotional videos are big-budget affairs with much wit), Barbra Streisand, and Neil Diamond—have yet to come forth even with discs or standard cassettes.

I mention those three deliberately because all record for CBS-owned labels and because CBS is reportedly considering a cassette and/or disc compilation of video numbers by several of its artists.

The home video market isn't large enough yet for programs to be produced exclusively for the medium—let alone for any one format—so that much of what you'll see is apt to be familiar. The Fleetwood Mac and Stevie Nicks discs were originally cable concerts; so are two Peter Allen sets, the latest featuring Radio City's high-kicking Rockettes. One noteworthy exception is MGM/UA's *The Compleat Beatles*, available on video cassette and disc only—at least through this year. A well-crafted two-hour "documentary," the program hasn't pleased serious fans because a fair amount of footage was taken from events having nothing to do with the Beatles. Still, for the nonaficionado who hasn't amassed his own collection of Beatles clips, it is an excellent sampler. Many of the songs aren't heard all the way through, but the cumulative effect is powerful. And MGM/UA is to be commended for catering to the home market—something it will do again with a feature-length video show based on Alan Betrock's book *The Girl Groups*, about the Ronettes and others.

Whatever context these programs may have appeared in first, getting them on disc, and eventually on Beta Hi-Fi, affords the opportunity to hear them with far greater clarity and definition than is possible on broadcast or conventional cable TV. With player sales picking up momentum and "The Compleat Beatles" cracking the Top 5 on the best-seller charts, the market should be healthy enough to support the creation of some genuinely original programming in the not too distant future. We'll keep you posted. **HF**



STEVIE NICKS: whirling, twirling, and, for a grand finale, hysterical tears.

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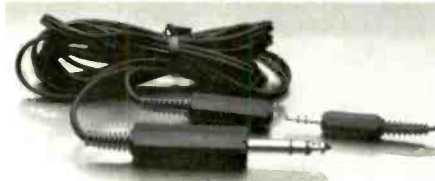
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Verdi Performance: Restoring the Color

A priceless legacy of historic recordings reveals how far we have strayed from the composer's "intentions."

by Will Crutchfield

WHEN BEVERLY SILLS can admit that her opera company's *I Lombardi* was "a turkey" and dismiss the failure by claiming that "everyone is entitled to their *Macbeths*," a casual observer may be forgiven for inferring that the early-Verdi revival has entered on hard times.

And so in fact it has. The San Diego Verdi Festival has fallen victim to the recession (temporarily, it is promised). Philips has wound down its enterprising series of recordings, leaving the gaps to be filled by smaller firms. The New York City Opera's *Nabucco* was received little better than its *Lombardi*, and plans for *I Masnadieri* and a continuing early-Verdi cycle there seem to have been quietly buried.

Before the Metropolitan's ill-fated new *Macbeth* last season, as before every revival of that opera, Verdi's famous letters concerning the harsh and forward-looking music of *Lady Macbeth* were widely quoted in the press. While preparing for the work's 1847 premiere, the composer penned another letter, to baritone Felice Varesi, which, though still little-known and seemingly innocuous, can be even more valuable in attempts to revitalize modern Verdi singing. He was sending, he wrote, "an adagio in D flat major, tender and melodious, which you must color beautifully."

"Color": Verdi's verb is *miniare*, which, as Julian Budden points out in his landmark study of the operas, is also used to denote the illumination of a manuscript. What would it have meant to Varesi? How might a singer of Verdi's day have colored, illuminated, an aria such as this? The pursuit of such questions can offer our faltering revival a radical, liberating stimulus.

Researchers have at their disposal not only the traditional battery of sources—contemporary criticism, scribbles in performers' scores, manuals of instruction—

Will Crutchfield is a music critic for the New Haven Register. He will present the results of his Verdi performance-practice research in greater depth in the July 1983 issue of 19th Century Music, providing more than 200 transcribed examples and full data on original recordings and reissues.

that have served in the attempt to re-create Handelian and earlier style, but also a priceless legacy of recorded sound that links us directly with the singers active during Verdi's later career.

The body of recorded evidence is richer and broader than many realize. Roberto Bauer's *Historical Records, 1898-1908/9* lists 1,633 Verdi recordings by 469 singers. Hundreds more made within that first decade lay beyond the scope of Bauer's catalog or have come to light since its compilation; perhaps as many more were made during the remaining years of acoustical recording by the same singers. These discs (of which I have managed to hear just over 1,500) reveal, as might be expected, a style in transition. Verdi had already composed most of his operas before even the earliest of the singers was born. Although he had heard and worked with several of them in his last years, they represent Italian singing as it existed well after his influence had made itself felt, in a period of rapid change, during which other influences (Toscanini, Mascagni, Caruso, Wagner) came to the fore. Among the younger singers of the period are some whose Verdi style is not too far removed from that of recent generations. Among the older ones—those whose careers overlapped the composer's—one finds something very different.

This is true above all of a small group of singers whose records have in recent years achieved wide circulation as reissues, foremost among them the tenor Fernando de Lucia (1860-1925) and the baritone Mattia Battistini (1856-1928). Because both recorded prolifically and maintained good vocal health into old age, their discs competed in the catalogs with those of younger, more modern singers, compared to whom they can seem a pair of glorious eccentrics. A close survey of the earliest records, less well-known and sometimes less attractive from a vocal standpoint, reveals a picture into which these "twin glories of Italy" fit much more consistently. Among the nineteenth-century artists who survived to make records in the twentieth were a Violetta admired by Verdi, no fewer than nine participants in premieres he supervised, and dozens of others whose

paths crossed his or who were vital participants in the operatic scene that he still dominated.

The records they left make clear, for instance, that Verdi's copious pianissimo markings were not exaggerated pleas for relief from an interminable forte, as Arturo Toscanini claimed (on which basis, paradoxically, he ignored most of them); rather, they were simple requests for a feature of Italian singing that was as commonplace then as it is rare (at least among male singers) today. One is repeatedly impressed with a piano tone that is not simply a dulled forte, but an intensely projected, vibrant sound even at its softest and most delicate. Even that great old roarer Francesco Tamagno (the first Otello), in whom Bernard Shaw heard only "magnificent screaming" and for whom Verdi deemed the mezza voce a "*cosa impossibile*," found it possible to sing the high Gs of his *William Tell* aria with a gentleness thenceforth rarely encountered in tenors of his category. Victor Maurel (the first Iago and Falstaff) was in poor vocal health by the time he made records, but he could still do this, right up to the top of his range. For most tenors the ability to reduce a top A or B flat from forte to a whisper was almost a point of honor.

A forgotten concept of legato also emerges, based on generous use of portamento and strict avoidance of intrusive aspirate *hs*. Rests within a continuous line were treated as a "non legato" indication rather than a literal series of fixed silences interrupting words and phrases.

Harder for modern tastes to accept, yet even more rewarding, once assimilated, is the rhythmic freedom of these early performances. Andrew Porter has described the Verdi conducting of Riccardo Muti and James Levine, superb in many ways, as trapped "in a grid of bar lines"; after an evening or so spent with the records of Battistini and De Lucia (who at first blush may seem simply willful or dilatory), any sensitive listener will see Porter's point. Nineteenth-century Italians seem to have conceived tempo not as a rigid pulse with occasional modifications, but as a fluid continuum allowing one at any moment to relax

and linger or to hurtle forward. (Verdi sometimes specifies "without hurrying" at places where it would never have occurred to a modern performer to hurry; listening to the early discs we can recognize a certain idiomatic way of pressing toward a cadential fermata that the composer, in these particular instances, wished to avoid.)

Often this freedom is turned to dramatic account in a way that rubato cannot be when its use is more strictly regulated. Antonio Pini-Corsi, who sang Ford in the premiere of *Falstaff*, made a record of the fat knight's own "Quand'ero paggio," which lingers and hurries, alternately bold, self-satisfied, and appealingly reticent. De Lucia recorded a famous version of Alfredo's "De' miei bollenti spiriti" (*La Traviata*) in which he takes 2'34" on pages that Jan Peerce and Toscanini dispatch in 1'35". (Peerce is also quite loud all the way through, whereas De Lucia sings pianissimo for perhaps half the aria.) Toscanini kept a De Lucia record into old age, for laughs; but just about every other commentator who has come to know this one has found it compelling. For Desmond Shawe-Taylor (in the *New Grove Dictionary*) it is "so tender and caressing as to efface the memory of other versions." John Steane (*The Grand Tradition*) has "never felt the dramatic reality of Alfredo's emotions as vividly as through De Lucia's very personal realization of the song."

But the most controversial issue raised by the old records is surely ornamentation. Up to the turn of the century, certain musical events in Italian opera were consistently seen as invitations for the singer to grace his line. If Verdi thought otherwise, he maintained uncharacteristic silence on the matter.

The typical Verdi solo scene (in the operas up through *Traviata*, where it remains reliably formulaic) invited embellishments of several kinds, each illustrated here with examples from the recordings. The standard recitative ending—a sustained dominant colored by a minor second—might be elaborated, as it was by

Fig. 1a



Fig. 1b



Fig. 2a

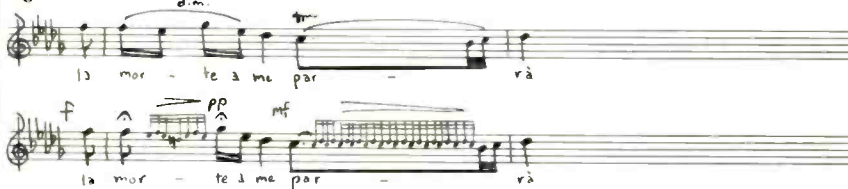


Fig. 2b



Battistini and Enrico Caruso in recorded passages from *Macheth* and *Rigoletto* [Figs. 1a, 1b]. Within the aria, principal cadences (before a modulation; leading into a reprise; introducing a coda) were regularly marked with *rallentando* and/or embellishment. De Lucia (in *Il Trovatore*) and Battistini (in *Traviata*) are typical here (although the tenor's trill-substitute is not) [Figs. 2a, 2b]. Gemma Bellincioni in "Ah, fors'è lui" (*Traviata*) and Ferruccio Corradetti in "Il balen" (*Trovatore*) show how an exact melodic repeat would elicit variation [Figs. 3a, 3b].

The final unaccompanied cadenza (a regular feature up to the time of *Forza*) requires some explanation, partly because in some of his earlier arias Verdi did not write it out. This has led to the misunderstanding that Verdi for some reason did not wish cadenzas to be sung in these arias (or wanted the perfunctory ending he had written to serve in place of a cadenza), even though the standard cadenza lead-in was present and the arias were in all other respects consistent with those for which endings were written in full. The clearest refutation of this comes from Verdi himself, who left the cadenza spot blank in the bass aria from *Lombardi* but filled it in impressively for the French revision (*Jérusalem*). In addition, we have cadenzas that singers of the period sketched into their scores and notebooks, and there is copious testimony on the records, where singers invariably filled out such endings as those of the first-act tenor aria from *Ernani* or the last-act one from *Un Ballo in maschera*. Two good examples can be found in "Oh, de' verd'anni miei" (*Ernani*), the first by Battistini, the second by Giuseppe Kaschmann (who took Maurel's place in early revivals of *Otello*) [Figs. 4a, 4b].

But literal observance of cadenzas written out in the score was never considered obligatory either. Verdi's full-length cadenzas consist of three basic functional units: a) a note or short phrase announcing the harmonic function of the cadenza; b) a melisma or syllabic sequence involving some display of range; and c) a brief per-

oration consisting of a word (or a few) resolving to the final tonic. The most common soloistic practices around the turn of the century were to replace or adapt Verdi's "b" passage (often so as to reflect the growing preference for declamatory singing over coloratura), and to expand the form by inserting another melisma, syllabic sequence, or a free combination of the two,

Fig. 3a



Fig. 3b



between "b" and "c". The examples shown are taken from "Infelice, e tu credi" (*Ernani*), "Parmi veder le lagrime" (*Rigoletto*), and "Ah, fors'è lui" [Figs. 5a, 5b, 5c].

In early to middle Verdi, the solo scene almost always concludes with a brisk cabaletta in two stanzas, and a tradition dating from Rossini's time called for improvised elaboration of the repeat. Records offer little evidence on this: The cabaletta had by 1900 come to be despised as a relic of the bad old days. Only a few famous ones were recorded with any regularity, and then usually in single-stanza form. However, certain adornments by older singers such as Battistini (in *Ernani*) and Tamagno (in *Trovatore*) might possibly have belonged to the second verse of a cabaletta in earlier years [Figs. 6a, 6b].

A final point, relating more to basic execution than to embellishment: What we

now call a "grace note" was then treated as a two-note ornament, beginning on the lower pitch. Battistini's "Di provenza" (*Traviata*) to which a few extras are added, illustrates [Fig. 7].

What in fact were Verdi's opinions on embellishment? Would he have been outraged by the sort of thing Battistini and De Lucia did? The evidence does not really suggest so. His vast correspondence contains a lot about good and bad voices and about staging and mise-en-scène, a fair amount about unapproved cuts and transpositions (in the later operas)—but very little about ornamentation. Given Verdi's outspokenness on matters that concerned him, the paucity of comment says much in itself.

And what little comment there is applies only tenuously to the singers who lived to make records. We can probably assume that ornamentation accounted for at least part of the bad taste Verdi attributed to Maria Malibran, and for his distrust of Sophie Cruvelli as "one of those caricatures" of the earlier singer that "have only her oddities without any of her genius." Certainly, Jenny Lind's decorations seemed excessive to Verdi's protégé Emanuele Muzio: "the sort of thing people liked in the last century, but not in 1847." This squares with the Verdi who wrote that he was "content to hear simply and exactly what is written" and, at face value, with the approach of such modern conductors as Claudio Abbado and Muti: no variants, no interpolations, no cuts.

But of course no description can be taken at face value when it comes to performance practice. If Lind was truly ornamenting in the fashion that "people liked in the last century" (that of Angelica Catalani, Elizabeth Billington, and the castratos), or in the fashion of Malibran, or even in the fashion of the tasteful transcriptions that have been preserved by her biographers, then she did vastly more than did the singers of the early recorded era. It is entirely possible that Verdi would have thought Battistini's embellishments simple and legitimate inflective devices, like an added accent or a heightened crescendo, well within the bounds of "simply and exactly what is written." If he had known he was writing for a posterity that would see absolute composer-control of electronic music, he might have declared himself "content to hear simply and exactly what is written, with of course the usual vocal devices at the obvious spots."

What "simply and exactly" meant to Verdi is suggested by his stringent proposal in 1847 of a contract forbidding "any insertions, any mutilations, any lowering or raising of keys, in short, any alteration that requires the smallest change in the orchestra part." The implication here is that even at his most inflexible Verdi would accept (Continued on page 100)

Fig. 4



4a, Battistini



4b, Kaschmann



Fig. 5a, Edouard de Reszke



Fig. 5b, Carlo Albani

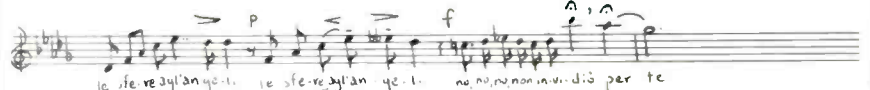
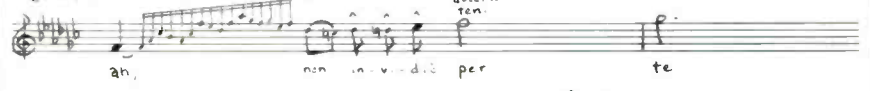


Fig. 5c, Gemma Bellincioni



Fig. 6a

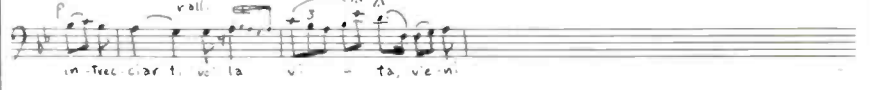


Fig. 6b



Fig. 7



Chéreau's *Ring*, Syberberg's *Parsifal*: Records as By-products

Two important new Wagner recordings partake of a widening trend toward derivative enterprises, while Eurodisc's *Walküre* follows the traditional route.
Reviewed by David Hamilton

WHEN CLASSICAL RECORDINGS BEGAN, they primarily reflected what was going on in concert halls and opera houses. Eventually, records acquired a certain autonomy, bringing together combinations of works and performers that hadn't been heard "live." This was particularly true in the field of opera, and especially in the decades after the introduction of LP, when the major international companies each year produced an impressive schedule of complete operas, the majority of them planned and cast without regard to the repertory of actual opera houses. (On occasion, there might be a *prospective* relationship: If the Met planned a production of *I Vespri siciliani*, RCA arranged a recording in advance, so that it would be ready in the stores in time for opening night.)

Those halcyon days seem now to be over. Complete studio opera recordings from the major companies have dwindled to a trickle. More and more, operas are recorded in performance, subsidized by outside sources such as foundations and corporations, coproduced with the help of performing institutions (such as European radio services), or derived from other media enterprises (usually visual)—or some combination of these. In the process, record companies have usually given up some of their traditional control over the final product: the artist-and-repertory function, the recording of the sound, the production supervision, or all of these, may be in outside hands. However imperfectly record companies have sometimes represented the interests of the music-loving listener, he remains their primary customer—but these new elements in the recording picture have other constituencies in primary focus: Corporations may be principally mindful of the public-relations effect of their gift rather than the quality of the musical results, and television producers are likely to favor visual over auditory considerations (al-

though the prospect of high-fidelity stereo sound for television, especially via the laser disc, is now an incentive to greater attention on the audio side).

These reflections are stimulated by a recent harvest of major Wagner recordings. Of the three projects represented, two—the Bayreuth centenary *Ring*, controversially staged by Patrice Chéreau and conducted by Pierre Boulez, and Erato's recording of *Parsifal*—came into being as offshoots of visual projects, while only one—Eurodisc's studio *Ring* cycle, which has now reached *Die Walküre*—stands autonomously as a recording. Of course the visual origin of these projects is attractive to record companies not only because it underwrites their production; their media prominence is surely expected to be a powerful stimulant to sales: Viewers entranced by *Die Walküre* on PBS are more likely to gravitate to the corresponding recording in the stores than to the Eurodisc set (let alone earlier and superior recordings of the work).

Erato's *Parsifal* is, in fact, a conventional studio recording—but one that came to pass only because Hans-Jürgen Syberberg required a recording of the opera for the soundtrack of his highly personal film version. He had first sought the rights to an existing tape of a Bayreuth performance, but the Wagner family demurred, presumably because of the director's earlier marathon film interview with the late Winifred Wagner, the family's disgraced but still fervent resident champion of Adolf Hitler. The Bayreuth *Ring*, on the other hand, is an offshoot of Unitel's television taping of the cycle, currently on display by PBS (faintly strung out over a period nearly as long as it took for the story's events to transpire in the first place).

However, the Philips sound recording is not simply the soundtrack of the TV *Ring*, nor is it (like all other postwar Bay-



Pierre Boulez: unflagging concentration

reuth complete recordings) an edited composite of live-performance and rehearsal tapes. Since filming during performances at the Festspielhaus was not possible, the Unitel TV version had to be made at a series of special sessions, fully staged but without audience, during 1979 (*Götterdämmerung*) and 1980 (the other three operas). The sessions covered (more or less) an act a day, performed twice through complete, followed by retake patches when necessary.

The music was simultaneously recorded by two essentially independent teams. A Bavarian Radio crew made an instantaneous two-channel stereo mix-down that went onto the (analog) soundtrack of the video tapes. At the same time, a Unitel crew under the direction of Andrew Kazdin, using the same vocal mikes and two-channel submix but their own orchestral setup, made a sixteen-track analog master and—in 1980 only—a four-track digital master as well. During the patch sessions,

Kazdin was able to request retakes for sound only, without action, to cover passages where stage noises had been exceptionally disruptive. At the end of each summer, Kazdin and Boulez listened to all the tapes and prepared a score marked up with their preferred takes, which was left with Unitel.

From this point, the two sound recordings followed divergent paths, though both teams of editors had the Boulez-Kazdin splicing plan for reference. The two-track version on the video tapes was edited by Unitel in conjunction with the video images. The sound-only tapes were eventually licensed to Philips, which edited them and released them, last year as a packaged set and now as single operas in connection with the PBS showings. For the three operas recorded in 1980, the digital tapes have been used, but *Götterdämmerung* exists only in the analog version (contrary to some reports in the press at the time of the first publication, which implied that in this opera Boulez had "preferred the analog version to the digital").

As all that suggests, some effort was expended to make sure that the audio-only consumer of this *Ring* received a satisfactory product. Because of the nature of Chéreau's production, with a metal gridlike stage floor in many scenes, and considerable vigorous physical activity, the general level of stage noise is higher than in earlier Bayreuth recordings, though of course without the audience interventions encountered in real "live-performance" takes. The "Ride of the Valkyries," the first act of *Siegfried*, and the cycle's finale are particularly afflicted with thumping and banging from assorted sources, and the hissing of steam intervenes at the first appearance of the Rhinegold and during the Magic Fire Scene of *Die Walküre* (this *Ring* and Syberberg's *Parsifal* suggest that the steam concession in European show business these days must be a lucrative one)—not to mention the squeaking axles of the wheeled dragon in Act II of *Siegfried*.

