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PREVIEW!
'84 COMPONENTS

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Revealing Tests: Sony's True Hi-Fi Video Deck!



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Compact Disc, Videocassette, and Videodisc Reviews!



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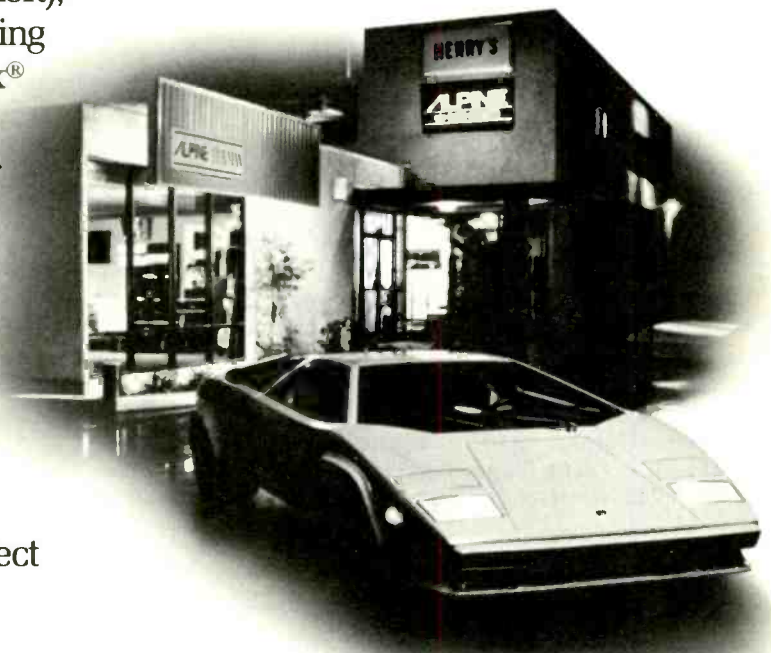
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VOLUME 33 NUMBER 8 AUGUST 1983

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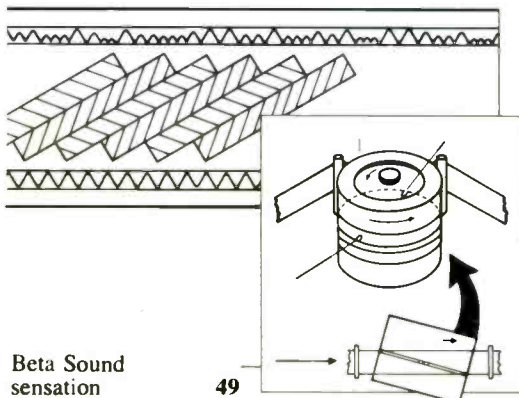
Covering the latest developments
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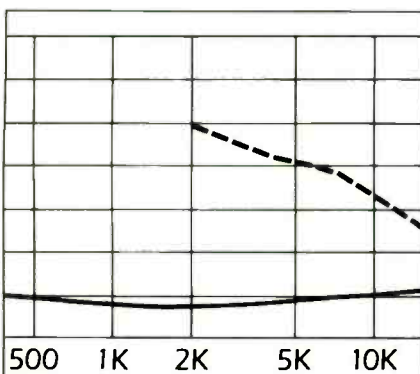
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About This Issue

Inside the Pages of August's High Fidelity

WITH SO MUCH ATTENTION focused on the Compact Disc, one can easily overlook exciting developments in more traditional audio. In fact, substantial improvements have transformed a number of audio staples, particularly cassette tape and tape recorders. We've been every bit as impressed this year with the latest blank cassettes as we've been with the new crop of decks (see "New Equipment Reports," February and this issue).

Only 18 months have passed since we last looked at these tapes. But after putting the current batch through its paces, we found some unexpected surprises at the finish line. Not only do we report our results in "Which Cassette Tape Performs Best," but we explain in "Basically Speaking" how we arrived at them. In "Sound Views," Robert Long explores the reasons for the ever widening gap between the tape industry's de jure tape standards and the de facto standards of the marketplace. "Retsoff's Remedies" provides helpful hints on choosing the best microphones for live audio or video recordings. Rounding out our coverage of tape are in-depth lab tests of new cassette decks from Yamaha, Onkyo, and Harman Kardon; DBX's inexpensive noise-reduction unit; and a portable PCM digital audio processor from Technics.

On the video front, we are witnessing the first fruits from the seeds of discontent over poor VCR audio quality. For the most part, the problem has been tied directly to how the audio signal has been recorded. The Beta Hi-Fi format, recently introduced by Sony, uses a radically different recording procedure that yields true high fidelity stereo sound on videotape. More on this revolutionary format can be found in Peter Mitchell's "How Beta Hi-Fi Works," in our lab test of Sony's SL-2700 VCR, and in Ira Mayer's review of the new Video 45s—all of which appear in NEW TECHNOLOGIES.

Speaking of new technologies, the above picture of consulting technical editor Robert Long may pique your curiosity. What he is doing—writing this month's "Sound Views" on his home computer—is not unusual in itself. What *is* unusual is the fact that he called us up and transmitted the piece some 125 miles, from his computer to ours. Actually, most of the outside material in this issue came to us in the same way. The computer is fast becoming a part of our lives, whether for writing or for music applications (see "Letters"), and we'll be introducing you to more home-entertainment uses in the months to come. September's issue, for example, contains an article about a music system that interfaces with the Apple computer to create a full-function digital synthesizer.

One further point: Our forecast for new audio and video components (see "1984 Product Preview") seems right on target. I'm completing this column after returning from the Summer Consumer Electronics Show in Chicago, and there's no doubt that the bloom is back on audio after two years of near dormancy. In September, we'll give you a complete rundown on SCES. And be sure to catch our annual Preview of Forthcoming Recordings, which this year will include digital Compact Discs. —W.T.



Robert Long, HF's consulting technical editor, composing with a computer.



COVER DESIGN: Skip Johnston

Cover Photos: Steven Mark Needham

ON THE COVER: Audiocassettes from TDK, BASF, Sony, Fuji, Maxell, Denon, Memtek, 3M, Radio Shack, Nakamichi, Magnex; (left) Sony SL-2700 VCR with Beta Hi-Fi

Elton John: Photo by Ebet Roberts

audio-talk from audio-technica

Number 6 in a Series

Better Leverage

As you look at the business end of a phono cartridge, you'll see the stylus mounted on a small tubular or rod-shaped arm.

This arm, called a cantilever, transmits the motion of the stylus—as it traces the groove—to the rest of the cartridge.

Popular Aluminum

To accurately transmit stylus motion, the cantilever must be very stiff. And since it makes up most of the effective moving mass of a cartridge, it must also be very light. Finding the ideal cantilever material has engaged the interest of engineers for years. Easily the most popular material is aluminum. It is readily available, easily formed, stable, light, and potentially quite rigid.

Tapered is Better

An aluminum cantilever is normally made from a small tube, flattened at the end to accept the stylus. Audio-Technica has taken this concept a step further, creating tapered tube aluminum cantilevers whose strength and rigidity are improved.

The design also permits thinner walls so that effective moving mass is reduced.

New Materials

In recent years, other metals have been tried, including beryllium and titanium. Non-metals like carbon fiber and boron have also been utilized. Most recently, even diamond and ruby cantilevers have been created for cost-no-object cartridges. In every case, the goal is to control resonances which can color overall response while also reducing effective moving mass.

Pluses and Minuses

Our experience with all these materials in production cartridges suggests there is no single material ideal for every application. For instance, the lightest, most rigid cantilevers are often quite fragile, demanding great care in use. Also, some "exotic" cantilevers offer increased stiffness at the expense of greater moving mass. Details of cartridge construction can also affect the ultimate value of some materials.

Yet the performance benefits from careful design can be significant.

Make Your Choice

Within the Audio-Technica line, aluminum cantilevers predominate in both tapered and cylindrical configurations. Beryllium is used in our most sophisticated models. In sum, you should balance the needs for ruggedness and low cost with your desire for the ultimate in record reproduction when selecting your cartridge. And the tiny cantilever will play an important part in your selection.

Good listening.

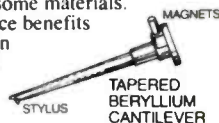
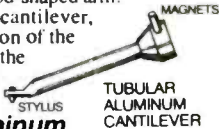
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audio-technica.

The World's Favorite Phono Cartridge



Letters

Just in Time

One of my projects lined up for the summer is to catalog my records and tapes with my recently acquired computer. Roger Parker's article ("Let Order Prevail," June) is very timely.

Albert Nacinovich
Cogan Station, Pa.

Really enjoyed "Let Order Prevail."

F.C. Findlay
Grand Rapids, Mich.

Roger Parker's article on a computer-based record-filing system was very interesting.

David Shappirio
Ann Arbor, Mich.

Thanks for NEW TECHNOLOGIES, especially Roger Parker's "Let Order Prevail," which provided useful basics on computer indexing of recordings. But is there any moderately priced way to overcome the severe information storage limitation he points out? And what about leaving room for updating files?

Lee Harris
New York, N.Y.

Your article on computer cataloging was extremely interesting, but, as a reader of HIGH FIDELITY/MUSICAL AMERICA since Vol. 1, No. 1,

I wish you had given more information on classical music. My collection of LPs, open reel tapes, and cassettes is huge: I have almost 200 different operas, some in all three formats and in duplicate; my jazz collection spans 50 years. I am certain that I am not the only serious collector who needs help. You are to be commended for NEW TECHNOLOGIES, and I hope you will expand it.

Richard B. Menin
New York, N.Y.

The VisiFile program mentioned in Roger Parker's article admittedly has a limited capacity, and more powerful alternatives are available. One of our staffers is currently attempting to organize his records and tapes with a program called Perfect Filer from Perfect Software, Inc. So far he has been less than totally satisfied with its applicability to music filing. Since the only sure way of judging a program's effectiveness is by using it, please let us know if any of you have experimented with a data-base manager program that works well as a music organizer and doesn't cost a fortune.—Ed.

I welcome computer articles like Roger Parker's in HF.

Min-Tang Chang, M.D.
Garden City, N.Y.

Compressed Compacts?

In May's "Basically Speaking," Michael Riggs

said that frequency responses of good tuners generally range from 50 Hz to 15 kHz, $\pm 1\frac{1}{2}$ dB. He added: "Since 15 kHz is the upper limit allowed in FM broadcasting, there is no reason for a tuner's response to reach higher."

Boston radio station WCRB-FM recently inaugurated broadcasting of Compact Disc selections. If Mr. Riggs is correct that no FM station broadcasts beyond the 15 kHz limit, then what is the use of transmitting Compact Disc sound, which carries frequencies much above that? Most standard digital discs also carry frequencies above 15 kHz and are frequently played over WCRB and other fine music stations. Some high quality analog discs, in fact, will surpass that upper limit.

I called WCRB for an explanation and was told that Mr. Riggs is incorrect, that WCRB does not compress its signals, and that, consequently, the full fidelity of Compact Discs can be appreciated. (WCRB also broadcasts a Dolby-ized signal.) Who is right?

Bernard A. DuPont
Putnam, Conn.

Michael Riggs replies: *It sounds like whoever you talked with was confusing frequency response with dynamic range, which is the level difference between the loudest and softest sounds reproduced. Most FM stations are capable of transmitting a signal with a dynamic range of 60 to 70 dB if no compression or limiting is used. This is enough to handle most program material—even that on Compact Disc—though it is not wide enough to accommodate recordings that exploit the CD's full 90-dB-plus dynamic range.*

The frequency responses of all CDs roll off very sharply above 20 kHz, which is less than half an octave above the 15-kHz limit of FM broadcasting. Only very occasionally is there any significant (or even audible) musical information at frequencies higher than 15 kHz; indeed, some recordings have almost nothing on them above 10 kHz. The FCC requires that all FM stations cut off their signals at 15 kHz to prevent interference with the stereo multiplexing system.

Spaced-out

Your January test report on the SDA-1 loudspeaker raises a question in my mind. I have a Carver C-1 Sonic Holography preamp. Since the Polk and the Carver attempt the same task, one acoustically and the other electronically, what happens when they are used together?

Gordon Aronhime
Bristol, Va.

We haven't tried it, but we know someone who has. He reports that the effect is very dramatic, but not necessarily realistic. You'll have to determine by auditioning whether or not it's something you would want to live with.—Ed.

Better CD Sound, Please

Now that the digital era is fully upon us with the advent of the digital Compact Disc, I hope record companies and producers learn very quickly that the public is tired of shoddy, amateurish recordings. The first CDs to become available retain much of the poor sound of most LPs, which indi-

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YOU'LL FOREVER WONDER,

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



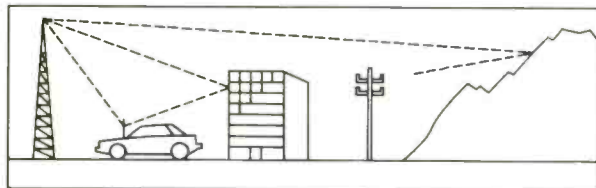
THIS IS THE CAR STEREO TECHNOLOGY EVERYONE ELSE WILL HAVE FIVE YEARS DOWN THE ROAD. SUPERTUNER III.™

In 1976, Pioneer introduced the first Supertuner technology.

It elevated the car stereo tuner's ability to produce music.

And sent every other car tuner maker scrambling back to the drawing boards.

Now, just when they've



A lot of things stand in the way of clear reception. Like buildings, mountains, even telephone poles. Radio signals bounce off them like balls on a handball court. Creating static, signals cutting in and out. Unless you have a Supertuner III.

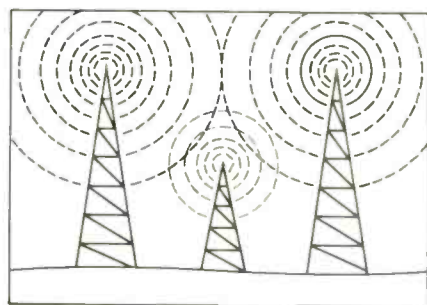
Supertuner, Pioneer introduces Supertuner III.

So long, fellas. See you down the road in another five years or so.

FM CAR STEREO RECEPTION
SO CLEAR YOU'LL THINK
YOU'RE LISTENING
TO A CASSETTE.

Because music and only music is important to the engineers at Pioneer, anything that gets in the way of the music is as

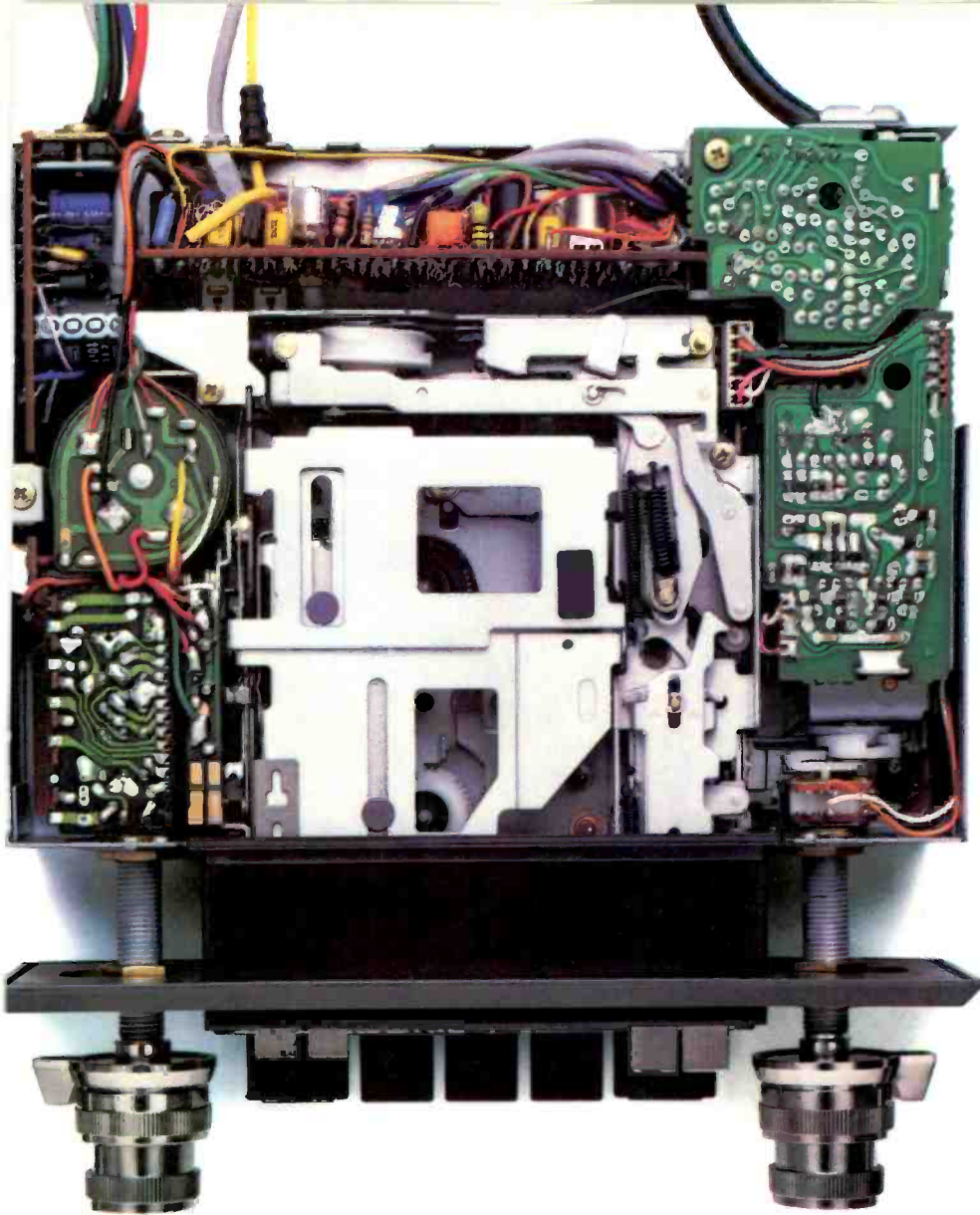
finally caught up to the advanced technology of the original annoying to them as it is to you. So they've worked



Three-signal-intermodulation is techno jargon for a weak signal that's surrounded by two stronger ones. This is what causes stations to cut into or bleed over others. Except in a new Supertuner III.

continually to develop technology so sophisticated and advanced it virtually eliminates the maddening interference common to all car tuners.

Like static. FM noise. Strong signals cutting in or bleeding



in Chicago, Illinois, perhaps the worst FM reception area in the country.

If Supertuner III outperformed the competition here, it would do it anywhere.

Using the same car, with the same antenna, and driving continuously around the same block on the Near North Side (where the world's tallest and third-tallest buildings create FM listening havoc), Pioneer put one tuner after another to the test.

And the clear winner, time after time, was Pioneer's Supertuner III. Downtown, only Supertuner III received stations that came across other tuners sounding like bacon sizzling on a hot griddle. And in the suburbs, only Supertuner III consistently was able to pick up weak stations located downtown, and hold on to them.

Of course, reading this now may impress you. But most likely you'd rather hear the real thing with your own two ears.

So, at your earliest convenience,

on top of weaker ones.

In addition, Supertuner III can capture weak signals from a great distance and lock them in.

So, while Supertuner III offers a great many convenience gadgets like other tuners, it offers something that none of the others can.

The clean, clear, FM stereo reception you should be getting in this day and age.

WHICH CAR TUNER GETS THE BEST RECEPTION IS NOW PERFECTLY CLEAR.

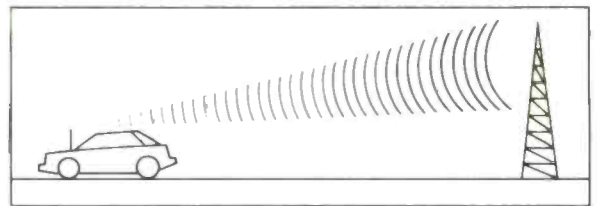
Of course, it's one thing to boast that no other FM stereo

tuner eliminates the irritants to your listening pleasure like Supertuner III.

It's another to prove it. Which is just what Pioneer did.

By road testing Supertuner III against the highest quality stereo tuners currently on the market.

The test was conducted



Cars move and radio stations don't. So the further you drive from the transmitter of your favorite station, the harder it is to capture its signal. Unless you have a Supertuner III. Which is just another reason we should have the market all locked up.

ence, visit your nearest Pioneer car stereo dealer and ask for a demonstration of Supertuner III.

And if, on the drive there, you get static and stations cutting in and out on your car stereo, don't just change stations.

Change car stereos.



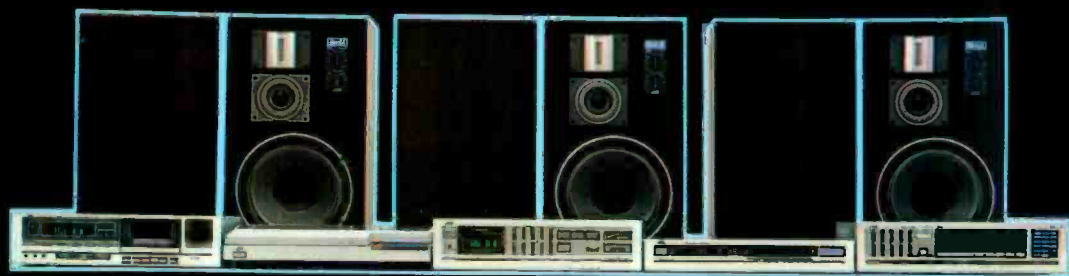
PIONEER
Because the music matters.

Circle 3 on Reader-Service Card



"That night
I was listening to
the bass player cook.
As his hands went
spidering up and down
the strings
his thum-thum-thum
became the group's
heartbeat – and mine too.
In my living room, I had
traveled once again to that
smokey little jazz club long ago."
A JVC High Fidelity System
can take you to another
time and place, with components
that reduce six different
kinds of distortion down to inaudible.
Nothing interferes with the
reality of your music. You're there.

We take you there.



JVC® JVC JVC JVC JVC JVC JVC JVC JVC

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

Letters

cates that no amount of high technology is going to compensate for careless and incompetent recording techniques.

There is a paradox here because the Compact Disc does have tremendous clarity and transparency, greatly articulating every detail. Edits, excessive overdubbing, noise, hum, and improper microphone placement are clearly audible, as are sloppy performances. The CD recordings I have heard to date are overly bright and edgy sounding; I am inclined to continue buying audiophile LPs, rather than invest in CD.

Arthur Johns
Lisle, Ill.

Renaissance Rub

While sitting in an auditorium full of smiling faces and swaying bodies at a recent Calliope concert, I began thinking about Matthew Gurewitsch's review [April] of the group's latest recording [which Ms. Sherman produced]. Normally I would think, "Oh well, he's a minority of one, and we can't bat 1.000 on every record." But there seems to be more vitriol in this review than mere boredom warrants, and I decided that I had to respond.

Unfortunately, I don't quite understand the review, or what Mr. Gurewitsch's point is. Indeed, the middle of the review is all favorable. Did he hate the record because the crescendos are not as wide as those of a nineteenth-century industrial orchestra? That is the only specific criticism he gives. The crescendo, as we know, was very much a nineteenth-century practice. Before that it was so unusual as to provoke comment when used. (Cf. Mozart's letters.) So that's hardly reason for such nastiness.

Renaissance music made its contrasts by varying color (from the almost inaudible mellowness of the tenor recorder to the shawm's raspy duck call) or density, or by setting up a contrapuntal rub between different melodies or rhythms. The range of dynamics from softest to loudest would fit comfortably between a Mahleresque *ppp* and *mp*. Criticizing a Renaissance band for not being a marching, big, or rock band is like criticizing a harpsichord for not being a piano. My impression is that Mr. Gurewitsch's ear is not attuned to Renaissance music, and, therefore, he was not a good choice to review this record.

For my part, I feel happy and privileged to have the chance to work with Calliope. At the recording sessions, the problems were rarely technical but more in the vein of "this doesn't swing enough" or "this should dance more," and no one was happy until one could feel the physical movement implied by the dances. Luckily, that's what everyone else is hearing.

Judith Sherman
New York, N.Y.

Matthew Gurewitsch replies: Yes, we are speaking the same language. The concerns voiced at the recording sessions are the same ones that trouble me. The music doesn't swing enough; it should dance more. Quite a disappointment; I had been expecting a treat.

Price of Progress

I enjoyed reading the test report of the Nakamichi Dragon [April] and am convinced that it is the most advanced cassette deck yet. But its \$1,850 price tag makes the new CD players look like

bargains. For my money the most advanced technology and best values are in video equipment.

H. Miller
New York, N.Y.

Powerful Program

I believe you missed the most powerful alternative in your review of composing programs ("High Cs from ICs," June). I refer to the Stereo Composer by Speech Systems, which allows four voices with a range of seven octaves, two of which can be directed to either channel. This program is written for Radio Shack's TRS Color Computer and sells for about \$120 with all the hardware necessary for stereo reproduction.

Steve Schneider
Camarillo, Calif.

Missing Means

Peter Mitchell, in his article "Sonic Ambience—the Missing Ingredient" [October 1982] suggests adjusting the volume of the ambience speakers. My question: When the circuit shown in Fig. 1 is used, what means can be used to control the volume of the ambience speakers?

Merrill A. Smith
Claremont, Calif.

A rheostat (variable resistor) in the line connecting the two ambience speakers should do the trick.—Ed.

Phasing Redux

I find E. D. Hoaglan's approach to phasing ["Letters," June] partially incorrect. If one watches the cones move in and out and visually sets the phasing, so that both cones move toward the grille cloth while the speakers are facing each other, then his method will work. However, if you attempt to phase them acoustically by going for the position with the loudest bass, then his method won't work.

If two speakers are facing each other, the loudest bass will occur when one cone moves forward and the other backward. The net result is that the air is moved in the same direction, reinforcing the bass. If one speaker is now swung 180 degrees around to its normal position, the speakers are now 180 degrees out of phase with each other.

Matty Jakowsky
Flushing, N.Y.

Even at very low frequencies, the cones will move too fast for you to set phasing visually. Mr. Hoaglan's acoustical method works fine, though: All that matters is that both speakers produce compression waves together and rarefaction waves together. In other words, both cones should move outward at the same time and inward at the same time; the directions in which the cabinets are turned is irrelevant.—Ed.

After reading Alexander Retsoff's column on speaker phasing ("Retsoff's Remedies," April) and a printed reply ("Letters," June), I thought I should mention a very simple trick on speaker phasing that I learned a few years ago and found less time-consuming and less prone to judgment errors on the part of the listener.

All you need is an ordinary 1.5-volt flashlight battery and two pieces of wire. Attach the wires to the speaker inputs and then one of them

to one pole of the battery. (This process should be followed for each loudspeaker individually.) When you join the second wire with the other pole of the battery, the woofer cone should push forward. If it does, the wire connected to the positive pole of the battery is also connected to the positive input of the speaker. (The negative pole is joined to the negative input.) This means the speaker is correctly phased. If the woofer cone sucks inward upon attachment of the second wire to the battery, you have the polarity reversed, and it should be corrected before final hookup to your amp.

Walter R. Plaessmann
Edison, N.J.

Michael Riggs replies: *Actually, it doesn't matter which way the cones move, so long as it is in the same direction when the same battery-pole-to-input-terminal arrangement is used for both speakers. And you still need to check the phasing with the speakers wired to the amp to make sure you haven't inadvertently reversed the leads on one channel.*

Looking for DBX

There has been much talk about DBX-encoded records and tapes among my friends. We can't seem to find any vendors of these products. For the February issue, you tested the Panasonic RQ-J20X Walkman player with DBX noise reduction ("Going Walkabout"), and you listed a few records and tapes (my main interest) that are DBX-encoded. Where can I get a list of all the DBX-encoded records and tapes?

Douglas F. Starfield
Santa Cruz, Calif.

The most up-to-date listings can be obtained directly from DBX, Inc., 71 Chapel St., Newton, Mass. 02195.—Ed.

How Close?

Regarding phono cartridges, in "Prescriptions for Audio Indecision" [March] you state, "To be sure of getting a flat frequency response . . . you will usually have to make sure that the total capacitance contributed by the tonearm cables and the phono input is close to that recommended by the cartridge's manufacturer." What is "close"?

Bert Bagley
Jackson, Mo.

"Close" is within 50 picofarads, if possible—100 picofarads at the outside.—Ed.

Old HFs, Anyone?

If you're interested in a set of old issues of HF, two of our readers may be able to help you out. One has 46 of the first 50 issues from 1951 to 1957, beginning with Vol. 1, No. 2, and ending with Vol. 7, No. 2. The other set comprises Vol. 1, No. 1, and all issues from 1954 through 1975, except for three months' worth. Write us at "Letters," and we'll pass along your requests to the appropriate parties.—Ed.

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.

1984 Product Preview

The excitement returns to audio as manufacturers release a torrent of new components.

by Peter Dobbin

THE DOLDRUMS OF AUDIO are over. A strengthening economy and the excitement generated by the Compact Disc have inspired manufacturers to set full sail with boatloads of new products. Though the majority of new audio and video compo-

nents will not be formally introduced until the Summer Consumer Electronics Show in June, the stack of pre-CES product announcements already on my desk is proof enough of this year's watershed status.

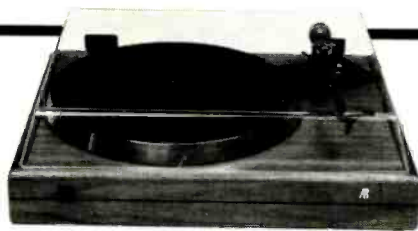
The following preview is based on

information culled from that stack and from recent press conferences. Actually, I'm writing this moments before departing for the main event in Chicago, details of which will appear in September and in subsequent issues.



New uses for microprocessors are being explored by Yamaha in its top receiver, the Model R-100 (\$800). Headlining the unit's astounding complement of features is a five-band tone control system with eight memory presets. Five of those presets come "programmed" with typical response curves for bass boost, loudness compensation, presence, treble boost, and high-cut. Controls on the receiver, however, let you modify the factory-set contours to your particular listening needs. The remaining three presets can be used to store additional equalization curves. What makes this system even more attractive is that it can be controlled via a hand-held remote that comes with the receiver. Other goodies include a dynamic noise-reduction system, an "auto phono" circuit that senses stylus touchdown and switches inputs accordingly, and an automatic mode selector that adjusts the tuner section's IF bandwidth in accordance with reception conditions. The R-100's 100-watt (23-dBW) power amp section is said to include a protection circuit that makes it unusually tolerant of low-impedance loads.

Circle 126 on Reader-Service Card



Reliable, simple, and unusually immune to acoustic feedback, the old AR turntable was a budget-conscious audiophile's delight. The AR Turntable makes a comeback this year—it had been manufactured for some 17 years before being discontinued four years ago. It is available in two versions—one without tonearm (\$280) and one equipped with a low-mass, straight-tube arm (\$430). Though the unit's cosmetics have been updated, the basic design of the original has been retained: tonearm and platter on a three-point spring suspension, with a 24-pole synchronous motor in a belt-drive configuration. Most unusual for mechanical devices, the turntable is backed by a five-year limited warranty.

Circle 124 on Reader-Service Card



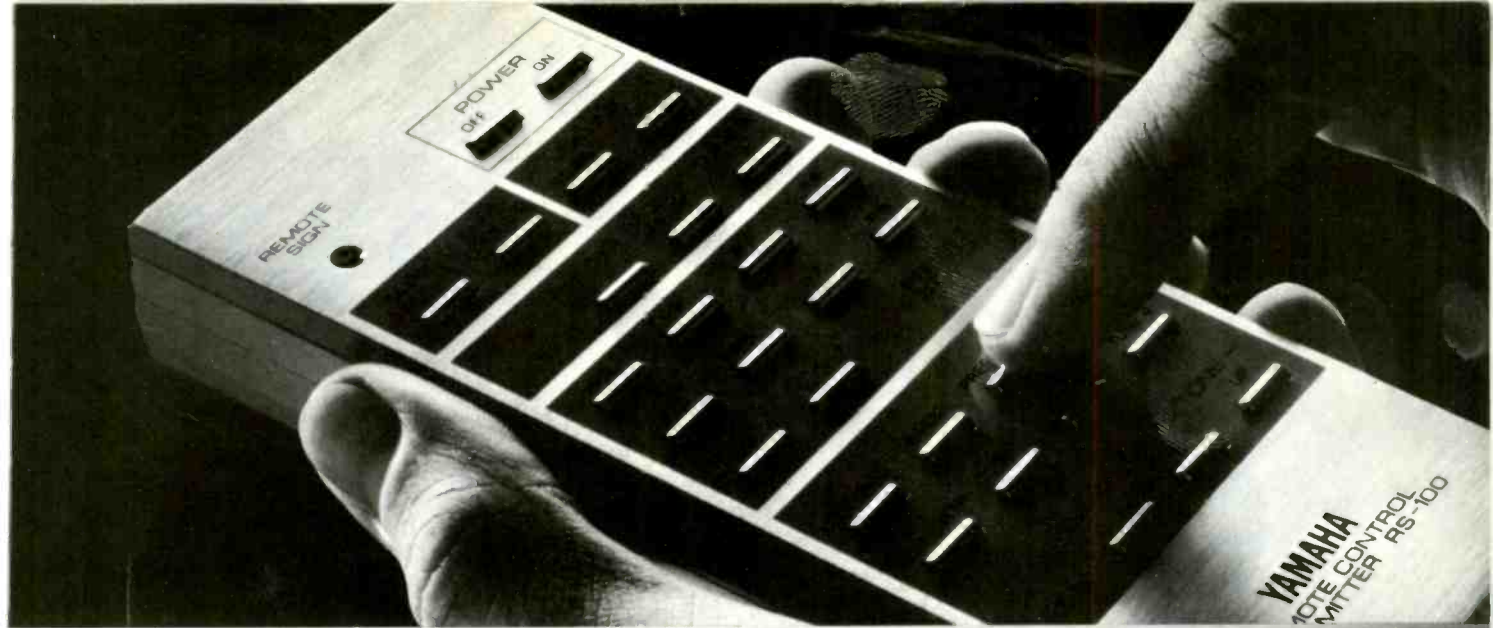
Pioneer's return to a more traditional look for its audio components in '83 may well

signal the beginning of an industry-wide trend. The new SX-60 receiver, though hardly *recherché*, breaks away from last season's "new look"—Mondrianesque faceplates with flat rockerplate controls—by reverting to sturdy knobs and sliders. Pioneer also acknowledges the growing importance of video to audiophiles by dedicating one high-level input to television audio and including "simulated stereo" capability to dress up mono TV sound. The SX-60 is the top of Pioneer's receiver line and has a rated output of 80 watts (19 dBW) per channel. It is priced at \$500.

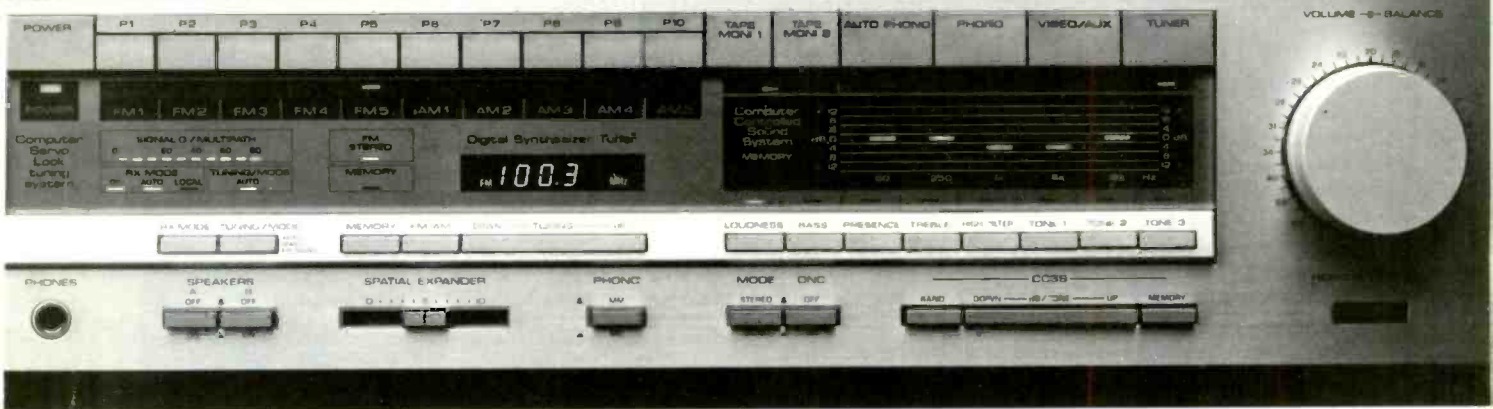
Circle 130 on Reader-Service Card



Borrowing a bit of computer jargon, Tandberg describes its latest cassette deck as "user friendly." A three-head design, the TCD-3014 incorporates Tandberg's proprietary dynamic recording equalization circuitry (Dyneq) and newly refined recording electronics that are said to improve dramatically the recording amplifier's head-



YAMAHA NATURAL SOUND STEREO RECEIVER R-100



MAKE THE MUSIC LISTEN TO YOU.

Introducing command performance music. Introducing the R-100, the most astounding, musical-sounding receiver ever to come from Yamaha. Or anyone.

There's 100 watts RMS per channel (both channels driven into 8 Ohms, 20 Hz to 20 kHz, with no more than 0.01% Total Harmonic Distortion) combined with our unique Zero Distortion Rule circuitry to virtually eliminate power amplifier and thermal distortion. But such wonders have been heard from Yamaha before.

The unheard-of part is the phenomenal control the R-100 gives you over your music. For the first time, a five-band graphic equalizer is combined with a microcomputer. This unique Computer-Controlled Sound System (CCSS) allows you to select from five different preset frequency response curves (Loudness, Bass, Presence, Treble, or High Filter), and then further adjust each of the five curves in four different preset variations. You can then store any three of the preset variations in memory for instant recall.



THREE PRE-PROGRAMMED LOUDNESS CONTOUR CURVES.

And if you really want to be creative with your music listening, you can adjust the five bands independently to form any frequency response curve you choose, then store it in memory.

The CCSS offers you unparalleled flexibility to tailor the music to your personal taste and listening environment.

And you can control all this (and a lot more) by just pressing the right button on the remote control unit that is a standard accessory.

There's more that comes standard with the R-100. Like Yamaha's spatial expander, dynamic noise canceller, the ability to handle low impedance loads, and the headroom to handle "hot" source inputs.

And there are four more models to choose from, each with the same natural sound Yamaha is famous for.

Whichever one you choose, you'll hear your music like you've always wanted to hear it. Give a listen at your Yamaha dealer. Or write Yamaha Electronics Corporation, USA, P.O. Box 6660, Buena Park, CA 90622.

FOR THE MUSIC IN YOU.



room. A microprocessor controls the transport of this three-motor deck, allowing real-time readouts in record, play, or either fast-wind mode. Rounding out the complement of features on this \$1,400 machines are equalized meters, Dolby B and C, and adjustments for bias, tape sensitivity, and record-head azimuth (along with the appropriate test-tone generators).

Circle 129 on Reader-Service Card



It's well-nigh impossible to decide which of Sony's offerings typifies its new line: The company responsible for the Walkman and (at least partially) the Compact Disc system is too eclectic to be so easily characterized. That very eclecticism, however, qualifies our choice for spotlighting—the PS-F5 portable turntable (\$150). Like Audio-Technica's Mister Disc, it is a light-weight, battery-operated phonograph with just enough built-in amplification to drive a pair of high-efficiency stereo headphones. It does differ, though, in its direct-drive motor and linear-tracking tonearm. The dynamic-balance tonearm enables the PS-F5 to be used in a variety of positions. As the photo shows here, it will even track a disc when standing on its "toes."



A "smart," dual signal-tracking power supply is said by Soundcraftsmen to enable its DDR-1200 power amp to supply undistorted momentary outputs of as much as 600 watts (27¾ dBW) per channel. The unit has a continuous power rating of 250 watts (24 dBW) per side into 8 ohms and 750 watts (28¾ dBW) in a bridged mono mode. The bank of LEDs on the amp's faceplate is a frequency spectrum display, which, when used with an equalizer and the supplied test record, provides a visual reference for a variety of equalization procedures. Other features of this multifunction amp include clipping indicators, which respond to actual waveform distortion rather than input voltages, and dual power-output displays. The

DDR-1200 costs \$1,200.

Circle 122 on Reader-Service Card



On the basis of an OSHA report that warns of hearing damage after four hours of continuous exposure to sound pressure levels of 95 dB or more, the Koss Corporation has equipped its personal portables with an LED that lights when safe playing levels are exceeded. Pictured here is Koss's AM/stereo-FM receiver, Model 1A, with an LCD frequency display and signal strength readout. The \$110 unit has eight AM and eight FM station presets and comes with Koss folding headphones.

Circle 120 on Reader-Service Card



Matthew Polk promised last year to make the Stereo Dimensional Array technology pioneered in the SDA-1 loudspeaker (New Equipment Reports, January 1983) more affordable, and in the new SDA-2 he does just that. Like its big brother, the SDA-2 is said to create a breathtakingly realistic stereo image by means of specially designed matrixing circuitry and "extra" drivers whose outputs are used to cancel interaural crosstalk. At \$600, the Polk Audio SDA-2 employs two tweeters, three bass/midrange drivers, and a passive radiator in an enclosure that measure 39 inches high and 16 inches wide.

Circle 127 on Reader-Service Card



Infinity's first car speakers bear some remarkable resemblances to its home models, especially in terms of drivers. The A-693 (\$180 per pair), for instance, combines an EMIT tweeter, a polypropylene woofer, and a polycarbonate midrange driver in a 6-by 9-inch triaxial format. Two 6½-inch round speakers and one 4-inch round model complete Infinity's initial offerings.



The EPI Model 100, one of the most popular speakers of the last decade, returns with driver cones fabricated of a new composite material. The cones are said to be extremely stiff, to resist flexing, and well damped, so that stored energy is quickly dissipated. A two-way design with an 8-inch woofer, the Model 100 retails for \$125.

Circle 119 on Reader-Service Card



Sansui tests the car stereo waters this year with a full line of auto-sound products—front ends, amplifiers, and speakers. Pic-

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[®]

tured here is the company's top car amp, the SM-100 (\$230), with a rated output of 32 watts into 4 ohms. The unit has high- and line-level inputs and can therefore be used either as a power amp or a booster amp. A less powerful version, the SM-50, has a rated output of 12 watts per channel and sells for \$100.

Circle 128 on Reader-Service Card



A venerable English loudspeaker company that has enjoyed only a limited market here, Wharfedale is tackling the U.S. again this year with a four-model line dubbed the Mach Series. The new speakers, said to have "clinical clarity" of tone, use horn-loaded tweeters, LED displays to indicate relative input "power" levels, and automatic resettable overload-protection circuits. Sensitivity of each of the models is a very high 94 dB for a 1-watt input. Pictured here is the Mach 5, a three-way system priced at \$405.

Circle 118 on Reader-Service Card



If the 901 were a military officer, its loyal service and years in the field might well have earned it five stars. Alas, it must content itself with a mere promotion in suffix—this time to Series V. The commander-in-chief of the Bose line distinguishes itself from earlier versions by dint of increased headroom in its equalizer, red-

signed tone controls, and speaker cones treated to prevent breakup caused by high volumes and fast transients. The 901 Series V sells for \$1,400 per pair.



With a tip modeled closely on the geometry of a cutting stylus, the 830-CSA pickup from Micro Acoustics is designed to achieve superior tracking while reducing record wear. The 2½-gram cartridge, which is said to use an electret transduction scheme, has a specified tracking force range of 0.7 to 1.4 grams.

Circle 121 on Reader-Service Card



We saw a prototype of Sanyo's VCR-7300 at the last CES, but a final version of the world's first portable Beta Hi-Fi recorder now seems ready for market. The significance of a portable Beta Hi-Fi deck will not be lost on audiophiles, who can now have digital-like audio performance for their location recording projects at a decidedly lower-than-digital price. The VCR-7300 is just \$1,000—about half the cost of a VCR-PCM processor combination. For video recording, the Sanyo unit offers a seven-day/single-event timer, a 105-channel tuner, and a wired remote control. Unlike other portable formats, the VCR-7300 joins tuner and recorder on one inseparable chassis for a 15-pound package (with battery) that's

In September's Issue:

complete coverage of the Summer Consumer Electronics Show, with details on the new tape decks, receivers, loudspeakers, digital-disc and record players, and other components introduced there—as well as an analysis of important new trends.

probably more *transportable* than it is portable.

Circle 123 on Reader-Service Card



From its description, the Vidcraft IVE-100 seems an altogether amazing device for the number of functions it offers for \$229. Here's a quick summary: image enhancement, vertical stabilization, commercial alert (Mamon, beware), distribution amplification, and bypass switching. The device has two sets of video and audio inputs, and its distribution amplifier will feed three receivers—a TV set and two VCRs, for instance. The commercial-alert feature strikes us as particularly interesting. Once activated, it senses the fade-to-black that usually precedes the appearance of a commercial and sounds a tone, thereby alerting you to switch your VCR to pause. Since not all commercials announce themselves with a strong black screen, putting the viewer in charge of this real-time editing seems a more efficient method than assigning the task to hit-or-miss automatic devices. Finally, the unit has RF outputs, enabling you to connect it to TV sets that lack direct-video inputs.

Circle 125 on Reader-Service Card



JVC says that its newest video cameras use technology borrowed from military night-surveillance devices, with the result that the GX-N70 and GX-N5 require a minimum illumination of just 10 lux (1 footcandle). The GX-N70 (pictured here) is fully automatic and is the first JVC camera to employ an infrared autofocus system, which enables it to focus through transparent objects, such as window glass. The camera has a microprocessor-controlled title and date generator, with eight separate 60-character display memories. A concealed keyboard gives the user direct access to all characters.

HITACHI introduces the next generation in sound...



...and gives you
a choice of styles
and features.

A technological breakthrough in audio that delivers finer sound reproduction than ever before possible.

The dream is now reality. Introducing the most perfect sound system in audio history. The Hitachi DA-1000 and DA-800 Compact Disc Players. This revolutionary breakthrough in audiotronics shatters the limitations of even the finest analog stereo system. There is greater dynamic range. Virtually no distortion. No wow and flutter. No acoustic feedback. No record wear. The result is the purest, cleanest sound, absolutely faithful to the original recording.

As a leader in this new frontier of digital



sound, Hitachi gives you a choice — vertical or front load players. With 10 key or two key programmability and visible or hidden disc design. Both offer advanced features like forward and reverse, cue, repeat and auto search for a unique sound experience. Now you can

“be there” for the live performance without ever leaving your living room.

Until you own Hitachi's Compact Disc Player, you've yet to hear the true sound of quality.

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Circle 11 on Reader-Service Card



CONCORD. THE DIFFERENCE IS WORTH THE DIFFERENCE.

Despite the fact that the Concord HPL-532 is ingeniously designed to fit everybody's car, it's definitely not for everybody. As Stereo Review said, Concord "... is truly an audiophile's car stereo."

And what makes it so different?

4-GANG FM TUNER

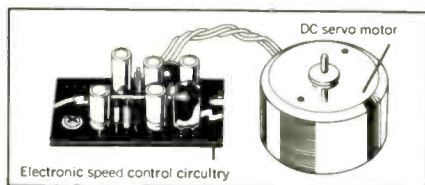
For extraordinarily clear FM reception, the Concord HPL-532 has an exclusive 4-gang digital tuner that provides exceptional station sensitivity & selectivity.

And to make selecting your favorite stations even easier it has a 10-station preset memory.

But, as Concord's 22 years of innovative stereo design would lead you to expect, that is only the beginning.

DC SERVO DRIVE MOTOR

We've designed an exclusive electronically controlled DC servo tape transport drive.

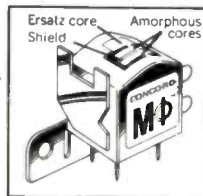


The result? Superior speed accuracy, lower wow and flutter, and over double the motor life.

AMORPHOUS CORE TAPE HEAD

We've also engineered a new match-phased amorphous core tape head design, which means a revolutionary improvement in tape frequency response out to 20,000 Hz.

It's an improvement you'll have to hear to believe.



TWO WAY/FOUR WAY AMPLIFIERS

And wait until you hear the authentic high fidelity sound reproduction of the HPL-532. It delivers an impressive 12 watts per channel into 4 ohms 30-20,000 Hz with less than 0.8% THD.

In addition, it can deliver 5 watts per channel into each speaker of a four speaker system, because of an ingenious two way/four way configuration and a front/rear low level fader.

All in all it's the greatest full bandwidth power at low distortion

you can get in a car stereo without add-on amplifiers.

OTHER IMPORTANT DIFFERENCES

With its exclusive signal processor circuitry the HPL-532 will easily handle anything you want to plug into it.

Like Concord's Dolby* C. Or dbx** adaptors.

Even imagers or equalizers.

And with lighted switches and function indicators the Concord HPL-532 is as easy to play at night as it is to play in the daytime.

And because of its front load mechanism, it's even easier to load.

All things considered the Concord HPL-532 is an extraordinary car stereo.

Of course at around \$600 it's not inexpensive.

But when you add up all its features you might say this.

The difference is worth the difference.

*Dolby is the registered trademark of Dolby Labs.
**dbx is the registered trademark of dbx.

CONCORD®
Anything else is a compromise.

CONCORD ELECTRONICS, 6025 Yolanda Avenue,
Tarzana, California 91356 (213) 344-9335

SPECIFICATIONS: Tuner Section Sensitivity: 30dB Quieting 1.0 Microvolts 11.2dBf, Stereo separation: min. 35dB, Frequency responses: ± 2 dB, 30-16,000 Hz **Tape Section** Frequency response: ± 2 dB, Standard tape: 30-15,000 Hz, Metal tape: 30-20,000 Hz, Wow & flutter: 0.08% **WRMS Amplifier Section** Maximum power: 25 watts/ch, Two-way power: 12 watts min. RMS per channel into 4 ohms, 30-20,000 Hz with 0.8 THD max, Four-way power: 5 watts min. RMS per channel into 4 ohms, 30-20,000 Hz with 0.8 THD max

Circle 9 on Reader-Service Card

The Autophile

Going on the road with stereo by Gary Stock

Triamplification: How to Divide and Conquer

TRIAMPLIFICATION and its little brother, biamplification, are two of the most sophisticated approaches available to reproducing sound in an automobile. Despite their formidable names, both techniques are simple in principle. A triamplified system is one in which the sound spectrum is divided into three parts, with each portion reproduced through its own specialized amplifiers and speakers. In a biamplified system, the sound spectrum is halved and routed

through two sets of amps and speakers.

Don't confuse bi- or triamplified systems with those that have multiway speakers and passive crossover networks. A true biamp or triamp setup divides the audio signal *before* amplification via an electronic crossover. Each speaker driver, therefore, gets its own amplifier channel and a signal that has been stripped of the other portions of the audible band. Triamplification's chief advantage is the extraordinary flexibility it gives the sound-system developer or installer—a benefit best appreciated by looking at the limitations inherent in the alternatives.

In a conventional car setup with a single full-range amplifier and two single-driver full-range speaker systems, finding

any speaker mounting location where the sound won't be terrible takes precedence over getting the best sound you can. An equalizer can serve as a sort of acoustic Band-Aid, but these handy little devices can sometimes create their own problems: If you find that the speakers need lots of bass boost and set the equalizer accordingly, chances are that you'll end up overdriving the amplifier, which will respond with lots of nasty clipping distortion.

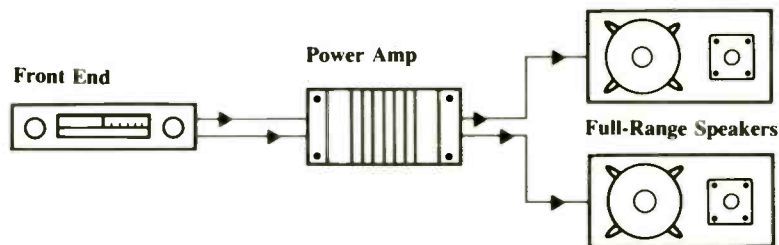
You have a better chance of getting decent sound with multiple drivers and a single outboard power amp. Even here, however, the exigencies of speaker placement will take their toll. The passive crossover networks that usually accompany component speaker systems are factory set to deliver a balance that may be less than ideal. If you or your installer had a degree in electrical engineering and lots of time on your hands, you might design a custom-made crossover network—but that takes sophisticated test instruments and isn't practical.

Thus triamplification emerges as an altogether efficient alternative for quality sound. The nerve center of a triamp system is its electronic crossover—a black box whose controls let you simultaneously adjust the frequency ranges and signal levels being fed to each speaker. Some electronic crossovers even let you vary the slope of the crossover filter, thereby providing a means of addressing some of the idiosyncracies of drivers.

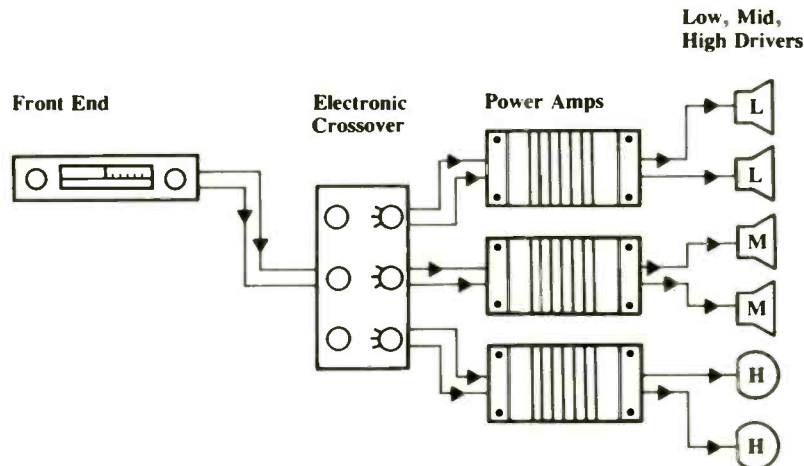
Since the position of a car speaker strongly affects its frequency response, such response-shaping flexibility is very welcome. Woofer resonances can be more readily controlled, thereby reducing the mid-bass boom that plagues many lesser systems. And tweeter output can be increased without bringing up the level of the midrange drivers, which often causes a nasal tone in cars.

Though expensive, a bi- or triamplified system's price isn't prohibitive—especially for the confirmed autophile. The least expensive high-quality biamplified system I've seen comprised multiple Alpine amplifiers and crossovers and cost about \$1,100, installation included—stiff, but not exorbitant. The truly handy, and by that I mean people who know their sockets from their ratchets and their volts from their ohms, might be able to install such a system themselves for something in the region of \$800. In most instances, however, it's best to leave such complexities to those who grapple with them for a living. **HF**

Single- vs. Multi-amping



In a typical mid-price car stereo system, the audio signal is routed from the front end through a single, two-channel amplifier, and from there to two full-range loudspeaker systems. If the speakers use more than one driver to reproduce the audible band, a nonadjustable crossover network divides up the signal so that each driver is apportioned the correct frequency band.



In a triamplified system, the audio signal is fed to an electronic crossover, where it is divided into separate low-, mid- and high-frequency bands. Each band is amplified by its own two-channel amplifier and fed to drivers throughout the car. Such a system lets you tailor precisely the level and operating ranges of each speaker to match listening conditions.

CrossTalk

Practical answers to your audio questions by Robert Long

Cleanup

I recently brought a Discwasher Perfect Path head cleaner for my Panasonic AM/FM/cassette "boom box." I would try using a Q-Tip and pure isopropyl alcohol, but the heads are upside-down and hard to reach on my portable. Did I waste my money on the Perfect Path?—Josh Zeprick, Milwaukee, Wis.

Not at all. If you can't reach the heads with a cotton swab, you need an alternative, and I don't know of a better one than Perfect Path. I must say that I like to check the swabs I use to see how much debris I've removed from the heads (which is usually impossible with the mechanical alternatives), but a poorly made swab can leave lint, particularly if it catches on the prongs of cassette-deck tape guides, and do more harm than good if you're not careful.

Sensitive Matters

Is tape-sensitivity adjustment as critical with DBX noise reduction as it is with Dolby? And when your equipment reports mention a meter reading referenced to DIN 0 dB for 3 percent distortion, do you mean when recording the test tone or when playing it back?—Kinhluan Nguyennoc, Storrs, Conn.

By the time tape-sensitivity has created a record/playback disparity of only 2 dB or so (and that isn't very much), audible frequency-response alteration will begin creeping in with either Dolby system, B or C—assuming a reasonably broad dynamic range in the program material. You should hear no frequency-response alteration with DBX until levels get so badly out of whack that they overdrive either the tape or the electronics, which might require something like 10 dB of mismatch or more on typical equipment. So for all practical purposes, sensitivity calibration is not an issue for DBX circuitry built into cassette decks—and even if it were, distortion or noise would be a more likely by-product than frequency-response aberrations.

Because of the sensitivity matching required for accurate Dolby tracking, metering generally—but by no means always—is the same in recording as in playback for a given test tone. Diversified Science Laboratories records and plays back

the tone (simultaneously, if the deck has a separate monitoring head) and looks for the level that delivers 3 percent distortion at the playback output. This usually means that the cited meter reading is for playback level; if it differs from the recording metering for the same input level, DSL states the indicator reading in terms of the latter, since that's what you normally would see during recording.

Heads Up

Many of my cassettes were recorded on decks whose heads were out of alignment. To get good, crisp reproduction, I align the azimuth of my deck's playback head to these tapes. I'd like a reference so that after playback I could restore correct head azimuth with pinpoint accuracy. Is a test cassette sold for this purpose, or could I use a regular prerecorded music cassette (say, one of the premium audiophile types)?—Peter Mork, Boston, Mass.

Several companies sell test or adjustment tapes that can be used to adjust playback-head azimuth, including, most recently, Mobile Fidelity with its Geo-Tape. You should be aware, however, that different brands will give you somewhat different results. For example, the azimuth of the BASF tapes used by Diversified Science Laboratories to measure decks for HF's equipment reports is not quite the same as that of the TDK tapes DSL used formerly, and neither matches the Teac tapes we used before that. You could use prerecorded music tapes, though that would make the job much harder than using the test/alignment tapes. And similar azimuth variations between brands would still remain (depending on which test tapes the tape-duplication operations happen to use).

The ideal solution is an automatic azimuth correction system, such as the one in the new Nakamichi Dragon reported on in this issue. But assuming that you don't want to spend \$1,800 on a new deck, I have to say that the whole idea of frequent azimuth recalibration bothers me. The adjustment brackets on some heads simply aren't designed with that in mind. I think that if I were faced with your problem, I'd copy all of the tapes onto a deck with normal azimuth and then permanently reset the azimuth of the playback deck. Then I'd play only the copies.

No Mystery

I tape radio broadcasts on an open-reel recorder and then dub portions onto cassettes. Recently I had to have two transistors, a pinch roller, and the heads of the open-reel deck serviced. The heads had to be relapped. Am I somehow damaging my tape equipment by practicing this audio hobby?—F.W. Nelson, Pawtucket, R.I.

Sure. You can't use tape equipment—or any other mechanical gear—without inflicting some punishment on it. But that's what it's there for. If you have to get the heads relapped or replaced more than every couple of years, you're either pretty compulsive about your hobby or there's something wrong with your equipment. But otherwise, just consider it one of the "operating costs."

What's Your RF Ref.?

In "How to Make Great Cassette Recordings" [February 1983], Peter Mitchell says, "... if you are recording with Dolby, be sure that the MPX filter is switched in." Previously, I had read that the filter should be used only when recording stereo FM broadcasts. My deck's manual even warns that the filter should not be used with any other source because it would unnecessarily limit frequency response. Who's right?—Paul Marshall, Woodridge, Ill.