In its more positive aspects, the sound has turned out well. Passages of poor balance are remarkably rare (I had a hard time finding the Valkyries' Ride motive in the Prelude to Act II of *Walküre*, and there are some spots in the "Ride" proper where the voices sound artificially boosted), and the overall quality is bright and natural. In the digital parts, the timpani are particularly tight and clear (e.g., in the *Todesverkündigung*, where their repeated taps have a motivic significance), while I think the strings have slightly more fizz and bloom in the analog *Götterdämmerung*—but some of the discrepancies here might well be the result of inevitable differences between two sets of sessions a year apart.

It's not easy, however, to consider the recorded sound independently of the performance itself, for Boulez' sonic conception

of the *Ring* is quite different from what we have become accustomed to in the German tradition, even at the hands of such recent, relatively lightweight exponents of the latter as Herbert von Karajan. Some nonsense has been written about this; for example, Jean-Jacques Nattiez, in the fall 1980 issue of the journal *October*, ascribed the uproar about this *Ring* not only to Chéreau's staging but to "Boulez' transformation of the Tetralogy from a catalog of musical themes into a dynamic musical work." This is sheer fabrication; Furtwängler's and Knappertsbusch's versions of the *Ring* presented nothing if they did not present "a dynamic musical work." Equally, it misses the real point of Boulez' performance, which is to clean the score of almost all expressive editorializing, to present it in a strict, almost abstract way, to concentrate on the musical

Boulez' involvement is greatest in the symphonic passages.

letter in the expectation that appropriate expressive results will automatically follow.

The extent to which they do is related, at least in part, to the density and inventiveness of the musical fabric at a given point in the cycle. From Boulez' essay, "Time Re-explored," included in the picture book furnished with the boxed set of the complete cycle, it is clear that he is more fascinated by the musical processes of the *Ring* than with its social or philosophical significance (and he is particularly intrigued by the ironical fact that the musical processes grow more complex and revolutionary as the cycle proceeds, while at the same time the dramaturgy grows more conventional), and his involvement is greatest in the more symphonic passages (the expansive parts of *Walküre*, and nearly everything from the cycle's later stage of composition, beginning with the last act of *Siegfried*). Despite Nattiez's claim, not even Boulez can transform those parts of *Rheingold* and *Siegfried* that are, in fact, little more than "catalogs of musical themes" into significant musical developments, though he frequently gives us a new perspective on them.

While the conductor's unflagging concentration keeps a taut rein on every moment of the cycle, the tempos are not in themselves particularly fast. Sometimes the transparent textures and consistent rhythmic precision make them seem so: From the second scene of *Rheingold* until the end of the Immolation, the upbeats to the Valhalla theme are always sharply and cleanly voiced, and this kind of pointing keeps the rhythmic motion continuously lively. My favorite passages are in *Götterdämmerung*,

where all the music related to the Rhine—much more interestingly developed here than in *Rheingold*—has wonderful *Schwung* and a bubbly fizziness, and the harmonic audacity of Hagen's music (the *Wacht* and the scene with Alberich) is presented with full force. Elsewhere, the mechanical quality of the composition sometimes shows through; the Prelude and Finale of *Rheingold* sound more "minimalist" than ever before, though they are well played.

For much of the cycle's course, the orchestral execution is indeed admirable. Given the circumstances of recording, there are inevitably lapses: The brasses are tired at the cycle's end, and elsewhere one encounters patches of poor wind intonation (e.g., in Brünnhilde's "*War es so schmählich*"). There is a curious false entry in the thirteenth measure of *Götterdämmerung*, Act II, but there are remarkably few explicit goofs overall. The solo players, though given less expressive latitude than in older performances, are very accomplished: solo cello in the first scene of *Walküre* and solo winds at the end of the second scene, for example. In a passage such as the violins' long unison "cadenza" at the beginning of the last scene of *Siegfried*, one realizes vividly the difference between this *Ring* and older ones, for here it is very deadpan, entirely lacking the emphases and distensions that of yore gave it a painterly quality, the character of exploring and depicting a newly discovered world.

If the singing in this cycle came anywhere near to the standard of playing, we would have cause to rejoice. Alas, it rarely does. Jeannine Altmeyer, as Sieglinde and Guttrune, deploys a voice of real color, heft, and character; despite some awkwardness in her delivery, she offers intensity and involvement. Peter Hofmann, her Siegmund, is also a committed singer, but no Heldentenor on the order of Lorenz or Melchior; with care and caution, he may be able to get by in these roles in circumstances where his sensitivity and personal force can make an effect and his lack of sheer power can be compensated for by sympathetic conducting. The Siegfried, Manfred Jung, has a voice of more meat but less color, and he is a stolid, unimaginative performer.

The most serious deficiencies occur in the cycle's two central characters, Wotan and Brünnhilde. Donald McIntyre's baritone sounds at least serviceable in his opening lines as Wotan, but thereafter he tires quickly, the tone woolly and unfocused in pitch, spread at the top, gray in the middle, vague at the bottom. His vocal problems preclude a wide range of expressivity as far as the recording is concerned, although by all accounts a quite absorbing characterization emerges on the television screen. Gwyneth Jones brings boundless energy to Brünnhilde, and some moments of bright and forceful tone—but more often the sound curdles under pressure, the intona-

tion goes awry (especially at the top of the staff), and the effect of desperation, not inapt at some points in Brunnhilde's role, is all too frequent. Really distracting to the listener, as it must have been to Boulez, is her persistent tendency to drag the beat: She may begin a phrase in coordination with the orchestra, but immediately falls behind. Boulez, though willing to stretch the tempo to allow rhetorical points, quite rightly doesn't give Jones an inch, for it would quickly undermine what he is trying to do; indeed, only at the end of her part in the Immolation does she finally succeed in forcing a grossly disruptive ritard.

A detailed report card on the entire cast seems superfluous, aside from a bow to Matti Salminen's Fasolt and Hunding, the only truly accomplished singing in the set. The rest of the singers illustrate a variety of vocal defects, the diagnosis of which may be left to specialists. Fortunately, many are still able to make positive contributions: Heinz Zednik's Loge and Siegfried Mime, Hanna Schwarz's Fricka, Hermann Becht's Alberich, Fritz Hübner's Fafner and Hagen, and Franz Mazura's Gunther are all real characters in the drama (no doubt thanks in part to Chéreau's direction), even though they frequently try the ears. (As of this writing, I have watched only a small part of the TV version, preferring to judge the recordings on their own, since of course they have to be purchased and listened to on their own.)

With only a couple of unfortunate side breaks, Philips has fit the cycle onto only sixteen discs—three fewer than the usual—and this compensates to some extent for the digital surcharge. As noted, the boxed set includes a book, containing Boulez' essay and production shots in color and black-and-white (captioned, unfortunately, with the names of the characters but no identification of the specific episodes they depict, which might have been helpful to the new *Ring* initiates that the TV series may bring to these records). The individual sets include only librettos, in the reliable translations of William Mann (*Walküre*) and Lionel Salter (the other operas).

Mann's translation turns up as well in Eurodisc's *Walküre*, a set that no more than its predecessor (301 137, December 1981) convinces me of the necessity of its existence. Again the excellent Dresden orchestra plays well; again Marek Janowski conducts plainly, without the virtues of either the traditional approach or the more modern one; again the digital sound registration offers no improvements overwhelming enough to justify repeated attention to what is, in the main, a pedestrian performance. The prospect of Jessye Norman as Sieglinde is enticing, but the achievement is disappointing, the voice not well-knit at the top, the characterization still underformed. And Altmeyer's promise as Sieglinde is not consistently fulfilled by her Brunnhilde, which

WAGNER: Das Rheingold.

CAST:

Woglinde	Norma Sharp (s)
Wellgunde	Ilse Gramatzki (s)
Freia	Carmen Reppel (s)
Fricka	Hanna Schwarz (ms)
Flosshilde	Marga Schiml (ms)
Erda	Ortrun Wenkel (a)
Loge	Heinz Zednik (t)
Froh	Siegfried Jerusalem (t)
Mime	Helmut Pampuch (t)
Wotan	Donald McIntyre (b)
Alberich	Hermann Becht (b)
Donner	Martin Egel (b)
Fasolt	Matti Salminen (bs)
Fafner	Fritz Hübner (bs)

Bayreuth Festival Orchestra, Pierre Boulez, cond. [Andrew Kazdin, prod.] PHILIPS 6769 070, \$38.94 (digital recording; three discs, manual sequence).

WAGNER: Die Walküre.

CAST:

Brunnhilde	Gwyneth Jones (s)
Sieglinde	Jeannine Altmeyer (s)
Gerhilde	Carmen Reppel (s)
Ortlinde	Karen Middleton (s)
Helmwige	Katie Clarke (s)
Gringerde	Ilse Gramatzki (s)
Fricka	Hanna Schwarz (ms)
Waltraute	Gabriele Schnaut (ms)
Siegrune	Marga Schiml (ms)
Schwertleite	Gwendolyn Killebrew (ms)
Rosswisse	Elisabeth Glauser (ms)
Sigmund	Peter Hofmann (t)
Wotan	Donald McIntyre (b)
Hunding	Matti Salminen (bs)

Bayreuth Festival Orchestra, Pierre Boulez, cond. [Andrew Kazdin, prod.] PHILIPS 6769 071, \$51.92 (digital recording; four discs, manual sequence).

WAGNER: Siegfried.

CAST:

Brunnhilde	Gwyneth Jones (s)
Wood Bird	Norma Sharp (s)
Erda	Ortrun Wenkel (a)
Siegfried	Manfred Jung (t)
Mime	Heinz Zednik (t)
Wanderer	Donald McIntyre (b)
Alberich	Hermann Becht (b)
Fafner	Fritz Hübner (bs)

Bayreuth Festival Orchestra, Pierre Boulez, cond. [Andrew Kazdin, prod.] PHILIPS 6769 072, \$51.92 (digital recording; four discs, manual sequence).

WAGNER: Götterdämmerung.

CAST:

Brunnhilde	Gwyneth Jones (s)
Gutrune	Jeannine Altmeyer (s)
Third Norn	Katie Clarke (s)

alternates between strongly voiced phrases and many that seem limp and uncertain (e.g., in the last act, "*Wohl taugte dir nicht die tö'ge Maid'*"). Siegfried Jerusalem is a thinner, drier Sigmund than is Hofmann, with less authority and security.

Vocal honors in this set go to the two shortest parts: Yvonne Minton's powerfully temperamental and vividly spiteful Fricka, and Kurt Moll's Hunding, more than just a black angry man, given a rounded visage by varied and characterful delivery. As in *Rheingold*, Theo Adam's experience helps his Wotan to count for something, although the voice is in parlous condition. (One of

Woglinde	Norma Sharp (s)
Wellgunde	Ilse Gramatzki (s)
Waltraute	Gwendolyn Killebrew (ms)
Second Norn	Gabriele Schnaut (ms)
Flosshilde	Marga Schiml (ms)
First Norn	Ortrun Wenkel (a)
Siegfried	Manfred Jung (t)
Gunther	Franz Mazura (b)
Alberich	Hermann Becht (b)
Hagen	Fritz Hübner (bs)

Bayreuth Festival Chorus and Orchestra, Pierre Boulez, cond. [Andrew Kazdin, prod.] PHILIPS 6769 073, \$54.90 (five discs, manual sequence).

WAGNER: Der Ring des Nibelungen.

Casts as above. PHILIPS 6769 074, \$150 (sixteen discs, manual sequence).

WAGNER: Die Walküre.

CAST:

Brunnhilde	Jeannine Altmeyer (s)
Sieglinde	Jessye Norman (s)
Gerhilde	Eva-Marie Bundschuh (s)
Ortlinde	Cheryl Studer (s)
Helmwige	Ruth Falcon (s)
Gringerde	Kathleen Kuhlmann (s)
Fricka	Yvonne Minton (ms)
Siegrune	Christel Borchers (ms)
Schwertleite	Anne Gjevang (ms)
Rosswisse	Uta Prieu (ms)
Waltraute	Ortrun Wenkel (a)
Sigmund	Siegfried Jerusalem (t)
Wotan	Theo Adam (b)
Hunding	Kurt Moll (bs)

Dresden State Orchestra, Marek Janowski, cond. [Helmut Hanusch and Oskar Waldeck, prod.] EURODISC 301 143, \$59.90 (digital recording; five discs, manual sequence). Tape: 501 143, \$59.90 (five cassettes).

WAGNER: Parsifal.

CAST:

Kundry	Yvonne Minton (ms)
Flower Maidens	Britt-Marie Aruhn (s), Jocelyne Chamonin (s), Eva Saurova (s), Tamara Herz (s), Hanna Schaer (ms), Gertrud Oertel (a)
A Voice	Gertrud Oertel (a)
Squires	Tamara Herz (s), Hanna Schaer (ms), Christer Bladin (t), Michael Roeder (t)
Parsifal	Reiner Goldberg (t)
Knights	Paul Frey (t), Gilles Cachemaille (bs)
Amfortas	Wolfgang Schöne (b)
Gurnemanz	Robert Lloyd (bs)
Klingsor	Aage Haugland (bs)
Titule	Hans Tschammer (bs)

Prague Philharmonic Chorus, Monte Carlo Philharmonic Orchestra, Armin Jordan, cond. [Jean-Pierre Brossmann, prod.] ERATO NUM 750105, \$59.95 (digital recording; five discs, manual sequence).

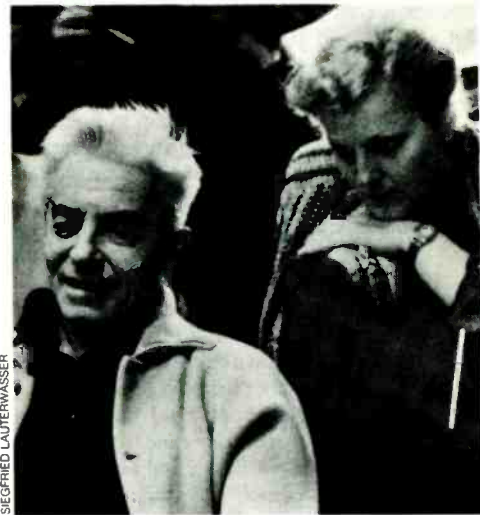
the lessons here is that stage experience really does help, and it's an advantage that Boulez' singers, whatever their vocal deficiencies, all share; by the time of the recording, many of them had been playing their parts for four or five summers in a row, repeatedly exploring the characters' interrelationships in the company of the same colleagues.)

Like the Eurodisc Ring, Erato's *Parsifal* was put together in the studio; though financed to serve as soundtrack for Syberberg's film, it was always intended for sep-
(Continued on page 99)

Turandot Without Turandot

After *Turandot*, *Tosca*, and *Aida*,
what will come of the Ricciarelli that
might have been?

Reviewed by Matthew Gurewitsch



Karajan and Ricciarelli hearing playback

HOPE. BLOOD. TURANDOT: For the hero who can read their meaning, the riddles at the heart of Giacomo Puccini's last opera point, like lodestars, straight to the frozen north of his heart's desire. Katia Ricciarelli, the Princess in Herbert von Karajan's new recording, poses an enigma of another order, beckoning far beyond and outside its own reflexive sphere to the exorbitant trajectory of her mystifying recording career. In time, we will track her comet from the present back to the first sightings, but not before pausing at the dizzy apex that prompts the inquiry.

Tragedy, fable, comedy, romance: *Turandot* contains them all. None is foreground, none background. In performance, a single element (or at best, two) tends to take ascendancy, but not here. Karajan's unfolding of the grand design achieves the equipoise and sweep of epic, equally expressive in the accomplishment of individual and collective destinies. Within moments, Peking has arisen in its savage splendor, its mask of ceremony already slipping from the face of stark terror beneath. Moments later, the tale of the Unknown Prince has taken off with brimming pathos. When the *maschere* Ping, Pang, and Pong irrupt on the scene, they, too, will stand forth in three dimensions, full and true.

Karajan takes his customary pains with the orchestra, in this case the Vienna Philharmonic, with magnificent results. All Puccini asks for is there, woven into a seamless fabric: the brute force, the strains of tenderness, the hovering pastels of mist and moonlight, the ghostliness and the bloom of the perfumed night. The Vienna State Opera Chorus and the Vienna Choir Boys perform with no less brilliance, catching to perfection the seething mutability of the crowd, crying first for blood, then for mercy; the brutality of the palace guard; the industry and glee of the executioner's men; the unquenched longing of the Princess' dead lovers.

Apart from Ricciarelli, who presents a special case, the members of the cast, as soloists and as ensemble, realize their parts with assurance, insight, and fire. Placido Domingo's Calaf surely ranks among his four or five finest recorded roles. From its dark lower registers to its bright, ringing top, the voice is in splendid condition, and the phrasing throughout is beautifully unaffected and direct. In the first act, where Timur, Liù, and the three high courtiers struggle to dissuade Calaf from embracing his fate, Domingo dominates the ensemble with plangent tones touched with tragedy. When, in their turn, the Emperor and then the Princess warn him to abandon his quest, Domingo's clarion replies bespeak the confidence of a born conqueror. Expounding the riddles, he springs into action like a panther. And he finds exactly the right expansive measure for a radiant "*Nessun dorma*."

As Liù, Barbara Hendricks offers no less striking, no less satisfying a performance. Her instrument has an exotic, child-like sweetness, a chiming lightness of astonishing carrying power. Her first line ("*Il mio vecchio è caduto!*") sails bravely above the outcry of the surging crowd. Her veiled, artless confession of love for the Prince ("*Perché un dì, nella reggia, m'hai sorriso*") is almost too poignant to bear. And "*Signore, ascolta!*" and "*Tu che di gel sei cinta!*" are yet to come! The delivery of both arias is heart-stopping in its simplicity, yet rests on a quietly superlative technique. The quick vibrato that makes the second of them so touching (especially at "*L'amerai anche tu!*") may be at least in part a gift of nature, but the sublime messa di voce at the close of the first is a triumph of art.

The supporting roles, too, are in expert hands. Siegmund Nimsgern issues the Mandarin's proclamations in the stern, measured tones of law, with one single flash of cruelty. Piero di Palma utters the Emperor's lines in hollow, wasted sounds

that tell a whole history of weariness of the world; his scraps of melody ("*Basta sangue! Giovine, va!*") seem like memories from another life. Ruggero Raimondi's sonorous Timur is a figure of profound and moving solemnity. As Ping, Pang, and Pong, Gottfried Hornik, Heinz Zednik, and Francisco Araiza skip lightly through their passages of gallows gaiety, but bear down with might when the Princess' edict puts all Peking in mortal danger.

In short, Karajan's *Turandot* belongs in that rare class of operatic recordings whose central intelligence and splendidly arrayed executants imbue the music and action at every point with potent imaginative meaning. All that is missing is the right star to blaze in the title role. And who might that be? Since the heyday of Birgit Nilsson, the sphinxlike Princess has been, to put it gently, a problem to cast. It is not only a matter of tessitura and cutting power. *Turandot* is a torn character, part Scarpia, part Tosca (and Tosca herself is many women in one). In the end, her icy reserve dissolves before Calaf's ardor; *in the end*. In the third-act duet, she reveals that when first she saw him, she read in his eyes "*la superba certezza*" ("that proud assurance"—Domingo has it, too), and that it provoked her to both love and hatred. In the battle of wits in the second act, and in the torture scenes in the third, she must show as a ferocious and a fascinating opponent. Joan Sutherland and Montserrat Caballé have both recorded the role (Caballé has also performed it on the stage) and handled the notes with honor. But they have not been fascinating. Sutherland, for her part, was not ferocious, either. From the first notes of her aria, it was plain she had succumbed. Such a reading reflects nothing but interpretive opportunism: If Sutherland could not be *Turandot*, *Turandot* had to be pleased to be a Sutherland. (Perhaps no one can really pull off the transformation from glittering basilisk to beaming lover. Nilsson's final moments certainly did not make

palpable the effects described in the synopsis, but amid the celebration of the happy ending, it was easy enough to accept what the story said was the case. When, as in Sutherland's performance, *only* the end rings true, credibility, shattered early, is impossible to restore.)

By temper and by vocal endowment, Ricciarelli is no Turandot. She emerged, the placid possessor of a warm, golden, ample soprano, well schooled if hardly breathtaking in coloratura, in the late 1970s in the lyric roles of early and late Verdi (Lucrezia in *I due Foscari*, Lida in *La Battaglia di Legnano*, Luisa Miller, Desdemona), and has been heard to special advantage as Amelia in *Un Ballo in maschera*. Since those none too distant early days, she has advanced her repertoire along divergent fronts; much of her history has been played out on disc. With the exception of Desdemona, she has recorded all the roles just mentioned, as well as Mimì, the soprano solo in the Verdi Requiem, Aida, Tosca, the *Trovatore* Leonora, Donizetti's Maria di Rudenz, as well as albums of duets with leading tenors of the day. Violetta and Mozart's Donna Anna figure in her repertoire, and of late, report has it, she has tackled Rossini's tremendous Semiramide. After proving herself in Lamberto Gardelli's early-Verdi series for Philips (*Foscari* appeared in 1977, *Battaglia di Legnano* the following year), and in *Simon Boccanegra* for Gianandrea Gavazzeni (also published in 1978), she has enjoyed in her recording career the attentions of some of the world's fanciest maestros. Colin Davis leads her in *Bohème* and *Trovatore*; Claudio Abbado in the Requiem and *Aida*; Lorin Maazel in *Luisa Miller*; and Karajan in *Tosca* and, of course, *Turandot*. (Believe it or not, she is also the mournfully serene Priestess in the second scene of Karajan's recent *Aida*.) *Maria di Rudenz*, recorded live at La Fenice in Venice under the baton of Eliahu Inbal, who groans along off-key, is her sole recording since the 1979 *Bohème* not in the charge of a superstar. (A projected Maazel *Turandot*, with Eva Marton in the title role and Ricciarelli as Liù, and the 1982 Los Angeles *Falstaff* under Carlo Maria Giulini, with Ricciarelli as Alice Ford, will perpetuate the pattern.)