Opinions range from that of your manual (which, I suspect, is from a manufacturer who believes that electrical bandwidth must always be kept as wide as possible to prevent any possible compromise of the signal within the audio band) to the other extreme, at which stray RF (radio-frequency) or other nonaudio elements are viewed as potential sources of Dolby mistracking or intermodulation distortion. The latter school would probably go Mitchell one better by leaving the filter on for all recording—with any sort of noise reduction or with none at all—for the cleanest possible signal. Many models, including a few very expensive ones, have nondefeatable filters that limit flat response to 15 kHz or slightly above.

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

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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.

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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.

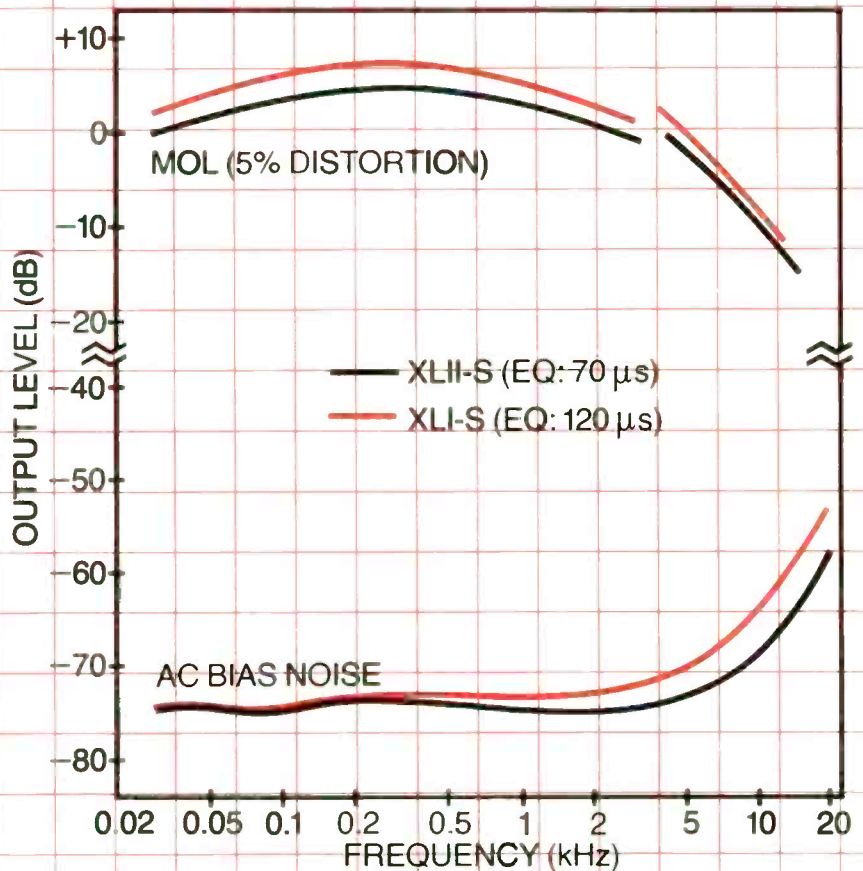
This increases maximum output level and reduces AC bias noise which in turn expands the dynamic range.

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

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

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Retsoff's Remedies

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

Choosing a Mike: The Inside Story

WITH THE EXTRA HEADROOM afforded by today's super noise-reduction systems and the growing availability of VCR-based audio recorders—PCM and Beta Hi-Fi—it's more likely than ever that you'll want to start experimenting with live recording. No matter how good your deck is, your choice of microphones will be of prime importance: As a transducer converting sound into electrical energy, a microphone will necessarily inflict a bit of its own character on the signal it feeds to the recorder.

Microphones can be classified either by the type of transducer that is used—dynamic, condenser, electret, ribbon, or "crystal"—or by directional pickup pat-

terns, you can pretty much rule out "crystal" (or piezoelectric) mikes. Their output impedance is much too high and they are affected by changes in temperature and humidity. In general, crystal mikes are unsuitable for serious recording.

Dynamic mikes are very similar to ordinary loudspeakers operated in reverse. The diaphragm—the thin membrane that is moved by the air vibrations we call sound—is attached to a coil of wire immersed in a magnetic field. The motion of the coil in the field generates a voltage across the coil, which becomes the output. Dynamic mikes are practically impervious to changes in temperature and humidity. They're rugged and they can take a good deal of physical abuse and handle very high sound pressure levels with relatively low distortion.

The dynamic element is low impedance, but an internal transformer is usually employed to raise signal level and, with it, impedance. Thus, dynamic mikes come in

nal, a transformer can be used at the recorder input to boost level.

Of all the microphone types, dynamics are probably the most popular and are available in a variety of pickup patterns. They're especially favored by vocalists who want to thrash about the stage and handle the mike freely. On the negative side, a dynamic mike's moving element tends to be more massive than other types, which limits its transient response. Frequency response also tends to be less smooth and generally less extended at the high end than with other quality designs.

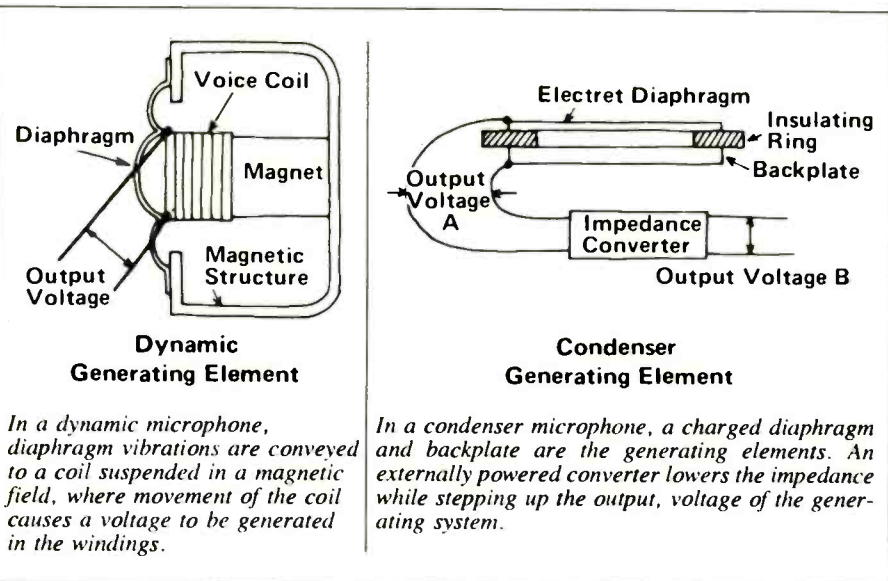
A ribbon mike uses the same electro-mechanical principle as a dynamic, but here the conductor is the diaphragm itself, which is formed of a very thin metal ribbon. Since the moving mass is very low, transient and high-frequency response can be excellent. Ribbon mikes are unaffected by humidity and temperature changes, but because the ribbon diaphragm is loosely suspended and very thin, they are extremely fragile. Some recent designs are said to be much more rugged than their predecessors and so bear serious consideration.

Ribbon mikes are usually expensive and, because only a single "wire" is used as the generating element, they need a step-up transformer to raise their outputs to usable levels. Since only serious recordists are attracted to a ribbon mike, the transformer usually is designed to work into relatively low ("professional") loads.

A condenser microphone operates similarly to an electrostatic speaker. A thin, conducting membrane is used as both the diaphragm and generating element—a la ribbon microphone—but in a condenser the membrane is stretched fairly taut near a fixed metal plate, the two forming an electrical capacitor (or condenser in old parlance).

The diaphragm is energized by an external DC power supply, and a charge is built up on its rear surface. This charge causes electrons to flow through a resistor until a charge of equal but opposite value is built up on the surface of the backplate. When the diaphragm moves inward in response to a sound—closer to the backplate—the capacitance of the system increases, causing a change in voltage across the capacitor proportional to the distance the diaphragm has moved.

This voltage could be used as the microphone's output, except that the source impedance of the condenser is far too high to work into a mike cable: The self-capacitance of even a few inches of cable would



In a dynamic microphone, diaphragm vibrations are conveyed to a coil suspended in a magnetic field, where movement of the coil causes a voltage to be generated in the windings.

In a condenser microphone, a charged diaphragm and backplate are the generating elements. An externally powered converter lowers the impedance while stepping up the output, voltage of the generating system.

tern—omni, cardioid, supercardioid, bidirectional, and so on. Your job is to choose one from Column A and one from Column B. Once you've decided on type and pickup pattern, there are two other areas to check to make sure that your microphones will be compatible with your recorder in output level and impedance.

In this month's column, we'll inspect the menu for Column A—transducer types—and see what you can expect from each in the way of response, output level, impedance, and general reliability. For

high- (perhaps 10,000-ohm) and low- (50- to 600-ohm) impedance varieties. A high-impedance dynamic generates more output, but you can't use a cable longer than 10 or 15 feet between it and the recorder. Furthermore, the microphone preamps of some recorders—especially semiprofessional ones—are designed to match a low-impedance mike and are unsuitable for use with a high-impedance design. If you opt for a dynamic, I'd advise a low-impedance one (say 600 ohms) that allows you to run a long cable. If your recorder requires more sig-



HOW CAN SANSUI CLAIM THE D-970 IMPROVES EVERY TAPE YOU'LL EVER MAKE? SIMPLE. ITS HI-TECH FEATURES INCLUDE COMPU-TREC.

Sansui's remarkably innovative approach to microcomputer technology is the reason Sansui cassette decks have an unfair advantage over other cassette decks.

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coreless FG-servo direct-drive capstan motor and the Dyna-Scrape filter with Hold-Back Tension servo, glides the tape smoothly over the three high-performance heads.

The result is 0.025% wow and flutter—less than the most expensive deck in the world. And Dolby C/B noise reduction is responsible for a superb 81dB signal-to-noise ratio. There's also a Dual Memory for repeat play on any section of



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The new Signet TK10ML



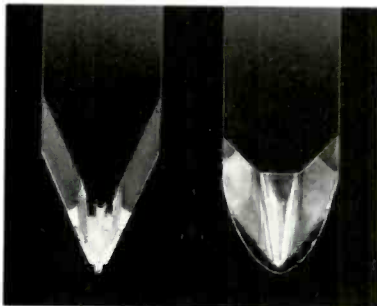
...so remarkable
it may set digital records
back another year!

Until you hear the Signet TK10ML, you may not fully appreciate how superb today's analog recordings can be. And how little may be gained by going all-digital.

The single most significant advance in the Signet TK10ML is its unique new *Micro-Line™* stylus...the most complex stylus shape ever attempted. Its scanning radius is a mere 2 to 3 *microns!* That's just 39% of the scanning radius of a typical 0.2-mil elliptical. Yet the supporting radius is about 3.0 mils (compared to only 0.7-mil for the elliptical). It's the longest, narrowest footprint ever achieved.

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Each Signet TK10ML *Micro-Line* stylus is created from a whole, natural octahedral diamond, oriented for longest life, and with a square shank to precisely fit the laser-cut hole in our unique, ultra-rigid low-mass boron cantilever. You get perfect alignment. Period.

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With the new Signet TK10ML, older records literally come back to life. New records transcend the limits of ordinary technology. Your entire system gets a new lease on life.

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swallow it. So, condenser mikes have built-in, externally powered electronics—usually an FET source follower—to lower the output impedance. Professional condenser mikes usually have phantom powering, in which a power supply located near the recorder sends a DC voltage over the same cable used to carry the audio signal. Many mixers provide built-in phantom powering for multilimited recording work.

A condenser mike's internal electronics provide a low output impedance—generally around 600 ohms—and a high output level. The transducing element itself is rug-

If I had to
choose just one
mike, I'd opt
for a condenser.

ged since the diaphragm is tautly drawn, but because of the high *internal* impedance, a condenser mike can be adversely affected by high humidity. Such mikes will work to very high sound-pressure levels without distorting, and, by interposing attenuators between the mike head and the internal electronics, the working level can be increased even further. Heads with different pickup patterns can be used with the same mike and preamp, which gives the system great flexibility. And, since the mass of the moving element is very low, transient and high-frequency response can be very good. For all these reasons, if I had to choose just one mike, I'd opt for a condenser—if I could afford it.

The electret mike is the poor man's condenser. The operating principle is virtually identical, but an electret does not require external diaphragm charging. It is made of a metallized plastic that is permanently charged during manufacture. An electret still requires electronics to lower its impedance, however, and is usually powered by an internal battery.

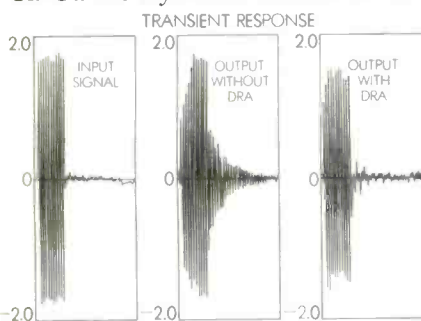
Because it is designed as a low-cost alternative to condenser mikes, an electret lacks flexibility: It usually has a fixed head, so you can't swap mike elements or insert attenuators. And, if it is battery powered, there's a chance it will give up the ghost during a recording session. Furthermore, the maximum output level of an electret is limited by its battery voltage, so it typically can't handle as high a sound-pressure level as a professional condenser. Finally, there is the question of how permanent a permanent charge really is. New electret materials are said to be quite stable, but I've had older electrets die on me after about five years of steady service.

HF

HERE'S A TECHNOLOGY STORY THAT'S TRULY ABSORBING.

Every story has a protagonist and an antagonist. And this one's no different.

The hero, in this case, is an unassuming, little technological breakthrough from Pioneer called the Dynamic Resonance Absorber™ (DRA).



And the arch-villain, the ever-present Resonant Tonearm Vibration.

What the Dynamic Resonance Absorber does, to make a long story short,

is to absorb the resonant frequency of the tonearms on all of our new turntables.

Thereby eliminating distortion which causes music to lose clarity and accuracy of reproduction.

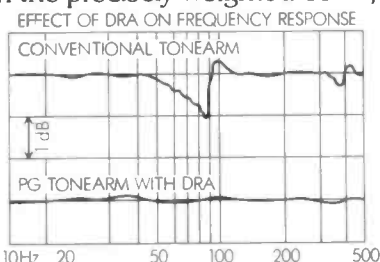
As if this weren't thrilling enough, there's also an exciting subplot. The DRA eliminates acoustic feedback that results when the turntable is too close to speakers played at high volume.



How the Dynamic Resonance Absorber causes all this to happen is actually quite simple, as most acts of genius usually are.

The DRA is composed of a damper made of extremely dense butyl rubber enclosed in a weighted collar on the tonearm.

Working within the precisely weighted collar, the butyl rubber acts just like a spring. When the pipe of the Polymer Graphite™ (PG) tonearm vibrates, the "spring" compresses and simultaneously soaks up vibrations.



That's why Pioneer can virtually promise that muddy reproduction is an out-of-date story. And why transient response is far more accurate. In fact, as you can see on the chart, the cartridge output (with DRA) closely resembles the original input.

Furthermore, frequency response, as you can also see, is tremendously flat.

But, while the Dynamic Resonance Absorber is a real blockbuster, it's not the only story here.

Every Pioneer turntable also features a Stable Hanging Rotor™ that improves stability by reducing friction which decreases wow and flutter.

A zero-clearance dust cover allows you to place the turntable flush against a wall, yet still open it all the way.

And another convenience item: all controls are located outside the dust cover.

In addition, the PL-S70 (shown here) has two other ease-of-operation features: an automatic disc size selector (ADSS) and auto repeat function.

Naturally, you'll want to audition each new Pioneer turntable with Dynamic Resonance Absorber at your earliest convenience.

If only to convince yourself that this story falls in the non-fiction, not the science-fiction category.

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Absolute silence (of course, you'll get sound on AM/FM). The silence is the mark of a great receiver. And great engineering.

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We've turned on the R-851 for some very experienced—even jaded—audio ears, and all we can say is it stops 'em every time. The sound is different. The sense of *being there* is almost overpowering. All this comes from 85 watts per channel of power* (with dynamic power far above this figure) and some of the most sophisticated circuitry in the business. Above all, it uses MOS FET's, the new breed of output transistors, in the amplifier section. They can handle the transients, the power surges, the power requirements of present-day sound (and tomorrow's digital sound) better than bipolar transistors ever could—and give you a sonic purity like no other (many claim MOS FET's have picked up the warm, rich sound of the great tube amps and gone a step beyond!).

Fine tuned for every audio need.

From front end to output jacks, the R-851 offers every feature an audio enthusiast might want. The most commonly used controls are right up front—the more esoteric ones are placed behind a neat flip-down front panel. There's microprocessor-controlled quartz-locked tuning with 14 station programmable memory (7 AM & 7 FM); automatic station seek; 3-band parametric-style equalizer; fluorescent display panel; and two-way tape monitoring and dubbing.

If you need some help in finding that one Kyocera dealer in twenty, contact: Kyocera International, Inc., 7 Powder Horn Drive, Warren, NJ 07060 (201) 560-0060.



*85 watts RMS per channel, both channels driven, at 8 Ohms with no more than 0.015% THD from 20-20,000 Hz.

Basically Speaking

Audio concepts and terms explained by Michael Riggs

How HF Tests Cassette Tape

TO MAKE A GOOD RECORDING, you need a good tape deck. But that's only half the story. You need a good tape, too. So periodically we set ourselves the task of testing most of the new or recently improved cassette-tape formulations that we think might be of interest to serious recordists. We don't test absolutely everything on the market, however, which means that one or two of your particular favorites may slip through our net. But in many cases, those may simply be tapes that have not changed significantly since we last tested them. We therefore suggest that, if you don't find what you're looking for in this month's roundup, you should look up our last series of tests in the February 1982 issue.

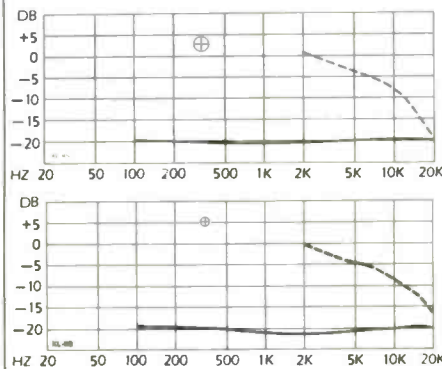
The testing protocol Diversified Science Laboratories followed then is identical to the one it used for the tapes covered in this issue, except that this time the reference tapes are the IEC (International Electrotechnical Commission) standard formulations, which serve as benchmarks against which other tapes can be compared. Although the IEC tapes are internationally recognized as representing the center-line values for bias, sensitivity, and frequency response for their respective tape types, the IEC standards allow considerable latitude around those nominal values. Nor would extreme deviation from the norms these tapes represent necessarily imply any deficiency of performance: The important question is how a given tape will perform in your cassette deck. Correctly interpreted, the data from our tests will help answer that question for you.

DSL begins by calibrating a Nakamichi 582 cassette deck's bias and sensitivity to the characteristics of the appropriate reference tape. The resulting settings serve as points of comparison for the various tapes of that type under test. For each tape, DSL adjusts the 582's bias to achieve equal sensitivity at 333 Hz and 10 kHz. The resulting bias is listed in the data (under "relative bias") as a percentage of the reference bias. This figure can enable you to determine whether or not the tested tape is compatible with the biasing of your cassette deck.

For example, if your deck's manufacturer recommends the use of a particular Type 2 tape, you can look up its relative-bias rating and then compare that number with the relative-bias ratings of other tested

Type 2 tapes. Neglecting for the moment the question of tape sensitivity and Dolby tracking, you will probably find that there are quite a few that, because their ratings are close enough to that of the recommended tape, can be used interchangeably with it. Or you may at the moment be employing a tape that gives you recordings with, for example, slightly dull highs. This would suggest that your deck is overbiased for that formulation and that you might get better results with a tape having a higher relative-bias rating.

On the other hand, such an error in high-frequency response might also be caused by Dolby mistracking brought on by an incompatibility between the deck's Dolby recording calibration and the tape's midrange sensitivity. (If the problem disappears when you switch off the noise reduction or use DBX instead, you know it's a sensitivity mismatch.) In this case, you would want to try tapes whose relative sensitivities are different from that of the tape you are using now. Relative sensitivity is



The above graphs illustrate why we sometimes retest a tape that is nominally the same as one we have tested before. Both are for Maxell XL-IIS—but the top one is from our February 1982 roundup, while the bottom one is from this issue's series. You can see from the positions of the gunsight symbols (marking the recording level relative to DIN 0 dB at which 3 percent THD is reached at 333 Hz) and of the dotted lines (indicating the recording level at which 3 percent IM is reached at frequencies above 2 kHz) that the current version of the tape has almost 3 dB more midrange headroom, as well as about 2 dB more headroom at the extreme high end. With each tape biased for equal sensitivity at 333 Hz and 10 kHz at -20dB, the relative sensitivity versus frequency curves (the solid lines) are quite similar, except for the new formulation's slightly deeper trough in the upper midrange and lower treble.

shown in our data as the deviation in decibels (dB) from the sensitivity of the reference tape. Usually, you will want to stick with tapes whose relative sensitivities are very close to that of the tape recommended by your deck's manufacturer.

Three very important performance characteristics are shown graphically. One is the tape's relative sensitivity with respect to frequency at 20 dB below the DIN 0-dB level (defined as 250 nanowebers per meter at 333 Hz) when biased for equal output at 333 Hz and 10 kHz. Most tapes exhibit very uniform sensitivity over the entire test range of 100 Hz to 20 kHz when biased this way. But although the Nakamichi 582's recording head gap and recording equalization are fairly typical of good three-head decks, they may not be representative of your cassette deck. So you may find that you get better or worse response from a particular tape than our sensitivity curve might at first glance suggest. Experimentation is therefore in order: Once you've tried out a few of the tapes on your own machine, you should find it easier to interpret the plots with confidence.

The two other items of information on the graph concern the tape's headroom—the maximum signal level that can be recorded on it without excessive distortion. Midrange headroom is indicated by the elevation of the gunsight symbol on the graph. This tells you the signal level at which 3 percent total harmonic distortion (THD) is reached at 333 Hz. High-frequency headroom is shown by a dotted line extending from 2 to 20 kHz, which tells you the signal level at which 3 percent intermodulation (IM) distortion is reached. (An IM measurement is used because in a severely band-limited system, such as a cassette deck, harmonic distortion measurements cannot be accurately made at high frequencies and will therefore give too rosy a picture of how much audible distortion is actually being generated.) Headroom at three frequencies—333 Hz, 4 kHz, and 15 kHz (about the highest frequency of musical significance)—is also tabulated below the graph in dB referred to DIN 0.

Since our cassette deck reports give the meter readings for DIN 0 dB, you can use these figures to calibrate your recording levels on any deck we have tested to the headroom of any tape we have tested. For example, if your deck's meters read +3 dB at DIN 0 dB with Type 2 tapes, and if you are using a Type 2 tape with 2½ dB of midrange headroom, you should ordinarily be able to record up to the +5-dB mark on

CONSTANTLY BETTER

AUDIO Basically Speaking

the meters.

The more signal you can put on a tape the better, so you want a tape with good headroom. You may find, however, that between two tapes, one has the better midrange headroom, while the other has the better high-frequency capacity. This may well be the case if the first is a Type 2 formulation and the second is a Type 1 tape, since Type 1 tapes almost invariably have better high-frequency headroom. Your choice must then depend on the spectral characteristics of the music to be recorded. Jazz, for example, is more likely to be rich in high-frequency energy than is chamber music.

The more signal you can put on a tape, the better.

And you must also consider noise: Extra headroom is no great benefit if you have to use it all up keeping the signal above a high noise floor. For that reason, we list the midrange signal-to-noise (S/N) ratio at the recording level that produces 3 percent THD. This is your best single guide to a tape's dynamic range. (Type 2 and Type 4 tapes usually emerge as the champs in this department.) In addition, we list the A-weighted noise referred to DIN 0 dB, which is essentially the same measurement but taken at the same recorded level for all tapes. (In fact, you can figure it out for yourself simply by subtracting the midrange headroom figure from the midrange S/N ratio.) This is primarily valuable if you always record at the same meter reading regardless of the tape you use. In that case, you'd want the lowest noise possible, independent of the total dynamic range.

Finally, we give the total harmonic distortion at 333 Hz at 0 and -10 dB. These levels are high enough to stress the tape, but not so high as to push it into saturation. Again, the design and calibration of the tape deck used will affect the results. On a deck with a different approach to recording equalization and bias from that used in our test machine, you might get somewhat better or worse performance than we show.

The final and most important test is actually using the tape in your deck to make the kind of recordings you want. If a tape looks especially attractive, but you know your deck isn't optimally set-up for it, you can usually have a service technician make the adjustments necessary to get top performance with it. And on many of today's premium decks, you (or the machine itself) can make the changes required to accommodate most formulations. **HF**

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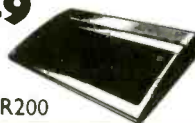
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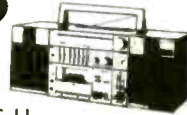
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New Equipment Reports

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



Technics Makes Digital Magic

Technics SV-100 portable PCM digital audio processor, with SH-V100 external AC power supply and battery charger. Dimensions: 9½ by 3¾ inches (front panel), 9½ inches deep plus clearance for controls and connections. Price: \$900. Warranty: "limited," two years parts and labor. Manufacturer: Matsushita Electric Industrial Co., Ltd., Japan; U.S. distributor: Technics, 1 Panasonic Way, Secaucus, N.J. 07094.

JUST A FEW YEARS AGO, a digital recording system would set you back tens if not hundreds of thousands of dollars. Professional ones still can, but, as the Technics SV-100 PCM processor demonstrates, the semipro or serious home recordist willing to forgo umpty-ump separate channels and "razor-blade editing" can now do just about as well for less than a grand plus a home VCR.

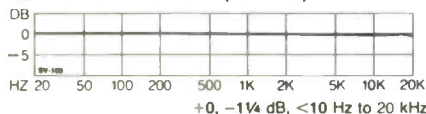
The SV-100 takes a stereo signal pair, at either microphone or line level, samples each channel 44,056 times a second, converts each sample voltage to a 14-bit digital word, and generates a pair of error-correction codes for every six samples. It then scrambles the data so that no two successive words or their error-correction codes appear next to each other on tape and "encodes" the resulting bit stream so that, to a VCR, it looks exactly like an NTSC TV signal, complete with horizontal and vertical sync pulses and all the other necessary accoutrements. In playback, the process is reversed: The digital words are extracted from the video signal, put back in order, checked against the error-correction codes, and finally converted back into analog signals. (For a more detailed explanation of PCM recording, see "The Whys and Hows of Digital Recording," August 1982, page 40.)

The miracle is that this is accomplished in a portable package weighing less than 6½ pounds that you can buy for the price of a good cassette deck. This was made possible by the development of special-purpose N-MOS LSI chips—three of which replace about 700 conventional ICs, or more than 30,000 transistors—and a design that shares many components between the recording and playback modes. (Home digital recorders do not have provisions for off-tape monitoring.)

The error-correction codes are so powerful that any dropout equivalent to less than 32 TV scan lines can be corrected with complete accuracy. Larger dropouts can't be corrected, but for those of less than 96 lines, the most probable data is interpolated. If the dropout exceeds 96 lines—which shouldn't occur if you use good tape and a well-maintained VCR—the system either mutes (if the auto playback mute is on) or emits a burst of noise (if it isn't).

The SV-100 can be used with any video recorder—VHS, Beta, U-Matic, or what have you—that accepts standard NTSC video signals. Since it adheres to the EIAJ digital-recording standard, any tape made with it can be played back through any other EIAJ-standard PCM processor, and vice versa. The processor comes with an SH-V100 external AC power supply, which can

RECORD/PLAY RESPONSE (at -10 dB)



ANTI_ALIASING FILTER RESPONSE

at 15 kHz	-1/4 dB
at 20 kHz	-3/4 dB
at 22 kHz	-2 3/4 dB
at 24 kHz	-30 1/4 dB

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

line input	A-weighted	CCIR/ARM
	83 1/4 dB	80 3/4 dB
mike input	83 dB	77 3/4 dB

INDICATOR READING AT OVERLOAD

+1 1/2 dB

DISTORTION (THD at -10 dB; 315 Hz to 15 kHz)

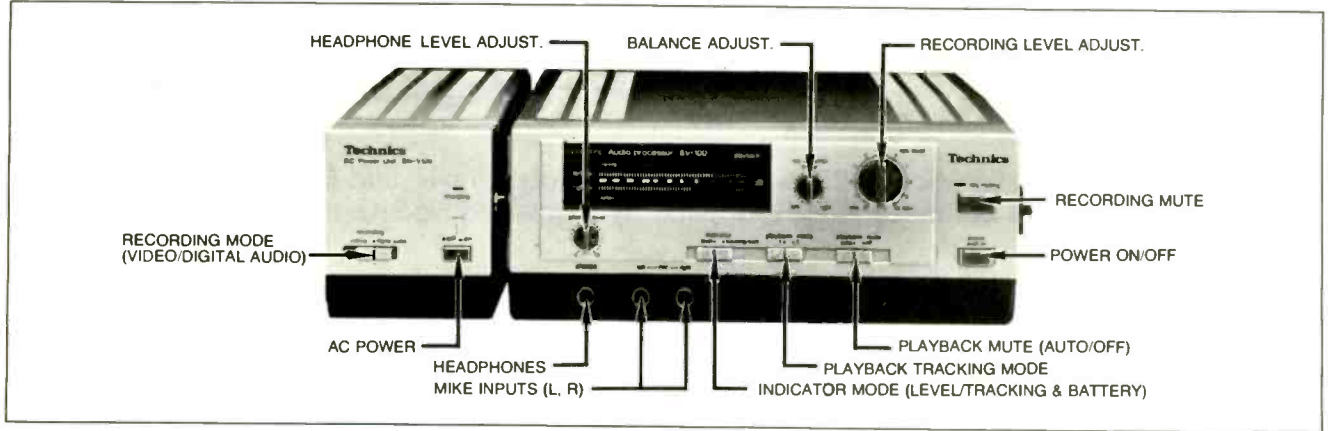
≤ 0.143%

CHANNEL SEPARATION

≥ 43 dB, <10 Hz to 20 kHz;
64 dB at 315 Hz

INDICATOR "BALLISTICS"

Response time	≈ 0.2 msec
Decay time	≈ 800 msec
Overshoot	0 dB



PITCH ACCURACY	no measurable error
FLUTTER (ANSI weighted peak; R/P)	< ±0.01%
SENSITIVITY (re 0 dB; 315 Hz)	
line input	155 mV
mike input	3.8 mV
MIKE INPUT OVERLOAD	170 mV
INPUT IMPEDANCE	
line	49k ohms
mike	580 ohms
OUTPUT IMPEDANCE	560 ohms
MAXIMUM OUTPUT (from 0 dB)	2.22 volts

*See text

power the SV-100 directly as well as charge its internal replaceable battery pack. (Technics claims one-hour operation from a fully charged battery.)