If this repertoire hardly puts Ricciarelli in a class with James McCourt's omnivorous Mawrdew Czgowchewz, it still ranges far beyond the domain where she has her best to offer. Her instrument has neither the weight nor the steely thrust for heavy dramatic roles. Her lustrous tone cannot hold steady under pressure. So far, a wobble approaching Slavic proportions has been the worst of her misfortunes; but patches of harshness and stridency are creeping in, too. Besides, Ricciarelli until very recently has conceived character in very general terms. She has always been a highly musically singer. She dispatches the fioritura

Schemers, sirens, and lionesses are not in Ricciarelli's line.

of *Foscari* and *Battaglia di Legnano* with delicate, if detached, precision. As the *Otello* love duet in her album with Domingo indicates, to take an example, she shapes an aristocratic legato. She observes note values scrupulously and shuns vulgar display (shrieking, sobbing). Her admirable qualities lend her performances a broad expressivity equally applicable to joy and sorrow. But until *Maria di Rudenz*, Ricciarelli was never one to snatch away, as it were, the painted veil of unreal shapes to gaze upon the fears and hopes that weave above the chasm.

None of this is to deny she has evinced deep sympathies that have resulted in performances capable of giving a deep and civilized pleasure. If her recordings represent the range of her artistry truly, she connects most spontaneously with leading ladies pure of heart ensnared in webs of trouble not of their own spinning. Given a fundamental posture of passivity, she can, when called on, rise to great impetuosity and excitement, as her albums of duets bear out. She has recorded the first-act love scene from *Madama Butterfly* both with Domingo and José Carreras, both times in ardent, lambent tones. With Domingo, she has also undertaken the third-act encounter of Paolo and Francesca from Zandonai's *Francesca da Rimini* (due for revival at the Metropolitan with Renata Scotto), conveying fatality

and despair. Pleading, but with noble reserve, suits her; and in the duet of Sarah and Essex from Donizetti's *Roberto Devereux*, she shows that she, like Maria Callas, whom she otherwise does not resemble, can touch the simplest, most straightforward delivery with accents of affliction.

Of her full-length recordings, *I due Foscari* and *La Battaglia di Legnano* find her in her musical and dramatic element. In Davis' fluent, detailed *Bohème*, there are moments (as at "ma il mio nome è Lucia") when Ricciarelli's phrasing becomes precious; elsewhere, she hardly interprets at all (as at "Altro di me non le saprei narrare: sono la sua vicina che la vien fuori d'ora a importunare"—conversational lines Callas could toss away with such smiling intimacy that they amounted to a reply to Rodolfo's as yet unspoken declaration). But her unfailingly gracious tone and manner carry all before them. The same is true of her Luisa Miller, where some hints of affectation in the early scenes of girlish delight do not seriously interfere with the piteous impression she finally creates. Better still is her Amelia in Abbado's excellent *Ballo in maschera*, which exhibits all her musicianly virtues, and also catches the flame of spontaneous conviction. Perhaps not by chance, the sense of vocal shading is richer and more various here than ever before or since.

Leaving aside for the moment questions of vocal requirements, schemers, sirens, and lionesses are not in Ricciarelli's line. Tosca's theatricality eludes her completely. In the first act, she comes across colorless, exquisite, chaste. "Ma falle gli occhi neri," which Puccini's librettists and Puccini himself surely meant to be especially telling, since they have the diva repeat it (Continued on page 100)

PUCCHINI: Turandot.

CAST:

Turandot	Katia Ricciarelli (s)
Liù	Barbara Hendricks (s)
Calaf	Plácido Domingo (t)
Emperor Altoun	Piero de Palma (t)
Pang	Heinz Zednik (t)
Pong	Francisco Araiza (t)
Ping	Gottfried Hornik (b)
A Mandarin	Siegmond Nimsgern (b)
Timur	Ruggero Raimondi (bs)

Vienna State Opera Chorus, Vienna Choir Boys, Vienna Philharmonic Orchestra, Herbert von Karajan, cond. [Michel Glotz and Günther Breest, prod.] DEUTSCHE GRAMMOPHON 2741 013. \$38.94 (digital recording; three discs, manual sequence). Tape: 3382 013, \$38.94 (three cassettes).

Other Ricciarelli Recordings

Donizetti: *Maria di Rudenz*. Baleani, Cupido, Nucci. Inbal. CBS M3 36948 (3).

Puccini: *La Bohème*. Putnam, Carreras, Wixell; Davis. PHILIPS 6769 031 (2).

Puccini: *Suor Angelica*. Cossotto; Bartoletti. RCA (OP).

Puccini: *Tosca*. Carreras, Raimondi; Karajan. DG 2707 121 (2).

Puccini, Verdi, Donizetti: *Love Duets*. Carreras. PHILIPS 9500 750.

Puccini, Verdi, Zandonai: *Love Duets*. Domingo. RCA ARL 1-2799.

Verdi: *Aida*. Obraztsova, Domingo, Nucci, Ghiaurov; Abbado. DG 2741 014 (3).

Verdi: *Aida*. Freni, Baltsa, Carreras, Cappuccilli, Ghiaurov; Muti. ANGEL SZCX 3888 (3).

Verdi: *Un Ballo in maschera*. Gruberová, Obraztsova, Domingo, Bruson; Abbado. DG 2740 251 (3).

Verdi: *La Battaglia di Legnano*. Carreras, Manuguerra, Ghiuselev; Gardelli. PHILIPS 6700 120 (2).

Verdi: *I due Foscari*. Carreras, Cappuccilli, Ramey; Gardelli. PHILIPS 6700 105 (2).

Verdi: *Luisa Miller*. Obraztsova, Domingo, Ganzarolli; Maazel. DG 2709 096 (3).

Verdi: *Requiem*. Verrett, Domingo, Ghiaurov; Abbado. DG 2707 120 (2).

Verdi: *Simon Boccanegra*. Domingo, Cappuccilli, Raimondi; Gavazzeni. RCA (OP).

Verdi: *Il Trovatore*. Toczyńska, Carreras, Mazurk, Lloyd; Davis. PHILIPS 6769 063 (3).

Reviews



The Cambridge Buskers, Dag Ingram and Michael Copley: a progress report—See page 80.

BEETHOVEN: Concerto for Piano and Orchestra, No. 5, in E flat, Op. 73 (Emperor).

Arturo Benedetti Michelangeli, piano; Vienna Symphony Orchestra, Carlo Maria Giulini, cond. [Karl Faust, prod.] DEUTSCHE GRAMMOPHON 2531 385, \$10.98. Tape: 3301 385, \$10.98 (cassette). [Recorded in performance, February 1, 1979.]

This *Emperor* has much in common with the Michelangeli/Giulini account of the Beethoven First Concerto (DG 2531 302, January 1981): A big, bold, brazen performance, whose distracting details are largely compensated for by the overall weight and urgency of the orchestral framework and the imposing on-location sound.

Michelangeli's *Emperor* interpretation has appeared in myriad other versions—with Steinberg and the New York Philharmonic; Caracciolo and the Scarlatti Orchestra of Naples; and Celibidache and the Stockholm Philharmonic. The new one is by far the best-recorded, and while the pianist remains a mannerist, the calculated exaggerations of phrase and nuance (there are many!) are unobtrusively paved over by the diplomatic conductor. There is no tug-of-war, this time, when the horns reenter after the cadenza at the end of the first movement. And other "effects," too, are minimized.

Still, many will dislike the aggressiveness of the soloist's entry into the second movement (exacerbated by excessively close miking of the piano, which sometimes

gets in the way of the orchestra), and certainly there is a cold disdain about much that this pianistically oriented master inflicts on the music (the rhetorical pullback just before the octave passage in the first-movement development; the finicky exaggeration of certain lyrical phrases in all three movements; the spiky articulation of filigree throughout). Yet somehow it works this time, and I can recommend this disc, at least as a thought-provoking alternative version of this masterpiece. Whether it will stand up to repeated playings is another question, which only time will answer.

Every bit of applause, tuning, and audience noise is preserved, and I rather like the effect. H.G.

BEETHOVEN: Quartets for Strings (complete)—See page 84.

BRAHMS: Concerto for Piano and Orchestra, No. 1, in D minor, Op. 15.

Vladimir Ashkenazy, piano; Concertgebouw Orchestra, Bernard Haitink, cond. [Andrew Cornall, prod.] LONDON LDR 71052, \$12.98 (digital recording). Tape: LDR5 71052, \$12.98 (cassette).

Daniel Barenboim, piano; New York Philharmonic, Zubin Mehta, cond. [Andrew Kazdin, prod.] CBS MASTERWORKS M 35884. Tape: MT 35884 (cassette). [Price at dealer's option.]

A year or so ago, Ashkenazy collaborated with Giulini in a televised performance of this concerto that proved thoroughly depressing in its lethargy, self-indulgence,

Reviewed by:
John Canarina
Scott Cantrell
Kenneth Cooper
R. D. Darrell
Peter G. Davis
Kenneth Furie
Harris Goldsmith
Matthew Gurewitsch
David Hamilton
Dale S. Harris
R. Derrick Henry
Joseph Horowitz

Nicholas Kenyon
Allan Kozinn
Paul Henry Lang
Irving Lowens
Karen Monson
Robert P. Morgan
James R. Oestreich
Conrad L. Osborne
Andrew Porter
Patrick J. Smith
Paul A. Snook
Susan T. Sommer

and completely unpurposeful direction. Not that soloist and conductor were out of sympathy with one another; ironically, they were together to the point of complacency. Haitink, however, provides a tough, sinuous orchestral framework, shaping the magnificent dark and weighty Concertgebouw sonority with Szell-like tautness and attention to detail, and establishing a kind of magnetic counterpull to the rhythmic flailing Ashkenazy seems to have picked up from his association with Barenboim. The lesson is instructive: When the orchestral portion of a concerto is held firmly in check by a strong-willed, dominant conductor, the soloist can, paradoxically, make a better case for freedom of phrasing.

Here, Ashkenazy's rhetoric serves all the right purposes: The octave passages in the first-movement development, for instance, emerge with stark, hulking power, and a few lyrical tenutos at dreamy junctures produce an almost hypnotic rumination with no loss of momentum. The third movement doesn't fare quite so well as the first two; I would prefer that the second theme maintain tempo, with greater attention drawn to the spiky accompanimental ostinato (cf. Fleisher/Szell, *Odyssey Y 31273*). Yet this is clearly one of the most distinguished Brahms D minors of recent times, preferable even to the superlative Pollini/Böhm of a few years ago (DG 2531 294). London's digital sound, sumptuous and clear, is absolutely gorgeous.

Barenboim and Mehta fare somewhat better here than in their Brahms Second (CBS M 35885, September 1981), recorded at the same time but released earlier. And the CBS pressing shows no serious problems this time. Yet, in the main, the slow tempos and pretentious "serious" rubatos, framed in scrawny, unalluring acoustics,

Critics' Choice

The most noteworthy releases reviewed recently

BACH: Goldberg Variations. Gould. CBS IM 37779, Jan.

BEETHOVEN: Fidelio. Báthly, Rösler, Klemperer. HUNGAROTON LPX 12428/9 (2), April.

BRAHMS: Paganini Variations. PROKOFIEV: Piano Sonata No. 6. Faerman. DG CON-COURS 2535 013, March.

CESTI: Orontea. Müller Molinari, Jacobs. HARMONIA MUNDI FRANCE HM 1100/2 (3), May.

COPLAND: Orchestral Works. Atlanta Symphony, Lane. TELARC DG 10078, April.

HANDEL: Messiah (excerpts). U. of Michigan Early Music Ensemble and Ars Musica, Parmentier. SCHOOL OF MUSIC SM 0017, Feb.

HAYDN: Symphonies (6). L'Estro Armonico, Solomons. CBS 13M 37861 (3), May.

HAYDN: Symphonies Nos. 42, 43. Monadnock Music, Bolle. TITANIC TI 101, May.

HILDEGARD OF BINGEN: Sequences and Hymns. Gothic Voices, Page. HYPERION A 66039, April.

MAHLER: Symphony No. 7. Chicago Symphony, Levine. RCA RED SEAL ATC 2-4245 (2), March.

MOZART: Piano Concertos Nos. 20, 27. Curzon; English Chamber, Britten. LONDON CS 7251, April.

PFITZNER: Songs (17). Fischer-Dieskau, Höll. PANTHEON ORFEO S 36 821, May.

POWER: Masses and Motets. Hilliard Ensemble, Hillier. EMI ELECTROLA RÉFLEXE IC 069-46402, March.

RACHMANINOFF: Symphony No. 2. Concertgebouw, Ashkenazy. LONDON LDR 71603, March.

SCHUBERT: Lazarus, D. 689; Salve Regina, D. 676. Mathis, Hollweg, Chmura. PRO ARTE 2PAD 203 (2), May.

SCHUBERT: Piano Sonata, D. 960. Goldsmith. AAG A 014, May.

SCHUBERT: Songs (93). Various. EMI RLS 766 (8), April.

SCHUMANN: Symphony No. 3; Manfred Overture. Los Angeles Philharmonic, Giulini. DG 2532 040, May.

SHOSTAKOVICH: Unpublished Works. Rozhdstvensky. VOX CUM LAUDE VCL 9035, April.

TCHAIKOVSKY: Symphony No. 2 (orig. version). London Symphony, Simon. CHANDOS ABRD 1071, May.

WAGNER: Tristan und Isolde. Price, Kollo, Kleiber. DG 2741 006 (5), Feb.

BERLIN PHILHARMONIC: 100 YEARS. EMI ELECTROLA IC 137-54095/9 (5), Dec.

JÓZSEF GREGOR: Great Buffo Scenes. Savaria Symphony, Pál. HUNGAROTON SPLX 12359, March.

ELMER ISELER SINGERS: Spectra. CENTREDISCS CMC 0281, April.

OFRA HARNOY: Arioso. DISCOPAEDIA MBS 2013, March.

EGON PETRI IN RECITAL. DELL'ARTE DA 9009, March.

grow tedious. I never realized how important sheer sound can be in this work: At the close of the first movement, Brahms's combination of piano, strings, and brass can easily sound scrappy and disjointed if not lubricated properly with a judicious amount of hall echo; here, everything can be heard, but without any particular sheen. This kind of sonic "truth serum" tends to incriminate both Barenboim and the New York Philharmonic: Under such scrutiny, the many tiny lapses of ensemble and intonation become problematic. H.G.

CHÁVEZ: Symphony No. 2 (*Sinfonia india*)—See Recitals and Miscellany.

COPLAND: Quartet for Piano and Strings—See Foss.

FOSS: Round a Common Center.* COPLAND: Quartet for Piano and Strings. WYNER: Intermezzi.

Elaine Bonazzi, mezzo-soprano*; Orson Welles, narrator*; Yehudi Menuhin, violin*; Cantilena Chamber Players. [Judith Sherman, prod.] PRO ARTE PAD 120, \$9.98 (digital recording). Tape: PCD 120, \$9.98 (cassette).

The Foss and Wyner works were composed for the Cantilena Chamber Players in 1980; the Copland was completed thirty years earlier. Yet these works share an austere, basically tonal language and a paradoxical impulse that seems continually to push them toward lush Romanticism without ever letting them lose their foothold in spare, sober contemporary rationality.

Lukas Foss's *Round a Common Center* is based on (but not quite a setting of) W. H. Auden's *The Runner*, certainly a natural choice for a work to be performed at the 1980 Olympic Winter Games. But the commission, according to Foss's notes, was a strange one: He was asked first for a piano quartet, then for an optional voice part, and

finally for an optional violin part. "In short," he writes, they wanted "an all-purpose piece. The problem with all-purpose pieces is that they usually work equally badly in every version."

The version presented here is apparently the full one and then some, for nowhere does Foss mention yet a third optional part, for narrator. My guess is that the narration was splintered away from the voice part to accommodate guest star Orson Welles, thus widening the disc's appeal. Here, Elaine Bonazzi sings a pretty but scant vocalise just before and after Welles reads the poem, in the work's opening section; later, her role is more crucial.

The first of the work's two sections forms a slow, contemplative prelude, with musical materials derived from altered scales, sometimes in contrary motion, sometimes building in intensity; but the focus of this repetitive section is clearly the poem. The main body of the work grows quickly from an insistent piano ostinato to an explosion of athletic energy—a brisk contrapuntal movement that is almost cinematic in the way it suggests the physical motions of Olympic running. The voice is treated as an instrumental line, with a repeated, rising arpeggio (sung to solfège syllables) that, though optional, seems not only an intrinsic part of the ensemble texture, but often the movement's driving force. Yehudi Menuhin's optional violin line is somewhat more varied yet equally mechanistic; and while his tone, edgy to the point of harshness, may make a point in this context, I suspect that a more solidly centered rendition of the line would not lessen the piece's urgency.

Yehudi Wyner's two *Intermezzi* inhabit a more cerebral plane, providing effective contrast to the overt physicality of the Foss. The first opens with cloudy string harmonies competing against a more wildly

gesticulating piano part, but the sparseness soon gives way to denser sonorities, and the piece edges toward a passionate climax without ever actually achieving it, ultimately reverting to the misty, almost impressionistic sonorities with which it began. The second piece has a more ominous, mysterious feel, and although certain emotions here come closer to bubbling to the surface, they never quite make it. Though by no means unattractive, these *Intermezzi* seem overly reserved—too intent on preserving detachment as a defense against sentimentality.

Aaron Copland's piano quartet, too, has a reserved quality. In fact, in its final movement, when he falls back on what one might call his "*Appalachian Spring* moves"—a hint of the score's Shaker hymn, confirmed by the voicing of the string parts—he takes care to interpose a few harsher intervals whenever the music threatens to become too homey and sweet. Otherwise, this work shows Copland on the more adventurous side of the gulf that separates his "popular" 1940s idiom from his later, less ingratiating style. He cautiously strives toward sensuousness, like Wyner, but finds a more successful balance; and while he adheres to the comparatively dry language he has chosen for this piece, he allows each movement to build to a climax that draws the listener in.

Programmatically, these works fit together well, and the Cantilena Chamber Players' performances are solid and committed. A lone shortcoming, both the group and its producer seem to have taken too literal a cue from the language of the music; the playing, tight as it is, seems unduly rigid at times, and the recording, although nicely balanced, is almost entirely devoid of room ambience. A touch more warmth would have gone a long way. Overall, however, this constitutes a worthy addition to any

collection of mainstream American music.

A.K.

GALINDO: Sonos de Mariachi—See Recitals and Miscellany.

GLASS: The Photographer.

Paul Zukofsky, violin; chorus, instrumentalists, Philip Glass Ensemble, Michael Riesman, cond. [Kurt Munkacsi and Philip Glass, prod.] CBS FM 37849. Tape: FMT 37849 (cassette). [Price at dealer's option.]

Philip Glass's first LP for CBS, *Glassworks* (FM 37265, July 1982), was a compilation of uncharacteristically short, melodic pieces—a pop-style album that, despite the attractiveness of several selections, disappointed many Glass admirers who, not unreasonably, expected something bigger and better. Likelier to satisfy such expectations, *The Photographer* is a three-act music/theater work about the British-born photographer Eadweard Muybridge, composed for the 1982 Holland Festival.

In 1874, Muybridge (then working in San Francisco) discovered that his wife was having an affair with one Colonel Larkyns. Muybridge shot Larkyns and was acquitted at his murder trial. The first act of *The Photographer* is a play about the Muybridge-Larkyns incident and the trial, to which Glass supplied three short incidental pieces. Two—a bittersweet and rather catchy choral song, "A Gentleman's Honor," and a superfluous instrumental version of same—are included on the LP, where they bracket the longer piece from the second act. Onstage, the central act takes the form of a concert, during which Muybridge's photographs are projected on a screen behind the instrumentalists. The third act is a dance piece that brings back all the characters from Act I.

Thus, the work's full meaning, drama, and impact might be better served on video disc than on LP; but, divorced from their stage action, these pieces stand up nicely as abstract music, as captivating as Glass's earlier, longer, and more truly abstract explorations (*Music in Similar Motion*, *Music in Twelve Parts*, etc.) documented on the Chatham Square and Virgin labels. Anyone familiar at all with Glass's music will know what to expect: arpeggiated themes, repeated phrases, textures gradually evolved during those repetitions, and rhythmic webs.