Diversified Science Laboratories tested the SV-100 in conjunction with a Panasonic PV-5000 portable VHS VCR. The PV-5000 matches the SV-100's appearance and, with its companion PV-A500 tuner, eliminates the need to change connections when switching between digital-audio and video recording. The SP (standard two-hour) recording mode was used for all tests, as recommended by Technics, to minimize the possibility of long dropouts.

Frequency response is almost ruler flat from below 10 Hz to 18 kHz and down only 1¼ dB at 20 kHz. Channel separation is greater than 40 dB out to 20 kHz and more than 60 dB below 2 kHz. (Many amps and preamps don't do that well.) A-weighted noise is at least 83 dB below the maximum recording level from either the line or microphone input, and the microphone overload point is a very generous 170 millivolts. Together, they suggest that you should be able to make excellent recordings using the SV-100's preamps, provided you don't get *too* close to the source with a highly sensitive mike.

Microphone input impedance is close to the professional standard of 600 ohms. Clearly Technics expects you to take this processor seriously and to use high-quality low-impedance microphones. The system output impedance is also about 600 ohms, which suggests that the semipro will have little difficulty using the SV-100 with professional equipment, and the output level is more than adequate for any conceivable use. Line input impedance and sensitivity seem well chosen to handle any recording situation. As expected, pitch accuracy is perfect, and flutter is below measurement limits.

Unlike analog recorders, which overload slowly and gently, a digital system clips abruptly at its maximum recording level. The largest signal level that can be described by a 14-bit word is fixed, and a level greater than that is simply chopped off. Thus, the characteristics of the record-

ing-level indicator are very important in PCM recording, and Technics has done an excellent job in this area. The indicators have fine resolution around the critical 0-dB point, respond extremely rapidly (but without overshoot), and hold the peak level long enough for you to read it. The SV-100 uses standard EIAJ recording preemphasis, but the meters read *after* the preemphasis network and antialiasing filter, and so indicate the exact signal level applied to the analog-to-digital (A/D) converter. As a result, you needn't concern yourself with the spectral distribution of the program you're recording.

Although the meters read to +6 dB, clipping occurs slightly below the +2-dB mark. An occasional excursion above that level probably will cause no harm provided the peak is very brief, but it's nonetheless a good idea to avoid it if at all possible. Distortion remains less than 0.05 percent at meter indications from -20 dB to +1 dB. As is typical in PCM systems, measured distortion increases at lower levels. But even at -50 dB, midband distortion is less than 1.5 percent—or 86½ dB below maximum recording level—which suggests that the harmonic components themselves will be completely inaudible. With a constant -10-dB input level (the indicator reads higher than that as the preemphasis takes effect), distortion is no more than 0.021 percent out to 10 kHz. A higher reading (0.143 percent) at 15 kHz reflects spurious cross-products rather than true harmonic distortion.

The meters can be switched to monitor battery level on the lower (right-channel) indicator and VCR tracking on the upper (left-channel) display. Proper VCR tracking is vital to avoid lost data. When playing a PCM recording on a different VCR from the one on which it was made, the VCR tracking control is adjusted for maximum indicator reading. The SV-100 also has two switch-selectable playback modes, one of which will provide more reliable performance than the other, as indicated by the tracking display.

Once the bench tests were completed, we were faced with the problem of what

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A large black speaker stands on the left, with a smaller black speaker to its right. A dense field of white dots radiates from the speakers, creating a 3D sound field. The background is dark with a grid of white dots.

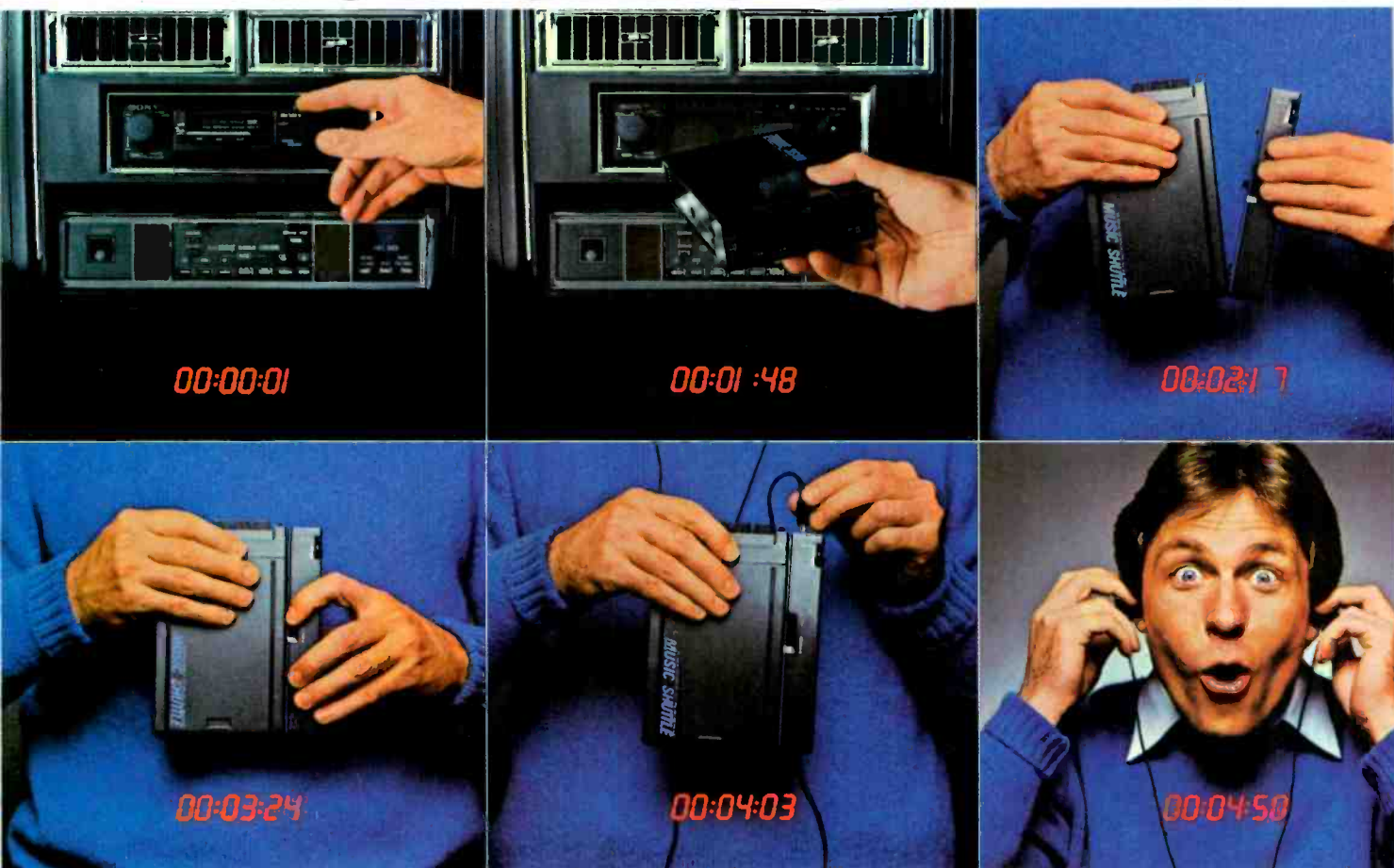
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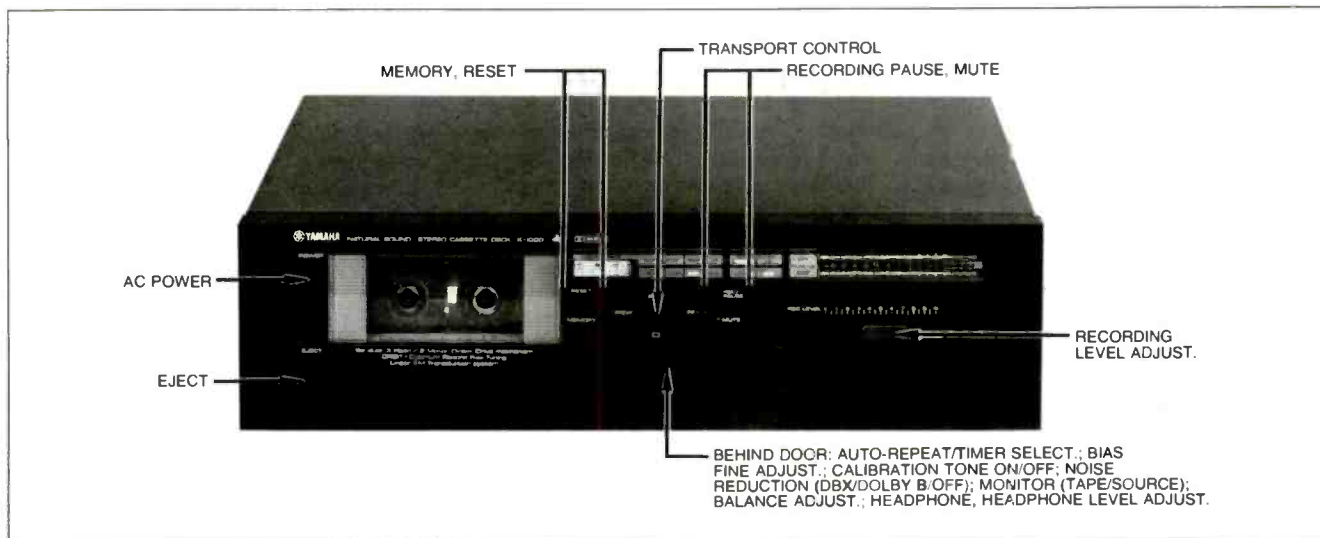
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source to use for a listening test. The only prerecorded material that might tax the SV-100's ability would be from a Compact Disc. Indeed, some readers might use the system for copying such discs, but we decided on live recording as the ultimate test. Fortunately, several professional musicians were sufficiently interested in digital sound to participate in some experimental recordings.

The SV-100 accompanied us on location to several concerts and private recitals, with extraordinary results. The recordings were made using DSL's laboratory microphones and custom mixer. Occasionally we had the opportunity to perform a real-time A/B comparison in the same acoustic environment. Our "laboratory musician" would repeat the performance in synchrony

with the recording, enabling us to switch between his current performance and the previously recorded one at will. From the microphone's vantage point, the audible differences were insignificant. We also made direct digital-to-digital copies of our tapes using two VCRs and the SV-100's "Copy Out" jack. Again, we could discern no difference between the copy and the original—which is all you can ask for and more than you usually get. A top-flight open-reel analog recorder with noise reduction will give you no better (probably worse) fidelity than the SV-100, yet will give you less uninterrupted recording time, weigh more, and cost more both to buy and to operate. By those lights, we would rate this little Technics a big success.

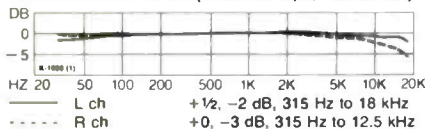
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Luxury on a Budget from Yamaha

Yamaha K-1000 cassette deck, with Dolby B and DBX noise reduction. Dimensions: 17 by 4½ inches (front panel), 13½ inches deep plus clearance for connections. Price \$595; optional RS-10 wired remote control, \$50. Warranty: "limited," one year parts and labor. Manufacturer: Nippon Gakki Co., Ltd., Japan; U.S. distributor: Yamaha Electronics Corp., USA, 6660 Orangethorpe Ave., Buena Park, Calif. 90620.

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



AMONG THE GROWING NUMBER of top cassette decks that include DBX noise reduction is Yamaha's new \$795 K-2000. But if that's a little rich for your budget, there's also the K-1000, reviewed here. For \$200 less, it provides most of the premier model's features, including DBX noise reduction and Dolby B. And its bias can be fine-tuned manually for the brand of tape you're using with the aid of a test-tone oscillator and a unique "tuning-meter" calibration. (Yamaha calls this system Orbit—for Optimum Record Bias Tuning.)

Other extras are a variety of timer and memory modes, including a repeat feature whose start and end "stops" can be set wherever you want them and a headphone output with a level control. A feature of the K-2000 that is curtailed here (certainly the most important difference between the two models) is the monitoring. Although the K-1000 has separate recording and playback heads, tape/source comparisons are possible during recording only if you don't use noise reduction. Otherwise, tape/source switching is automatic and depends solely

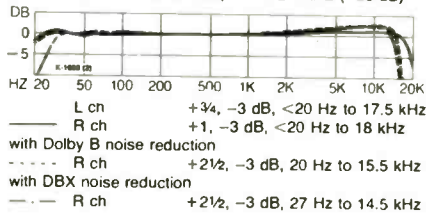
on whether you are in playback or in recording (including recording/pause). This obviates the need for the duplicate noise reducers that would otherwise be required for simultaneous recording and playback, but it is sure to disappoint recordists who want to be able to monitor off the tape in all recording situations.

The Orbit bias-adjustment knob itself is fairly conventional, with a detented center position that can be used as a "default" setting when you don't have time to run the full procedure (which takes only a few seconds, however). It is calibrated for a ± 25 -percent range and influences all three tape types that the deck is designed to accept: Types 1, 2, and 4. Equalization and basic bias settings for these types are selected automatically, based on the identifying keyways in the cassette shells.

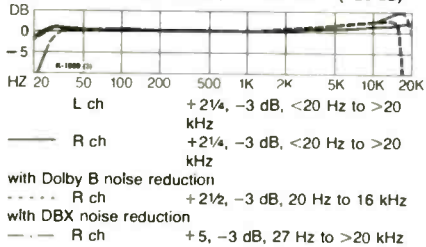
When you press the red test button next to the knob, the counter converts into an ingenious tuning meter that does for bias adjustment more or less what a channel-center meter does for FM tuning. If the bias is low, causing a high-frequency peak in

AUDIO New Equipment Reports

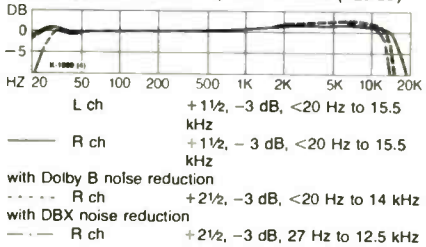
RECORD/PLAY RESPONSE, TYPE 2 TAPE (-20 dB)



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



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



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

	Type 2 tape	Type 4 tape	Type 1 tape
without noise reduction	54 dB	53¼ dB	53¼ dB
with Dolby B noise reduction	64¼ dB	63¾ dB	63½ dB
with DBX noise reduction	85½ dB	85¼ dB	84¾ dB

INDICATOR READINGS FOR DIN 0 dB (315 Hz)*

Type 2 tape	+7 dB (with 1.9% THD)
Type 4 tape	+7 dB (with 3.0% THD)
Type 1 tape	+7 dB (with 1.1% THD)

INDICATOR READINGS FOR 3% DISTORTION (315 Hz)*

Type 2 tape	+7 dB (for +1½ dB DIN)
Type 4 tape	+7 dB (for 0 dB DIN)
Type 1 tape	+10 dB (for +3 dB DIN)

DISTORTION (third harmonic; at -10 dB DIN)*

Type 2 tape	≤ 0.68%, 50 Hz to 5 kHz
Type 4 tape	≤ 1.2%, 50 Hz to 5 kHz
Type 1 tape	≤ 0.34%, 50 Hz to 5 kHz

ERASURE (100 Hz) ≥ 67 dB

CHANNEL SEPARATION (315 Hz) 51 dB

INDICATOR "BALLISTICS"

Response time	0.6 msec
Decay time	≈410 msec
Indicator overshoot	0 dB

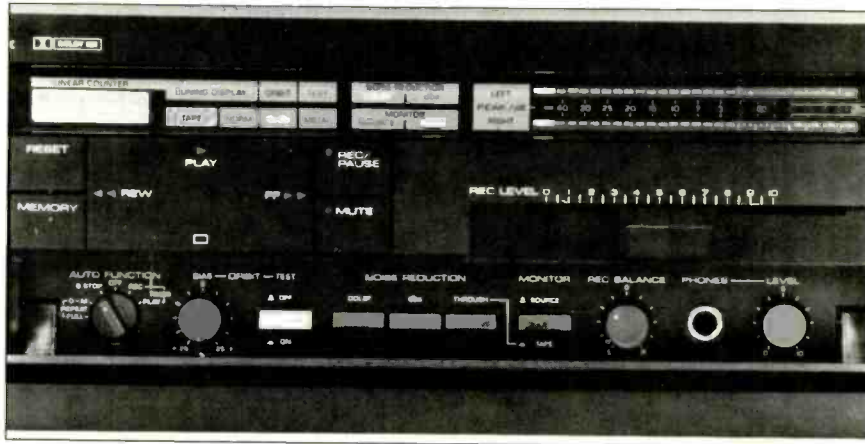
SPEED ACCURACY 0.5% fast at 105 VAC; 0.4% fast at 120 and 127 VAC

FLUTTER (ANSI weighted peak; R/P) ±0.14%

SENSITIVITY (re DIN 0 dB; 315 Hz) 90 mV

OUTPUT (from DIN 0 dB) 0.76 volt

*Without noise reduction; see text.



Behind a flipdown door at bottom right of the front panel are the automatic modes (timer, repeat, etc.) selector, the Orbit bias system, noise reduction and monitor switching, a recording balance control, and a headphone output and its level control.

response, the left end of the display is bent upward, suggesting that the knob is turned too far to the left; if it is too far to the right, that end of the display is bent downward, suggesting the rolloff caused by overbiasing. When you're spot-on, both end sections disappear, leaving a tidy, symmetrical display. When you release the test button, the transport automatically rewinds to the point at which calibration started, so you can touch up the bias even during a relatively brief pause in your program material and be ready to go again when it resumes.

All four of the main transport controls are on a single rocker plate: You begin play by pressing its upper edge, stop it at the lower edge, and engage the fast-wind modes at the two ends. At the right of this plate are the RECORDING MUTE and the PAUSE, neither of which works quite the way you might expect. The MUTE cuts off the signal to the tape for as long as you press it; there is no built-in timing and no automatic PAUSE such as those you find in decks with random-access features that depend on a metered blank between selections. The PAUSE puts the deck into the recording standby mode so you can set levels. Once you have done so, you need only press PLAY to begin recording. There is no recording interlock in the usual sense and no pause feature in playback (for which STOP and PLAY produce the equivalent action). (Incidentally, you can also use the optional RS-10 wired remote control, which plugs into the back panel.)

The counter reads in minutes and seconds—and does so even in the fast-wind modes. If you reset it to 00:00 at the beginning of the tape, it will count upward to show elapsed time; if you reset it at the end and then rewind to the beginning, it will read remaining time (in negative numbers). The memory stop and play functions rewind to 00:00; just below RESET is a button marked "memory" that sets a second "marker" for use in an automatic repeat

mode, which plays from 00:00 to this memorized counter setting before rewinding.

Diversified Science Laboratories used the Orbit bias control (as the owner's manual mandates) for each tape before making its measurements. Though the manual mentions only Yamaha's own branded tapes, DSL measured with what we are given to understand are the equivalent TDK formulations, which should be much easier to find in this country: SA ferricobalt as the basic Type 2 tape, MA as the Type 4 metal, and AD as the Type 1 ferric. All are quite flat except for a slight rise in the treble that is emphasized to some extent with either noise reduction system.

The big surprise is how well the ferric does even in comparison to the metal. Its midrange headroom is the highest of the three (+3 dB DIN—1½ dB higher than that of the ferricobalt and 3 dB higher than that of the metal), more than offsetting the 1 dB or so that it must concede to the other two in raw noise score. And even at -10 dB, the ferric's distortion figures are lower than those of the other tapes. In these respects you should be able to get slightly better recordings on the least expensive tape, though its performance at extremely high frequencies—both at -20 dB and at 0 dB—is admittedly the least impressive. In listening, we could find no overriding basis for choice and would, therefore, pick the ferric as the most cost-effective for most purposes.

These ruminations also apply whether the tapes are used with no noise reduction or with Dolby B. The situation changes somewhat when DBX is chosen, because it increases the effective headroom of the recorder virtually throughout the frequency range. The circuit's recording compression boosts signals below -7 dB DIN (to keep them above the noise) and reduces them above this level. Thus a signal that would go onto the tape at 0 dB without DBX noise reduction is recorded at -3½ dB with it; a

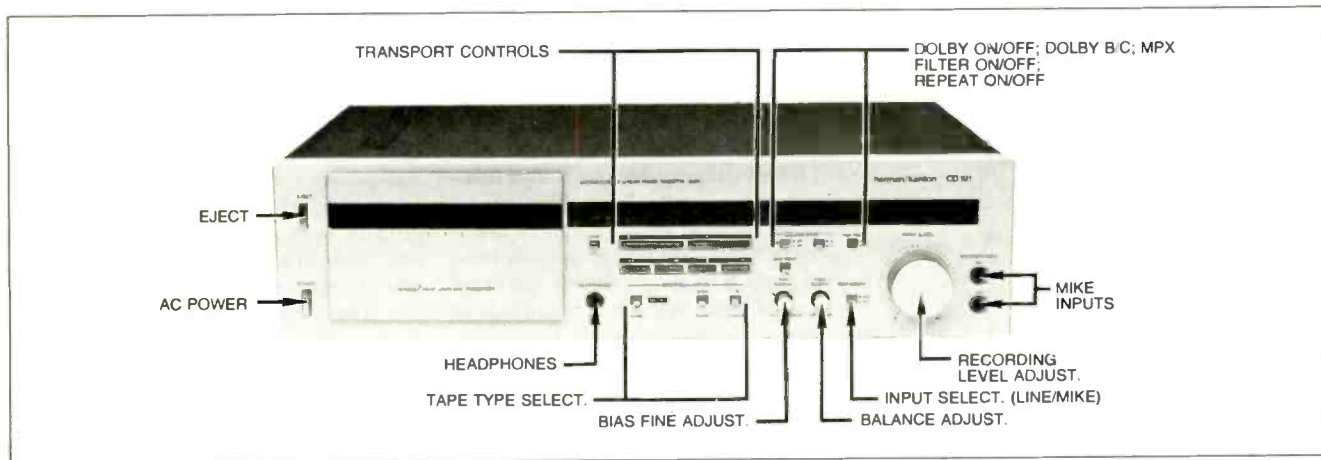
signal at +10 dB (17 dB above the "inflection point") is compressed downward by 8½ dB (half of 17), placing it at +1½ dB; and so on. As a result, midrange overload points (for 3 percent THD) are very high in terms of input signal levels. The highest is, again, for the Type 1 tape, which will accept 13 dB above DIN 0—though, of course, it actually records the test signal at a much lower level.

This enormous midrange headroom (which is a property of the DBX compression scheme in general, rather than of this incarnation in particular) is mirrored at high frequencies, as the lab demonstrated with frequency sweeps at 0 and +5 dB. Yamaha recommends that you record to a maximum of +7 dB on its meters with Dolby B or no noise reduction and to +18 dB with DBX. These figures agree very closely with the lab data, but the metering makes it difficult to be very fussy about following the recommendations. The calibration runs from -40 to +18, with a 2-dB step at the very top of the range, but nothing smaller than 3 dB below that. It would materially help the recordist if Yamaha would raise its calibration 0-dB to at least the Dolby reference level—so the signal wouldn't go into the

red long before you're in trouble, as it does now—and provide finer gradations in that range and above. In practice, however, the metering is not a serious inhibitor of recording quality. Its action is very good, with quick response and just enough "hold" for you to read signal values with reasonable ease.

As with all Yamaha's equipment, the emphasis in the K-1000 is squarely on the reproduction of music in the home, with no pretense at "professional" features. From this viewpoint, the automatic source/tape switching is eminently sensible, and the high replication quality of the deck assures the home recordist that what he hears in the source mode will be altered only minimally on playback, whether or not it can be monitored while the recording is in progress. Hidden behind the scenes are the attributes—a two-motor direct drive system, laminated sendust heads, Yamaha's Linear Electromagnetic Transduction design (intended to prevent unwanted interaction between signal and bias), and so on—that make it all work. And, in case you hadn't noticed, it rates well above average in looks—in either black or silver styling.

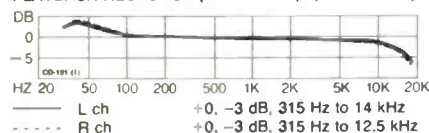
Circle 105 on Reader-Service Card



Low Cost, High Performance from HK

Harman Kardon CD-191 cassette deck, with Dolby B and C noise reduction. Dimensions: 17½ by 4¾ inches (front panel), 12¾ inches deep plus clearance for controls and connections. Price: \$330. Warranty: "limited," one year parts and labor. Manufacturer: made in Japan for Harman Kardon, Inc., 240 Crossways Park West, Woodbury, N.Y. 11797.

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



HAVING FOUND SO MUCH to like in Harman Kardon's flagship cassette deck, the CD-401 ("New Equipment Reports," August 1982, page 22), we were curious to see what the company could do in a budget machine. At less than half the 401's price, the CD-191 is one up from the bottom of the HK line and is this company's least costly model to incorporate Dolby C noise reduction. And though it naturally lacks certain of the 401's refinements—separate recording and playback heads, for example, and the Dolby HX Professional headroom-extension circuit that is the 401's star feature—it retains a strong family resemblance.

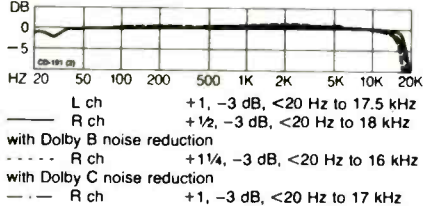
Near the top of the front panel, to the right of the cassette well, is a narrow row of indicators, including a three-digit mechani-

cal tape counter and three small lights that indicate whether the deck is turned on and whether the recording or pause functions have been activated. Next to these are two LED level indicators, calibrated from -20 to +8 dB, with 2-dB intervals from -7 to +5, plus one at the 0-dB point. And to the extreme right is a pair of lights indicating whether Dolby B or C is engaged.

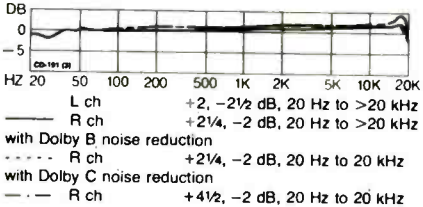
Three small, square buttons just below the right-channel level indicator enable you to select the noise reduction you want and to switch the multiplex filter on or off. Another string of three buttons—near the bottom of the panel, right below the transport controls—permit bias and EQ selection for Type 4 metal, Type 2 chrome and ferric-oxide, and Type 1 ferric tapes. There is also a button for choosing between the line and

AUDIO New Equipment Reports

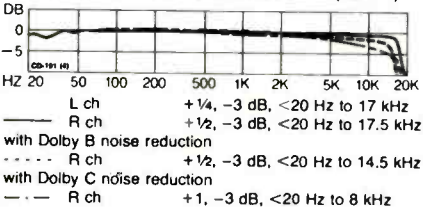
RECORD/PLAY RESPONSE, TYPE 2 TAPE (-20 dB)



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



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



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

	Type 2 tape	Type 4 tape	Type 1 tape
without noise reduction	54 1/2 dB	53 3/4 dB	52 dB
with Dolby B noise reduction	64 1/2 dB	64 1/4 dB	62 1/4 dB
with Dolby C noise reduction	73 1/2 dB	73 dB	71 1/2 dB

INDICATOR READINGS FOR DIN 0 dB (315 Hz)

Type 2 tape	+1 dB (with 2.2% THD)
Type 4 tape	+1 dB (with 1.6% THD)
Type 1 tape	+1 dB (with 0.97% THD)

INDICATOR READINGS FOR 3% DISTORTION (315 Hz)

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

DISTORTION (third harmonic; at -10 dB DIN)

Type 2 tape	≤ 0.45%, 50 Hz to 5 kHz
Type 4 tape	≤ 0.29%, 50 Hz to 5 kHz
Type 1 tape	≤ 0.33%, 50 Hz to 5 kHz

ERASURE (100 Hz)

Type 2 tape	71 dB
Type 4 tape	60 3/4 dB

CHANNEL SEPARATION (315 Hz)

	51 dB
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INDICATOR "BALLISTICS"

Response time	0.8 msec
Decay time	≈300 msec
Overshoot	0 dB

SPEED ACCURACY 0.6% fast, 105 to 127 VAC

FLUTTER (ANSI weighted peak; R/P) ±0.083%

SENSITIVITY (re DIN 0 dB; 315 Hz)

line input	65 mV
mike input	0.82 mV

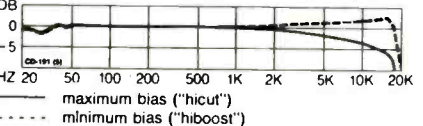
MIKE INPUT OVERLOAD (clipping)

	70 mV
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OUTPUT (from DIN 0 dB)

	0.82 volt
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BIAS ADJUSTMENT RANGE (Type 1 tape; -20 dB)



mike inputs and one for activating an auto-replay feature that automatically rewinds a tape when it reaches the end and plays it back from the beginning. This option works only when the deck is in the recording or playback mode and remains in effect until you defeat it by releasing the button. The microphone inputs, by the way, are standard 1/4-inch phone jacks, arranged so that, if only the one for the left channel is used, its output is automatically routed to the right channel as well for mono recording.

Recording levels are set with a single large knob, while the balance between the two channels is controlled by means of a separate, smaller knob with a detent at the midpoint of its rotation. This scheme is by far the most convenient for most purposes, and we have long wished it were more commonly used. Its presence in this deck is especially welcome, since it tends to mitigate the awkwardness of the meters' side-by-side (as opposed to left-above-right) configuration, which makes reading stereo balance somewhat harder than usual.

Like many other contemporary decks, the CD-191 has a bias-adjustment knob that can be used to increase or decrease the bias current applied to the recording head, to reduce or augment, respectively, the high-frequency response. Unfortunately, Harman Kardon has not provided a test-tone oscillator to assist you in getting flat response. The manual simply tells you to turn the control clockwise if your recordings are too dull or counterclockwise if they are too bright until you get the right tonal balance. But since this is a two-head deck that is therefore incapable of off-tape monitoring during recording, it is difficult to be assured that you are getting it right (if that is your aim). Most users will be best off leaving the knob at its detent setting and using the tapes Harman Kardon recommends in the manual, which, according to Diversified Science Laboratories' measurements, will give very good results.

If you do want to use the bias adjustment, you can rest easy in the knowledge that you can't go too far wrong. The amount of boost or cut available is fairly modest, ranging at 15 kHz from +1/-2 dB with Type 4 tape to +2/-3 dB with Type 2 tape to +3/-5 dB with Type 1 tape (as shown in the graph in the data column). The main

application we can see is perhaps to coax better response from low-price Type 1 tapes than might otherwise be possible.

Since there is no output level control, the volume from the headphone jack is fixed. But it has enough kick to drive most phones to a very acceptable level. During recording, the CD-191 feeds the source signal to the outputs, so even though you can't monitor what's getting onto the tape, you can check whether the deck is getting an input signal and whether it is of good quality. This, in fact, seems to us the most likely use for the headphone jack. The front of the cassette-well door, just to the left of the headphone jack, is easily removed, providing good access to the heads for cleaning.

Playback response is quite smooth, but with some roll-off at very high frequencies—apparently because of azimuth disagreement between the BASF test tape and the CD-191's combination record/play head, since the effect is not present in the record/play curves. These were made with the reference tapes listed in the manual: Maxell UDXL-1 for the Type 1 ferric, TDK SA for the Type 2 ferricobalt, and TDK MA for the Type 4 metal. The results DSL obtained with them are uniformly good. Response is smooth and extended for a two-head deck, if not out into the ultrasonic range claimed by some more costly machines. With Dolby B engaged, there is some premature roll-off in the left channel with all three tapes, though, curiously, not on the right channel or with Dolby C. Otherwise, Dolby tracking is exemplary, exhibiting little or no error. All of the Type 4 responses rise a couple of dB from 1 kHz to 10 or 15 kHz, while the Type 1 curves drop off just a bit at the top, but these are the only anomalies—and hardly major ones, considering the price.

The other standouts in the data are the flutter, which is quite low for a deck in this price range, and the distortion, which is very low by any standard. And although the lack of a separate playback head deprives us of the ability to make instantaneous A/B comparisons between source and tape, we can vouch that the CD-191 is capable of very good recordings, even of demanding material. All in all, Harman Kardon's new deck is a good little machine, well worth the asking price.

A Quick Guide to Tape Types

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

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

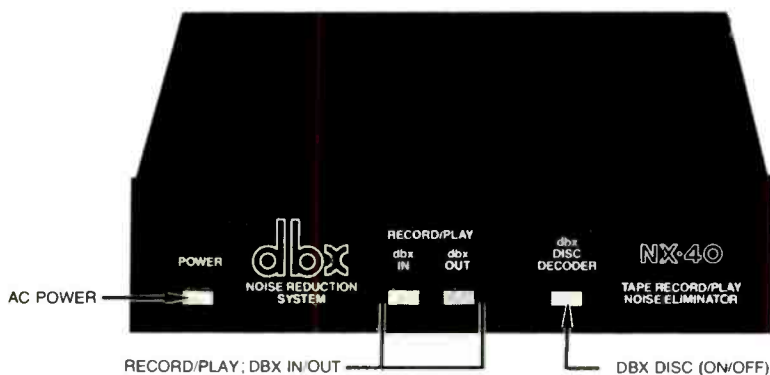
Type 1 (IEC Type I) tapes are ferrics requiring the same 120-microsecond playback EQ but somewhat high-

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

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

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

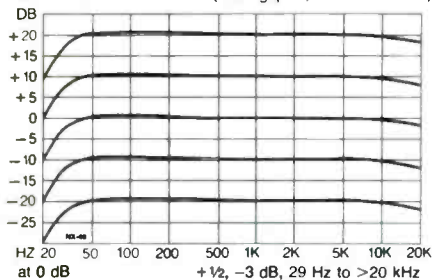
Type 4 (IEC Type IV) are the metal-particle, or "alloy" tapes, requiring the highest bias of all and retaining the 70-microsecond EQ of Type 2.



DBX for Everyone

DBX NX-40 noise reduction adapter. Dimensions: 7 by 13 1/4 inches (front panel), 8 3/4 inches deep plus clearance for connections. Price: \$159. Warranty: "limited," two years parts and labor. Manufacturer: Made in Taiwan for DBX, Inc., 71 Chapel St., Newton, Mass. 02195.

FREQUENCY RESPONSE ("throughput"; 0 dB = 100 mV)



MAXIMUM THROUGHPUT LEVEL (clipping; at 1 kHz)
1.5 volt

S/N RATIO (A-weighted; re 0.5 V) 81 dB

TOTAL HARMONIC DISTORTION (THD)
at 1 volt $\leq 1.8\%$, 40 Hz to 16 kHz
at 0.5 volt $\leq 1.2\%$, 40 Hz to 20 kHz
at 0.1 volt $\leq 1.1\%$, 40 Hz to >20 kHz

INPUT IMPEDANCE ≥ 85 kilohms

OUTPUT IMPEDANCE ≤ 280 ohms

THERE IS NO QUESTION that the DBX noise-reduction system has carved out a place for itself in home audio—not only as a "high-performance" tape system, i.e., one offering more noise reduction than the basic Dolby B system, but for appropriately encoded prerecorded cassettes and LPs as well. If you want to go DBX, we can think of no better way than by adding the NX-40, which does it all in a compact, good-looking package and at a moderate price.

Operation of the NX-40 could hardly be easier. You run one set of cables from the tape connections on your receiver or preamp to the two pairs of "receiver" jacks on the back panel of the NX-40 and another set between its "tape recorder" jacks and your deck. All the jacks are clearly marked: You should be in no doubt about what to do even if you don't consult the clear and easily understood owner's manual. Once you select the appropriate monitor option on your receiver or preamp, you have the choice of DBX disc decoding, DBX tape recording or playback (or both at once, for off-tape monitoring, if your deck permits it), or "out"—with the signal passing unaltered through the device, even with its power switch turned off.

The wiring is such that tape/source monitor switching is handled entirely at the recorder, since the output from the NX-40 derives from the deck in all situations but one: when the NX-40's DBX disc button is pressed. You can still record the signal (which will go to the deck without decoding, to make a DBX tape), but you will lose the ability to monitor from the tape. What you will hear is the decoded signal from the DBX disc you are playing. If you want to make a non-DBX tape from it, you must alter the back-panel connections, as explained in the manual—which also gives clear instructions for hooking an equalizer or other signal processor into the same tape loop as the NX-40.

The basic concept of DBX noise reduction is very simple: The input signal is compressed to half its original dynamic range, recorded or transmitted on whatever medium you wish, and then expanded back to its original dynamics. The inherent

dynamic range of the recording or transmitting medium can thus, in theory, approach as little as half that of the program material without compromising it. The crucial element that sets DBX's system apart from the many other possible schemes for accomplishing this, according to the company, is its rms signal-level detection circuit, which ensures that phase shifts introduced by the tape recorder will not cause expander mistacking in playback. But other significant measures have been taken to preserve signal quality through the compansion cycle as well. In particular, the consumer version of the DBX system is deliberately band-limited to prevent infrasonics or ultrasonics from misinforming the level sensor about what is going on. Without this bandpass filtering, signal components outside the audio band could influence encoding, but, because they're also outside the effective passband of most recorders, they would not survive the recording process to influence decoding reciprocally. Conversely, some out-of-band information could intrude on the encoded signal (infrasonic rumble in DBX disc mastering or pressing, for example, or RFI in any medium) to influence decoding without having done the same during encoding.

That's why we always find the DBX response curves drop off at the frequency extremes. It may look like a fault, but it isn't. When you examine these rolloffs, you see that they occur at frequencies where little if any musical energy exists—in other words, where they will be most effective at preserving the signal with minimum influence on it otherwise.

Because the NX-40 can be driven over a wide range of signal levels, Diversified Science Laboratories chose a "0 dB" reference of 100 millivolts. This means that the curves document behavior from 1 volt (at "+20 dB") to 10 millivolts ("-20 dB"). The main point to be drawn from them is that the overall system delivers frequency response that does not vary with level and restores dynamics (the 10-dB steps between test levels) verbatim.

These curves represent what we have been calling throughput measurements.

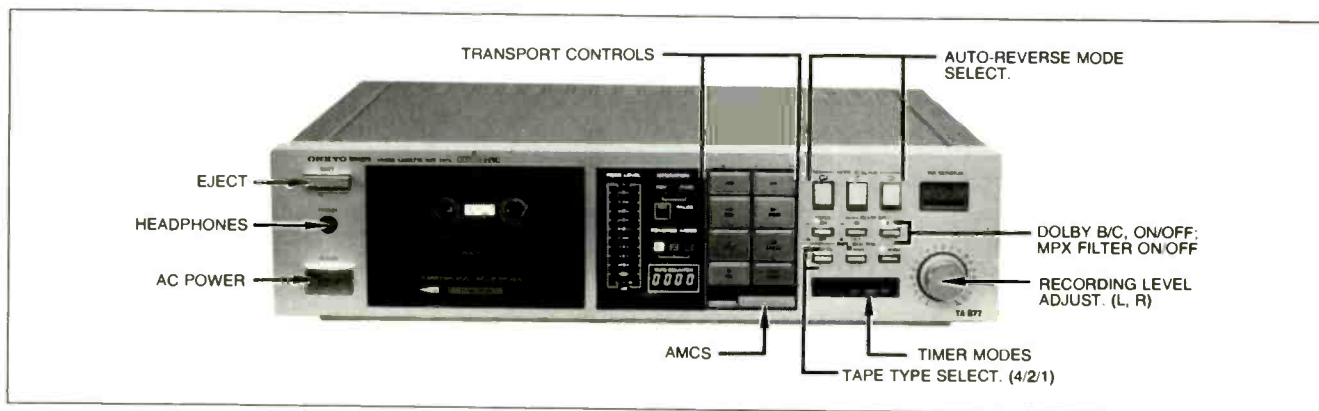
The test signal goes into the main input, comes out (in encoded form) the recording output, is fed directly back into the playback input, and is measured (in decoded form) at the main output. The jumper between recording and playback connections thus simulates an ultimately linear tape system. (If only such a perfect one existed!) Back-panel controls for tape recording and tape playback levels are adjusted to maintain the 100-millivolt reference level. (You may never have to touch these controls, which are factory-preset for levels appropriate to typical home systems; if you do, the lab's measurements show that their range is wide enough to accommodate any practical requirement we can think of.) Since there are only two controls—one for the inputs (left and right) and one for the outputs (left and right)—the lab measured interchannel tracking at these settings. It found only a small (1½-dB) discrepancy.

Input and output impedances should pose no problems in typical—or even atyp-

ical—systems. The inputs measure about 85 kilohms; the receiver output measures 280 ohms, which is low enough to drive even 600-ohm lines, while the tape input measures an even lower 155 ohms. The noise measurement applies whether the tape encode-decode throughput or the disc decoder is measured. The distortion shown here is worst-case—approaching the limits of the device's bandwidth. In regions where you might actually find musical signals (and without a signal, there can be no distortion) the measurements are generally at around 0.1 percent or less.

That such a level of competence, flexibility, and compactness can be offered at this price is obviously due to DBX integrated circuits, which are the heart of the NX-40. The remaining circuitry is simple, almost rudimentary in fact, which is why the price is so low. And that's what will probably make the NX-40 the DBX adapter of choice for a great many listeners.

Circle 103 on Reader-Service Card

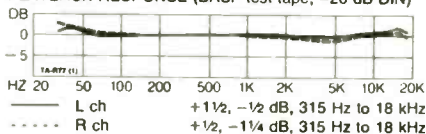


Quick-draw Autoreverse from Onkyo

Onkyo TA-R77 cassette deck, with Dolby B and C noise reduction and bidirectional automatic-reverse recording and playback. Dimensions: 17 by 4 inches (front panel), 13¼ inches deep plus clearance for controls and connections. Price: \$400. Warranty: "limited," two years parts and labor. Manufacturer: Onkyo Corp., Japan; U.S. distributor: Onkyo U.S.A. Corp., 200 Williams Dr., Ramsey, N.J. 07446.

Data are shown for the forward direction of tape travel; data for the reverse direction are similar.

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



FOR A NUMBER OF REASONS, we're tempted to call the Onkyo TA-R77 an opera lovers' deck—though it obviously will appeal to a much larger audience. In particular, its automatic-reverse mode's ability to provide virtually continuous recording over both sides of a cassette will be seen as a blessing by Wagnerians. The automatic-scan mode is ideal for pulling out one aria from the hodgepodge you so often find on operatic recital tapes. And the general no-fuss style of the deck is ideal for users who (like many opera lovers of our acquaintance) want the capabilities of a modern deck without the mental exercise required by some high-tech models.

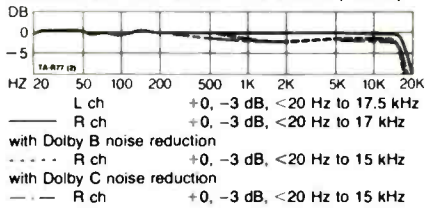
The quick-reverse mechanism uses a photosensor to tell when the cassette's leader tape is impinging on the head area. When this happens, the tape stops, the head assembly moves away from the tape, and the central portion (containing the record/playback element) swivels through 180 degrees to position itself for the opposite direction of tape travel. The head assembly then returns to its operating position, and

recording (or playback) resumes in the opposite direction. All this takes only a scant second: The pause is so brief that you might not even notice it if you weren't paying attention, and the tiny interruption is certainly preferable to the common alternatives for many purposes.

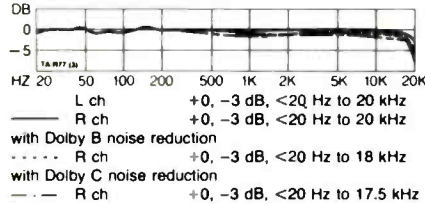
The TA-R77 has all the usual adjuncts to automatic reversing: options for unidirectional or bidirectional recording, and for unidirectional, out-and-back, or continuous-repeat playback. (The continuous-repeat recording option is always omitted so you won't inadvertently erase what you've recorded.) And you can reverse the tape just as quickly with the manual controls. If you want to do so during recording, you need only hold in the recording interlock while you press the transport-direction button of your choice. If you reverse the tape during recording without doing so, the deck will change mode (to playback) as well as direction—again to prevent inadvertent erasure.

A further aid to goofproof recording is a little display panel just above the record-

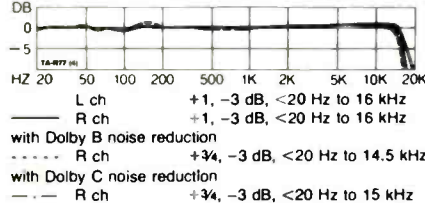
RECORD/PLAY RESPONSE, TYPE 2 TAPE (-20 dB)



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



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



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

	Type 2 tape	Type 4 tape	Type 1 tape
without noise reduction	55 dB	52 1/4 dB	52 1/2 dB
with Dolby B noise reduction	65 dB	62 1/4 dB	62 3/4 dB
with Dolby C noise reduction	73 3/4 dB	71 1/4 dB	71 1/2 dB

INDICATOR READINGS FOR DIN 0 DB (315 Hz)

Type 2 tape	+2 dB (with 2.45% THD)
Type 4 tape	0 dB (with 1.25% THD)
Type 1 tape	+2 dB (with 0.66% THD)

INDICATOR READINGS FOR 3% DISTORTION (315 Hz)

Type 2 tape	+4 dB (for +34 dB DIN)
Type 4 tape	+4 dB (for +3 dB DIN)
Type 1 tape	+6 dB (for +4 dB DIN)

DISTORTION (third harmonic; at -10 dB DIN)

Type 2 tape	≤ 0.91%, 50 Hz to 5 kHz
Type 4 tape	≤ 0.69%, 50 Hz to 5 kHz
Type 1 tape	≤ 0.58%, 50 Hz to 5 kHz

ERASURE (100 Hz) ≥ 64 1/2 dB

CHANNEL SEPARATION (315 Hz) 48 1/2 dB

INDICATOR "BALLISTICS"

Response time	11.5 msec
Decay Time	≈650 msec
Overshoot	0 dB

SPEED ACCURACY 0.6% fast, 105 to 127 VAC

FLUTTER (ANSI weighted peak; R/P) ±0.10%

SENSITIVITY (re DIN 0 dB; 315 Hz) 90 mV

OUTPUT (from DIN 0 dB) 0.54 V

ing level control. It shows the status of the erasure-prevention tabs on each end of the cassette shell—a touch that is unique in our experience. We've all had those nasty moments when we switch from one side of a cassette to the other in the middle of a recording only to find that it won't record because the tab is gone. It need never happen again.

What Onkyo calls the Automatic Music Control System, or AMCS, is a random-access function that samples 10 seconds' worth of each selection. It requires a blank space of about five seconds between selections if it is to pick them up. Like most systems of this sort, it can be fooled by the quiet passages (let alone pregnant pauses) in classical music into stopping where it shouldn't but proves quite reliable with most pop music. When you tap the MUTE during recording, it creates a gap of appropriate length and then puts the deck into the recording/pause mode; if you hold the button in, it will create a continuous mute, putting the deck into pause only when you finally release it.

Tape selection is manual, with buttons for the three most popular tape groups. Diversified Science Laboratories tested the deck with Maxell formulations, which Onkyo also appears to use in its checkout procedure. UDXL-II was the basic Type 2 ferricobalt, with MX where a Type 4 metal was called for and UD for the Type 1 ferric. The high-frequency ends of the curves made without noise reduction are remarkably free of peaks or premature rolloff, confirming that bias is spot-on for these tapes. Some of the curves made with noise reduction show a tendency toward shelving, however, suggesting minor misadjustment of the Dolby tracking for the sensitivities of the Type 2 and Type 4 formulations.

The bass ends of the record/play curves are particularly extended, generally remaining within ±1 dB from the midbass right down to the 20 Hz, despite some

"lumps" along the way. Onkyo says that it has taken care to avoid the usual contour effect (so-called head bumps) in its design, and the relative smoothness of these curves confirms that it has been largely successful. Playback response is quite smooth, and high-end rolloff is minimal despite some evidence of azimuth disparity between the deck and the test tape. In the reverse direction, right-channel playback response is within 1 dB of the figures for the forward direction; in the left channel it is within 1 1/2 dB.

Transport figures, too, correspond well between directions. Speed accuracy, which is good in the forward direction, is even better (0.2 percent) in reverse, while flutter, at ±0.14 percent, is just slightly poorer.

The signal displays are calibrated in 2-dB steps down to -8 dB, then at -15 and -20 dB. Lower levels, which occur with some regularity in program material of wide dynamic range, go undocumented and leave the metering unilluminated. This can give the impression that the deck has stopped recording. The parallel vertical elements for the two channels are a welcome aid to setting stereo balance, somewhat offsetting the awkwardness imposed by the very stiff clutching of the level control's two elements.

Bidirectional cassette decks have come a long way since the first successful models appeared in the Seventies, and what may seem routine to us in the TA-R77 was beyond the reach of the early models. Measurable and audible performance is now so good that striking differences between transport directions are precluded. And this example is better than average for its type, even among today's decks. It also offers more than minimum features at a moderate price for a reversing deck; even better, it avoids the clutter of convenience features found in some. It is, in short, a very good buy.

Manufacturers' Comments

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

Revox B-710 Mk. II cassette deck, February 1983. *I'd like to point out what we feel is a discrepancy in the B-710 test report appearing in your February issue. I think you'll find that the frequency response curves illustrated do not match the actual frequency response of our machine. We would certainly appreciate it if you would indicate this to your readers, as it has caused some confusion among our customers.*

Lawrence G. Jaffe
Director of Marketing & Sales, Revox Division
Studer Revox America, Inc.

Michael Riggs replies: Revox supplied Diversified Science Laboratories with a second, pretested sample of the B-710 Mk. II. In this case, our curves agreed quite well with theirs. In particular, the low-frequency "head bumps" evident in the curves run on the review sample were not present. This suggests that the playback head in the first unit was defective or damaged during shipment and therefore not entirely representative of the performance of typical B-710s.

Which Cassette Tapes Perform Best?

Complete laboratory tests of 28 new and reformulated ferric, chrome, and metal tapes yield some unexpected results.

by Robert Long



THE PACE OF INNOVATION certainly has not slackened since our last round of tape tests in February of last year. Nor have the standards of quality among the major brands, where our testing has always concentrated. Although some of these tapes are better than others, there is not a single ringer in the bunch. Tests on budget brands—and even on some with fancier pretensions—have shown that bad tapes still exist. We're far more concerned, however, with the quality of the good ones than with that of the other (nonaudiophile) end of the spectrum.

Diversified Science Laboratories used the new IEC reference tapes as the basis for this round of measurements, rather than the Nakamichi tapes used in previous years. Consequently, the bias percentages and relative sensitivity figures in this report are not directly comparable with those in past tests, though the differences aren't very large. If you want to translate values from an earlier report to their IEC-based equivalents, use the following conversion rules: For Type 1 tapes, subtract 4 percent from the bias figure and add $\frac{3}{4}$ dB to the relative sensitivity; for Type 2, subtract 7 percent from the bias and add 1 dB to the sensitivity; and for Type 4, subtract 2 percent from the bias and add $\frac{1}{2}$ dB to the sensitivity.

The major surprise, as discussed in this month's "Sound Views," is the emergence of two distinct categories in the metal group. Three of the six brands involved tested out quite similar to the IEC standard tape (and to the 1980 sample of Nakamichi's ZX tape, which had been our reference for past tests of metal tapes). The other three required considerably more bias to achieve equal sensitivity at 333 Hz and 10 kHz and therefore seem to be based on a markedly different magnetic particle.

Because of this difference, the test results must be examined with caution. The very high bias delivers extremely high midrange headroom but robs the tapes of some of the high-frequency headroom for which the metals are famous. At the same time, you'll note that the curves representing sensitivity versus frequency (in effect,

the frequency response of the tape with the test deck's particular recording equalization and the bias determined by the test procedure) are not as flat for the very high-bias metal tapes as they are for most of the remaining tapes.

All of this suggests that these three metal tapes would be better served by a different bias/EQ procedure—one that would apply somewhat less bias (enhancing the high-frequency headroom) and make up the difference in recording EQ. Presumably this is what happens when a deck manufacturer designs for such a tape: With such a combination of bias and EQ, the response of any of these metal formulations could be made superbly flat and its high-frequency headroom expanded generously at an easily spared cost in midrange headroom.

Thus the results that you actually achieve with these tapes will depend to a considerable extent on whether you're using a deck that (like our Nakamichi 582) was designed for the typical metal tapes of the past few years or one that was specifically engineered for these new formulations. Of course, if you have a deck whose recording equalization (as well as bias and sensitivity) can be fine tuned, you—or the automatic circuitry in your deck—may be able to do what a design engineer would do in optimizing for them. But, as the data demonstrate, bias adjustment alone will not necessarily extract from them the best performance of which they are capable.

There are a few tapes in the Type 1 and Type 2 groups that are also more likely to produce top results in a deck whose recording EQ is adjustable, but they are less common and generally aren't as idiosyncratic. Like the metal tapes, they demonstrate the importance of staying with formulations that are the same or similar to those that are particularly recommended for use with your deck, unless it is one of the very few with adjustable recording EQ.

As it has done in past tape tests, Diversified Science Laboratories ran its graphs of output versus frequency both with the normal vertical scale (as shown in these

reports) and with an exaggerated vertical scale so that we could study what we have called the "granularity" of the traces. Though this is not a property we can quantify or to which we can attribute very specific causes and effects, there is no question in our minds that it is related to the finish and magnetic consistency of the tape and that it therefore affects audible and measurable distortion.

Again, all the tapes we tested in this batch are good. Even the most granular traces among them are very well behaved compared to the extremely ragged curves that DSL has sometimes measured for "off brands" in the past. Indeed, many traces in this batch are nothing short of superb in this respect. Bravo to all concerned.

In one way, most of this year's tapes are remarkably similar: their very handsome and practical packaging and labeling. Completely transparent outer boxes are the rule (no smoky plastic that reduces legibility in poor light). Tape-viewing windows in the shells are usually generous in size, as are the spaces provided for identification, whether on affixed or stick-on labels. The latter option is nice because it enables you to dress up your cassettes with typed labels; if you use pencil, you'll find that most of today's labels erase cleanly, which wasn't always the case.

Also impressive is the molding of the shells. This can be more than a question of good looks: Precision molding makes for precision tape handling and, therefore, top performance. But the lab—in a footnote to its main tests—suggests that appearances may mislead. It adjusted the test deck's head azimuth individually for each tape, just to give it its best shot. As you would expect, very little readjustment was needed from tape to tape. Two brands required a little more than the rest—not enough to indicate a problem, but enough to make them stand out. One was Realistic, with the least impressive shell appearance of the lot, and the other was Magnex, with shells as elegant looking as any currently on the market.

BASF

The first company to produce a recording tape in the modern sense (with a magnetic medium mixed with a binder and coated onto a plastic substrate) continues to be a leader. In particular, BASF has headed the drive for the adoption of IEC tape standards to bring order out of anarchy. Not surprisingly, the three formulations tested here all

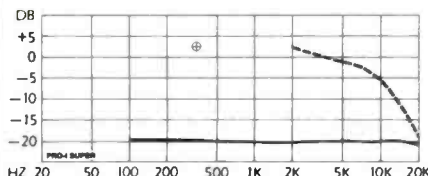
fall reasonably close to the respective IEC reference tapes in terms of bias requirement and sensitivity. The Type 1 ferric, Pro-I Super, does take somewhat more bias than average for its group in our test setup. The noise level is higher than that of other tapes in the group, but this is compensated for by the relatively high midrange headroom, which stretches the dynamic range as long

as you record at a level high enough to make use of it. The Type 2 tape, Pro-II Chrome, is, of course, a chromium-dioxide formulation. Again, it's not surprising how closely it matches the IEC Type II ideal. The Metal-IV falls into the lower-bias Type 4 group; in fact, it requires the least bias of any of our metal formulations, though not by too wide a margin.



BASF Pro-I Super C-90
cassette tape (Type 1)

OUTPUT CHARACTERISTICS (re 250 nW/m, 333 Hz)



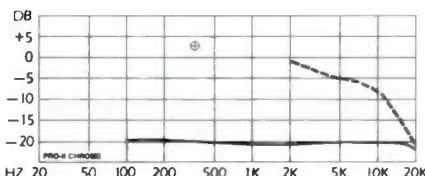
— Relative output vs. frequency (at -20 dB)
⊕ Midrange headroom (3% THD) +5 dB
- - - - Maximum high-frequency output (3% IM)
at 4 kHz -1/2 dB
at 15 kHz -12 1/2 dB

RELATIVE BIAS	112%	
RELATIVE SENSITIVITY (333 Hz)	+1/2 dB	
A-WEIGHTED NOISE (re 0 dB)	-52 dB	
MIDRANGE S/N RATIO (re 3% THD)	57 dB	
THD (at 333 Hz)	at 0 dB 0.44%	at -10 dB 0.13%
C-90 PRICE	\$5.99	



BASF Pro-II Chrome C-90
cassette tape (Type 2)

PLAYBACK CHARACTERISTICS (re 250 nW/m, 333 Hz)



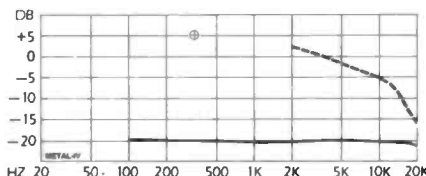
— Relative output vs. frequency (at -20 dB)
⊕ Midrange headroom (3% THD) +2 3/4 dB
- - - - Maximum high-frequency output (3% IM)
at 4 kHz -4 1/4 dB
at 15 kHz -14 3/4 dB

RELATIVE BIAS	97%	
RELATIVE SENSITIVITY (333 Hz)	0 dB	
A-WEIGHTED NOISE (re 0 dB)	-59 dB	
MIDRANGE S/N RATIO (re 3% THD)	61 3/4 dB	
THD (at 333 Hz)	at 0 dB 1.50%	at -10 dB 0.31%
C-90 PRICE	\$6.29	



BASF Metal-IV C-90
cassette tape (Type 4)

PLAYBACK CHARACTERISTICS (re 250 nW/m, 333 Hz)



— Relative output vs. frequency (at -20 dB)
⊕ Midrange headroom (3% THD) +5 dB
- - - - Maximum high-frequency output (3% IM)
at 4 kHz -1/2 dB
at 15 kHz -10 1/2 dB

RELATIVE BIAS	86%	
RELATIVE SENSITIVITY (333 Hz)	+1/4 dB	
A-WEIGHTED NOISE (re 0 dB)	-55 dB	
MIDRANGE S/N RATIO (re 3% THD)	60 dB	
THD (at 333 Hz)	at 0 dB 0.90%	at -10 dB 0.14%
C-90 PRICE	\$11.49	

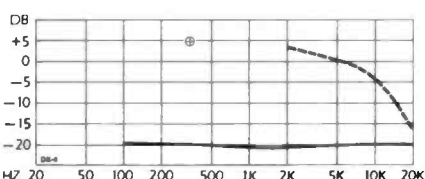
Denon

Made by Nippon Columbia, Denon products have often included models that ranked among the very best in their respective audio fields. These two cassette tapes are "drop-ins"—additions to the company's existing line. The Type 1 ferric, DX-4, is a little on the high side in both sensitivity and noise but excellent in both distortion and headroom. The lab's expanded trace displays exceptionally little granularity. The Type 2 DX-8—which appears to be a ferricobalt on the basis of the relatively low bias point and relatively high sensitivity in the lab data—also displays excellent high-frequency headroom. Its midrange headroom, and therefore its dynamic range, is not as impressive as that of DX-4, however. Denon provides stick-on labels that are somewhat cramped.