But most striking here is how far Glass has taken his style, how much more sophisticated his manipulation of these seemingly simple elements has become. His penchant for slow change has given way to a tendency to densify "events," including, even, rapid shifts of themes and textures. In the third act, for instance, the characteristic opening arpeggiation quickly gives way to an electrifying fast gallop for full ensemble—nothing "soporific" here, as Glass's detractors would have it. And this tornado-

like movement is suddenly interrupted for a brief a cappella interlude that leads to something else. The second-act music shows similar variety, with Paul Zukofsky's tensely played arpeggiated progressions superimposed upon an organ sequence built on the first two chords of the Beethoven *Moonlight*, stretches of wordless choral accompaniment, and bass-synthesizer and trombone lines that create a spooky, almost gothic atmosphere. Glass's orchestrations have, in fact, become more cosmopolitan: A remnant of his ensemble sound lingers in the wheeze of a Farfisa organ, but strings, brasses, and voices give the music its body

now.

To the listener who has followed Glass's music only on disc, these changes may seem to constitute a quantum leap, that's only because his discography hasn't kept pace with his rapidly diversifying compositional career. Since his last major recordings—*Einstein on the Beach* and *Dance*, for Tomato—Glass has composed a number of significant works, missing links in the evolutionary chain between those recordings and *The Photographer*. These include his second opera, *Satyagraha*, and an ambitious film score, *Koyaanisqatsi*, bits of which made their way into *Glass-*

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works. Good as it is to have Glass's most recent endeavors preserved on disc, it would be nice to see this gap closed in the near future.

Sonically, *The Photographer* is first-rate—well balanced, richly ambient, and sparkingly clear even in the densest sections. I was recently astonished to learn that this—like, apparently, all of Glass's discs—was recorded one instrumental voice at a time, the way pop discs and electronic works often are. Still, the reconstructed performance has a vibrant, live feel and lacks nothing in cohesiveness, energy, or ensemble "interaction." **A.K.**

KODÁLY: Choral Works, Vols. 1*-2†.

Lajos Miller, baritone‡; Hungarian Radio and Television Chorus, János Ferencsik* and Ferenc Sapszon†, cond. [János Mátyás, prod.] HUNGAROTON SLPD 12352*, \$12.98 (digital recording); SLPX 12398†, \$9.98.

Hymn of Zrínyi‡; Jesus and the Traders; The Aged; Norwegian Girls; Too Late; Ode to Liszt. * Evening Song; Transylvanian Lament; A Birthday Greeting; Two Folksongs from Zobor; Mátra Pictures; Beseching; Hymn to St. Stephen; The Forgotten Song of Balassi; Wish for Peace—1801; Sándor Sík Te Deum. †

Kodály composed more than a hundred choral works, most for unaccompanied mixed chorus. This is unique in recent musical history, because few composers have been attracted more than occasionally

to this genre, central to Kodály's output. Though the listener who does not know Hungarian will enjoy the works presented here, those who can follow the texts will get closer to the music and experience a deeper awareness of its quality, since the melodies are formed from speech rhythm. An unac-

Convention always finds its way back into any new style.

companied chorus permits only a restricted area for the composer to work in, yet the great masters used these restrictions to their advantage by exploiting the many delicate nuances arising from the combination of words and music. Kodály knew the literature intimately from the Renaissance to Brahms, perhaps the last great composer in this medium, yet he preserved his individuality by using the new national musical language he and Bartók had created. At times he did fall back on conventional figures and turns, but always tastefully—and, after all, who didn't? Convention, though expelled with a pitchfork in the early twentieth century, always finds its way back and becomes part of any new style. These cho-

ral songs are very attractive, atmospheric, and exceedingly well set; the modicum of sameness of technique and tone can be avoided by not taking large doses in one sitting.

The Hungarian Radio and Television Chorus, superbly trained and conducted by Ferenc Sapszon and János Ferencsik, is admirable. Lajos Miller, the baritone soloist in the *Hymn of Zrínyi*, sings his part with the epic lyricism of the old storytelling rhapsodist. Hungaroton's sound is first-class. **P.H.L.**

KODÁLY: Háry János, Op. 15.

CAST:
Empress Mária Sudlik (s)/Mária Sulyok (spkr)
Örse Klára Takács (ms)/Piroska Molnár (spkr)
Marie-Louise

Katalin Mészöly (ms)/Ildikó Hámori (spkr)
Knight Ebelastin

Sándor Palcsó (t)/Gyula Szombathy (spkr)

Háry János

Sándor Solyom Nagy (b)/Sándor Oszter (spkr)

Napoleon

Balázs Póka (b)/Péter Haumann (spkr)

Marci József Gregor (bs)

Emperor Franz Antal Páger (spkr)

Hungarian Radio and Television Children's Chorus, Hungarian State Opera Chorus and Orchestra, János Ferencsik, cond. [Miklós Szinetár, prod.] HUNGAROTON SLPX 12187/9, \$29.94 (three discs, manual sequence). Tape: MK 12187/9, \$29.94 (three cassettes).

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ioned from Kodály's "song play" *Háry János* will be surprised to find in this magnificently produced album more than twice as much music. Indeed, this is an integral performance of the entire play, all the words and all the music. If anyone has settled views about *Háry János*, this recording will change them.

Edward Dent characterized *Háry János*, upon seeing it at the theater, as "an enigma which is easy to understand but difficult to solve: it is a joke, a satire, and has a deep meaning—all at the same time." The crusty old Cambridge scholar (who I suspect knew some Hungarian, because he was a great linguist) came pretty close to solving the enigma. Many who have accepted Bartók's *Bluebeard's Castle*, a full-fledged opera composed with advanced Western European musical techniques, feel uncertain when confronted by the altogether East-European flavor of *Háry János*, composed with far less advanced means than Bartók's opera. Yet the work is remarkably consistent, honest, and genuine in its picaresque and slightly dated Romantic tone, which so admirably suits the text. Bartók called *Háry János* "the apotheosis of Hungarian folksong," and we can see in our mind's eye the learned professor of the Budapest Academy of Music stepping down from his pedestal, so to speak, to mingle with the peasants.

Háry János is not an opera; significantly, it has neither recitative nor arioso, only songs—real songs—and independent but always related instrumental pieces. It is a distant cousin of the ballad opera, the vaudeville (the ancestor of the opéra comique), and the Singspiel—yet it is none of these. It has traces of satire, but is not entirely satirical. Like the ballad opera, it shuns the shallow music of the vaudeville. It does not follow the Singspiel's tendency to rise to the highest operatic art (as in *The Magic Flute* or *Fidelio*), in which spoken words are few. Kodály's work does not represent a genre, but constitutes a unique personal solution, the raising of ancient Hungarian folksong to a high artistic plateau without distorting its intrinsic qualities. Even Kodály could not repeat the feat, though he tried in *Székely fönő*.

Besides the instrumental numbers, the composer spliced in sixteen folksongs of haunting beauty, and it is when we hear them sung with the consummate artistry of Klára Takács that we realize the real achievement and significance of this work: the liberation from the musical colonialism of the long Habsburg era. The *Háry János* Suite, the form in which we are accustomed to hear this work, does not convey this; it presents some fine music, but when everything—words, songs, and orchestral pieces—is combined, the sun shines from the composer's eyes. As the work closes, we realize what Dent had in mind, for there is sadness and quiet resignation there.

Háry, the mustered-out hussar, is the

Hungarian miles gloriosus, an eighteenth-century Plautine peasant: jovial, pleasant, attractive, a great storyteller, and a mighty liar. After telling us about his fantastic adventures, he seems to hint that we should not dissect the legends and examine fairy tales too closely; let us only believe what is beautiful. And the music also delicately bewails our inability still to see as the child sees—a world of miracles.

Regrettably, this superbly performed and engineered production will probably never become a popular success in this country: The entire fairly long play is recorded in the original language, and miles of spoken dialogue separate the musical numbers. The American public can put up with French, Italian, and German, but Hungarian, not an Indo-European language, is beyond the pale when not part of the musical fabric. Yet to anyone who knows Hungarian (as I happen to), it is clear that the text, with its ancient flavor (it was taken from a verse epic) and Aesopian language, determines melody and articulation to a considerable degree, which is why the folksongs fit so well where they are inserted. Translation, though duly furnished, can do no justice to it. Hungaroton, however, has promised a two-disc set of musical excerpts, which will allow us, as we regard

this work with the loving cruelty of foreign observers, still to enjoy those beguiling songs, choruses, and instrumental pieces.

P.H.L.

MONCAYO: Huapango—See Recitals and Miscellany.

MOZART: Quartets for Flute and Strings (4).

Alain Marion, flute; Trio à Cordes de Paris. SYRINX 0977 011, \$13.98 (distributed by AudioSource, 1185 Chess Dr., Foster City, Calif. 94404).

Barthold Kuijken, flute; Sigiswald Kuijken, violin; Lucy van Dael, viola; Wieland Kuijken, cello. [Adelheid and Andreas Glatt, prod.] ACCENT ACC 8225, \$11.98 (distributed by AudioSource).

Quartets: in D, K. 285; in G, K. 285a; in C, K. 285b; in A, K. 298.

COMPARISON:

Bennett/Grumiaux Trio Phi. 6500 034 Music-appreciationists may still take seriously Mozart's momentary petulance over being "obliged to write for an instrument that I cannot bear." Record connoisseurs know better how incalculably he enriched the flute repertory—and how remarkably well suited his flute music is to recording. The flute quartets, only *seemingly* lightweight, have long been winning new, fast

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friends primarily through the irresistible charms of first-rate recorded performances—topped perhaps by the 1970 versions of William Bennett and the Grumiaux Trio. And now, to complicate matters (delightfully), we have two equally admirable yet very different imported versions—both uncommonly quiet-surfaced and handsomely packaged as well.

Flute specialists may favor the opulent, opalescent tonal qualities of the gold Sanko instrument played by Alain Marion, a onetime pupil and frequent recording colleague of the great Rampal. And most non-specialists also will delight in these Gallically elegant and deft classical-Romantic concert readings, beautifully recorded a few years ago in a Southern French church (Lacoste, Vaucluse). The Marseilles label Syrinx, attempting to create "the atmosphere of a 'live' concert, but without its imperfections," uses only two microphones and no control manipulations, recording on-location with—once the players are secure and relaxed—a very quiet small audience in attendance. By present evidence, the sensible notion works very well indeed. My only reservation, quite minor, is that Marion tends to dominate (in tonal richness and personality projection rather than in actual loudness) his less individual if no less skillful companions.

Purists, and fans of the gifted Flemish family of old-instrument specialists, the Kuijken, will of course treasure the more recently recorded Belgian Accent set. Flutist Barthold Kuijken participated in the first (to my knowledge) period-instrument recording of these quartets, by Collegium Aureum members for German Harmonia Mundi, c. 1978. Here he joins brothers Sigiswald (violin) and Wieland (cello), and violist Lucy van Dael, all playing period instruments pitched about a semitone lower than the present standard. Between recordings, Barthold has had ample time to master the technical problems of his 1789 August Grenser instrument, more uneven tonally and less flexible than a modern flute but, for many ears, far more fascinating and characterful in tone. And he surely must be more at home with his present colleagues, all of whom unmistakably share his own quirky humor as well as his zestful approach to this music.

My pleasure in the breezily sunny Bennett/Grumiaux recording remains undiminished, yet already I'm finding even keener joy in the more novel piquancy of the new version by the Kuijken and Van Dael.

If you don't already know this music, and especially the *jeu d'esprit* K. 298 (once considered a Parisian postscript to the first three works, Mannheim commissions of 1777-78; actually a set of parody variations on borrowed tunes, probably tossed off nearly a decade later for a Storace family soirée), you're missing illuminating insights into Mozart's incomparable chamber

writing. More than that, you're missing the precious rewards of music that simultaneously entertains and leaves one—as the Syrinx annotator perceptively observes—"in a state of grace." R.D.D.

PUCCINI: Turandot—See page 70.

REVUELTAS: Sensemayá; Homage to Garcia Lorca; Ocho x radio—See Recitals and Miscellany.

ROSSINI: Il Barbiere di Siviglia.

CAST:

Rosina	Marilyn Horne (ms)
Berta	Raquel Pierotti (ms)
Count Almaviva	Paolo Barbacini (t)
Figaro	Leo Nucci (b)
Fiorello	Simone Alaimo (b)
An Officer	Silvestro Sammaritano (b)
Dr. Bartolo	Enzo Dara (bs-b)
Don Basilio	Samuel Ramey (bs)
Ambrogio	Carlo Folcia (bs)

La Scala Chorus and Orchestra, Riccardo Chailly, cond. [David Mottley, prod.] CBS MASTERWORKS 13M 37862 (digital recording; three discs, manual sequence). Tape: 13T 37862 (three cassettes). [Price at dealer's option.]

COMPARISONS:

Berganza, Ausensi, Varviso	Lon. OSA 1381
Callas, Gobbi, Galliera	Ang. SCL 3559
De los Angeles, Bruscantini, Gui	Ang. SCL 3638

Many of these people were recently heard toiling through Rossini's *Turco in Italia* (CBS 13M 37859, February), and they all sound happier as well as more productive here, working with some decent material. The recitatives, presented uncut, have more than usual conversational life, while the concerted numbers recall the firmness of proportion of the Galliera/Angel *Barbiere* and the buoyant flow of the Varviso/London.

But something is getting in the way—something apart from the individual vocal pluses and minuses, something that nearly overrides the individual vocal pluses and minuses: The singing leaves hardly a trace in the imagination. Listen, say, to Ramey's "La calunnia," and note phrase by phrase the even, rounded tone, the smoothly bound line, the easy projection of the high F sharps (yes, the aria is sung untransposed). Then ask yourself whether you have any sensory recollection, any *physical* impression of the performance.

This is in contrast to the image that lingers in my mind from a City Opera performance heard in 1976 (and checkable via tape). Terrific (even transposed down), wow, somebody ought to record this! Well, now somebody *has* recorded it, just as somebody has recorded his even more successful (in the theater) Mozart Figaro (London LDR 74001). In both cases the vocalism is quantifiably impressive but lacks the grabbing power of which Ramey is demonstrably capable.

At a guess, what's happening is something I've commented on in one form or

another a number of times, as for example when José Carreras recorded Canio and Turiddu (Angel SZCX 3895, September 1980) and I detected "no audible evidence of the vocal energy necessary to carry sound out into a playing space, and therefore none of the emotional energy that can accompany it." It may be that current record buyers don't care about the difference (perhaps because they have become used to allegedly live performances similarly drained of most of their energy), but the singers who have come to trust those nearby microphones as their friends might want to start caring. The work that results is providing progressively less reason for listeners to care.

Whether for some such reason, or because Chailly has asserted himself, Horne's Rosina is a much more subdued creation than her fans have become accustomed to. On the one hand, I don't miss the coarse overemphases of her superstar Rosina, but on the other, I don't hear much taking their place. The close scrutiny of the microphones reveals that the singing itself isn't terribly plush tonally or unblemished technically—note for example the glitches in the downward passage-work. This remains accomplished vocalism, but where is Rosina? (Compare Berganza in her first recording, or De los Angeles, or Callas.)

It's a bit embarrassing to confront Barbacini, whom I compared unfavorably to Piero de Palma in his *Turco* comprimario role, as the Count, but perhaps I shouldn't be the one who's embarrassed. In fact, he sounds a whole lot better here, singing with an attractive, full sound and a winning interpretive sense. Unfortunately the tightness of the vocal production, while accommodating a certain limited range of passage-work, simply closes him off entirely when the note procession passes a certain speed. In especially difficult writing, he can be left literally gasping, which happens most embarrassingly in the Count's treacherous final-scene aria, restored here for reasons I don't understand. Didn't anyone notice that Barbacini can't sing it? (Who can? Valletti, in the Met/RCA recording, LSC 6143—or in a pinch, Benelli, in the London set.)

Nucci is a singer I still can't pin down. Here, as in most of the performances of his I've heard, he sounds like a competent small-voiced baritone with limited freedom, no upper extension, and not much imagination. But then there's that confounded DG *Aida* recording (2741 014, February), with a voice of distinctive timbral and carrying characteristics. Dara is one of the better Bartolos on records. The upper part of the voice is now less resonant than it was in the Abbado/DG recording (2709 041), but his work has a good deal more human vitality than it did in that picky environment. The smaller roles are nicely filled with gratifyingly Italianate voices.

K.F.

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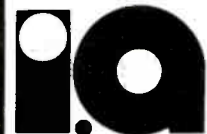
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CLASSICAL *Reviews*

RCA. But you really should have at least two of the recordings (any pairing proves complementary), and preferably all three.

K.F.

WAGNER: Der Ring des Nibelungen; Die Walküre; Parsifal—See page 67.

Recitals and Miscellany

CARLO BERGONZI AND DIETRICH FISCHER-DIESKAU: Duet Recital.

Carlo Bergonzi, tenor; Dietrich Fischer-Dieskau, baritone; Bavarian Radio Symphony Orchestra, Jesús López-Cobos, cond. [F. Axel Mehrlé, Dieter Sinn, and Diether G. Warneck, prod.] PANTHEON ORFEO S 28 821 (digital recording). Tape: CS 28 821 (cassette). [Price at dealer's option.] (Distributed by Pantheon Music International, Inc., 211 E. 43rd St., New York, N.Y. 10017.)

BIZET: Les Pêcheurs de perles: Au fond du temple saint. PONCHIELLI: La Gioconda: Enzo Grimaldo. PUCCINI: La Bohème: O Mimi, tu più non torni. VERDI: Don Carlos: Dio, che nell'alma. La Forza del destino: Solenne in quest'ora; Invano Alvaro. Otello: Si pel ciel. I Vespri siciliani: Sogno, o son desto?

I suppose it all depends on what you want from a tenor-baritone team. Judging from the ones history recalls best—Caruso/Ruffo, Gigli/De Luca, Bjoerling/Merrill, Tucker/Warren, and Domingo/Milnes—vocal opulence takes first place. If so, the Bergonzi/Fischer-Dieskau combination would seem far from ideal, especially with both old pros pushing sixty and the age of retirement. Beyond that, the pairing of an Italian tenor with a German baritone may strike some as an odd mismatch, although Bergonzi and Fischer-Dieskau are not exactly strangers, having once collaborated in complete recordings (albeit nearly twenty years ago) of *Rigoletto* and *Don Carlos*.

I can hear all that, but I still rather enjoy this recital, perhaps more for the wonderful little moments than for heady animal excitement. It's amazing both singers sound as good as they do, reaping the fruits of solidly grounded techniques and a lifetime of sensible career decisions. Bergonzi is especially remarkable. He never rejoiced in a thrilling top register, and he wisely never overextended himself in trying to develop one. Even now his voice is a beautifully integrated instrument that retains its lovely soft-grained, almost baritone timbre from top to bottom, and he sings everything here with his customary musical polish and stylish grace.

Fischer-Dieskau must work harder to fill out the line—for many this refined, light voice never was and never will be acceptable in Italian opera—but through clever weighting of tonal perspectives he creates the proper aural illusion, and he always blends smoothly with Bergonzi.

Both singers share an essentially aristocratic temperament, and together they conjure up many memorable effects. I simply mention the reprise of the Don Carlos/Rodrigo "friendship" duet, delicate and dreamy and a perfect embodiment of these two idealistic personalities. Their work in this familiar repertory will be for some a revelation, for others a rather precious vocal compromise—take your choice. Personally, I'll buy it, and listen again with pleasure, despite López-Cobos's rather routine orchestral accompaniments.

P.G.D.

WOLFGANG BRENDEL: Operatic Recital.

Wolfgang Brendel, baritone; Bavarian Radio Chorus*, Munich Radio Orchestra, Heinz Wallberg, cond. [Theodor Holzinger, F. Axel Mehrlé, Dieter Sinn, and Diether G. Warneck, prod.] ANGEL DS 37907, \$12.98 (digital recording). Tape: 4XS 37907, \$9.98 (cassette).

GOUNOD: Faust: Avant de quitter ces lieux. MOZART: Le Nozze di Figaro: Hai già vinta... Vedrò mentr'io sospiro. Don Giovanni: Finch'han dal vino. OFFENBACH: Les Contes d'Hoffmann: Scintille, diamant. ROSSINI: Il Barbiere di Siviglia: Largo al factotum. VERDI: Il Trovatore: Il balen del suo sorriso... Per me ora fatale.* Un Ballo in maschere: Alzati!... Eri tu, che macchiavi. La Forza del destino: Son Pereda, son ricco d'onore*; Morir! tremenda cosa!... Urna fatale... Egli è salvo (with Hermann Sapell, bass). Falstaff: È sogno? WAGNER: Tannhäuser: Wie Todesahnung... O du mein holder Abendstern.

It's reasonable to hope that Germany might come to the rescue in Italy's hour of baritone need, but the only point of interest on the Verdi side is the lively performance of Ford's always welcome monologue. If I were casting *Falstaff*, I'd sign him up. Otherwise we're mostly hearing a middle-weight, monochrome baritone merely coping with the high tessitura, which is also the case in an all-Verdi Acanta recital by Bernd Weikl (DC 23327). Nor do I hear much different in the Rossini, Mozart, and Wagner selections.

But in the two French selections we hear almost another voice entirely—with some luster in the tone and some exciting reach up and over the break. These selections alone, even though shorn of their recitatives, make the record worth hearing, both for the startling contrast with the rest and for the hope it raises of better things to come from Brendel.

Accompaniments and sound are okay. There are no texts.

K.F.

CAMBRIDGE BUSKERS: A Little Street Music*; Not Live from New York†; Soap Opera‡.