Denon DX-4 C-90
cassette tape (Type 1)

PLAYBACK CHARACTERISTICS (re 250 nW/m, 333 Hz)



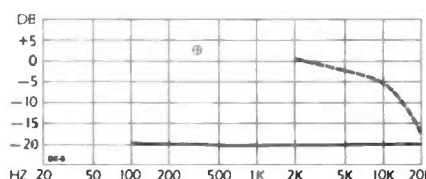
— Relative output vs. frequency (at -20 dB)
⊕ Midrange headroom (3% THD) +4 1/2 dB
- - - - Maximum high-frequency output (3% IM)
at 4 kHz +3/4 dB
at 15 kHz -10 3/4 dB

RELATIVE BIAS	107%	
RELATIVE SENSITIVITY (333 Hz)	+1 1/4 dB	
A-WEIGHTED NOISE (re 0 dB)	-52 3/4 dB	
MIDRANGE S/N RATIO (re 3% THD)	57 1/4 dB	
THD (at 333 Hz)	at 0 dB 0.47%	at -10 dB 0.08%
C-90 PRICE	\$5.99	



Denon DX-8 C-90
cassette tape (Type 2)

PLAYBACK CHARACTERISTICS (re 250 nW/m, 333 Hz)



— Relative output vs. frequency (at -20 dB)
⊕ Midrange headroom (3% THD) +2 1/2 dB
- - - - Maximum high-frequency output (3% IM)
at 4 kHz -2 dB
at 15 kHz -11 dB

RELATIVE BIAS	89%	
RELATIVE SENSITIVITY (333 Hz)	+2 1/2 dB	
A-WEIGHTED NOISE (re 0 dB)	-56 dB	
MIDRANGE S/N RATIO (re 3% THD)	58 1/2 dB	
THD (at 333 Hz)	at 0 dB 1.76%	at -10 dB 0.23%
C-90 PRICE	\$8.00	

Fuji

FR-I, Fuji's top Type 1 ferric, is a good example of its class, though the high-frequency headroom is better than that of most. FR-II also is fairly typical of the premium Type 2 tapes, though its noise figure

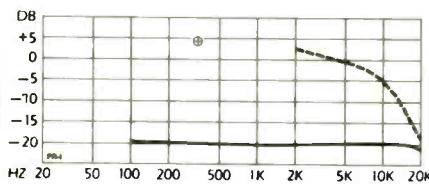
is a little higher than average. A deck with a little less bias current and compensatory recording EQ might produce a flatter top end. FR Metal, Fuji's current Type 4 entry, might profit even more from a reduction in bias, though it decidedly belongs to the

higher-bias group among the six metal tapes in this batch. The expanded trace for FR Metal reveals a superbly consistent output at high frequencies but noticeable granularity in the midrange and bass. The usable space on Fuji's stick-on labels is fair.



Fuji FR-I C-90 cassette tape (Type 1)

PLAYBACK CHARACTERISTICS (re 250 nW/m, 333 Hz)



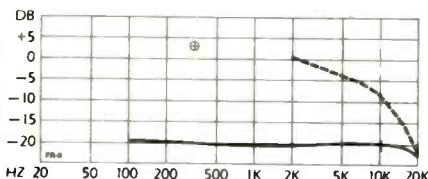
— Relative output vs. frequency (at -20 dB)
 ⊕ Midrange headroom (3% THD) +4 1/4 dB
 - - - - Maximum high-frequency output (3% IM)
 at 4 kHz 0 dB
 at 15 kHz -12 1/2 dB

RELATIVE BIAS 102%
 RELATIVE SENSITIVITY (333 Hz) -1/4 dB
 A-WEIGHTED NOISE (re 0 dB) -55 1/4 dB
 MIDRANGE S/N RATIO (re 3% THD) 59 1/2 dB
 THD (at 333 Hz) at 0 dB at -10 dB
 0.44% 0.12%
 C-90 PRICE \$7.50



Fuji FR-II C-90 cassette tape (Type 2)

PLAYBACK CHARACTERISTICS (re 250 nW/m, 333 Hz)



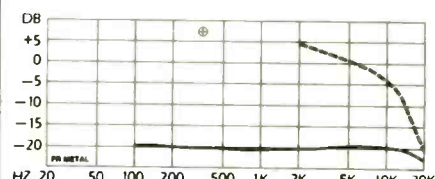
— Relative output vs. frequency (at -20 dB)
 ⊕ Midrange headroom (3% THD) +3 dB
 - - - - Maximum high-frequency output (3% IM)
 at 4 kHz -3 dB
 at 15 kHz -14 1/2 dB

RELATIVE BIAS 94%
 RELATIVE SENSITIVITY +1 1/4 dB
 A-WEIGHTED NOISE (re 0 dB) -56 dB
 MIDRANGE S/N RATIO (re 3% THD) 59 dB
 THD (at 333 Hz) at 0 dB at -10 dB
 1.43% 0.23%
 C-90 PRICE \$7.50



Fuji FR Metal C-90 cassette tape (Type 4)

PLAYBACK CHARACTERISTICS (re 250 nW/m, 333 Hz)



— Relative output vs. frequency (at -20 dB)
 ⊕ Midrange headroom (3% THD) +7 1/4 dB
 - - - - Maximum high-frequency output (3% IM)
 at 4 kHz +1 1/2 dB
 at 15 kHz -11 1/2 dB

RELATIVE BIAS 126%
 RELATIVE SENSITIVITY (333 Hz) 0 dB
 A-WEIGHTED NOISE (re 0 dB) -55 dB
 MIDRANGE S/N RATIO (re 3% THD) 62 1/4 dB
 THD (at 333 Hz) at 0 dB at -10 dB
 0.52% 0.14%
 C-90 PRICE \$10.75

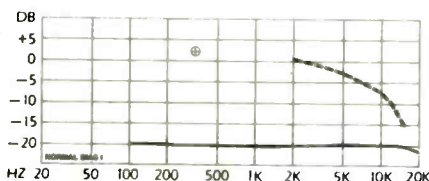
Loran

A relative newcomer to the tape field, Loranger Entertainment continues to use the high-strength heat-resistant shells that are uniquely its own, but now with upgraded tape loaded inside. Normal Bias, the Type 1 formulation, offers an exceptionally smooth trace in the granularity test. Headroom is not as great as that of some tapes in this group, and the dynamic range is therefore somewhat less impressive than that of typical premium brands. In nonadjustable decks, the sensitivity may be low enough to compromise Dolby tracking slightly. Headroom is much more generous in the High Bias (Type 2) formulation, which displays the lowest 0-dB distortion of any Type 2 tape in this group. Both might profit from a deck whose recording EQ permits lower biasing. Loran cassettes no longer come with stick-on labels; those affixed to the shells are small, and file-folder stick-ons (a popular substitute) tend to cover the screwdriver slot for the clever little erasure-prevention feature that Loranger uses in place of the familiar break-away tab.



Loran Normal Bias C-90 cassette tape (Type 1)

PLAYBACK CHARACTERISTICS (re 250 nW/m, 333 Hz)



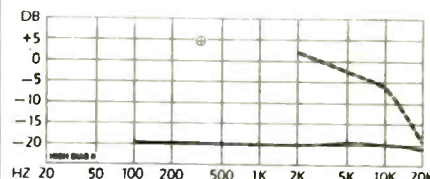
— Relative output vs. frequency (at -20 dB)
 ⊕ Midrange headroom (3% THD) +4 1/2 dB
 - - - - Maximum high-frequency output (3% IM)
 at 4 kHz -1 1/2 dB
 at 15 kHz -12 3/4 dB

RELATIVE BIAS 107%
 RELATIVE SENSITIVITY (333 Hz) +1 dB
 A-WEIGHTED NOISE (re 0 dB) -56 dB
 MIDRANGE S/N RATIO (re 3% THD) 60 1/2 dB
 THD (at 333 Hz) at 0 dB at -10 dB
 0.67% 0.12%
 C-90 PRICE \$7.95



Loran High Bias C-90 cassette tape (Type 2)

PLAYBACK CHARACTERISTICS (re 250 nW/m, 333 Hz)



— Relative output vs. frequency (at -20 dB)
 ⊕ Midrange headroom (3% THD) +2 dB
 - - - - Maximum high-frequency output (3% IM)
 at 4 kHz -13 1/4 dB
 at 15 kHz -14 1/2 dB

RELATIVE BIAS 106%
 RELATIVE SENSITIVITY (333 Hz) -2 dB
 A-WEIGHTED NOISE (re 0 dB) -54 1/2 dB
 MIDRANGE S/N RATIO (re 3% THD) 56 1/2 dB
 THD (at 333 Hz) at 0 dB at -10 dB
 1.46% 0.23%
 C-90 PRICE \$7.95

Magnex

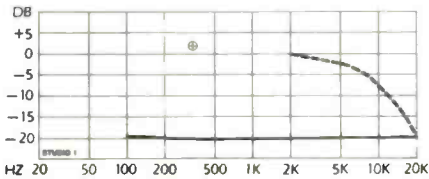
An altogether new brand, at least in this country, is Magnex, which is manufactured in Italy. We tested the Type 1 and Type 2 formulations called, appropriately, Studio 1 and Studio 2. The former tied for the lowest raw-noise score of any tape in the Type 1 group, though the relatively restricted headroom—particularly in the midrange—reduced the total dynamic range to approximately average for a good ferric. The granularity of this tape, though much better than that of typical budget tapes, is relatively unimpressive in present company. Studio 2's is noticeably better, though not outstanding. Again, noise is low, but so is midrange headroom, for a somewhat less generous dynamic range than is typical of these Type 2 tapes. Small, cramped stick-on labels run across the width, rather than lengthwise, on the shells.

STUDIO 1 90

MAGNEX

Magnex Studio 1 C-90 cassette tape (Type 1)

PLAYBACK CHARACTERISTICS (re 250 nW/m, 333 Hz)



— Relative output vs. frequency (at -20 dB)
 ⊕ Midrange headroom (3% THD) +13 1/4 dB
 - - - - Maximum high-frequency output (3% IM)
 at 4 kHz -13 1/4 dB
 at 15 kHz -13 1/4 dB

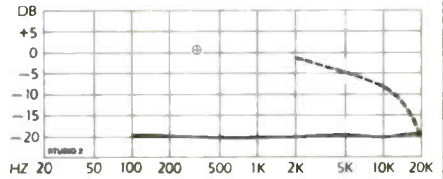
RELATIVE BIAS 103%
 RELATIVE SENSITIVITY (333 Hz) -1 1/2 dB
 A-WEIGHTED NOISE (re 0 dB) -55 3/4 dB
 MIDRANGE S/N RATIO (re 3% THD) 57 1/2 dB
 THD (at 333 Hz) at 0 dB at -10 dB
 1.95% 0.19%
 C-90 PRICE \$4.95

STUDIO 2

MAGNEX

Magnex Studio 2 C-90 cassette tape (Type 2)

PLAYBACK CHARACTERISTICS (re 250 nW/m, 333 Hz)



— Relative output vs. frequency (at -20 dB)
 ⊕ Midrange headroom (3% THD) +1/2 dB
 - - - - Maximum high-frequency output (3% IM)
 at 4 kHz -3 3/4 dB
 at 15 kHz -12 1/2 dB

RELATIVE BIAS 90%
 RELATIVE SENSITIVITY (333 Hz) +1/4 dB
 A-WEIGHTED NOISE (re 0 dB) -58 dB
 MIDRANGE S/N RATIO (re 3% THD) 58 1/2 dB
 THD (at 333 Hz) at 0 dB at -10 dB
 2.71% 0.28%
 C-90 PRICE \$5.06

Maxell

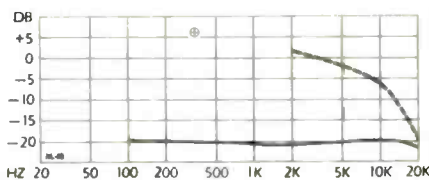
The most recent additions to Maxell's cassette line are the two superpremium formulations with the -S suffixes. They have been further refined since we last tested them in the February 1982 roundup. On the basis of our tests, the improvements are significant—even dramatic. Noise is lower and midrange headroom higher, creating champion dynamic-range figures in both cases. And distortion is unusually low, partly as a consequence of the extra headroom. Both tapes—particularly XL-IIS—are on the high side in sensitivity, which may compromise Dolby tracking in some nonadjustable decks. And the curves at -20 dB, while displaying an unusual lack of granularity, suggest that flattest response would be achieved with recording-EQ settings permitting slightly lower biasing of XL-IS and slightly higher biasing of XL-IIS. The stick-on labels remain attractive but cramped.

maxell 減幅90

maxell

Maxell XL-IS C-90 cassette tape (Type 1)

PLAYBACK CHARACTERISTICS (re 250 nW/m, 333 Hz)



— Relative output vs. frequency (at -20 dB)
 ⊕ Midrange headroom (3% THD) +6 dB
 - - - - Maximum high-frequency output (3% IM)
 at 4 kHz -1 1/4 dB
 at 15 kHz -13 1/4 dB

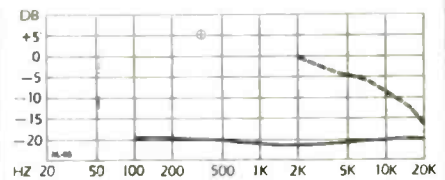
RELATIVE BIAS 107%
 RELATIVE SENSITIVITY (333 Hz) +1 1/4 dB
 A-WEIGHTED NOISE (re 0 dB) -55 1/4 dB
 MIDRANGE S/N RATIO (re 3% THD) 61 1/4 dB
 THD (at 333 Hz) at 0 dB at -10 dB
 0.40% 0.13%
 C-90 PRICE \$7.29

maxell 減幅90

maxell

Maxell XL-IIS C-90 cassette tape (Type 2)

PLAYBACK CHARACTERISTICS (re 250 nW/m, 333 Hz)



— Relative output vs. frequency (at -20 dB)
 ⊕ Midrange headroom (3% THD) +5 1/4 dB
 - - - - Maximum high-frequency output (3% IM)
 at 4 kHz -4 dB
 at 15 kHz -12 1/4 dB

RELATIVE BIAS 98%
 RELATIVE SENSITIVITY (333 Hz) +2 3/4 dB
 A-WEIGHTED NOISE (re 0 dB) -56 dB
 MIDRANGE S/N RATIO (re 3% THD) 63 3/4 dB
 THD (at 333 Hz) at 0 dB at -10 dB
 0.71% 0.11%
 C-90 PRICE \$7.29

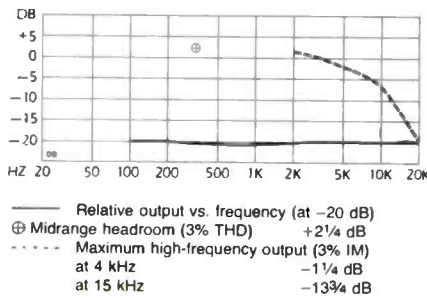
Memorex

Memtek Products' new entry is Memorex DB (or dB—though this style makes it impossible to tell whether you're talking of the tape or the decibel). It is a Type I ferric that prefers significantly lower bias than is typical among the premium formulations. Consequently it might be an excellent choice for an old deck, biased for an earlier generation of ferrics. Treated this way, it will deliver performance that rivals that of today's premium ferrics, though its midrange headroom is perhaps a little less generous than that of most. DB is packaged in the sort of clear box one expects these days—not the exceptionally dustproof design that housed the 1982 Memorex cassettes. Memtek, by the way, is introducing a new line of premium Memorex tapes this summer.



Memorex DB C-90 cassette tape (Type 1)

PLAYBACK CHARACTERISTICS (re 250 nW/m, 333 Hz)



RELATIVE BIAS	86%
RELATIVE SENSITIVITY (333 Hz)	+1/4 dB
A-WEIGHTED NOISE (re 0 dB)	-55 1/2 dB
MIDRANGE S/N RATIO (re 3% THD)	57 3/4 dB
THD (at 333 Hz)	at 0 dB 0.98% at -10 dB 0.14%
C-90 PRICE	\$3.79

Nakamichi

If you're not familiar with this recorder manufacturer's tape line, you may be confused by the nomenclature at first. The -II suffixes represent a second-generation formulation, rather than an IEC type number, and not all changes in formulation are dignified with a new generation number. Thus EX (the company's original Type I ferric) was supplemented by EX-II (HF test,

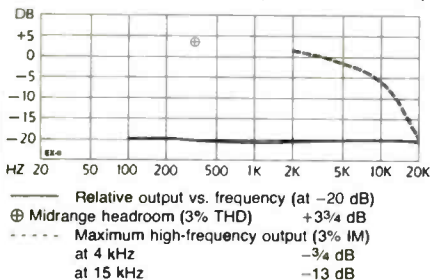
August 1976) and is here retested in a reformulated version; SX (the Type 2 ferric-cobalt) has been joined by SX-II, which is tested here for the first time; ZX (the Type 4 metal, HF test, July 1980) has been reformulated with no name change. The current version of EX-II proves to be very typical of today's premium Type 1 tapes. Its freedom from granularity is, perhaps, its outstanding characteristic, vis-à-vis competing tapes,

but it is no slouch in any respect. Much the same might be said of SX-II, though its sensitivity is slightly on the high side, raising questions of Dolby tracking in nonadjustable decks. ZX is similarly representative of the higher-bias Type 4 group—and therefore significantly different from our previous ZX reference sample, requiring 25 percent more bias than it did. Nakamichi now supplies fairly roomy stick-on labels.



Nakamichi EX-II C-90 cassette tape (Type 1)

PLAYBACK CHARACTERISTICS (re 250 nW/m, 333 Hz)

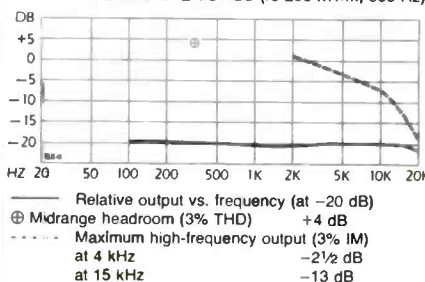


RELATIVE BIAS	103%
RELATIVE SENSITIVITY (333 Hz)	0 dB
A-WEIGHTED NOISE (re 0 dB)	-53 3/4 dB
MIDRANGE S/N RATIO (re 3% THD)	57 1/2 dB
THD (at 333 Hz)	at 0 dB 0.64% at -10 dB 0.16%
C-90 PRICE	\$5.40



Nakamichi SX-II C-90 cassette tape (Type 2)

PLAYBACK CHARACTERISTICS (re 250 nW/m, 333 Hz)

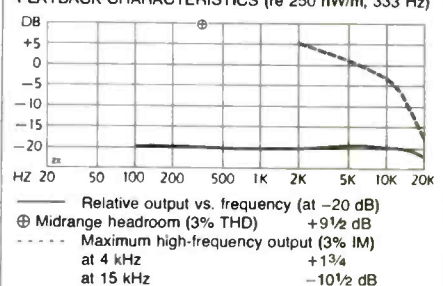


RELATIVE BIAS	100%
RELATIVE SENSITIVITY (333 Hz)	+2 1/2 dB
A-WEIGHTED NOISE (re 0 dB)	-57 dB
MIDRANGE S/N RATIO (re 3% THD)	61 dB
THD (at 333 Hz)	at 0 dB 1.00% at -10 dB 0.14%
C-90 PRICE	\$8.00



Nakamichi ZX C-90 cassette tape (Type 4)

PLAYBACK CHARACTERISTICS (re 250 nW/m, 333 Hz)



RELATIVE BIAS	123%
RELATIVE SENSITIVITY (333 Hz)	+3/4 dB
A-WEIGHTED NOISE (re 0 dB)	-55 1/4 dB
MIDRANGE S/N RATIO (re 3% THD)	64 3/4 dB
THD (at 333 Hz)	at 0 dB 0.31% at -10 dB 0.083%
C-90 PRICE	\$9.00

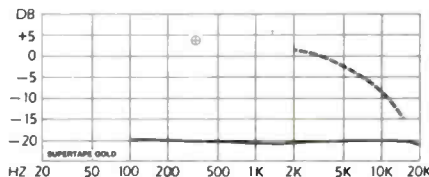
Realistic

We wondered whether Radio Shack's house brand would show any influence of the company's recent acquisition: Memorex (or, as it is now known, Memtek Products). The answer is a decided "no." Both Supertape Gold, the Type 1 ferric, and Supertape Metal have conventional screw-closure shells (as opposed to the sonic-welded design that is a Memorex hallmark). Packaging, too, is decidedly more conventional than Memtek's: Realistic is the only brand represented here that still uses the traditional two-tone (black/clear) Philips box. The U.S.-made ferric has the tiny viewing window that is now commonplace only in bargain brands, though the metal—made in Japan—has a somewhat larger window similar to those of most of the remaining brands listed here. In the lab tests, the ferric proved worthy of the Type 1 designation, with very little granularity but somewhat meager high-frequency headroom and a slightly low bias requirement for today's decks. The metal, which falls into the lower-bias group, also did well in the granularity test and provided the best A-weighted noise figure in its class.



Realistic Supertape Gold C-90 cassette tape (Type 1)

PLAYBACK CHARACTERISTICS (re 250 nW/m, 333 Hz)



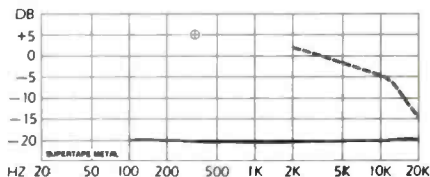
— Relative output vs. frequency (at -20 dB)
 ⊕ Midrange headroom (3% THD) +3 1/2 dB
 - - - - Maximum high-frequency output (3% IM)
 at 4 kHz -1 1/4 dB
 at 15 kHz -14 3/4 dB

RELATIVE BIAS 93%
 RELATIVE SENSITIVITY (333 Hz) +1/4 dB
 A-WEIGHTED NOISE (re 0 dB) -53 1/2 dB
 MIDRANGE S/N RATIO (re 3% THD) 57 dB
 THD (at 333 Hz) at 0 dB at -10 dB
 0.76% 0.13%
 C-90 PRICE \$3.99



Realistic Supertape Metal C-90 cassette tape (Type 4)

PLAYBACK CHARACTERISTICS (re 250 nW/m, 333 Hz)



— Relative output vs. frequency (at -20 dB)
 ⊕ Midrange headroom (3% THD) +5 dB
 - - - - Maximum high-frequency output (3% IM)
 at 4 kHz -1 dB
 at 15 kHz -9 3/4 dB

RELATIVE BIAS 95%
 RELATIVE SENSITIVITY (re 0 dB) -1/4 dB
 A-WEIGHTED NOISE (re 0 dB) -55 3/4 dB
 MIDRANGE S/N RATIO (re 3% THD) 60 3/4 dB
 THD (at 333 Hz) at 0 dB at -10 dB
 0.90% 0.17%
 C-90 PRICE \$8.99

Scotch

The 3M Company has revised the Scotch Master cassette line, with the results shown here. XS-I is typical of today's premium ferrics, with measurements very close to median for this group, though the expanded

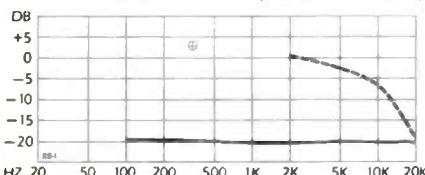
trace at -20 dB is unusually smooth. Judging from its rather low bias point and somewhat high sensitivity, the Type 2 entry (XS-II) is a ferricobalt, and it should be readily interchangeable with other formulations of that type. The noise level of the XS-II is a

little bit higher than average for the Type 2 tapes, however. The metal (XSM-IV) falls into the lower-bias Type 4 group, of which it is, again, quite typical. The Scotch stick-on labels appear to be only a little bit cramped.



Scotch XS-I C-90 cassette tape (Type 1)

PLAYBACK CHARACTERISTICS (re 250 nW/m, 333 Hz)



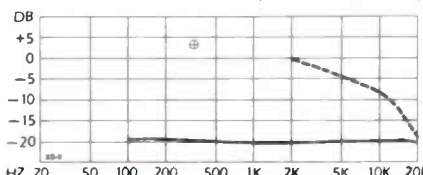
— Relative output vs. frequency (at -20 dB)
 ⊕ Midrange headroom (3% THD) +2 3/4 dB
 - - - - Maximum high-frequency output (3% IM)
 at 4 kHz -1 3/4 dB
 at 15 kHz -13 dB

RELATIVE BIAS 104%
 RELATIVE SENSITIVITY (333 Hz) +1/4 dB
 A-WEIGHTED NOISE (re 0 dB) -55 1/2 dB
 MIDRANGE S/N RATIO (re 3% THD) 58 1/4 dB
 THD (at 333 Hz) at 0 dB at -10 dB
 1.12% 0.13%
 C-90 PRICE \$5.79



Scotch XS-II C-90 cassette tape (Type 2)

PLAYBACK CHARACTERISTICS (re 250 nW/m, 333 Hz)



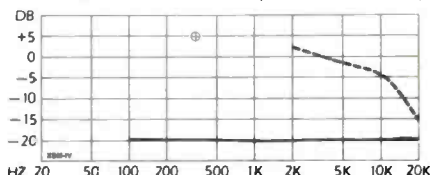
— Relative output vs. frequency (at -20 dB)
 ⊕ Midrange headroom (3% THD) +3 dB
 - - - - Maximum high-frequency output (3% IM)
 at 4 kHz -3 1/2 dB
 at 15 kHz -13 1/4 dB

RELATIVE BIAS 88%
 RELATIVE SENSITIVITY (333 Hz) +1 3/4 dB
 A-WEIGHTED NOISE (re 0 dB) -56 dB
 MIDRANGE S/N RATIO (re 3% THD) 59 dB
 THD (at 333 Hz) at 0 dB at -10 dB
 1.35% 0.20%
 C-90 PRICE \$5.99



Scotch XSM-IV C-90 cassette tape (Type 4)

PLAYBACK CHARACTERISTICS (re 250 nW/m, 333 Hz)



— Relative output vs. frequency (at -20 dB)
 ⊕ Midrange headroom (3% THD) +5 dB
 - - - - Maximum high-frequency output (3% IM)
 at 4 kHz -1 dB
 at 15 kHz -10 dB

RELATIVE BIAS 94%
 RELATIVE SENSITIVITY (333 Hz) -1/4 dB
 A-WEIGHTED NOISE (re 0 dB) -54 3/4 dB
 MIDRANGE S/N RATIO (re 3% THD) 59 1/4 dB
 THD (at 333 Hz) at 0 dB at -10 dB
 0.87% 0.15%
 C-90 PRICE \$10.29

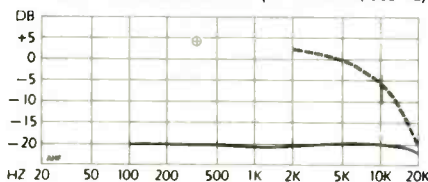
Sony

AHF proves to be an interesting ferric. It tied for lowest noise figure in the Type 1 group, and its trace in the expanded sweep at -20 dB is extremely smooth. The one catch, in some decks, will be the very high bias point—though ideal bias in a deck with appropriate recording EQ might be a little lower than the test indicates. The Type 2 UCX, one step down from Sony's superpremium UCX-S, also is a fine tape, and it is more nearly typical of its ferricobalt class. Note in this respect that bias point is somewhat below, and sensitivity somewhat above, the IEC (chromium-dioxide) Type II norm. Sony supplies applied and stick-on labels, both with a minimum of clutter.



Sony AHF C-90 cassette tape (Type 1)

PLAYBACK CHARACTERISTICS (re 250 nW/m, 333 Hz)



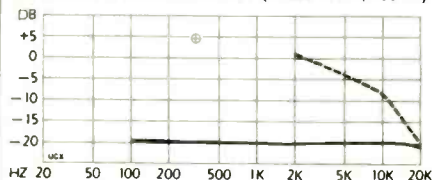
— Relative output vs. frequency (at -20 dB)
 ⊕ Midrange headroom (3% THD) +4 1/4 dB
 - - - - Maximum high-frequency output (3% IM)
 at 4 kHz +1 1/2 dB
 at 15 kHz -13 dB

RELATIVE BIAS	122%
RELATIVE SENSITIVITY (333 Hz)	-1 1/2 dB
A-WEIGHTED NOISE (re 0 dB)	-55 3/4 dB
MIDRANGE S/N RATIO (re 3% THD)	60 dB
THD (at 333 Hz)	at 0 dB 0.42%
	at -10 dB 0.11%
C-90 PRICE	\$5.20



Sony UCX C-90 cassette tape (Type 2)

PLAYBACK CHARACTERISTICS (re 250 nW/m, 333 Hz)



— Relative output vs. frequency (at -20 dB)
 ⊕ Midrange headroom (3% THD) +4 1/2 dB
 - - - - Maximum high-frequency output (3% IM)
 at 4 kHz -2 3/4 dB
 at 15 kHz -14 1/4 dB

RELATIVE BIAS	93%
RELATIVE SENSITIVITY (333 Hz)	+2 dB
A-WEIGHTED NOISE (re 0 dB)	-57 1/4 dB
MIDRANGE S/N RATIO (re 3% THD)	61 3/4 dB
THD (at 333 Hz)	at 0 dB 0.91%
	at -10 dB 0.17%
C-90 PRICE	\$5.75

TDK

Like several other companies in this report, TDK has upgraded some existing lines and added others. In each of the three main types, it has both a premium and a superpremium line—the latter with an added suffix. Thus AD is the premium ferric and AD-X, a recent addition, the superpremium. Its bias point is high enough so that it may be, like some other recent formulations, beyond the reach of old decks—though here again, recording EQ that would allow

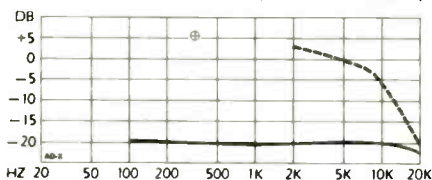
slightly lower bias than that of our test might prove ideal. In any event, headroom is excellent throughout the measurement range, and the expanded trace is extremely smooth. The "familiar" SA (now paired with the superpremium SA-X in TDK's Type 2 line) is a bit of a surprise because its bias point is a bit higher than that of other ferricobalts (though the sensitivity is about what you might expect) and almost spot-on that of the IEC chrome reference tape. Noise level is a trifle higher than average;

otherwise, SA is typical of premium Type 2 tapes. The metal MA (the superpremium is MA-R) falls in the higher-bias Type 4 group. Like the other two tapes of this sort, it exhibits exceptional midrange headroom and disappointing (albeit very good) headroom at extremely high frequencies, where output droops. Again, recording EQ permitting a lower bias seems called for and should improve high-frequency headroom, as well as output. TDK's stick-on labels are fairly generous.