Cambridge Buskers. [Jimmy Bowen*† and Brian Culverhouse‡, prod.] DEUTSCHE GRAMMOPHON 2536 414*, 417†, \$8.98 each; 2532 072‡, \$9.98 (digital recording). Tape: 3336 414*, 417†, \$8.98 each; 3302 072‡, \$9.98 (cassettes).

Armed only with an accordion and a bagful of winds, the Cambridge Buskers have

apparently set out to plunder the world. Never mind that no known composer has provided for their peculiar instrumental configuration. The jaunty conquistadores roam the musical map as they please, and when they hear a tune they like, they help themselves.

Dag Ingram (accordion and, in one memorable track after Tchaikovsky, swan) and Michael Copley (flute, soprano recorder, piccolo, ocarina, tonette, krumphorn, etc., etc.) have played everything from Bach, Handel, and Mozart to Weill, Gilbert and Sullivan, and Scott Joplin, by way of the Red Priest (to whom, in deference to friends in Japan, they refer as "Bibardi"), Praetorius, Offenbach, and Suppé. They hopscotch without fear or favor from the operatic literature to the symphonic, and sometimes they even land on a patch of certified folk music.

Surely no performer before them has leaped so swiftly from the street corners of Britain and the Continent into concert halls from the Midwest to the Far East, not to mention the recording studios of Deutsche Grammophon. Their latest release, "Soap Opera," follows hard on "Not Live from New York" and their debut album, "A Little Street Music." There is no progress to report. Since the beginning of their recorded time, the Buskers have been practicing their art in a state of blissful perfection. They fashion their numbers with the care of men who, having seen tall ships bounding on the main, build tiny ships in bottles, with sails that still billow and proud pennants that flutter unmoved by the tide or the salt sea air.

It is amazing how much substance and variety they contrive to pack into their miniatures. Mozart speaks clearly in the little gestures that make up their arrangement of the windswept opening movement of his Symphony No. 40 ("LSM"); Wagner's spirit blows fierce and pure in their "Ride of the Valkyries" ("SO"). In their Overture to *The Silken Ladder* ("NLfNY"), Rossini's tricks of the trade are all in evidence: the legato periods punctuated by bursts of staccato, the short phrases that jeer at long ones—and all those innumerable notes! Copley's fingers are fast and devilishly accurate.

In the Brahms *Hungarian Dances* (No. 1 shows up on "NLfNY," No. 5 on "LSM"), the yearning accordion swells and falls with true Gypsy passion. In the Countess' aria "*Dove sono*" from *Le Nozze di Figaro* ("SO"), the flute spins out a liquescent line embellished with artful simplicity, and with appoggiaturas in all the right places. The organ-grinding sound affected for "*La donna è mobile*" ("SO") makes perfect sense, and the easy top notes are of a lightness that would make any tenor pale with envy.

But no, it is not *all* wonderful. Copley's effortless phrasing can turn bland, as in the Largo from Bibardi's *Winter Concerto*

(("NLfNY")), and the joke of overblown crescendos and mad accelerandos pretty quickly wears thin. Even where his playing is lovely, as in the "Dance of the Blessed Spirits" from Gluck's *Orfeo* ("NLfNY"), the accordion will often spoil it with thick, plodding chordal textures. There are times, as in "*Sempre libera*" ("SO"), when the Buskers settle for knocking off the notes in a mindless mechanical frenzy. But when they succeed, which is most of the time, their refreshing playfulness pleases as greatly in the music they ought to have no business playing as in, say, the "Drunken Sailor/Hornpipe" medley ("LSM"), which is surely theirs by right. M.G.

MEXICAN ORCHESTRAL WORKS.

Orquesta Sinfónica del Estado de México, Enrique Bátiz, cond. [Brian B. Culverhouse, prod.] VARÈSE SARABANDE VCDM 1000 220, \$15 (digital recording).

CHÁVEZ: Symphony No. 2 (*Sinfonia india*). MONCAYO: Huapango. REVUELTAS: Sensemayá; Homenaje a García Lorca.

Xalapa Symphony Orchestra, Luis Herrera de la Fuente, cond. [Thomas Frost and Jonathan Wearn, prod.] VOX CUM LAUDE D-VCL 9033, \$10.98 (digital recording). Tape: D-VCS 9033, \$10.98 (cassette).

CHÁVEZ: Symphony No. 2. GALINDO: Sonos de Mariachi. MONCAYO: Huapango. REVUELTAS: Sensemayá; Ocho x radio.

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From the Talich Quartet, a Major Addition to the Beethoven Discography

Reviewed by Harris Goldsmith



The Talich Quartet: a sonority built pyramidlike from the bass up—ideal in this music

THE EXTENSIVE ANNOTATIONS, all in French, are devoted exclusively to this wonderful music; one has to search to discover the membership of the Talich Quartet—violinists Peter Messiereur and Ken Kvapil, violist Jean Talich, and cellist Evzen Rattay—listed once, inconspicuously, on the back of the box. (I have not seen the smaller sets or individual packagings of these discs.) Further sleuthing turned up a review noting that the ensemble is named after the great Czech conductor Václav Talich (1883–1961) rather than for the group's violist, but then I learned that violist Talich, the conductor's nephew, had been the first-violinist until 1970 and that the quartet is named for him after all.

I mention this bit of biography because I am fascinated by the musical personality of a player who (presumably) voluntarily yields a position of leadership for a "subordinate" role. I may be reading significance into these performances, but, for whatever reason, I note a consistent orientation toward the lower end of the spectrum. Thus, the quartet resembles some other European groups, such as the Végh Quartet, in that its sonority is built pyramidlike from the bass up. I find such balance ideal in this music, though others—particularly those used to a more brilliant, dominant first violin—may not. Indeed, in the Végh's second Beethoven cycle (Telefunken—already deleted, shamefully), particularly in the middle quartets, the first-

violin line was slighted to a degree that even I find objectionable. Here all four lines come through in perfect conjunction. The viola and cello dominate not because of mere volume or close miking, but because they are played with an unusual degree of concentration, color, and musical characterization: Instances of an eloquent cello line or a dark, vibrant viola tone are simply too numerous to cite.

More than just another good cycle of the Beethoven quartets, these interpretations are full of technical accomplishment and profound re-creative subtlety. If the Talich's collective style doesn't show quite the proprietary ripeness and grandeur of the Végh's (the Telefunken version was made after that group had played together for more than thirty years without change of personnel), these players are nevertheless far more probing than, for example, the Hollywood Quartet, whose Beethoven late quartets were recently reissued (EMI RLS 7707). For that matter, the Talich even surpasses the young Budapest, whose reissued 1930s performances, in several superb Odyssey albums, show a greater fondness for virtuosity per se and a predilection for rapid pacing that the more conservative Talich generally avoids. Note the tempos for the last movement of Op. 18, No. 3: The Budapest version becomes a scintillating high-wire act; the more sedate Talich is heavier afoot yet still rhythmically incisive. One group favors nervous excitement, the

other, structural clarification and solidity.

In reviewing various sets of the Beethoven symphonies in these pages, I have noted the tendency of jet travel and widespread phonograph recordings to "homogenize" disparate local styles: Kubelik's edition, in which each symphony featured a different orchestra, some American, some European, was more of a piece stylistically than was Scherchen's early-1950s Westminster cycle, which divided honors only two ways, between the Vienna State Opera Orchestra and the "Philharmonic Symphony of London," actually Beecham's Royal Philharmonic. For whatever reason, string quartets seem less prone than orchestras to this kind of cross-pollination. Perhaps the very rigors of quartet life (with its attendant hazards and occasional nervous breakdowns) have preserved the individuality of "American" and "European" styles. There is, of course, some crossover in groups such as the Cleveland and Guarneri Quartets, whose American proficiency and hard-hitting approach to rhythm have been "contaminated" by a pseudo-European Marlboro style.

The Talich Quartet is definitely of "European" persuasion. The modern style—everywhere—puts great emphasis on textual fidelity and accuracy of note-values, and the Talich, for all its mellow tone, favors punctilious timing, forgoing the portamento of such older foursomes as the Busch, the Amadeus, and the Vlach (not to mention more ancient ensembles). Nevertheless, the Talich's rhythm tends toward the flowing rather than the hammering—the soft Furtwängler instead of the hard Szell. This, of course, has its assets and liabilities, both evident in the Op. 127 reading: For the most part, it is a brilliant success, with an eloquence and a supple passion that give an almost vocal inflection to the variations. But immediately following that movement, spellbinding in its humanity and introspection, comes the scherzo, which, while assured, flexible, and fine-grained, is disappointingly reticent and undynamic. Similarly, the lyrical Op. 59, No. 1, gets one of the finest accounts I have ever heard, fully comparable to the magnificent ones of the Busch, Végh, and Budapest; the feverish and angry *Serioso*, Op. 95, however, is too civilized, and even a mite finicky in its occasional tempo adjustments to delineate architecture (is that hint of *ritard* at the end really necessary?).

Since the discs are available individually (with, be it noted, some nonconsecutive couplings), here is a brief rundown of the performances:

No. 1, in F, Op. 18, No. 1: There are admirable contrasts between piano and forte, but the Talich underplays the difference between *sforzando* and *fortissimo* (first movement, bars 96–99 and the later paral-

lel passage). More seriously deficient is the pacing of the great slow movement: This 9/8 *Adagio affetuoso ed appassionato*—said to have been inspired by *Romeo and Juliet*—is traditionally played too fast, since the players run out of bow in attempting to sustain a really slow tempo. Even at that, the Talich sounds positively jaunty. The two last movements make amends. The cello's eighth-note in bar 4 of the Scherzo draws the analogy with Op. 130's second

Quartets seem less prone than orchestras to homogenization.

movement as aptly as in the Végh performance.

No. 2, in G, Op. 18, No. 2: The playing is tasteful if a shade too restrained; the passage-work in the finale becomes a bit hard-pressed.

No. 3, in D, Op. 18, No. 3: This suddenly comes to life; the recorded sound seems more vibrant, the playing, more colorful and alive.

No. 4, in C minor, Op. 18, No. 4: Dark-toned and passionate. The Minuet is aptly paced, with the faster da capo deftly, though not overly, illuminated.

No. 5, in A, Op. 18, No. 5: The first movement treads rather heavily at a tempo similar to that of the 1957 Budapest reading; still, it sounds more convincing here. The other three movements are splendid. (The Sousa-band variation is wonderfully rousing.)

No. 6, in B flat, Op. 18, No. 6: Here the first movement is lively yet never breathless; the spirit, if not the letter, of Beethoven's swift metronome marking is splendidly captured.

No. 7, in F, Op. 59, No. 1: As already noted, one of the glories of the Talich cycle: intense and soaring.

No. 8, in E minor, Op. 59, No. 2: Fast-paced but a shade sober: a fine, if not overwhelming, reading, similar to the Végh's (especially its earlier recording, on Haydn Society). The Presto finale proceeds moderately, as in the 1936 Budapest.

No. 9, in C, Op. 59, No. 3: A really convincing approach, with tempos that are bracing, yet not rushed. The interrelationship of the four movements has an organic rightness, and one never feels—as one does in the Guarneri and Juilliard readings—that a rapid finale has been grafted onto a more "traditional" torso.

No. 10, in E flat, Op. 74: Another splendid, sober, yet stimulating account. The third movement unfolds with firm, vital rhythm, rather than with feverish precipitation.

No. 11, in F minor, Op. 95: Already cited, a good but slightly overintellectual performance, again, similar to the Végh interpretations.

No. 12, in E flat, Op. 127: Already praised, this performance cannot be overpraised. Even the underplayed third movement sounds much more convincing on rehearing, and the variations are haunting in their wondrous beauty. The finale is a perfect summation. Here is one of the great readings on record.

No. 13, in B flat, Op. 130: In this series of bejeweled movements, the Talich portrays the gossamer changes of mood with really imposing power. The differing note-values of those downward slides leading into the elaborate second-movement da capo are attentively observed. The Cavatina is a thing of beatific poignancy. Unfortunately, although both finales are played, the *Grosse Fuge* comes first—which strikes me as outrageously wrongheaded.

Grosse Fuge, Op. 133: I stubbornly refuse to regard this as the finale to Op. 130. The Talich performance, though, is exceedingly fine, with the slower middle section offering solace, not somnolence.

No. 14, in C sharp minor, Op. 131: This performance doesn't have quite the slashing momentum of the Bartók Quartet's reading, but, like the Végh's later account, is nonetheless remarkable in its sensibilities and technical proficiency. Color is extraordinary, particularly since it is used completely selflessly—for maximum expression of musical eloquence.

No. 15, in A minor, Op. 132: The Talich doesn't ruminate on this very Brahmsian, Romantic masterpiece the way the Quartetto Italiano and the Guarneri do, but offers plenty of passionate expression along with the granite. The Hymn of Thanksgiving is nobly projected.

No. 16, in F, Op. 135: Luminously played; the poignant moods of every movement are exquisitely captured. Even the scherzo, a bit temperate, takes wing sufficiently.

The Talich is generous, but not obsessive, about repeats, observing or eschewing them out of aesthetic, not doctrinaire, considerations. The sound, while not sensationalistic, is agreeable and wide-ranging. Surfaces are mostly silent and well processed. This set is a major addition to the Beethoven quartet discography. **HF**

BEETHOVEN: Quartets for Strings (complete).

Talich Quartet. [Georges Kisselhoff and Jacques le Calvé, prod.] CALLOPE CAL 1631/40, \$99.80 (ten discs, manual sequence; also available in three smaller sets [3 discs "early," 3 "middle," 4 "late"]) and on single discs and cassettes (distributed by International Book and Record Distributors, 40-11 24th St., Long Island City, N.Y. 11101).

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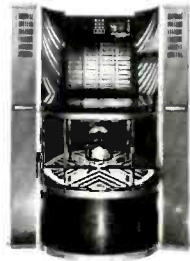
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Mexican music is unequalled, except, perhaps, in the music of the Czechs. Enrique Bátiz and his musicians have these scores in their blood and deliver scintillating performances guaranteed to quicken one's pulse. Yet it is Luis Herrera de la Fuente who demonstrates that there is more here than surface flash and razzle-dazzle.

Bátiz is a little too precipitate in his treatment of the *Sinfonía india*'s repetitive finale, which, failing Chávez' own slightly more measured tempo (CBS Special Products C 32 31 0002, a three-disc set of his six symphonies), needs the ultimate exuberance of Leonard Bernstein's New York

Philharmonic version (CBS MS 6514). Herrera's reading, with some poor string intonation, doesn't match the brio and precision of any of the others, but builds to a terrific climax—the percussionists play for all they're worth—and projects the work's primitive quality better than any account except the composer's. Chávez, though he provided alternative scoring for a more conventional percussion battery, wrote for native instruments and used them in his own recording. One would expect other versions emanating from Mexico to do likewise, and Herrera seems to, but Bátiz, among other substitutions, uses the normal

xylophone rather than the deeper-pitched teponaztli.

Revueltas' *Sensemayá* (Mexico's answer to *Le Sacre*, in a fraction of the time), has many offbeat percussion accents, which add so much to the zest of Bernstein's account but are mostly woefully ignored in these versions. Also, Bátiz' performance doesn't give the opening tuba solo the requisite awesomeness. *Sensemayá* can hardly fail to make a stunning effect, and so it does even under Bátiz, yet it is Herrera who, with an unusually deliberate tempo, really gets to the heart of the score; the work's ominous character and feeling of primitive ritual emerge as seldom before. At first I found Herrera a bit cautious, but I should have guessed why, having heard his *Sinfonía india*: He is a conductor who knows how to build a climax. The ferocious savagery of the final pages, taken at a deliberate pace, becomes all the more overwhelming for his initial reticence.

Each disc provides a welcome opportunity to hear less familiar music by the strikingly gifted and tragically short-lived Revueltas. Bátiz offers *Homage to Garcia Lorca*, in a more popular style than *Sensemayá*, save for the austere slow section. The annotator espies a kinship with the neo-classical Stravinsky; I'm reminded more of the South American pieces of Milhaud. The brief *Ocho x radio* Herrera plays is more Stravinskian, a chamber work containing echoes of *L'Histoire*.

Of special interest, both collections restore to the catalog the quintessential Mexican folkloristic piece, Moncayo's colorful and lovable *Huapango*—you'll swear you're out riding with the Cisco Kid. Bátiz plays it very snappily and exuberantly, Herrera more seriously and "symphonically." Whereas *Huapango* is of the countryside, Galindo's *Sones de Mariachi*, offered by Herrera, evokes music of a village festival.

Varèse *Sarabande* furnishes spectacular sound for Bátiz, with an extremely vivid bass drum in *Huapango*, and a beautiful package, featuring color photos of Mexican art; unfortunately, the liner notes devote more discussion to the digital recording process than to the music. The sound Vox gives Herrera is less brilliant yet perfectly natural, appropriate to his less flashy performances.

The State of Mexico Symphony is the more brilliant orchestra, just as Bátiz is the more extroverted conductor. The Xalapa Symphony is less polished, a potential liability that actually becomes an asset in conveying the primitive power of much of this music. Herrera, an older musician, has obviously lived with this repertory longer, and it shows in his more thoughtful and ultimately more meaningful interpretations. Yet neither conductor is right or wrong in his approach, for each shows these engaging and exciting pieces in a different, equally valid light.

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The Tape Deck

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

Catching Up

(Concluding a two-part survey of new, mostly promising offerings)

• **London** (digital/ferric, \$12.98 each). One of the most dramatically arresting Bruckner exponents, Georg Solti, leads the Chicago Symphony in the favorite Fourth (*Romantic*) Symphony (LDR5 71038). For sheer architectural grandeur and magnificent sonic ring, this is outstanding even among the best of the many earlier versions. In a lighter vein, Antal Dorati's novel Dvořák program with the Detroit Symphony (LDR5 71024) imaginatively couples the engaging *Czech Suite* with even less familiar charmers: the high-spirited *Prague Waltzes*, E flat Polonaise, and B flat Polka, plus the Op. 40 Nocturne. And in brightly vivid analog recording, Charles Dutoit and the Philharmonia bring back four once popular Saint-Saëns tone poems and the *Marche héroïque* in Gallically idiomatic readings (CS5 7204, \$10.98).

• **Nonesuch** (digital/ferric, \$11.98 each). Topping recent releases (prior to Nonesuch's decision to provide program notes) is Joshua Rifkin's sensationally provocative performance of Bach's B minor Mass, using one voice to a part and period instruments (79036-4, two cassettes, notes and texts on request). One doesn't have to agree with the radical musicological arguments to find this approach—however disconcerting at first—ultimately stimulating. Despite the lack of choral weight and power, the enhanced lucidity, sonic immediacy and more personalized devotional conviction reveal entirely new facets in a masterpiece no longer familiar. Spectacular, too, in a quite different way, is Igor Kipnis' aptly titled "Virtuoso Handel" recital (79037-4): harpsichord pieces mostly well-known but heard in the most ebullient bravura performances and thunderous sonics. An earlier release proffers an admirable introduction to Janáček's extraordinary chamber music, piquant versions by Gerard Schwarz and the Los Angeles Chamber Orchestra of the mellifluous early *Idyll* for strings and the pungent late *Mládí* (*Youth*) for winds (79033-4). The turn-of-the-century English-music renaissance is represented in budget-price analogs (\$5.98 each): Elgar's Second Symphony, in James Loughran's idiomatic Hallé version (71406-4), and Frank Bridge's polished chamber jewels, the piano quintet and *Phantasie* Trio, by the London Music Group (71405-4).

• **Philips** (digital/chrome, \$12.98 each). Exceptionally impressive audio engineering distinguishes four unrelated programs. Daniel Chorzempa's Bach show-piece recital on a monstrous Dutch organ with stops dating from 1629 to 1975 (!) is elephantinely heavy-handed, but its unfettered sonic power and reverberation surpass almost all earlier organ "spectaculars" (7337 274). Gidon Kremer's Beethoven violin concerto with Neville Marriner (7337 075), played and recorded with exemplary virtuosity, is controversial for its inclusion of the notorious Schnittke cadenzas—which, I must confess, I find more impudently amusing than disgusting. Digital recordings of Liszt's two war-horse piano concertos, by Mischa Dichter and the Pittsburgh Symphony under André Previn (7337 200), surely *sound* more resplendent and realistic than in any earlier versions, but the indulgently mannered readings stretch Romanticism to its limits. Perhaps Edo de Waart's uninhibitedly emotional Mahler Fourth Symphony with the San Francisco Symphony (7337 201) also will appeal primarily to ultra-Romantics. Yet even the least sentimental will find it impossible to resist either the pervasive tonal loveliness (with truly magical pianissimos) or the enchantments of soprano soloist Margaret Price in a matured re-creation of her memorable role in the still-incomparable Monitor version Jascha Horenstein led shortly before his death in 1973 (55001).

• **Pro Arte** (\$9.98 each). This happily born-again label picks up where it left off in catholicity of repertory and state-of-the-art technology. In a digital/chrome edition, the Collegium Aureum continues its Beethoven symphony series on period instruments with a Seventh (PCD 123) that non-purists may find less disconcerting than the earlier *Eroica* (PAC 1029)—and equally revelatory of hitherto unappreciated details. Concertmaster Franzjosef Maier leads a performance that, less hard-driven than those we're accustomed to, is undoubtedly much closer stylistically as well as tonally to those of Beethoven's time. An analog recording, derived from Supraphon, features Václav Neumann and the Czech Philharmonic in four Dvořák overtures (PAC 1054). Another analog commemorates Rameau's 300th birthday—a prizewinning period-instrument version of the Frenchmaster's elegantly rococo ballet *Pygmalion*, of 1748. Limpidly recorded, the international forces feature four soloists and the Paris Chapelle Royale chorus with La Petite Bande under Gustav Leonhardt (PAC

1082). And for more good news, Barclay-Crocker is now releasing open-reel editions of Pro Arte and Quintessence programs—leading off with two acclaimed here in their cassette versions: Janáček's *Cunning Little Vixen*, with Neumann leading an all-Czech cast (P 2012, \$19.95), and Neumann again in the magnificent coupling of Martinů's First Symphony and *Inventions* (F 1006, \$9.95). (Barclay-Crocker, 313 Mill St., Poughkeepsie, N.Y. 12601.)

• **RCA Red Seal** (digital/chrome, \$12.98 each). Two young virtuosos star: pianist Emanuel Ax, more Florestan than Eusebius, in Schumann's delectable *Fantasiestücke* and bravura *Humoreske* (ARE 1-4275) and fiddler Dylana Jenson in romantically finespun performances of Brahms's First and Third Sonatas with Samuel Sanders (ARE 1-4419); both recordings boast near ideal sonic purity. And harking back to invaluable bargain-price (\$3.98) Victrola reissues, I must pay belated tribute to the Fiedler/Boston Pops examples: first, the truly incomparable *Zitronen* and other Strauss family waltzes (ALK 1-4458), and a festive Offenbach miscellany (ALK 1-4457); then, nearly as memorable, the Rimsky/Tchaikovsky/Rossini, Borodin/Rimsky, and Liszt programs (ALK 1-4460, 1-4461, and 1-4475).

• **Spectrum** (\$7.98 each). Like the Kipnis/Nonesuch program, Nicholas Jackson's "Art of the Harpsichord," Vol. 2, uses the full virile power of the instrument—here a 1776 Kirkman in a well-varied English-Italian-German recital (SC 248) especially notable for its Croft, Purcell, and Bach pieces. Hartmut Haenchen's festive baroque sonatas with the Berlin Chamber Orchestra (SC 261; also on Pro Arte PAC 1083) will appeal to more than trumpet and trombone aficionados, for there are effective string contrasts and percussion enhancements in these ringingly ceremonial works by Bertali, Franceschini, and Kerzinger as well as the (slightly) better-known Biber, Caldara, Schmelzer, Telemann, and Vejvanovsky.

• **Turnabout/Vox**. The budget series has one of the great seascape evocations: Alfvén's Fourth Symphony, spellbindingly recorded by Stig Westerberg and the Stockholm Philharmonic with wordless vocal parts (CT 4778, \$5.98). Vox Cum Laude resurrects the 1969-70 Barenboim/Zukerman/Du Pré HMV recording of Beethoven Trios, Op. 70, Nos. 1 and 2 (VCS 9024, \$8.98). Though the sonics are unfaded, the performances are too often arbitrarily over-vehement. **HF**

BACKBEAT[®]

Les Soeurs McGarrigle

Songs of love for the strong of heart and keen of ear
by Steven X. Rea



Anna and Kate: "We won't put anything on record until we're ready."

KATE AND ANNA MCGARRIGLE couldn't care less about being pop stars. In fact, sometimes they don't even care about making records. And touring is something these two sisters from Montréal do with the utmost reluctance.

What Kate, thirty-seven, and Anna, thirty-eight, do care about is writing songs. Over the past seven years, the McGarrigles have released five wry and whimsical albums. They are records that don't quite fit in the pop mainstream: The melodies jump and turn in midmeasure; the arrangements spill over with accordions, banjos, fiddles, and oompah drumbeats; the lyrics deal with, among many other things, family life and children; and the words sometimes aren't even in English. Yet the McGarrigles have struck the right chord with enough lis-

teners to make them a very hot property in the prestigious "devoted cult following" market.

Among the founding members of this burgeoning fan club is Linda Ronstadt, who has recorded several of the sisters' tunes, including *Heart like a Wheel* (the title song of her multiplatinum 1975 LP) and, on her last album, *Talk to Me of Mendocino*. Maria Muldaur had a hit with Kate's *The Work Song*, and Judy Collins recently recorded Anna's lovely *Sun, Son (Shining on the Water)*.

Kate and Anna's compositions touch on a variety of themes, all imbued with a gentle skepticism and a rich romantic sensibility. The songs are smart, and sometimes smart-ass, but they can also be tender and melancholy without ever sounding trite

or mushy. They are songs about love, broken hearts, and broken promises, about homelife and hard work, about old memories and new beginnings. Sometimes they're about faraway places and people, but they always ring true. The McGarrigles' newest disc, "Love Over and Over" [see BACKBEAT, May] on Polydor, might well be the best collection of tunes the pair ever has put together.

Kate and Anna are managed, produced, and occasionally accompanied on record and onstage by their older sister, Jane. The family hails from St. Sauveur-des-Monts, an outback township in the French-Canadian province of Québec. The music the three women heard when they were growing up was a weird mix of Joan Baez and the blues, r&b and rock hits they picked up on a radio station in Buffalo, classical and traditional pieces that their father played on piano, church songs, and the local French-Canadian fare, which the McGarrigles liken to the buoyant, loping rhythms of Cajun music.

In college in Montréal, the McGarrigles teamed up with Peter Weldon and Jack Nissenson, playing coffeeshouses and dances as the Mountain City Four. It wasn't until the early Seventies when Kate moved to New York City (where she met and married her now ex-husband, folksinger Loudon Wainwright III) that the two sisters began writing and performing their own compositions. And it wasn't until the likes of Ronstadt and Muldaur recorded their songs that the McGarrigles were offered a recording contract.

Nowadays, Kate lives with her two children in a house in Montréal, while Anna and her husband, journalist Dane Lanken, live with their two offspring sixty miles away in a farmhouse just across the Québec border. Early last spring, the McGarrigles embarked on what they jokingly refer to as their "1983 North American tour"—a swing through four Northeastern cities in as many days. A clue to how discombobulated they are when it comes to "professional stuff" like touring was their itinerary: Washington, D.C., then up to Boston, back

down to Philadelphia, and finally up to New York, where they headlined at a near-capacity Carnegie Hall. Squeezing all this territory into four consecutive nights meant driving like demons to make it in time for sound checks and interviews—something they didn't always manage to do. I caught them during the break between two sold-out sets at the Ripley Music Hall in Philadelphia. Both were in a marvelous humor.

Backbeat: Some of the reviews of your concerts have mentioned the unprofessional, "What are we going to do next?" kind of approach of your shows. It's as if a person was in his living room with a bunch of friends who happened to be musicians in the mood to perform. It's very homey. Would you agree?

Anna: Yeah, I'd have to. We just write songs and then sometimes we perform them. Suddenly we're onstage and we haven't worked out an order. I don't think we've ever been prepared to go on—we're on the brink of disaster every second!

Kate: We know we have a lot of songs to choose from, but we never know which ones. So we think, "Should we follow an up-tempo with a down-tempo? If we do two songs in a row in the same key, is the audience going to get bored?" I don't think we really know what we're doing [laughs].

Backbeat: Is performing something you get excited about or is it something you dread?

Kate: Both. Afterward, if it went well, we enjoy it.

Anna: But sometimes you feel like you're in a fishbowl, especially in the big places like Carnegie Hall. Rather than be nervous, we're just amazed to be there at all.

Backbeat: "Love Over and Over" was released in Canada last year and here last January. When did you record it?

Kate: We actually started it in 1979 and then we ran into some contractual problems [with Warner Bros.]. So we put it on the back burner and made the "French Record." After we sorted out all the problems and ended up with PolyGram, we took the project up again in the summer of '81 in London. So about half the basic tracks were cut in '79 and the other half in England in '81. In order to keep some continuity, we used most of the same players and all of the same rhythm section. We tried to keep it sounding like it was all made in one day. It took about the same time for God to make the world as it did to make that record [laughs].

Backbeat: Dire Straits' Mark Knopfler plays on the title track. How did that come about?

Kate: Somebody suggested that he play guitar on that track because it needed something really exciting. So Janey arranged it with his manager. We sent him a demo tape, and he said he liked the song and would like to put a guitar part on it. I guess a lot of people ask to use him, so we were

surprised and happy that he agreed to play on our record.

Backbeat: Is that song, to your mind, commercial?

Anna: Well, we think it's commercial. The people in commercial radio don't think it's commercial at all.

Kate: You know, it's interesting. *Love Over and Over* got on Air Canada's in-flight pop music channel, wedged between the Rolling Stones and Fleetwood Mac. Coming back from Europe last fall, I listened to it wondering, "What does it sound like up against the real professionals?" And it sounded very good. It held its own. I was quite surprised, in a way. I almost didn't know it was us.

Backbeat: *Love Over and Over* is one of the few songs you've written together. Can you pinpoint the differences in your respective writing styles?

Kate: That's an interesting question. Everybody has picked this record to discuss the differences in our writing. But this is our fifth album and neither one of us has changed our particular style of writing. Anyway, people like to say that I write songs that are darker, more brokenhearted-sounding, and Anna tends to write more hopeful, childlike songs.

Anna: Maybe that's true of this record, but we've also done the reverse. There are definite differences, I guess, in the way the songs are shaped, and melody lines . . .

Kate: One of the critics—the guy in the *New York Times*—said something about the "dark sense of humor" that was coming out in Anna's writing. The thing he used to illustrate his point was the line in *Star Cab Co.*: "Don't throw the meter, Mama." Now that was a line I gave to Anna for that song. So, who knows?

Backbeat: Linda Ronstadt's recording of *Heart like a Wheel* really opened some doors for you. How did she come to record it?

Kate: We don't know. There are two theories.

Anna: We've never asked her. When we see her, we should find out.

Kate: Here's one theory: In 1970 I did some work in the U.S. with Leanne Ungar

[now the engineer for avant-garde composer Laurie Anderson]. We did little coffee-houses in little towns, and at one point we opened for Jerry Jeff Walker at the Gaslight. I sang that song, and he liked it and said, "I think Linda Ronstadt would do a great version of that. You should put it on a tape." So we did and gave it to him. Then we never heard from him again.

And the other theory is that two years later, again when I was working down here, the manager or producer of McKendree Spring [a New York-based folk-rock group] heard the song and asked for a tape. The group recorded the song in 1972—that was the first time we ever had anything recorded—and we found out later that they had opened for Linda Ronstadt on a tour, so that may have been it. But we don't know how she got it, whether it was from McKendree Spring or Jerry Jeff Walker.

Backbeat: Do you have a publisher?

Kate: We are our publisher. We have a little post-office box, and we were thinking—What's that called, Anna?

Anna: A microcomputer. We want to stick it in our mailbox and make that our office.

Kate: We'd have little telephones.

Anna: We'd have to drink a magic potion to get in it. And there'd be a teeny little sofa to sit on and a desk.

Backbeat: Do royalty checks appear every now and then, in this little post-office box of yours?

Anna: Yes.

Backbeat: Is it enough to live on?

Anna: No, definitely not.

Backbeat: So, how do you make ends meet?

Kate: We recycle food. If we have a turkey, the whole turkey gets used. We have soup from the bones.

Anna: No. Actually we live fine, very comfortably. But I don't know for how much longer [laughs].

Backbeat: In your show, you were talking about some of the music you have up in Québec, comparing it to Cajun music—accordions, fiddles, and banjos. Is it very prevalent?

Anna: There's not a whole lot of it—not anymore. Québec really only came into the twentieth century. I would say, at the beginning of the Sixties. I still remember the milkman and the man who brings you maple syrup always coming on a horse. And St. Sauveur-des-Monts wasn't even that far from the city.

Kate: We wore little black cotton dresses—all-black with white collars—that were handmade by the local mothers. And this was in the Fifties and Sixties!

Anna: You would hear that kind of music a lot more then. But Québec has never looked back. It's quite a modern city now.

Backbeat: The general consensus among McGarrigle fans and critics is that your third LP, "Pronto Monto" [1978], which

(Continued on page 101)

Discography

WARNER BROS.

Kate and Anna McGarrigle. WB 2862; 1976 (available as a reissue on Hannibal/Carthage 4401).

Dancer with Bruised Knees. WB 3014; 1977 (available as a reissue on Hannibal/Carthage 4402).

Pronto Monto. K 3248; 1978.

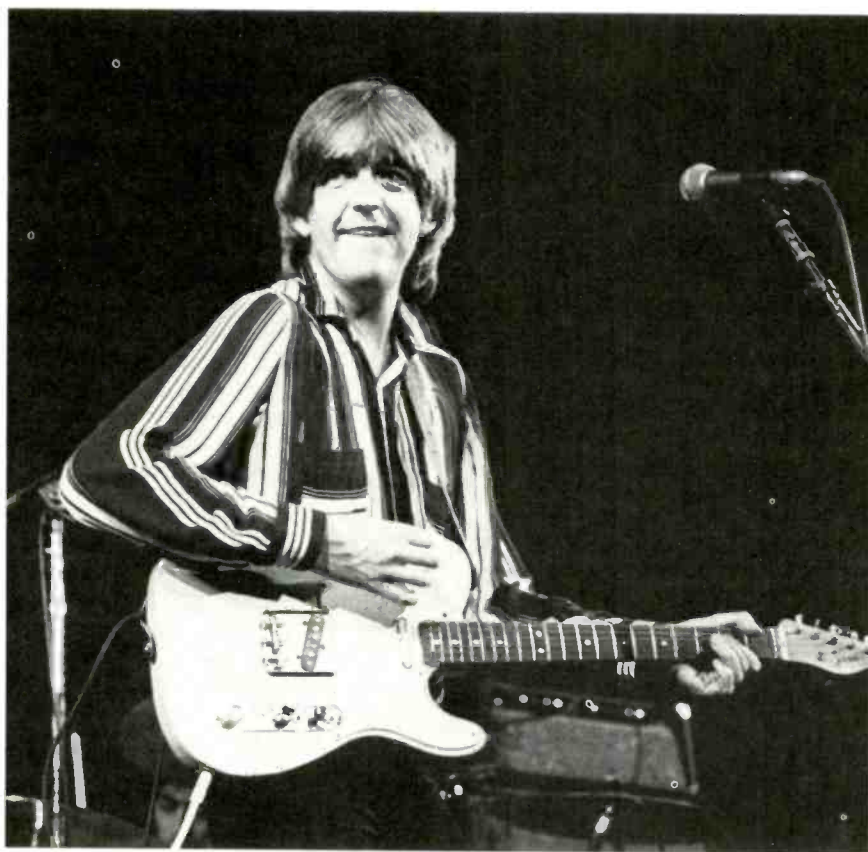
HANNIBAL

French Record. HNBL 1302; 1981.

POLYDOR

Love Over and Over. 422-810; 1983.

Reviews



Nick Lowe: People are always looking for the joke—See page 91.

Bananarama: Deep Sea Skiving

Barry Blue, producer
London 810 102-1 R-1

Bragging about their backseat expertise that turns a shy boy into a tiger, complaining about washing out their laundry on the road, evading a persistent but annoying suitor, the girls of Bananarama are reviving, with minor contemporary alterations, a feathery form of pop-rock. The sound snuggles up to you in a flirtatious way, ethereal, with touches of rhythmic adventurousness, but after a while the lack of variation makes "Deep Sea Skiving" less tantalizing than simply pleasant. Keren, Siobhan, and Sarah sing every song with the same breezy nonchalance, and, since they don't sound terribly interested, there's no reason why the listener should be.

Bananarama is working in an honorable tradition, as anyone who has been captivated by the Dixie Cups or the Marvelettes will testify, and this trio has a firm grasp on the value of "shoop-shoop" harmony. What the music needs is either a solid rooting in the conventions of the past or the boldness to bring the girl-group message completely into the 1980s. On the oldies (the Velvelettes' *He Was Really Sayin' Somethin'* and Steam's *Na Na Hey Hey Kiss*

Him Goodbye) and on the songs that aim to duplicate the spirit—especially *Shy Boy (Don't It Make You Feel Good)*—Bananarama doesn't exude enough personality to stack up favorably against its sources, and the tracks have to get by on what verve the songs themselves and the contemporary arrangements supply. (By not changing the pronouns in *Na Na . . .* Bananarama and company allow distracting, and probably unintended, sexual suggestions to sneak in.) There are other U.K. women, the Belle Stars and Mari Wilson among them, who are getting more mileage out of similar seminostalgic concepts.

Although "Deep Sea Skiving" isn't as much fun as it should be, its original material does indicate that, as writers, the members of Bananarama are aware of more than hand-me-down girl-group subjects. We've all heard too many songs about life on the road, but *What a Shambles* presents a little-exposed female view of its drudgery. *Cheers Then* and *Wish You Were Here* have a melancholy tinge that's a nice contrast to the LP's overall fluffiness, and, as an answer to those scores of early '60s singles that pined over unobtainable males, *Boy Trouble* says that some men are just too available. The girl looks the other way when this guy comes up the street, and,

when he asks her out, "I say I've got to wash my hair/'Cause I don't want to go." "Deep Sea Skiving" and Bananarama could use more of that obstinacy.

MITCHELL COHEN

Eardance: Seek Opposites

Jim Jacobsen, producer
Touch Records T 1000 (Eardance Ltd.,
1515 N. North Park Ave.,
Chicago, Ill. 60610)

Despite the much touted "conversion" that has brought synthesizer-laced, post-new-wave music into vogue at record companies and radio stations, a conservatism still prevails in mass-produced, overground pop. Granted the bubbling electronics and deadpanned vocal mien of recent hits are a far cry from the once dominant a.o.r.-sanctioned industrial-strength guitar rock. But the essential ingredients remain a simple song form, a romantic mythology, and a beat you can dance to.

These appear especially limiting when you listen to the growing number of well-produced, privately released albums and EPs by more adventurous bands. A case in point is this debut for Eardance, a Chicago-based quintet that obviously knows its way around a studio and has achieved a caliber of production, pressing, and even packaging that matches or exceeds that of the major record companies.

As musicians, however, Eardance's principals are considerably more sophisticated than the platinum hopefuls signed to established labels. Therein lies both their distinction and, one suspects, their inability to find a platform for wider exposure: Instead of chic digital drum patterns or thick washes of synthesizer draped over conventional pop tunes, this band builds its original songs from the inside out, and then dresses them in eclectic arrangements that utilize a wide variety of woodwinds, percussion, and even avant-garde classical touches.

Those nods toward the conservatory are particularly evident in the vocals, notably lead singer Russ Berger's, whose tonal purity and studied diction are miles from most modern pop or rock. Imagine Talking Heads' David Byrne with a few years of voice training, and you won't be far from Berger's style.

Such twists don't click consistently. There are awkward moments that can be dismissed as precious, as on *Movers and Shakers*, an up-tempo dance workout that tries for the sort of floating, chant-laced vamp Talking Heads excel at, but stumbles under its rather wooden vocal work. Such lapses aren't helped by the abundant verbal abstractions.

When Eardance does land on target,

though, it nearly erases the boundaries usually assumed between classical and pop music. On vocal turns like the opening *Jaded* or a mysterious, minimalist instrumental like the title piece, the style conjures images of the sort of "rock" band ECM might pursue were it so inclined.

"Seek Opposites" can't be recommended unreservedly, given its studious air and lyric pretensions, but at least Eardance is genuinely progressive in its approach. Pop adventurers should be interested, as much for the album's demonstration that high production standards don't necessarily require hefty budgets as for the quality of the music.

SAM SUTHERLAND

The Jam: Dig the New Breed

Polydor PD 1-6365

The Jam: Beat Surrender

Polydor 810-751-1 Y-1

The Jam: The Bitterest Pill

Polydor PX 1-506

Peter Wilson, producer

For British rock fans, the disbanding of the Jam was as significant a cultural event as *M*A*S*H's* decision to end the Korean War was for U.S. television viewers. One only has to look at the March 12 readers' poll issue of *Melody Maker* to see how much the group will be missed: It won as best band, best male singer (Paul Weller), top personality, top live act, Nos. 1 and 2 albums of the year, the two top singles, top dance record, and Nos. 1 and 2 instrumentalists. To Americans, this kind of Jam landslide is inexplicable, and the band's official farewell album, "Dig the New Breed," isn't likely to clarify matters for the uninitiated.

The LP is a collection of live performances from 1977 through 1982, and, like so many live albums, it preaches to the already converted. "Dig the New Breed" is frenetic, all right: Drummer Rick Buckler bashes away with fists of fury, and the Jam's consistent approach to these fourteen songs is stiff-armed punch. Weller, the trio's composer, singer, and guitarist, sings as though his necktie is choking him, and whatever talent he demonstrates as a writer is undercut by his pontificating and by the quality of the live recording that gives all the songs the consistency of stale toffee.

The earlier, basic-British-rock songs influenced by the Who, the Kinks, the Beatles—*In the City*, *Start*, *Standards*, *It's Too Bad*—come off best here, and *Set the House Ablaze* ends Side 1 with a burst of flailing, energetic hard rock. But on the final five tracks, all culled from April 1982 concerts, Weller's rancor is the only thing that slices through the atmosphere of live hoopla. Songs such as *That's Entertainment* and *Going Underground*, whatever their failings as social criticism, deserve to be heard under less garbled circumstances, and the absence of such high-quality Weller songs as *Eton Rifles*, *Down in the Tube Sta-*

tion at Midnight, and *Town Called Malice* suggests that the legacy of the Jam would have been more appropriately summed up, for the U.S. at least, by a straightforward "best of" album.