TDK AD-X C-90 cassette tape (Type 1)

PLAYBACK CHARACTERISTICS (re 250 nW/m, 333 Hz)



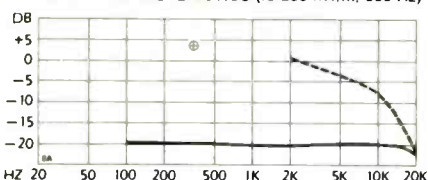
— Relative output vs. frequency (at -20 dB)
 ⊕ Midrange headroom (3% THD) +5 1/2 dB
 - - - - Maximum high-frequency output (3% IM)
 at 4 kHz +3/4 dB
 at 15 kHz -13 1/2 dB

RELATIVE BIAS	122%
RELATIVE SENSITIVITY (333 Hz)	-1/4 dB
A-WEIGHTED NOISE (re 0 dB)	-54 1/4 dB
MIDRANGE S/N RATIO (re 3% THD)	59 3/4 dB
THD (at 333 Hz)	at 0 dB 0.33%
	at -10 dB 0.13%
C-90 PRICE	\$5.49



TDK SA C-90 cassette tape (Type 2)

PLAYBACK CHARACTERISTICS (re 250 nW/m, 333 Hz)



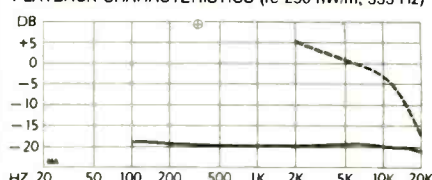
— Relative output vs. frequency (at -20 dB)
 ⊕ Midrange headroom (3% THD) +3 1/2 dB
 - - - - Maximum high-frequency output (3% IM)
 at 4 kHz -2 3/4 dB
 at 15 kHz -14 1/2 dB

RELATIVE BIAS	101%
RELATIVE SENSITIVITY (333 Hz)	+1 1/4 dB
A-WEIGHTED NOISE (re 0 dB)	-56 dB
MIDRANGE S/N RATIO (re 3% THD)	59 1/2 dB
THD (at 333 Hz)	at 0 dB 1.12%
	at -10 dB 0.22%
C-90 PRICE	\$6.19



TDK MA C-90 cassette tape (Type 4)

PLAYBACK CHARACTERISTICS (re 250 nW/m, 333 Hz)



— Relative output vs. frequency (at -20 dB)
 ⊕ Midrange headroom (3% THD) +9 dB
 - - - - Maximum high-frequency output (3% IM)
 at 4 kHz +1 1/2 dB
 at 15 kHz -10 1/4 dB

RELATIVE BIAS	120%
RELATIVE SENSITIVITY (333 Hz)	+3/4 dB
A-WEIGHTED NOISE (re 0 dB)	-55 1/4 dB
MIDRANGE S/N RATIO (re 3% THD)	64 1/4 dB
THD (at 333 Hz)	at 0 dB 0.33%
	at -10 dB 0.065%
C-90 PRICE	\$8.99

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Sound Views

Opinion and comment on the changing audio scene by Robert Long

The New Tapes: A Change for the Better?

IT SEEMS LIKE AN AGE ago that I was talking on the phone to a representative of a major tape-equipment manufacturer. He was explaining to me in great detail how important it is to know exactly what sort of tape you're using in your cassette deck if you want really fine reproduction from it. Experimentation in tape manufacturing is all very well and, in fact, is very important if there is to be progress in the consumer tape field. If that means, however, that the tape you buy today isn't the same as the tape you bought yesterday, even though it may have the same name (and perhaps packaging, as well), then you simply won't be able to tell what will happen when you start recording.

This was the first time I heard anyone mention the idea of clearly defined tape types that would serve as guidelines for all future tape development to help ensure predictable behavior in home recording. It was long before the present IEC (International Electrotechnical Commission) standards ever came my way (though they must already have been in the early discussion stages then) and some years before HIGH FIDELITY began using its type designations.

The phone call actually was the genesis of HF's type descriptions, although the obvious relationship between our designations and the IEC numbering scheme might lead one to think ours followed entirely from the IEC. (We use arabic numerals, rather than roman.) But any scheme that could assure a recordist of the performance he thought he was buying along with his recorder seemed like salvation from the tape anarchy of the early 1970s. After reviewing the data for this month's batch of tape tests, however, my only comment is "Humbug!"

We had all known there would be somewhat more spread among the Type 2 (chrome and ferricobalt) tapes than we ideally would like. IEC's Type II is defined in terms of a modern chromium-dioxide formulation, and its reference tapes are made by BASF, which firmly believes in the chromium-dioxide technology. The competing cobalt-modified ferrics—though not the exclusive fief of the Japanese tape manufacturers, nor even the only Type 2 technology of interest to them—

seem to appeal to them much more than chrome does. As a result, typical Japanese Type 2 tapes have for some time been higher in sensitivity and lower in bias requirement than the IEC Type II reference samples—but not necessarily by enough to put them outside the acceptable tolerance "window" of the IEC standard or beyond the pale of normal home usage.

This is why IEC standard tapes don't always perform well when used on decks that have been adjusted—either at the factory or by the user following the owner's manual—for some of the popular formulations. Our equipment reports have commented on Diversified Science Laboratories' findings in this respect. Though the

The big shockers are the new metal formulations.

IEC Type I tape often does well in the deck under test (suggesting good compatibility between it and the Type I ferric for which the deck actually is adjusted), the IEC Type II reference frequently displays a pronounced peak at the high end, suggesting insufficient bias current. And if, as usually is the case, its sensitivity is lower than that for which the deck is adjusted, Dolby tracking may suffer, as well.

At first there was some doubt about whether the Japanese tape manufacturers would take to standards developed half a world away, in Europe (though the IEC is, as its name implies, an international body). But after much exchange of information, the IEC representatives were heartened by signs that a consensus was being established. And the rapid proliferation of IEC type numbers on Japanese tape packaging suggested that standardization was under way.

Subsequent tape comparisons tell a different story, however—one that suggests a widening gap between the de jure IEC standards and the de facto standards of the tape marketplace.

The big shockers, however, in this month's tests are the metal tapes, which suggest that some current formulations diverge enough from the IEC Type IV standard to make them substantially incompatible with many existing cassette decks. The tape industry originally set its sights fairly low where metal "pigments" are con-

cerned. "Better a moderate improvement that can be made practical than a big one that overstrains the state of the head-design art" was the prevailing attitude. On the other hand, some engineers insisted that it would be better to go for broke in the design of the tape and then wait until recorder technology could catch up before marketing it. Well, recorder technology has made big strides. And now, it seems, tape producers may quietly be substituting the go-for-broke metals for the compromise metal formulations with which they entered the market.

Considering the quantity of mail we receive asking which tapes to use for which recorders, all this has got to be a major concern among recordists. I know it is with me. We certainly don't want progress to cease, but we don't want dismaying surprises when we start recording. If, for example, coercivity can be increased in metal tapes to achieve better performance (in an appropriately adjusted deck) than was possible heretofore, it may be necessary to label it "Type IV-B" to distinguish it from the tapes for which earlier "metal-ready" decks were designed. Otherwise, for the vast majority of recordists who can use it at all, the "improved" tape may prove anything but.

There was a time when Esther Peterson, then the official White House watchdog of consumer affairs, let it be known that she was about to pounce on the tape-recording industry with bared fangs. At the time, I thought she potentially had all too good a case, although she sometimes seemed to miss the real point. What disturbed me then—and does so now—is that we are asked to buy tape equipment on the basis of specifications written with the aid of tapes that can't be bought.

Sometimes the tape is available only overseas or has been supplanted by an upgraded formulation; sometimes the tape is available here but there is no way for the deck owner to find out which formulation it is. But it comes to the same thing: Unless you can record on the sort of tape that was used to create the specification—or something reasonably close to that tape—you simply can't achieve the performance promised by the specification.

When a top cassette deck cost \$200 and didn't even offer noise reduction, a little "slop" didn't mean much. At \$2,000 a throw, with the extra demands imposed by Dolby C or DBX decoders, and in an audio world that also encompasses the Compact Disc, recorder owners have a right to demand the performance they've paid for—in both recorders and tapes. **HF**

NEW
TECHNOLOGIES

Digital Audio
Video
Computers
Software Reviews

AN IN-DEPTH LOOK AT THE ANALOG AUDIO RECORDING TECHNIQUE THAT GIVES DIGITAL SOUND A RUN FOR ITS MONEY

AMID EXPECTATIONS of an all-digital future for audio, the recent appearance of Beta Hi-Fi came as something of a bombshell. A videocassette recorder with an analog audio recording system capable of stereo reproduction with almost

Peter Mitchell is president of the Boston Audio Society and a frequent contributor to these pages.

HOW BETA HI-FI WORKS

BY

PETER MITCHELL



perfectly flat frequency response and a dynamic range of 80 dB is competition indeed for the far more expensive PCM processor-VCR combination.

The problems of conventional analog audio recording in a VCR are plain enough. Because of the tape's slow travel past the fixed audio head, bandwidth is severely limited. Noise and distortion are also compromised in a system optimized for video reproduction.

Though Beta Hi-Fi is an analog recording technique, it shares little with conventional high fidelity taping systems. These mix the audio signal with an ultrasonic bias signal and record *directly* onto the tape, so any imperfections in the tape or the recorder are translated into flaws in the reproduced sound. Small variations in tape speed are heard as wow and flutter; the nonuniformities of the tape's oxide coating produce hiss; and a small change in the bias level or in the tape formulation causes a rise or fall in the high-frequency response, making the sound duller or brighter. These problems have posed a continual challenge to recordists.

Beta Hi-Fi avoids them by taking an *indirect* route to recording: What goes onto the tape is not the audio signal itself, but an elaborately processed version of it. This radically alters the relationship between physical flaws in the recording process and the quality of the sound: The processing removes the audio signal from the vagaries of the physical world, so to speak, and transposes it to the electronic realm, where performance parameters can be better controlled.

The means by which this is achieved is frequency modulation, or FM: The audio signal causes a carrier frequency to shift up and down at a rate equal to the audio signal's frequency and by an amount that depends on the signal's level. Thus, if the signal is a 400-Hz tone, the frequency of the FM carrier will shift up and down 400 times per second. The amount of the carrier's frequency shift—its "deviation"—is directly proportional to the level of the audio signal, with louder sounds causing greater deviations than softer ones. In Beta Hi-Fi, the maximum deviation is ± 75 kHz, as in FM broadcasting.

Beta Hi-Fi's FM carriers are at radio frequencies (near the top of the

AM broadcast band, in fact). They are mixed with the video signal in the VCR, fed to the spinning video heads, and recorded on tape as part of the video. In playback, the FM signals are

scientists have long used FM taping for satellite telemetry and for recording the outputs of transducers and laboratory instruments. And both currently available consumer videodisc systems,

THE NTSC BROADCAST SPECTRUM

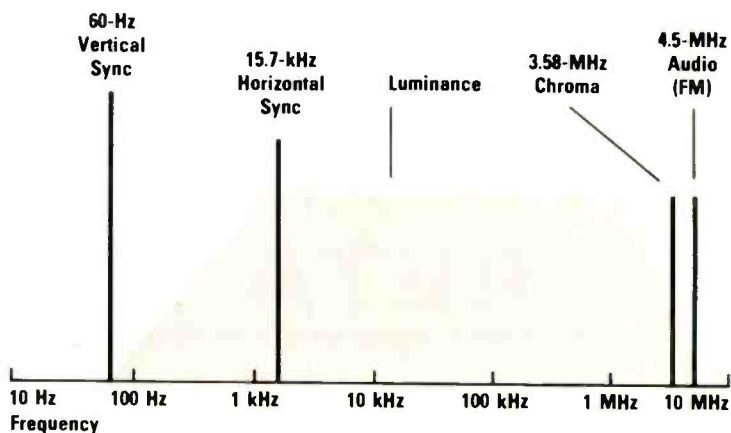


FIG. 1. THIS GRAPH uses a logarithmic scale to show the 75,000-to-one range of frequencies—from 60 Hz to 4.5 MHz—that make up an NTSC broadcast channel. Though a VCR can record a very wide bandwidth, the NTSC signal must still be squeezed down or reformatted for recording (Fig. 2).

extracted from the composite video signal and are demodulated by the same sort of circuitry that is used in an FM tuner, giving you back a virtually exact replica of the original stereo sound that was fed into the recorder.

Incidentally, although Beta Hi-Fi is a stereo FM recording system, it does not employ the multiplex method used for stereo broadcasts. The two channels of audio are recorded as separate mono FM signals, which avoids the noise and the distortion problems that arise in multiplex stereo. And since there's no multiplex subcarrier, there's no need for a 15-kHz bandwidth limit, so the frequency response in Beta Hi-Fi can extend all the way to 20 kHz. The channel separation is greater than 60 dB, which not only yields rock-steady stereo imaging but also enables the system to record two unrelated mono soundtracks without interference—for example, English dialogue on one channel and Spanish on the other.

Using FM for recording instead of broadcast is not a new idea. In fact,

CED and LaserVision, use FM recording for their stereo soundtracks.

The potential advantages of FM recording for audio have been well-known for many years. The obstacle to its implementation was the required bandwidth. FM carrier signals must be much higher than the highest audio frequency, and in Beta Hi-Fi they are between 1 and 2 MHz. It wouldn't make commercial sense to develop a recorder with a 2-MHz bandwidth simply for high fidelity use: It's unlikely that enough could be sold to recoup the expense. The breakthrough came with the mass-marketing of helical-scan video recorders, in which wide bandwidth is obtained by spinning the heads past the tape instead of moving the tape past a fixed head.

For the serious music recordist, the greatest blessing of FM recording is its constancy: Frequency response is always flat, regardless of the tape you use, and there's no need for fussy bias settings or level matching. Signal level is stable, too, without the dropouts and the continual small instabilities that

plague analog tapes. As for the pitch variations caused by wow and flutter, they are virtually nonexistent in the output signal.

Nevertheless, flutter is one reason why there has been little incentive to create an FM music recorder. Any wow and flutter in the system will cause random shifts in the carrier frequency during playback. These shifts are demodulated as unwanted audio signals—that is, noise. Therefore, the signal-to-noise (S/N) ratio of an FM recorder is typically limited to about 50–55 dB. You may recall that the first generation of LaserVision and CED videodisc players, which also employed FM recording for their audio, had S/N ratios of about 56 dB. The newer stereo players use CX noise reduction to add 14 dB of quieting, bringing the total S/N ratio up to around 70 dB.

The wow and flutter of an ordinary VCR's audio track is usually not very good. But to prevent visible picture jitter, there is a complex servo system tied into the video sync signal that better controls video-head flutter. (In fact, the tape movements caused by this system actually *cause* some of the audio flutter by jiggling the tape back and forth across the fixed audio head downstream.) Still, the "natural" S/N ratio of the FM playback in Beta Hi-Fi is limited to around 60 dB, which is improved to approximately 80 dB by a built-in noise-reduction circuit that compresses the signal's dynamic range in recording and expands it in playback. Unfortunately, specific information on this noise-reduction system was not available from Sony at press time. We have heard, however, that the VHS side's answer to Beta Hi-Fi (commonly referred to as VHS Hi-Fi) will use DBX compansion.

FORMATTING THE SIGNAL

To understand how the audio FM (AFM) carriers are integrated with the video signal for Beta Hi-Fi recording, we must first comprehend the restructuring of the TV signal for recording in a VCR. Standard NTSC-type TV broadcasts actually consist of several signals shoehorned into a 6-MHz-wide TV channel (Fig. 1). There is a strong 60-Hz synchronization pulse that your TV set uses to lock the picture in sync with the broadcast, so that the picture won't roll. An

amplitude-modulated (AM) luminance signal contains all of the black-and-white picture-forming information, with its details, shapes, and variations in brightness. Luminance information is

And there is an FM audio subcarrier at 4.5 MHz.

To record this signal directly onto tape, the recorder would need to have reasonably flat response from 60 Hz to

REFORMATTING FOR STANDARD BETA

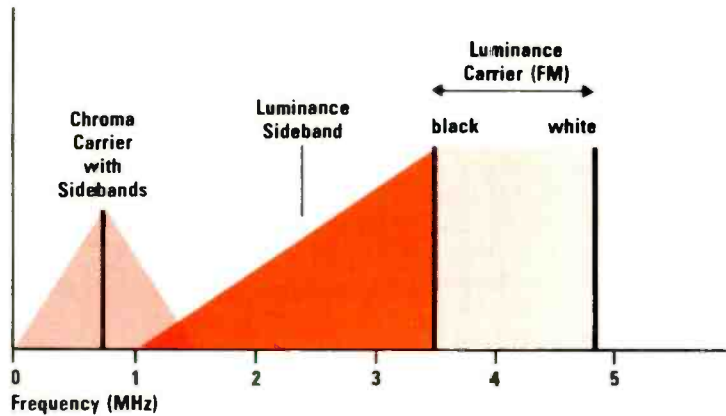


FIG. 2. DOWN-CONVERTING and reformatting are necessary to squeeze a video broadcast into the bandwidth limitations of a VCR. With the restructured signal, the video heads need handle a signal with just an eight-to-one frequency span.

REFORMATTING FOR BETA HI-FI

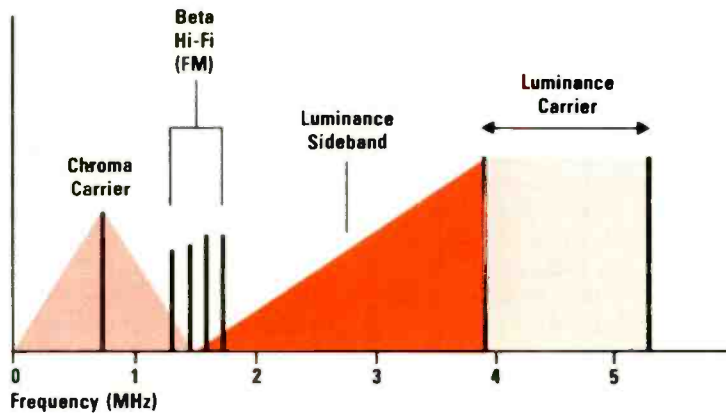


FIG. 3. BETA HI-FI's four FM carriers (two each for the left and right channels) are sandwiched between the chroma and luminance signals. To make room for them, the luminance carrier is shifted up in frequency by 400 kHz so that it ranges between 3.9 and 5.2 MHz.

conveyed by signals varying from audio frequencies up to 4.2 MHz. There is a chroma subcarrier at 3.58 MHz that is phase-modulated with all of the color information in the picture.

4.5 MHz, which is virtually impossible. It is difficult enough to obtain flat response over the 1,000-to-1 ratio of frequencies in an audio recorder (from 20 Hz to 20 kHz), let

alone this 75,000-to-1 range. To make video recording practical, the TV signal is restructured as follows.

First, the 60-Hz sync signal is split off and recorded by a separate head on its own control track at one edge of the tape. The 4.5-MHz broadcast audio signal is demodulated to recover the original 30-Hz to 15-kHz audio waveform, which is then directly recorded by a separate head onto a narrow track at the opposite edge of the tape. Then the luminance signal is used to modulate an FM carrier in the VCR, varying its frequency from 4.8 MHz for white picture highlights down to 3.5 MHz for the black band that separates successive video frames. The modulation process also produces "sidebands" related to the frequencies in the luminance signal. The lower sideband information is included in the recording, so that the total recorded luminance signal spectrum extends from 4.8 MHz down to about 1 MHz. Finally, the 3.58-MHz color signal in the broadcast is "down-converted" to shift its frequency to 688 kHz, combined with the FM luminance signal, and fed to the spinning video heads for recording on tape. The resulting VCR video spectrum is shown in Fig. 2.

Although this system is complicated, its advantages are clear. The independent control track ensures a stable, precisely synchronized picture (except when the sync track has been deliberately altered, as in commercially prerecorded tapes, to cause rolling in illegally duplicated copies of the tape). Color reproduction is quite stable. The video heads are required to handle only an eight-to-one frequency span, and their response doesn't even have to be flat over that range. Since the recorded luminance signal is FM, nonlinearities in the video head's output will merely cause amplitude modulation of the FM carrier, which has no effect as long as the FM detector has good AM rejection.

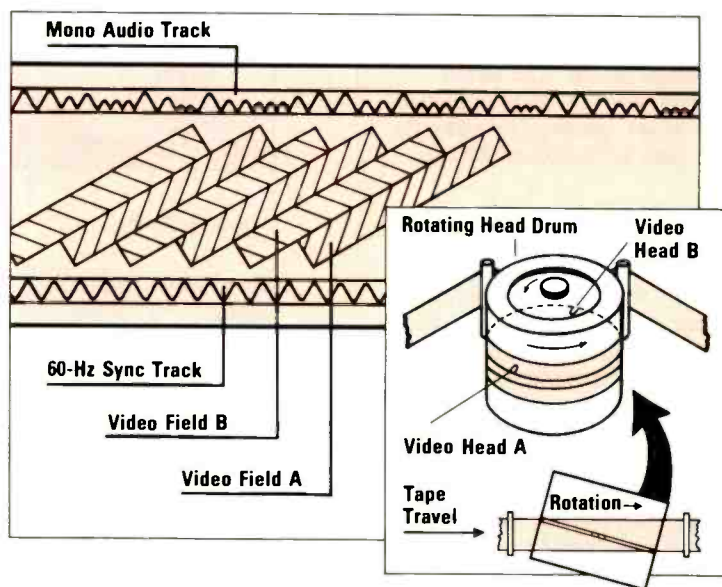
As you can see from Fig. 2, there is a region between 1 and 2 MHz, on the fringes of the chroma and luminance sidebands, where relatively little signal is recorded, and this is where Beta Hi-Fi's FM carriers are placed. To open up this gap and minimize the potential for mutual

interference between the audio FM and the sidebands of the luminance signal, the system's designers moved the luminance carrier up by 400 kHz so that it ranges between 3.9 and 5.2 MHz. To further reduce interference, they took advantage of a characteristic of the luminance sidebands: The sideband energy is not uniform but is concentrated at multiples of the 15.7-

only adjacent lines in the picture. And second, the alternating fields are recorded by separate heads located 180 degrees apart on the spinning drum, with their head gaps tilted at different angles to weaken the crosstalk.

In the case of Beta Hi-Fi's FM signal, the crosstalk problem is solved by using two alternating pairs of FM carrier frequencies for successive

GETTING IT ON TAPE



IN A BETA HI-FI VCR, the stereo AFM soundtrack is recorded along with the video on diagonal tracks laid down by the two rotating video heads (inset). A mono audio soundtrack (to ensure compatibility with standard Beta decks) and a video sync track are laid down by stationary heads.

kHz rate at which the horizontal lines in the TV picture are scanned. The AFM carriers are interleaved between these sideband frequencies.

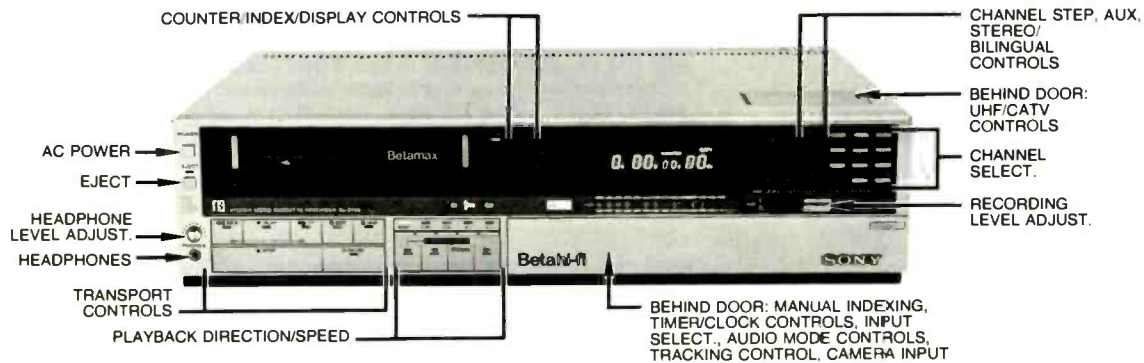
One problem remained. VCRs record on diagonal tracks across the tape with no blank guard bands to prevent crosstalk between adjacent tracks. In fact, at slow speeds, the tracks actually overlap. For video recording, this interference is minimized by two factors. First, each 525-line TV picture consists of an interlaced pair of 262.5-line "fields," and in a VCR the alternating fields are recorded on adjacent tracks. Thus, crosstalk between tracks will affect

tracks. With video field "A," the audio signal is modulated onto FM carriers at 1.38 MHz (left channel) and 1.68 MHz (right channel). For the next track, (video field "B," recorded by the opposite head), the FM carriers are at 1.53 and 1.83 MHz. In playback, head A and head B alternately feed the demodulator, which is switched between the appropriate carrier frequencies.

Considering how complex Beta Hi-Fi really is, it seems miraculous that it works at all. But for the audiophile seeking PCM-like performance at an affordable price, the appearance of Beta Hi-Fi may be a godsend. **HF**

SONY SL-2700 BETA HI-FI VCR

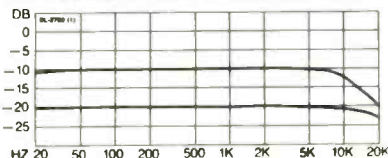
Sony SL-2700 Betamax videocassette recorder, with Beta Hi-Fi stereo audio and wireless remote control. Dimensions: 17 by 4¼ inches (front panel), 14 inches deep plus clearance for controls and connections. AC convenience outlets: one unswitched (400 watts max.). Price: \$1,500. Warranty: "limited," one year parts, 90 days labor. Manufacturer: Sony Corp., Japan; U.S. distributor: Sony Corp. of America, Consumer Products Div., Sony Dr., Park Ridge, N.J. 07656.



Except where otherwise indicated, all data are for both speeds (Beta II and III). All data were taken at the direct audio and video outputs.

VCR SECTION

AUDIO RECORD/PLAY RESPONSE, BETA HI-FI (stereo)



at -10 dB input*

— Beta II +0, -3 dB, <20 Hz to 11 kHz
- - - - Beta III +0, -3 dB, <20 Hz to 11 kHz

at -20 dB input*

— Beta II +0, -3 dB, <20 Hz to 19.5 kHz
- - - - Beta III +0, -3 dB, <20 Hz to 19.5 kHz

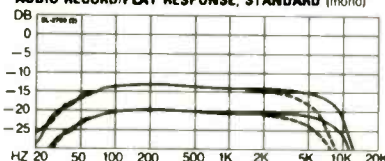
SONY'S SL-2700 VCR is the second of that company's Beta Hi-Fi recorders, and it has even more features than the SL-5200 that launched the era of high fidelity VCR sound. The front-loading home deck includes a 107-channel cable-ready tuner with random-access and scan modes, Betascan high-speed picture search, automatic and manual indexing, and a nifty feature called Swing Search

that provides virtually perfect freeze-frame, slow-motion, and double-speed operation. But the crowning glory is Beta Hi-Fi, which affords truly outstanding stereo recording and playback.

How Beta Hi-Fi works is explained elsewhere in this issue (page 49). How well it works was determined by Diversified Science Laboratories' bench tests—and that's very well

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.

AUDIO RECORD/PLAY RESPONSE, STANDARD (mono)



at -10 dB input*

Beta II	+1/4, -3 dB, 50 Hz to 6.8 kHz
Beta III	+1/4, -3 dB, 50 Hz to 3.8 kHz

at -20 dB input*

Beta II	+1/4, -3 dB, 50 Hz to 7.6 kHz
Beta III	+1/4, -3 dB, 50 Hz to 4.3 kHz

AUDIO S/N RATIO (re 0 dB output; R/P: A-weighted)*

	Beta II	Beta III
Beta Hi-Fi (stereo)	82 dB	81 1/4 dB
standard (mono)	42 3/4 dB	41 1/2 dB

INDICATOR CALIBRATION (315 Hz)

for 0 dB input (3% distortion)	> +5 dB
for -10 dB input	-2 dB

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

	Beta II	Beta III
Beta Hi-Fi (stereo)	≤ 0.41%	≤ 0.37%
standard (mono)	≤ 3.3%	≤ 3.3%

CHANNEL SEPARATION (Beta Hi-Fi)

	Beta II	Beta III
at 100 Hz	64 dB	63 dB
at 1 kHz	56 1/2 dB	55 dB
at 10 kHz	38 dB	38 dB

INDICATOR "BALLISTICS"

Response time	115 msec
Decay time	≈ 750 msec
Overshoot	0 dB

FLUTTER (ANSI weighted peak; R/P)

	Beta II	Beta III
Beta Hi-Fi (stereo)	< 0.01%	< 0.01%
standard (mono)	± 0.15% avg.	± 0.35% avg.