The two twelve-inch Jam EPs released by Polydor during the last year lend a clue to the musical circumstances that led to the band's split-up. "The Bitterest Pill" and "Beat Surrender" show Weller branching off into pop-soul that asks for more spontaneity and fuller arrangements than the group's rigid format could give him. *The Bitterest Pill (I Ever Had to Swallow)*, sung with Jenny McKeown of the Belle Stars and laden with violins, mutes Weller's anger with his lushest melody, and the entire "Beat Surrender" EP is a virtual tribute to soul music. Weller isn't up to the vocal standards of Curtis Mayfield (*Move On Up*), Edwin Starr (*War*, versions of which appear on both EPs), or Eugene Record of the Chi-Lites (*Stoned out of My Mind*). But his move toward this material (and Little Willie John's *Fever* on "Bitterest Pill"), his loosening up on the jazzy *Shopping*, and his use of a rousing horn section are indications that he was looking for an alternative vehicle.

Weller's first post-Jam project, a single with keyboardist Mick Talbot as the Style Council, is *Speak like a Child* (Polydor import TSC 1) and has a snappy, engaging mid-'60s feel. Weller also finished sec-

ond in *Melody Maker's* "brightest hope" category, and additional records like this one will make that vote of confidence seem more than just a sentimental send-off.

MITCHELL COHEN

Nick Lowe: The Abominable Showman
Roger Bechirian & Nick Lowe, producers
Columbia FC 38589

By establishing himself as a pop poseur on "Pure Pop for Now People," Nick Lowe conditioned his audiences to appreciate not only the sprightliness of his pop songs but the attitude that pricked their tuneful innocence. This has caused a peculiar problem, because if ever he were to come up with a song as unabashedly joyful as one by, say, Buddy Holly or the Everly Brothers, people would always be looking for the joke.

The very title of "The Abominable Showman" reaffirms Lowe's oft-ignored contention that his music is nothing more or less than entertainment. Working with the same musicians that recorded Paul Carrack's "Suburban Voodoo" (which calls itself Noise to Go on tour), Lowe dresses his LP in similar party duds. Like cocktail chatter, his concerns are resolutely frothy, and rarely stray beyond the distractions offered by his dance partner. Still, he manages to shuffle these familiar cards into some interesting hands. Spinning out of a delicious Spanish guitar run, *Chicken and*

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Feathers is a bouncy bonbon about a romantic imbalance of power ("You get the chicken, I get the feathers"). Equally fine is *Time Wounds All Heels*, a midtempo ballad that overcomes its overwrought wordplay with stylish harmonies and a lovely descant by Carlene Carter (Mrs. Lowe).

As both a player and producer (this is his first solo album with an outside producer), Lowe is nothing if not a traditionalist craftsman, and he often pleases more through details than complete songs. *Mess Around with Love* draws you in with his lushly ascending bassline, while more standard rockers like *We Want Action* and *Raging Eyes* ride on the clean, buoyant sound of the players. Rockpile, the group he fronted with Dave Edmunds, was better at hard rock & roll, but this lighter touch is more in tune with Lowe's eclectic, characteristically British sensibilities. He's a jack of all styles, and this time out he closes with *How Do You Talk to an Angel*, a cuddly cabaret ballad in which Lowe sends his sweetest warble up against a solo violin. The pleasing result: Picture this long-nosed Brit in a beret. Less mannered than '82's "Knick the Knife," "The Abominable Showman" is no more or less forgettable than fun.

JOHN MILWARD

Van Morrison:

Inarticulate Speech of the Heart

Van Morrison, producer
Warner Bros. 23802-1

For Van Morrison, the search for inner tranquility is tied up with the past—with the sound and soul of Ireland, the poems of John Donne, the songs of Gene Vincent & the Blue Caps. All are evoked on his new record, "Inarticulate Speech of the Heart," an album that, against long odds, manages to celebrate spiritual serenity without lapsing into smugness or vapidness. Even a "special thanks" on the LP jacket to Scientology's L. Ron Hubbard and a lyrical allusion to Kahlil Gibran can't dilute the graceful strength of this music; it has its own inner rhythms and draws you into them.

Soul music is usually associated with exertion, and attempts to explicate a state of grace are often sanctimonious and easily resisted. Morrison's "enlightened" LPs—"Into the Music," "Beautiful Vision," sections of "Common One"—assume an understanding that music can be urgent without being strenuous and that, as this album's title implies, the feelings that matter most are not easily verbalized.

Some of Morrison's expressions of awareness are no more than the usual abstractions (*Higher Than the World*). But that is part of the dilemma that this record eventually overcomes: how to describe the glow, how to ground it in words and musical images that don't go off into overly personal vapors. Morrison accomplishes this with instrumentals (*Celtic Swing*, *Septem-*



Wainwright: his most grown-up effort

ber Night, and the Irish melody and arrangement of *Connswater*, which uses Uilleann pipes and flute) that reel backward to his heritage and by reinforcing the atmosphere of deeply rooted memory on *Irish Heartbeat*, *Cry for Home*, and *The Street Only Knew Your Name*.

The music says that peace of heart comes from a reconciliation with the past and a rediscovery of your home: Return to "your own ones" for warmth and reassurance, and "you won't have to worry anymore." This is modern inspirational music, impressionistic and haunting, spacious and repetitive. There are also unexpected moments that break the placid surface of the album while helping to carry its theme forward: the slight undercurrents of tension in the music and Morrison's voice, the sudden outburst of a scat duet with an electric guitar, the yearning to pull the words of the pre-Industrial Age poets into our Nuclear Age, the references to Gene Vincent's *Who Slapped John* and *Be-Bop-a-Lula*, the drums that come crashing in near the end of *Inarticulate Speech of the Heart No. 1*, the saxophone that groans like a wounded animal. On the album's toughest song, *The Street Only Knew Your Name*, Morrison recalls "walking around the heart of town looking for that sound," and it's clear that no matter what he claims at the start of the LP, he'll never be able to "leave these blues behind." The cry in his voice will always be one that carries anguish and salvation. If you don't feel the pain, how will you know what to heal? MITCHELL COHEN

Alan Stivell:

Renaissance of the Celtic Harp

Franck Giboni, producer
Rounder 3067

Aficionados of European music need no introduction to this recording or to its creator, Alan Stivell Cochevelou, whose concert tours and albums have earned him an exalted niche in the revival of Celtic music. For more casual listeners, however, the

long overdue American release of this set, originally issued by Fontana in France well over a decade ago, may prove revelatory.

Stivell's principal instrument is the Breton concert harp, the Gallic cousin to the Celtic harp, which itself is presumed to have evolved in Ireland from primitive designs first brought there by Phoenician sailors. If the genealogy of the instrument remains vague and cast in prehistory, its substantial charms have since been rediscovered through the work of recent Irish, Scottish, and French musicians.

Stivell himself brings a special authority to his work in that his father, Jord Cochevelou, first began attempting a reconstruction of the Breton instrument in the 1940s, with his son as principal exponent for subsequent prototypes.

By the time Stivell cut this album for an emerging folk audience in the late '60s, both his technique and that of modern stereo recording were fully capable of preserving the delicate character of the instrument. At least as essential to the atmospheric beauty of the music is Stivell's poise in balancing a thorough knowledge of the traditional pieces with an imaginative palette as arranger: His own harp, Irish flute, Scottish bagpipes, and Breton bombardon are combined with traditional and modern instruments, both acoustic and amplified, without exposing any glaring seams.

The program ranges through Cornish and Irish music as well as the Breton sources that dominate, but one needs no knowledge of those idioms to be enchanted by the primeval grace of the music. Stivell creates a hushed, elegiac mood that can be heart-stopping, and even when voyaging through the Irish and Scottish jigs that dot *Gaeltacht*, the eighteen-minute Gaelic medley that fills Side 2, the sprightly cadences are tinged with meditative reserve.

SAM SUTHERLAND

Pete Townshend: Scoop

Peter Townshend & Chris Ludwinski, producers. Ateo 90063 1-F (two discs)

"Scoop" is comprised of outtakes, demos, experimental electronic pieces, and musical first drafts that Pete Townshend has been doodling with in studios around the world since the early days of the Who. It is also one exorcising ego trip.

For each of the twenty-five tracks on this double album, Townshend provides glib notes about how, where, and why the recording was made. No matter that many of these are throwaways, compositions that were rejected either by the Who or one of the Who's producers; Townshend thinks they're all terrific. *You're So Clever*, recorded at the 24-track studio at Townshend's "country place" and originally written for Bette Midler, was dismissed out-of-hand by producer Chris Thomas for "Empty Glass." Writes its author: "I still think it's great." *Politician*, a tune inspired

by Motown groups like Martha and the Vandellas, features a sound "that only I could get at that time." About *Bargain*, one of the demos he wrote for the film *Lifehouse*: "[These] demos are among the best I have ever produced."

And so it goes. Townshend is unarguably adept at tinkering with synthesizers and tapes, and at getting weird noises out of weird things (there's a wonderful whirring locomotive sound on *Cookin'*, an otherwise awful early recording). But he's so caught up in his own technical prowess, in his Teacs and Yamahas, his Neve mixing console and his PortaStudio cassette deck, that he has lost all semblance of artistic sensibility.

Admittedly, "Scoop" does have a few interesting moments, especially if you're a diehard Who fan. Some of the mid-Sixties material—*So Sad About Us* and *Circles*—features Townshend in his most melodic pop mode. And the goofy, polka-beat *Squeezebox*, which he says he did as a joke, is a lot more fun than the version with which the Who later had a hit. But what can you say about a ditzzy piano-and-drums reading of *It's a Long Way to Tipperary* or the light-weight atmospherics of an instrumental like *Recorders*?

I have learned two things from this fat bunch of homemade and off-hours endeavors. One is that Townshend listens—or listened—to Motown, the Beach Boys, and the Beatles. The other is that the superstar takes himself far too seriously. Collections like "Scoop" should not be allowed to see the light of day.

STEVEN X. REA

Loudon Wainwright III: Fame and Wealth

Loudon Wainwright III, producer
Rounder 3076

Loudon Wainwright's first two albums, released at the beginning of the Seventies, were not easy records to listen to. The singer-songwriter, accompanying himself on acoustic guitar, was certainly clever and cunning, smart and satirical, but the emotions behind his words—sung in a high, bitter whine—were angry, distraught, and dark. Sure, there were weird puns, strange jokes, and deft syntactical leaps, but no amount of wit and wordplay could conceal the fact that he was one unhappy fellow.

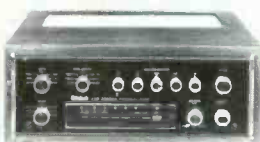
A dozen years and seven more commercial-sounding albums later, Wainwright has returned to the simple, stark musical style of those early discs. And although he still can't be called a happy man, his first collection of new songs in four years shows a wiser, worldlier set of perceptions. There is irony here, but there is also tenderness; there are neuroses, but there are also moments of peace and self-assurance. Wainwright has grown up.

Nowhere is this more apparent than on *April Fools Day Morn*, a brilliant first-person portrait of a man who's both a drunken. (Continued on page 95)

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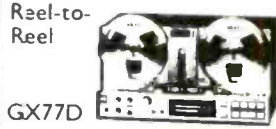
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March of the independents (from left): Jonny Holtzman, Pete Christlieb, Gary Windo, Joseph LoDuca

Roll-Your-Own Jazz

Reviewed by Crispin Cioe

Joseph LoDuca: *Glisten*

Joseph LoDuca & Edward Wolfrum, producers
Cornucopia Records AGS 82002
(Darnell Sales, 19021 W. McNichols, Detroit, Mich. 48219)

The Pete Christlieb Quartet:

Going My Way

Pete Christlieb, producer
Bosco Records (P.O. Box 2085, Canoga Park, Calif. 91306)

Jonny Holtzman: *Let's Do It*

Jonny Holtzman, producer
Toast Tone Records (P.O. Box 372 Yorktown Hts., N.Y. 10598)

Montana

Jim Honaker, production coordinator
Labor Records LAB 5
(P.O. Box 1262, Peter Stuyvesant Station, New York, N.Y. 10009)

Gary Windo: *Dogface*

Gary Windo & Hal Willner, producers
Europa Records JP 2011
(611 Broadway, New York, N.Y. 10012)

FOR THOSE WHO CAN AFFORD IT, there are some distinct advantages to financing and producing your own recordings. The biggest one is the freedom to present your artistic concept in toto, without label pressure to sweeten, delete, or otherwise compromise your intentions. All of these independent-label jazz discs are self-produced, some

self-financed; all are remarkably free of excess.

Joseph LoDuca is a young Detroitier who plays unabashedly lyrical and technically adroit classical and electric guitar, touching some of the same stylistic bases as Earl Klugh and Pat Metheny. But, as the spare, natural production approach of his debut album reveals, he has already developed a clean, singing tone and a phrasing style that are all his own. For several years LoDuca has been performing duet concerts around the Midwest with Oregon's Ralph Towner, and on "*Glisten*" Towner contributes appealing twelve-string background chording, especially behind LoDuca's moody guitar-synthesizer runs on *Neon Night*. Towner also supplies some delicate piano comping on the album's energy high point, *Artful Dodger*, an uptempo Latin-jazz number with Ralphe Armstrong on bass and Lawrence Williams on drums. LoDuca is a convincing fusion player with impressive chops and interesting ideas; indeed, there is plenty of evidence here of his having played around Detroit in mainstream and funk-jazz settings. But the album also shows off his vivid palette of guitar colors and harmonic moods, particularly on *Perry Street*—an effective bitter-sweet tone poem.

Tenor saxist Peter Christlieb, a veteran of the L.A. studio scene and Doc Severinsen's *Tonight Show* band, releases his

second solo LP here. His first, "*Self-Portrait*," was also a self-produced effort and received a 1981 Grammy nomination for best instrumental performance. An essentially live-in-the studio LP, "*Going My Way*" features Christlieb's regular, hard-swinging quartet: pianist Alan Broadbent, bassist Jim Hughart, and drummer Michael Whited. Christlieb is an exceptionally poised soloist, even on a breakneck-speed jazz standard like Gigi Gryce's *Minority*. But the real corker is the stunning ballad *Detour Ahead*, where his control of dynamics and robust, Rollins-ish approach to melody are riveting.

For several years, Jonny Holtzman sang and played in the Widespread Jazz (formerly "Depression") Orchestra, a talented East Coast big band that plays swing era classics with a strong emphasis on Basie and Ellington. On his solo debut, Holtzman plants his feet firmly in Sinatra's bel-canto approach to pop standards. Buoyed by tight, punchy arrangements from Bob Wilber and trumpeter Randy Sandke, "*Let's Do It*" has the panache of a late-'40s, small-combo, r&b swing date, especially on chestnuts like *Goody Goody* and the Cole Porter title track. The three Holtzman originals are so squarely in the tradition that you'd swear Fred Astaire sang at least one of them, *I Just Have to Think About You*, in *Top Hat*.

Unfortunately, the recording itself

also sounds reminiscent of '40s primitive techniques, but, given its presumably limited budget, this seems forgivable. For Holtzman's strong, clear voice and his group's infectious good spirit come through on each track, and Sandke's trumpet solos and Bob Hanlon's Lester Young stylings on tenor sax are consistently exciting.

Not nearly as obvious in its revivalism, but every bit as committed, is Montana. With guest soloist Jack Walrath on trumpet and fluegelhorn, the quartet plays a highly evolved hard-bop evocation of the Sixties Blue Note records sound, when Wayne Shorter and Freddie Hubbard were in full sway as composer-soloists. Though the group's members all live in or hail from Montana, their LP suggests mid-'60s New York mainstream improvisation at its finest. The level of playing is high: Reedman Chuck Florence has a strong tone, a hard attack, and a sophisticated harmonic approach on tenor, masked in the kind of smeared notes and glissandos that Shorter originated; Walrath, a veteran of several Charlie Mingus bands and numerous blue-chip sideman spots, is capable of timbral delicacies and refined shadings of the highest order; and pianist Bob Nell moves between Cecil Taylor-style angularities and lush, open-ended chord extensions with finesse. The group's roots show up most obviously in the stop-time space and uninhibited humor of Nell and bassist Kelly Roberty's *Seper B*, as Florence's soprano sax flutters and squawks like a crow on a telegraph wire. But this is serious stuff. In fact, "Montana" is one of the strongest mainstream-jazz debuts of the past year.

Saxophonist Gary Windo's first solo LP, "Dogface," hovers over the space where rock and the avant-garde meet and ignite, but with enough humor to make the results quite interesting. Windo is an English sax player, now living in the U.S., whose diverse credits include the Carla Bley band and sideman work for Robert Wyatt, Pink Floyd, Ian Hunter, and most recently, the Psychedelic Furs. His playing draws from such avant-garde influences as Archie Shepp and Albert Ayler, with large dollops of raspy r&b wailing mixed in for good measure. The album is loosely based on a canine theme, and includes oddities like *Don't Be Cruel* sung to a dog named Elvis; an animated dialogue between a screaming tenor sax and an unnamed mutt; and a fractured version of an old Rufus Thomas tune that Windo has renamed *Feela Dog*. Windo uses a variety of musicians, including that collection of celebrated rock eclectics, NRBQ, which lends solid, unpretentious support. The standout cut is a stomping version of Sister Rosetta Tharpe's *That's All*, a '50s rocker that seems like home turf for the backing band and finds Windo alternating jubilant high harmonics with classic rock sax cutting lines. **HF**

(Continued from page 93)

obnoxious lout and a scared, sensitive, fragile human being. The scenes in this song reverberate with emotion: the breakfast his mother fixes him because he's "too old and large and close" to be held in her arms and soothed, the woman he tries "to take down" on the bathroom floor, the wobbly trio of friends getting soused and silly in the small hours of the day.

Most of the selections on "Fame and Wealth" feature Wainwright on acoustic guitar and nothing—and no one—else. The exceptions are *April Fools Day Morn*, in which his acoustic guitar is matched by the intricate strum and plunk of Richard Thompson's; *Reader and Advisor*, where Thompson offers snaking electric-guitar lines and some soft, quavering mandolin; *Five Years Old*, a birthday song to Wainwright's daughter that sports a charming, buoyant arrangement for bass, drums, guitar, and keyboards; and *IDITYWLM* (which stands for "I don't think that your wife likes me"), a kind of Tom Waits barroom blues in which Wainwright's wry wailing lopes along over some jazzy piano and percussion. The song's blend of humor and outright hostility is typical, masterful Wainwright.

There are other tunes here that are easier and funnier: *The Grammy Song*, in which Wainwright wins not only a Grammy, but an Oscar, a Pulitzer, and a Nobel prize too; *Saturday Morning Fever*, a yelpy blues about the cartoon fare on TV; and *Fame and Wealth* ("bucks and praise are what I crave"), a dirgelike, a cappella number where Wainwright seems willing to compromise himself completely for a little notoriety and a lot of cash. It's a joke, I think. "Fame and Wealth" is Wainwright at his best, surpassing the musical power and focus of his eponymous debut LP and "Album II," and doing so with a newfound emotional maturity. **STEVEN X. REA**

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EQUALIZATION

(Continued from page 37)

8-kHz slider can make a vast improvement in many classical recordings, where individual sections or instruments have been spotlighted with closely placed microphones. An octave equalizer can also serve as a sophisticated scratch filter for old records by restoring the low bass and boosting the region between 6 and 10 kHz, while rolling off the top octave (where there is no musical material) to reduce noise.

An equalizer conveys another benefit as well: ear training. It's quite a shock, for instance, to see how few records have significant content at the extremes of the audible range. With most music you can remove the extreme bottom octave and give up nothing but extraneous noise, and for a suprisingly large number of records that's true of the top octave as well. Similarly dismaying revelations may be in store regarding your loudspeakers, or even your hearing. More gratifying, however, is the knowledge you will gain about the different parts of the midrange and the vital importance of their relation to each other. In particular, you will discover that the ear is so sensitive to perturbations in the midrange that changes in the 125, 250, and 500-Hz bands can fundamentally alter the character of vocal material.

There is another particularly timely reason to have an equalizer in your system—the digital Compact Disc. This new medium will, as advertised, bring us audibly perfect replicas of the original master

tapes. The problem is that many of those masters, both analog and digital, were engineered to deliver a satisfactory amount of musical detail when cut and pressed on vinyl discs and played back on mediocre systems. Most of them were made with aggressively close miking and lots of upper-midrange and top-end boost. Unfortunately, when transferred to CD and played back on a good system, they sound awful.

Having heard several fantastically good digital recordings, I know what CD can do given the right source material. But the medium will be damned for the unpleasant messages it is delivering until recording techniques change substantially. That will take time, and during this interim period—in which we must endure a temporary mismatch between recordings and playback systems—a good equalizer can help.

Unfortunately, the effects of overly close miking can't be corrected completely by equalization alone. Recent work by Arthur Benade of Case Western Reserve has shown that close miking can result in irregularities on the order of 40 dB in the relative strength of an instrument's harmonics. Nor can we remove the artificial quality of room reverberation that has been picked up from microphones placed far from the ensemble and folded into the mix like so many egg whites. But preliminary experiments with some of the worst sounding early CD releases prove that most can be corrected to the point where they are listenable, if not actually attractive. (To conduct

your own experiment, you might try to "repair" Mussorgsky's *Pictures at an Exhibition*, Hiroko Nakamura, prod., CBS/Sony 38DC 39).

Some people maintain that any equalizer degrades the quality of the signal that passes through it, even if all its sliders are set at their flat positions. They point to the extra stages of amplification—one for each band—and complain of the phase shifts introduced when the controls are moved off their center positions. Leaving aside the controversial question of whether phase anomalies are audible at all, remember that the perturbations in frequency response that we are trying to correct, whether caused by microphone technique or post-production fiddling, all carry their own inevitable phase alterations; in correcting the frequency response, we are at least partially undoing those as well.

Nevertheless, if an equalizer is audible with its controls set at zero, something is wrong. The problem is usually that the controls are badly calibrated, and the response isn't really flat. This is a common defect in cheap equalizers and constitutes a major reason to consider a more expensive unit. Fortunately, the breed has improved markedly over the last few years, so that there are now many models with accurate controls, versatile switching, and inaudible distortion and noise. For its ability to improve bad recordings and for its great educational value, an equalizer is, if you'll forgive the pun, a sound investment. **HF**

RING/PARSIFAL

(Continued from page 69)

arate publication as well—and no doubt Erato hoped to profit from the film tie-in: The box cover is headed "*Musique originale du film de H. J. Syberberg*," with Wagner's name coming only farther down. *Die Walküre* in Dresden, even with some imported singers, is a logical sort of project; *Parsifal* in Monte Carlo seems more improbable on the face of it, yet works surprisingly well. I first heard this performance while watching the film, and found it musically convincing. (The film is, as the phrase goes, "something else," too complex to discuss here.) On rehearing, without the visual distractions, its limitations are clearer, though not disabling: The orchestral playing is less polished than one hears on competitive versions of German and Austrian origin, and the chorus imported from Prague, strong of tone, occasionally lags slightly behind the beat. But Armin Jordan has a good sense of the opera's flow and structure, achieving a spontaneity and continuity that are certainly more convincing than Karajan's sleekly chilly traversal (DG 2741 002, August 1981), if rarely as resonant as Knappertsbusch's classic 1962 live-performance recording (Philips 6747 250).

And there is some good singing here. Minton, heard without the intense embodiment of Kundry that Edith Clever wraps around her voice in the film, turns out to be not quite as consistent as one had remembered, with some flatness in the second act, but overall hers is a performance of remarkable power and conviction, seductive and repulsive by turns. Reiner Goldberg is yet another non-Heldentenor, but his tone is aptly fresh and bright for the beginning of the role, firm and musical later on if without much access of power and substance as the character matures. Despite some roughness at extremes, Robert Lloyd sings a really distinguished Gurnemanz, firmly voiced, with much warmth and tenderness in the tone. The boundless solidity of Hans Tschammer's bass makes Titirel's few lines memorable, and Aage Haugland is a vivid Klingsor; only Wolfgang Schöne's unvariedly loud Amfortas leaves a great deal to be desired.

The digital sound is clear and natural, but there is less here than in most other recordings of the special aura of *Parsifal*, the luminous stained-glass orchestration that Wagner designed for the covered orchestra pit at Bayreuth. This is partly a function of the less skilled playing, but no doubt also partly the result of the acoustics

of the recording room, which cannot match the special Bayreuth sound. Filmgoers who come to *Parsifal* through this recording will not be misled or disappointed by Jordan's honest achievement, touching no extremes of profundity or executive perfection yet always involved and involving—but there is a dimension to Wagner's work missing here.

Of course no useful generalizations about the ultimate effect on recordings of the industry's partial sacrifice of autonomy are justified on the basis of this small sample. What can be said is that, however it came about, the Boulez *Ring* is at least an historical document of a significant innovation in performance style, and, as such, it will retain interest despite its manifest deficiencies. Like the results of some restorations of great paintings, it may strike us as at once revealing and excessive—but, unlike the restored paintings, it does not destroy earlier states of the *Ring*; we can still return to Furtwängler and Solti and Goodall as we please, listening to them with ears and responses subtly refreshed by the experience of Boulez'. Not, perhaps, a first or even a second *Ring* to own, it is certainly a *Ring* to hear at least once as well as to see. **HF**

TURANDOT

(Continued from page 71)



as an exit line, here goes for nothing, twice. In the third act, she seems, in view of her recent ordeals, rather too collected. Face to face with Scarpia (Raimondi), sparks fly from time to time—how could they not?—but in her haggling over the safe-conduct, she implores and trusts too much. Not that it matters; her peculiar to-and-fro between wisps of sound and full outcry has long since made for complete dramatic incoherence. (Karajan is no doubt to blame for these exaggerations, but the uncontrolled wobble at both ends of the dynamic spectrum is Ricciarelli's personal problem.)

Her Aida is a sustained mistake, with no incidental pleasures worth mentioning. But the same can be said of Abbado's entire dull, remote account of the score. Davis' brisk, featherweight *Trovatore* is a curiosity, its apparent purpose to demonstrate that the score can be made (but why?) to sound like Donizetti. The approach makes no sense, but the performance does have its intermittent rewards, and some of them come from the heroine. By the standards, say, of the young Leontyne Price, whose smoldering entrance ("*Un'altra notte ancora senza vederlo!*") conjured Leonora up in all her grandeur, Ricciarelli's reading is very tame. In the main, she bears her sorrows lightly; she seems truly at one with her part for the first time in what is surely the most—the only—insipid passage of that robust score (the duettino "*L'onda de' suoni mistici*"). And yet, in "*D'amor sull'ali rosee*," her utterly classical restraint suddenly justifies the experiment of casting the role with a lyric soprano. It no longer seems eccentric to want to hear that voice in that music; the surprise, then, is all the greater when Ricciarelli, having lapsed back into blandness, lights into a perfervid "*Mira d'acerbe lagrime*," all impetuosity and desperation. And with *Maria di Rudenz*, she follows the path of romantic distraction several steps further. Abandoned mistress, restored heiress, spurned victim, and avenging fury, and all the while a faithful lover, the heroine of Donizetti's melodrama gives the soprano every opportunity to practice a newfound brooding intensity. When Maria advances, like Medea, to confound those who have sinned against her, Ricciarelli's cry of "*Sì, son io!*" shivers with the aghast courage of a soul pushed far past all limits of endurance.

Her concentration as she leads off the superb ensemble that ensues ("*Chiuse al di per te le ciglia*") is mesmerizing; her subtly meshed sweet and stabbing attacks capture the heroine's inextricable pain and anger. The opera, Donizetti's fifty-ninth, is no *Lucia di Lammermoor* and no *Anna Bolena*, but it shows how authoritatively, how splendidly, Ricciarelli might come to serve the serious bel canto literature—if, that is, her excursions into the heaviest parts of Verdi and Puccini have not already exacted too great a toll. *Maria di Rudenz* documents not only a tremendous advance in her historic artistic artistry, but also, in its edginess and faltering control, the serious deterioration of once glorious vocal equipment.

But I digress; it is the lady's Turandot we set out to appraise. You will have guessed that it can hardly be what Puccini had in mind. "*In questa reggia*" begins wistfully, sinks into dreaminess ("*oggi rivivi in me*" emanates from the Land of the Lotus-Eaters), and then rises, first gently, then in a rush, to pure rhapsody. "*Mai nessun m'avrà!*," cries the Princess, but the oceanic orchestra swoons and gives the game away. Ricciarelli's notes, however, are squally.

Where Turandot fulminates, Ricciarelli rebukes, mildly. Where Turandot inveighs, Ricciarelli mouths the words. Where Turandot must imperialize, Ricciarelli gets lost in the ensemble. Moment to moment, the singer tries to make intelligent choices, but the role does not yield to her. No wonder that in Karajan's stunning recording the first act, in which the Princess does not sing, is the best.

Given that no really suitable leading lady could be drummed up, the question remains why, of all people, Ricciarelli was offered the part. Beyond the Looking Glass

VERDI PERFORMANCE

(Continued from page 66)



changes that did not require orchestral adjustment—as the vast majority of the ornaments found on early records do not. In fact, his instrumentation seems often to provide for it explicitly, when orchestral doubling of the voice is suddenly removed as a line moves toward its cadence. Examples abound in *Trovatore*, *Traviata*, *Rigoletto*, *Ernani*, and the earlier operas in general. (Typical instances are the downward spirals in "*Ernani involami*" [*Ernani*] and the fioritura following the syncopated top notes in "*Sempre libera*" [*Traviata*])—both frequently ornamented on the records.)

Indeed, the traditional signals for pos-

sible embellishment (final cadence, internal cadence or modulation, melodic repeat, etc.), obscure to us but obviously clear to the singers, were very much part of "what is written" to the performers for whom Verdi wrote. The composer's own behavior and tastes are consistent with such a view. We know that he admired, in *Traviata*, the soprano Bellincioni, cited above. We know that he esteemed Adelina Patti as highly as any singer (praising, for instance, her "incomparable performance" of "*Ah, fors'è lui*"), and we also know that she not only ornamented *Traviata*, but varied embellishments from performance to performance.

Many anecdotes attest to Verdi's willingness to see beyond the printed page. A famous one has him approving the celebrated high Cs of "*Di quella pira*" (*Trovatore*) with the caveat that "they had better be good." This may or may not be true; the composer gave surer indication of his attitude when next he came to write for

(Continued on page 101)

(Continued from page 100)

perpetrator of the crime, Enrico Tamberlik. The occasion was *Forza* in Petersburg, and, for the tenor, Verdi composed another martial C major cabaletta with chorus, this time writing in the high C himself. (When he came to prepare the score for other performances, he did exactly the practical thing that is so often condemned as an enormity in *Trovatore*: He transposed the cabaletta to B flat, not because the muses had urged another key sequence on him, but because "nobody will be able to sing what was written for Tamberlik.") So much for "Di quella pira"! The ghost of Verdi, insofar as we can perceive him, frowns disapproval not on the vainglorious tenor, but on the officious purist who stands between him and the desired effect of his cabaletta.

From this and other evidence, it is possible to say with confidence that Verdi could hear the kind of singing discussed here without finding any transgression worthy of note. It becomes almost irrelevant in

this context to speak of his "intentions," as though older composers had intentions just as specific of those as of Carter and Boulez but somehow failed to notate them with sufficient clarity. It is misleading to suppose that Verdi intended a certain fixed result from each bit of notation: He intended, rather, that his scores should enter the realization-system of the operatic theater and that a performance should emerge. He advocated changes in that system, of course, but we should be extremely wary of attributing to his intent the further changes that have come about since his day. Verdi made *Traviata* not just out of his own head, but also out of the traditional materials of Italian opera—materials that are inherently manipulable by singers.

From this standpoint, the Verdi of Muti and Plácido Domingo is as "wrong" as Thomas Beecham's Handel or Pablo Casals' Bach. Whether such performance transgresses the composer's spirit is a more complicated question: The spirit of

any great composer has many facets, some of which perhaps preclude others in any one performance. Much of the spirit of Bach and Handel is there in Casals and Beecham. If we had to hear Verdi sung only as he is sung on the early records (which along with the virtues praised here have many foibles), we would lose a great deal of what is most essential to his music. But so do we now, hearing only the literal, vigorous Verdi of our best contemporary performances and recordings. The point of investigating period practices is not to impose them as doctrine, but to offer them as vitalizing possibilities. A beautifully turned *gruppetto*, a sudden *pianissimo*, a lingering *rubato*, a flash of *roulade*, even that much-despised stock in trade, the *corona* on an exciting (possibly unwritten) top note—all these are parts of the singer's expressive vocabulary that twentieth-century practice has increasingly limited but that, wielded by artists, can give a satisfaction whose loss leaves us poorer. **HF**

McGARRIGLES

(Continued from page 89)



you recorded in Los Angeles, is by far your least satisfying work. And I've read that you've called the whole experience making that LP "distasteful" and "awful." What happened?

Kate: Sitting around the pool wasn't so bad. . . .

Anna: What it boils down to is that we didn't have a lot to say in what was happening. We kind of gave up after a while. We'd say one thing, and the producer [David Nichtern] would say, "Oh yes," and we knew it was going in one ear and out the other.

Kate: We didn't have an awful lot of confidence in him, because he had never actually produced anything.

Anna: We had more confidence in the engineer [Elliot Scheiner], because at least he knew what he was doing and would express his opinions. Even he didn't get along with the producer. In fact, he was always making faces behind his back. It was a terrible situation to be in.

Backbeat: So, of all your albums, that's the one you're least happy with?

Kate: It was the least joyful to make—particularly compared to the previous two. When we made the first record, we had no idea of what it would be like. We had no expectations. We just thought that Warner Bros. was letting us do this little thing, and then it was just going to sit on a shelf somewhere. Nobody was ever going to hear it. I mean, that's really what I thought. And so we were very surprised by the attention that it got.

So, fueled with that kind of attention and somebody saying, "Hey, they do make nice music!" we went and made the second record ["Dancer with Bruised Knees"], feeling like explorers. We made it in our hometown, and we used people that we wanted to use and did songs that we liked. It was really fun because we were kind of confident and hopeful. "Pronto Monto" was done in the most expensive studios, with the most expensive engineers and session men. The technical results were very state-of-the-art, but it wasn't much fun.

Backbeat: And then along came "French Record" . . .

Kate: Which was great fun because we had the same attitude we had with the second record. And the engineer [Chuck Gray] was very creative. We went for this sound—you can feel the northernness of it, almost hear the snow falling. On *Excursion à Venise*, the last song on Side 1, you can feel the wind blowing the snow off the lake.

Backbeat: Some of your songs are very childlike, as you've said, and some others are just about children. Have your children influenced the kind of things you write about?

Anna: Yes. Just because they're there. They're a part of your life. You see things the way they see things.

Kate: You tend to get down to their level.

Backbeat: Here's the proverbial "What do you think you'll be doing twenty years from now?" question.

Anna: I think we'll always make music. I don't know how many people we're going to make it for—maybe just for each other. But it's not something we're going to stop doing—even if there's no record contract.

Backbeat: Is there a new Kate and Anna McGarrigle record in the works?

Kate: Well, there's pressure to do one.

Backbeat: Is that because "Love Over and Over" did moderately well?

Kate: No, it's because they can't find a single off of it.

Backbeat: So they want you to jump right in and do another?

Kate: Yeah [very unenthusiastic]. I think they'd like to put something out by January. Janey stormed in the other day and said, "Your record is coming out in January!" and we looked up and both cried, "What record?" [laughs].

Backbeat: Have you written the songs?

Kate: Some. This is exactly what happened with "Pronto Monto." Warner Bros. said, "We really want you to do a commercial record," so "Pronto Monto" came about. And then as soon as it came out we had this meeting where the president said, "Look, we'd like you to go back and make a record like your first two." I just find it all very baffling. But I don't let it bother me.

Backbeat: Are you going to bow to this "pressure"?

Kate: I don't think we'll put anything on record before we're ready.

Anna: If anything, we'll probably bend over backward and take forever to do it [laughs]. I shouldn't say that, but sometimes we do tend to do things like that. We've become quite pig-headed about it. **HF**

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BACKBEAT REVIEWS

(Continued from page 95)

Lester Young, trombonist Dickie Wells, drummer Jo Jones, guitarists Freddie Greene and Al Casey; in the second, bassist Oscar Pettiford, drummer Shelly Manne, pianists Ellis Larkins and Eddie Heywood; and in the third, trumpeter Bill Coleman.

As Nat Hentoff points out in his liner notes, "Classic Tenors" transcends chronology—the sound and the spirit of the sessions are as immediate now as they were forty years ago. There is a superb variety of Hawkins solos here, many of them rolling figures gathered in short, stabbing phrases that take on a cumulative power. He gives *Sweet Lorraine* a soft and feathery treatment, while *How Deep Is the Ocean* is magnificently deep-toned and commanding. Hawkins consistently plays with great authority, yet there is also warmth and joy in his sound and little of the macho that often characterizes saxists trying to sound big.

Young is not as amply represented. In four tunes on Side 2, he progresses from casual, lesser Lester to confident, classic Lester, gathering most of his swinging momentum during his four-chorus solo on *I Got Rhythm*.

A kaleidoscope of interesting performances is provided by the supporting cast. Heywood was just moving into his period of great success with a provocatively stylized approach; Larkins sounds much stronger than he does today and even gets into boogie-woogie; Coleman builds solos with a crackling, brassy shout; Wells plays broad, conversational smears and abrupt exclamations; Casey gives a cameo demonstration of his sly and rhythmic guitar. And, in what may have been his first guitar solo on record, Greene introduces *I'm Fer It Too*. All of this belongs in any basic collection.

JOHN S. WILSON

Carl Kress and George Barnes: Two Guitars

Bernard Brightman, producer
Stash ST 222 Vol. 1
(P.O. Box 390, Brooklyn, N.Y. 11215)

The team of Carl Kress and George Barnes evolved from a line of jazz guitar duos that originated in the '20s with Lonnie Johnson and Eddie Lang. Kress joined the family in that same decade when he recorded with Lang. After Lang's death, Kress teamed with Dick McDonough in the '30s, Tony Mottola in the '40s, and Bucky Pizzarelli and George Barnes in the '60s. Barnes and Pizzarelli joined forces in the '70s, and today the line is carried on by Pizzarelli and his son John.

Kress switched from acoustic guitar when he joined electric devotee Barnes, but he played at such a modest, temperate level that he may as well have been playing acoustic. Barnes, on the other hand, wanted to sound like a trumpet—according to the liner notes—and his high, shrill, twangy

resonating tones resemble the corny ones that Boots Randolph produces deliberately on saxophone. Nevertheless, with partners such as Kress and Pizzarelli, Barnes could be toned down.

This set, recorded live in 1962 at Chuck's Composite in New York, offers a provocative variety of two-guitar timbral combinations. The general pattern is for Barnes to lead with a shrill, single-string solo, while Kress chords behind him; then Kress plays a low, single-string or chorded solo with Barnes playing muted chords or single strings behind him. This basic approach goes through a vast number of permutations on their program of standard pop material (*Mountain Greenery*, *A Foggy Day*, *How High the Moon*, etc.). The liner notes are a major contribution to "Two Guitars," particularly because of Pizzarelli's revelations about onetime partner Barnes.

JOHN S. WILSON

Bireli LaGrene: 15

John Simon, producer
Antilles/Island AN 1009

Bireli LaGrene's first album to reach the U.S., "Routes to Django" (see BACKBEAT, September 1982), revealed an amazing thirteen-year-old who played in the style of the great Gypsy guitarist Django Reinhardt. Though it was fascinating to hear, one couldn't help but wonder where—after performing at thirteen with the flair and much of the virtuosity of the great Reinhardt—would LaGrene go from there?

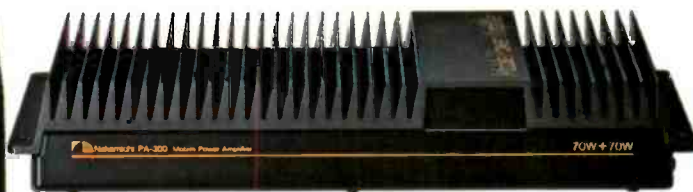
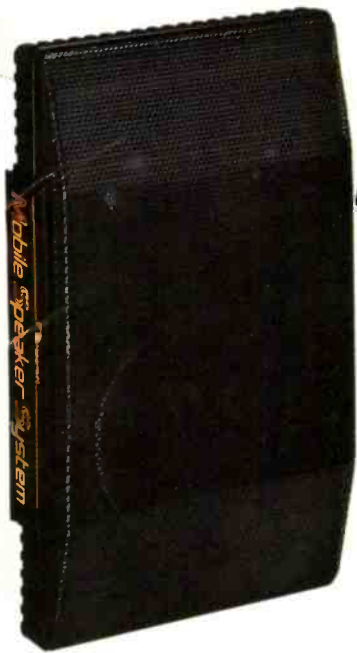
As one might have expected, "15" does not depart from the Reinhardt motif, but it does show an effort to expand LaGrene's context. On the quartet pieces, the guitarist is backed by two rhythm guitars and a string bass—an approximation of Reinhardt's most familiar setting, the Quintet of the Hot Club of France. Playing a Reinhardt composition, *Douce Ambiance*, or a pop tune that Django frequently played, *Sweet Georgia Brown*, LaGrene's projection of his model's style remains remarkable.

But he goes beyond that. His unaccompanied solo on his own composition *Mirage* is a virtuosic display. And with vibes and drums added to the quartet, he drives through his own arrangement of *Dark Eyes* in dazzling fashion. He is also joined on several pieces by Leszek Zadlo, a tenor saxophonist who is as accomplished in his own right as LaGrene. Zadlo's impressive opening statement on the fast, driving *Solidarnosc* leads into a strong, individualistic solo from LaGrene that in turn prompts vibraphonist Thomas Wind's best performance here.

A definite step beyond LaGrene's first album, "15" shows him to be an effective composer, arranger, and soloist, but still does not establish any real direction for him. We'll probably have to wait until he is sixteen to learn that.

JOHN S. WILSON

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