SENSITIVITY (for 0 dB output; 315 Hz; Beta Hi-Fi)*

line input	550 mV
mike input	1.7 mV

AUDIO OUTPUT (from 0 dB input; 315 Hz)*

Beta Hi-Fi (stereo)	1.4 volts
standard (mono)	0.22 volt

VIDEO RECORD/PLAY RESPONSE

	Beta II	Beta III
at 500 kHz	+1 dB	+1 dB
at 1.5 MHz	-4 dB	-4 dB
at 2.0 MHz	-7 1/4 dB	-6 1/2 dB

LUMINANCE LEVEL

Beta II	≈ 4% high
Beta III	≈ 5% high

LUMINANCE NONLINEARITY (worst case) ≈ 11%

CHROMA LEVEL ≈ 1 1/2 dB low

CHROMA DIFFERENTIAL GAIN

Beta II	≈ 7%
Beta III	≈ 10%

CHROMA DIFFERENTIAL PHASE ≈ ± 5°

CHROMA PHASE ERROR ≈ ± 3°

VIDEO TRANSIENT RESPONSE (window display)

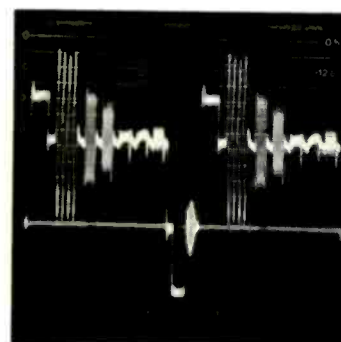
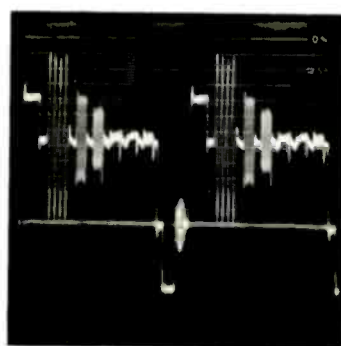
	≈ 7% overshoot with 2% tilt
--	-----------------------------

*The 0 dB input level for Beta Hi-Fi measurements is the voltage required to produce 3-percent third harmonic distortion at 315 Hz. For the standard audio recording mode, it is 10 dB above the level at which the automatic level control (ALC) produces 3-dB compression at 315 Hz. In both cases, the 0-dB output level is the voltage produced by a 0-dB input. All Beta Hi-Fi measurements were made with the ALC off and the recording level controls set for meter zero at 500 millivolts in.

indeed. Flutter is below measurement limits, distortion is very low, channel separation is very wide, and dynamic range is comfortably over 80 dB. Moreover, performance is essentially the same whether you choose "standard" Beta-II recording or the more economical Beta-III speed. This is true of the frequency response as well, which is the same in either mode, extending from 20 Hz to almost 20 kHz within 3 dB when the recording level is 20 dB below the midrange input required to produce 3-percent distortion. Cranking up the level causes

Despite its apparent complexity, the SL-2700 is quite simple to operate. Controls are color-coded and logically grouped, normal settings are indicated by (somewhat hard-to-see) green stripes, and the operating manual is, for the most part, written clearly.

The input selector array enables you to choose video and audio sources independently so that you can record a stereo simulcast in Beta Hi-Fi with the video from the TV tuner and the audio from your stereo system's FM tuner. There are three video choices—TUNER, CAMERA, and LINE/PCM; you can leave



VCR MULTIBURST RESPONSE in Beta II (left) and Beta III (right). Surprisingly, the video response holds up slightly better at the slower speed. In both, however, the 500-kHz burst is up just a smidgen, while the 1.5- and 2.0-MHz bursts are down a little and the last three bursts (at 3.0, 3.58, and 4.2 MHz) are all but obliterated. This steep rolloff at high frequencies is typical of VCRs and is responsible for their somewhat limited horizontal resolution compared to that of the very best video sources (such as broadcast television).

some high-frequency rolloff, just as it would in an ordinary audio tape recorder. Why this happens, we're not sure—perhaps because of the built-in noise reduction system—but it shouldn't become apparent on music at any recording levels below 0 dB.

Because of its many features, the SL-2700 has more switches and buttons than you'd want to count. Many of these are concealed behind a flip-down door that locks open, displaying its array on an easily accessible slanted panel. Here is where you'll find video and audio output selectors; tracking controls for normal, accelerated, and slow-motion playback; the clock and timer controls (the SL-2700 has a four-event/14-day programmer with an "every day" option); and the manual index markers (of which more later).

auxiliary equipment hooked up and select whichever one you want by switch. This is much better than the usual arrangement, whereby inserting a plug into the line jack automatically disconnects the tuner.

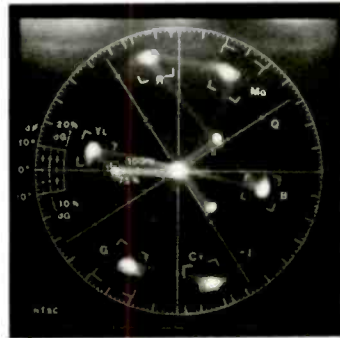
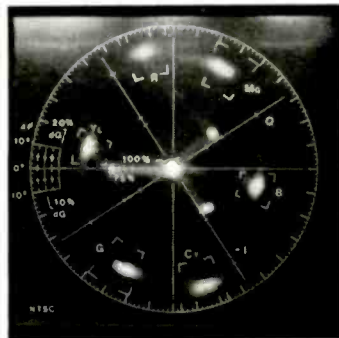
The audio recording controls permit you to suppress Beta Hi-Fi recording if you wish, to record left and right channels together or independently (to make a bilingual tape), and to choose either manual record-level adjustment or automatic level control (ALC). No matter which level-control mode you choose, the ALC always is active on the standard longitudinal audio track to eke the most out of its limited dynamic range. And that edge track is always recorded, so that the tapes you make will be compatible with Beta VCRs that lack

the Beta Hi-Fi feature.

The green stripe suggests that you normally use ALC during recording. This may be good advice for the uninitiated but we think most of you will want to ride the gain yourselves. DSL found that the ALC is very "tight." (Once ALC action begins, recording level increases by only 1/8 dB for every 1-dB increase in input.) This virtually precludes overloading the conventional audio track, while achieving the best possible dynamic range. But such strong measures are hardly necessary with Beta Hi-Fi's

takes some getting used to. The usual setting is AUTO, which chooses Beta Hi-Fi playback if the tape has such a signal and standard audio if it doesn't. The other setting enables you to monitor the sound going onto the conventional track during audio dubbing, together with the existing Beta Hi-Fi recording. (Since Beta Hi-Fi is recorded by the video heads and therefore cannot be re-recorded without destroying video information, audio dubbing is possible *only* onto the conventional track.)

Although not as obviously



VCR COLOR ACCURACY in Beta II (left) and Beta III (right). The fuzziness of the color vectors (the white dots in the six target squares) is caused by chroma noise. Even so, the SL-2700's superb performance is clearly evident, bettering that of any TV tuner we have yet tested. Chroma level (color saturation) is indicated by a dot's radial distance from the center of its target, while chroma phase (hue) accuracy is indicated by its angular displacement. Both are just about right on the money, in Beta III as well as Beta II.

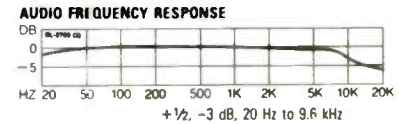
wider than 80-dB range. And Sony's recording indicators, which have a 55-dB range, make level setting easier on the SL-2700 than on many conventional audio recorders. They are calibrated with a healthy safety factor (the 3-percent distortion point is well off-scale), respond reasonably quickly, and hold the peak reading long enough for the eye to react.

The audio output switches are the most confusing. One chooses L, R, or B HI FI OFF. The normal position is L, which routes Beta Hi-Fi stereo to the audio line-out jacks when the switch is in the stereo position; when it is set for bilingual, only the left-channel sound track is presented. With an R setting, only the right track is presented. And in B HI FI OFF, the conventional mono track becomes the source. NORM also

distinguished as Beta Hi-Fi, the SL-2700's video-recording performance is also excellent. In fact, it is the best we have yet encountered, and DSL's bench tests suggest why. Video response (which determines horizontal resolution) is down only 7 1/4 dB at 2 MHz at the Beta-II speed and is actually *better* at the slower Beta-III speed. Chroma phase (hue) accuracy is exceptionally good—better than that of many receivers and separate tuners. Chroma level (color saturation) is just a trifle low and easily corrected with a monitor's color control. Luminance level is almost perfect, and luminance (or gray-scale) linearity is very good. Chroma differential gain and phase also are exceptionally low, suggesting constant tint and saturation independent of scene brightness. And video

TV TUNER SECTION

Except where otherwise noted, all audio measurements were made with the automatic level control (ALC) defeated.



AUDIO S/N RATIO (A-weighted)	
best case (no video signal)	44 3/4 dB
worst case (staircase with chroma)	25 3/4 dB

RESIDUAL HORIZONTAL SCAN COMPONENT (15.7 kHz)	
	-54 1/2 dB

MAXIMUM AUDIO OUTPUT	
ALC off	1.13 volts
ALC on	0.36 volt

VIDEO FREQUENCY RESPONSE	
at 500 kHz	flat
at 1.5 MHz	-2 dB
at 2.0 MHz	-2 1/2 dB
at 3.0 MHz	-3 1/2 dB
at 3.50 MHz	-5 dB
at 4.2 MHz	-17 1/2 dB

LUMINANCE LEVEL	correct
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LUMINANCE NONLINEARITY (worst case)	≈ 39%
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CHROMA LEVEL	≈ 7 dB low
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CHROMA DIFFERENTIAL GAIN	≈ 32%
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CHROMA DIFFERENTIAL PHASE	≈ ± 5°
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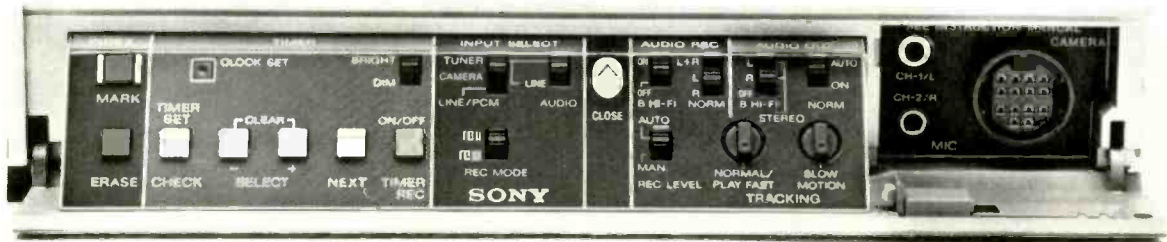
CHROMA PHASE ERROR	
---------------------------	--

red	+4°
magenta	+4°
blue	0°
cyan	+10°
green	+7°
yellow	+9°
average	≈ +6°

transient response is excellent, with negligible ringing and uniform brightness.

What's extraordinary is obtaining practically identical test results—as we did—at the two recording speeds. With

Nor is the SL-2700 short on features, which include not only Betascan (high-speed forward and reverse playback) but also Indexing, Auto Play, and Swing Search. Betascan is accessed by pressing FAST



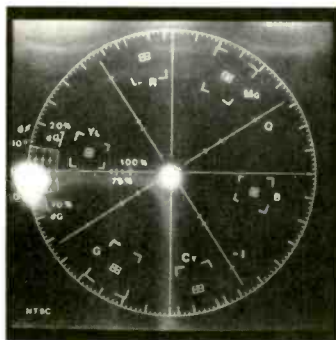
SECONDARY CONTROLS for the SL-2700 are behind a door at the bottom right of the front panel. They include switches for tape indexing, timer programming, setting the brightness of the front-panel display, input selection, recording speed selection, audio recording mode, and audio output selection. The two rotary controls are for tracking adjustments in normal or accelerated playback and in slow motion or freeze-frame. To the far right are a pair of mini-jack microphone inputs and a 14-pin K-type socket for connecting a video camera for live recording.

the exception of chroma noise (indicated by the size of the "fuzz balls" in the vectorscope photos), we simply can't tell at which speed a tape was recorded without looking at the indicator. And since Beta Hi-Fi performance is virtually identical in both modes, there is no audible clue, either. Chroma noise is slightly worse in Beta III than in Beta II, but is still far better than average.

FORWARD or **REWIND** while in **PLAY**. If you're in **REWIND** and press **PLAY** (while holding **REWIND** depressed), the tape shuttles back to counter zero and automatically replays from that point. The counter, by the way, reads in minutes and seconds and is not fooled by fast-winds or changes in recording speed: You always know the precise elapsed time on the tape.

TAPE RETURN brings you back to counter zero at a single touch, and a nine-program index enables you to find the beginning of any program quickly. Each time recording begins, an "index mark" is recorded on the tape. All you have to do to find that point again is enter its index number and press **PLAY**. The tape then rewinds or fast-forwards to the desired position and commences playback. You also can use the system in much the same way you would one of the program-skipping systems found on some audio cassette recorders. You can manually insert an index mark by pressing **INDEX MARK** or erase an index mark with **INDEX ERASE**.

Swing Search is the best freeze-frame, slow-motion, double-speed system we've seen. It works equally well on tapes recorded in Beta II or Beta III but does not function on Beta-I tapes (which the SL-2700 will play but not record). Freeze-frame is absolutely free of video noise, and the picture



VCR COLOR CONSISTENCY in Beta II (left) and Beta III (right) is excellent. Ideally, the white blob at the left (its diffuseness is caused by chroma noise) would be a single dot centered on the intersection of the nine-o'clock axis with the circumference of the grid. The radial spread indicates the chroma differential gain, which is a measure of how much color saturation varies with changes in brightness. The angular spread shows the chroma differential phase, which tells how much hue shifts with changes in brightness.

definition is excellent. You can move frame by frame in either forward or reverse, or you can get slow motion in either direction at one-fifth or one-tenth normal speed. Each frame is cleanly presented with a noise bar occurring



TUNER COLOR CONSISTENCY. The narrow angular spread of the color vectors (the white dots near the periphery of the grid) indicates low chroma differential phase: Hues shift very little with changes in brightness on the SL-2700's tuner. Chroma differential gain, indicated by the dots' radial spread, is not as good. But since the only significant drop in color saturation occurs at the top of the luminance scale, there will be little change in color saturation, except in the brightest scenes.

only at the point of frame-change. You also can advance or back up at double-speed, and *with* audio in the forward direction on tapes recorded in Beta Hi-Fi. Although the sound is at double speed, it remains at normal pitch and therefore is not subject to the Donald Duck effect that would occur if you tried this with a conventional tape recorder. You can even start recording from the Swing Search mode for tight video editing.

Swing Search can be operated from your armchair via an infrared remote-control unit, which can also be used to turn the system on and off, change channels, switch the TV feed from antenna to VCR, and operate the transport controls. You can even activate a sort of external processor loop that sends the RF input through an external pay-TV or captions decoder on its way to the SL-2700's tuner.

DSL's tests on that tuner suggest good, if not exceptional, performance. Luminance level is perfect, chroma

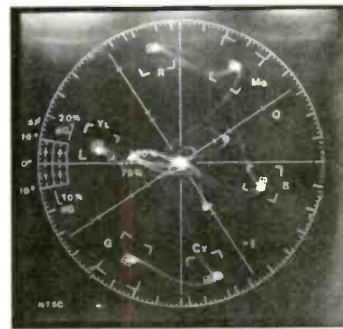
level, fairly low. Chroma phase (tint) accuracy is perfect on blue, excellent on red and magenta, and very acceptable on green, yellow, and cyan. Chroma differential phase (a measure of how much tints change with brightness) is very stable, and chroma differential gain (how much color saturation changes with brightness) is excellent up to the brightest level, where a fairly substantial decrease in saturation occurs. There is also a fair degree of luminance (gray-scale) nonlinearity, but the eye seems very tolerant of these foibles.

The video frequency response (which determines picture resolution) is good to the chroma-burst frequency, dropping off quite quickly at 4.2 MHz (the upper limit of the NTSC system). Audio response is within 3 dB of nominal to almost 10 kHz, which we consider quite good for a TV tuner. The audio signal-to-noise (S/N) ratio depends on the video program being transmitted; subjectively, we find it par for the course—not exceptional, but free of the annoying scan whistle that sometimes occurs. Sensitivity is about average.

The Sony SL-2700 sets a new standard in home video recording. Picture quality rivals that of a Laser Disc, and Beta Hi-Fi sound is, frankly, better. It even gives the Compact Disc a run for its money. Add all that to an extensive and very useful range of special features, and you've got one whale of a VCR.



UHF AND CABLE channels can be selected for scan tuning by means of these controls, located beneath a small door on top of the VCR. (VHF Channels 2 through 13 are always included in scan tuning and do not have to be programmed.) To add a channel, you first set the slide switch at the top to "NOR" (if it is a UHF channel) or "CATV" (if it is a cable channel). You then punch up the desired channel number on the front-panel keypad and press ADD. To remove a channel, you follow the same procedure, except that you push ERASE instead of ADD. AUX PRESET is used to program the VCR for reception looped through a decoder box whenever the front-panel or remote AUX is pressed.



TUNER COLOR ACCURACY. The vectorscope photo at left indicates low color saturation (chroma level) and a small amount of hue (chroma phase) inaccuracy. The photo at right was made with increased chroma gain and a slight clockwise phase rotation to simulate the best color one could obtain using the color and tint controls on a monitor. As you can see, the results are excellent.

THE BEST and THE BRIGHTEST

BY

MYRON BERGER

HERE'S A BUYER'S GUIDE TO SUPER-HIGH-GRADE VIDEOCASSETTES: NEW FORMULATIONS PROMISE BETTER RECORDINGS.

VIDEOPHILES concerned with getting the best possible performance from their VCRs should investigate the latest generation of super-high-grade videocassette tapes. Thanks to high particle packing densities and improved formulations, the new tapes all promise more output from a given video input. The importance of this can be understood by comparing a VCR's frequency-modulation (FM) recording technique to FM radio, where the more signal you deliver to the tuner, the quieter the reception will be. In VCR playback, quietness translates into less snow (video noise) and greater color saturation. (For a more detailed look at frequency modulation in video recording, see "How Beta Hi-Fi Works" in this issue.)

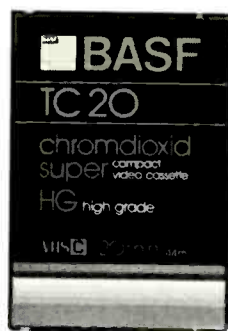
These tapes will not, however, ameliorate a video signal that is poor to begin with, nor will they turn an ordinary VCR into an electromechanical marvel. But with high-quality source material and with the VCR set to its fastest speed, improvements should be visible. Even audio reproduction should improve in

its basic signal-to-noise (S/N) ratio.

The following comments and descriptions were supplied by the manufacturers and should not be construed as reflecting HIGH FIDELITY's test results. We have not cited any prices: The market right now is wildly competitive, and prices change from day to day. Expect, however, to pay a premium for these premium tapes.

With VHS videocassettes, tape length is expressed as the maximum recording time possible with a VCR's fastest speed. Thus, a T-120 cassette will yield two hours of recording in the SP mode. To determine recording times available in the slower LP and EP speeds, multiply tape "length" by factors of two or three, respectively. Beta cassettes, however, are designated by their tape length (in feet), and no easy conversion to time is possible. Therefore, you should note the various time equivalents for the Beta II speed: L-250, 60 minutes; L-370, 90 minutes; L-500, 120 minutes; and L-750, 180 minutes. The Beta III speed will yield 50 percent more recording time. Finally, VHS-C videocassettes are currently available in only one tape length, TC-20 for 20 minutes of recording.

Myron Berger, a New York City-based free-lancer, is a frequent contributor to these pages.



BASF
Chrome Super HG

Formats (lengths): Beta (L-500, -750); VHS (T-120, -160); VHS-C (TC-20)

"Uniform chrome particle size and shape result in a high packing density. The luminance S/N ratio is 1.5 dB better, and chroma 2 dB better, than in our standard tape."

FUJI
Super HG

Formats (lengths): Beta (L-125, -250, -370, -500); VHS (T-20, -30, -40, -60, -80, -100, -120); VHS-C (TC-20)

"The extremely high performance of Fuji Super HG videocassettes is due to the development of a unique Super Fine Beridox formulation. The ultrafine particles coat the tape more uniformly, providing 4-dB improvement in video and color S/N ratios over our standard tape."

JVC
Dynarec Super High Grade

Formats (lengths): VHS (T-20, -30, -40, -80, -100, -120); VHS-C (TC-20)

"New superfine magnetic particles help achieve a high packing density. A new dispersion process enhances coating uniformity and reduces dropouts. Also, a new binding system produces a stronger, yet highly flexible magnetic layer with better adhesion. Supercalendering polishes the surface to optimum smoothness."

MAXELL
HGX Gold

Formats (lengths): Beta (L-500, -750); VHS (T-90, -120)

"A new bonding process increases tape-surface accuracy. More uniform Epitaxial magnetic particles and a high-density coating process produce the following: 2 dB more RF output, 1.8 dB more chroma output, and a 3.8-dB improvement in audio S/N ratio compared to JVC standard VHS tape. HGX Gold is backcoated for more stable running characteristics."

MEMTEK PRODUCTS
Memorex HG Master Series

Format (length): VHS (T-120)

"Major improvements in performance combined with a clear plastic, fully enclosed storage case make HG Master Series cassettes unique. In comparison

to our standard videocassettes, the new tape has 3 dB better video and chroma S/N ratios and 1½ dB more RF output."

PD MAGNETICS
High Grade Performance

Format (lengths): Beta (L-250, -500, -750); VHS (T-60, -90, -120, -160)

"Pure chromium dioxide particles make it easier to achieve optimum recording properties. In the VHS format, this tape is 2.5 dB better in luminance S/N than the JVC reference tape, chroma is 4.5 dB better, and audio is 5.7 dB better. In the Beta format, luminance is 1 dB better than the Sony reference tape, chroma is 0.8 dB better, and audio is 0.8 dB worse."

SONY
Dynamicron High Grade

Formats (lengths): Beta (L-125, -250, -500, -750)

"Dynamicron High Grade's color S/N ratio is 3 dB better, and its video 2 dB better, than that of regular Dynamicron. Audio S/N, too, has been increased by 2 dB compared to regular Dynamicron for significantly improved sound reproduction."

TDK
Extra High Grade Super Avilyn

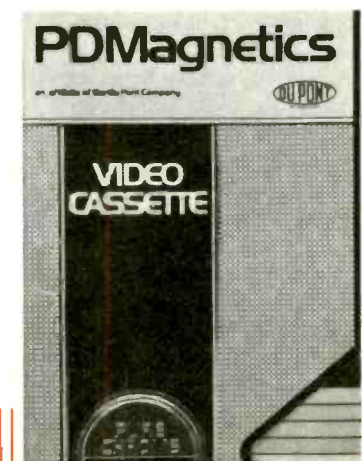
Formats (Lengths): Beta (L-500, -750); VHS (T-60, -120); VHS-C (TC-20)

"New ultrafine Super Avilyn magnetic particles deliver video and chroma S/N improvements of 3 dB and 5 dB, respectively, over standard TDK reference tapes. Audio sensitivity is increased by 1.5 dB. Other enhancements include a high-durability, high-density binder system, a new 1-micron-thick back coating, and an improved shell mechanism."

3M
Scotch HGX-Plus High Grade

Format (Lengths): Beta (L-500, -750); VHS (T-120)

"The tape and all mechanical parts of the cassette are treated with an exclusive antistatic additive. Dust buildup—a major cause of dropouts—is therefore eliminated. Tight quality-control procedures ensure a high-quality product, offering more plays and rewinds and better long-play performance than previous tapes." HF



*News and
new equipment*

DIGITAL TV?

The microprocessor is about to do for TV reception what it has been doing for FM tuners and other audio components for some time: Add new functions and control precision without materially increasing cost. Manufacturers that are readying microprocessor-equipped models for 1984 also expect greater reliability and easier repairability in all the new glitter.

The added microprocessor circuitry, which converts the analog video signal to digital for further processing, then back to analog again for viewing, is being made available to TV manufacturers by ITT as a set of integrated-circuit chips. The technique is expected to address everything from automatic picture enhancement to special on-screen functions like split images (so you can keep track of two channels at once) or overlays for time, closed captioning, and the like. Interest in the on-screen functions should grow, now that NBC has announced network-wide availability of its teletext piggybacking system. General Electric, Zenith, Sharp, Sanyo, Sony, and Telefunken are all planning to introduce TV sets incorporating the new chips. ●

3M: FIRST "METAL-FILM" LICENSEE

The first license to manufacture magnetic recording tapes with a pure-metal recording surface formed by evaporation has been granted by Matsushita Electrical Industrial Co., which developed the process, to the 3M Company of St. Paul, Minn., which makes Scotch brand recording tapes. Until now, Matsushita has applied the process only in its Angrom line of microcassettes, but the technology is expected to play an important role in the 8-mm-videotape

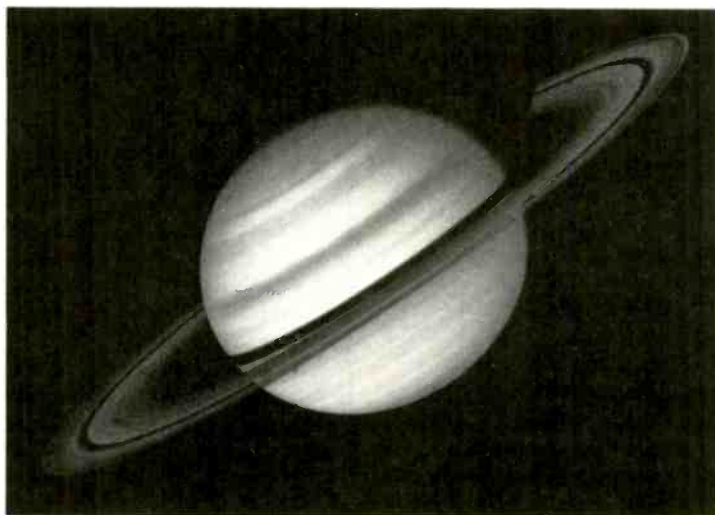
camera/recorder system expected shortly from several Japanese hardware manufacturers. The nonexclusive license gives 3M the right to market tapes for this format through its worldwide sales organization.

The advantages of the evaporation process for either the audio microcassette or the 8-mm video format are twofold. First, the extremely high coercivity and packing density (two to five times that of present metal-alloy cassette formulations, according to Matsushita) permit

ultraslow transport speeds without compromising signal bandwidth. Second, the direct deposition of the cobalt and nickel magnetic material eliminates the need for a binder, which may account for some 70 percent of the coating's bulk in a typical conventional formulation. As a result, both the coating and the substrate that supports it can be thinner—about 10 micrometers for 8-mm videotapes, as opposed to about 21 micrometers for a typical VHS tape. (This reduces the diameter of the "pack" for a given tape length.) The compactness of the 8-mm format, which combines camera and recorder in a single housing more or less comparable to that of a home-movie camera, depends on both these factors.

The 3M Company says that its own thin-film metal-evaporation research will enhance the technology provided by the license and will give 3M a head start over other tape suppliers. ●

LASER TO THE STARS



The title Space Discs may suggest flying saucers, but it shouldn't. It designates a series of optical video discs documenting the U.S. space program and related cosmic sciences. We tend to take for granted the packing density of video discs these days, but the production company's assertion that one of these (Apollo on the Moon) contains some 10,000 NASA still photos in addition to a number of movie sequences helps put this remarkable medium into perspective. All discs in the series come with extensive printed matter ("documentation," as computerists would call it). If the series is as engrossing as the descriptions provided by the producers, Video Vision Associates, it must be worth its not inconsiderable price of \$320 per program (one disc). Topics announced to date cover Voyager, Apollo, the Shuttle, the Space Age, astronomy, and geoscience. In addition, there's a two-disc set at the same price, without the printed user guide but including the NASA film Universe as a bonus. Circle 140 on Reader-Service Card

CLASSICAL MOSQUITO BYTES

Hard on the heels of June's article on the musical applications of two popular home computers ("High Cs from ICs") comes news of a computer programmer and would-be composer whose work has made it into the record stores by way of Radio Shack's TRS-80 Model III computer. Robb Murray of Chicago has said that he hopes that someday someone will come to him and say, "My daughter is getting married, and I want a Handelian composition. . . ." (Actually, his style reminds us more of Georg Philipp Telemann's.) But for the time being he has satisfied himself by transferring eight of his favorite pieces to a 45-rpm EP via the latest, stereo version of a program called *Orchestra 80*, from Software Affair, Ltd.

Orchestra 80 will handle as many as four voices polyphonically and



offers a few "instrumental" colors, though all the sounds suggest a Hammond organ. The emphasis on organlike sounds is, in fact, one reason Murray cites for his pursuit of a baroque idiom. However, since the computer performs the music exactly as directed by the program and the musical data entered by Murray, the effect is metronomic. Trills are quicker than any accomplished by a musician—more like a drill than an ornament. But the results are impressive, considering the program's low (\$90) price tag.

Murray admits having spent some thirty hours in composing and programming *Classical Mosquito* (also the name of the EP), a piece that runs barely 1½ minutes from first note to last. If you want to hear how Murray's music sounds, but you don't live in the Chicago area, where several record

PICTURE IN YOUR POCKET



This looks like the year the long-expected flood of flat-screen personal-portable TV receivers finally starts. The new sets use liquid-crystal screens, instead of the folded cathode-ray tube employed by Sony in its Watchman or the more arcane flat-screen techniques that have been surfacing from the research labs of three continents for decades.

Pictured above is Seiko's wristwatch TV (\$500), a two-piece affair whose receiver electronics are consigned to a pocket-sized enclosure. The Seiko unit comes with stereo headphones, and its receiver can tune to stereo FM broadcasts. The model XTV-2000 Video Sports (\$260), which is not shown, from EXP Research Co. is a palm-size design with a 1½-inch (diagonal) screen. It tunes AM and FM radio bands, as well as VHF and UHF TV, and is fitted with a headphone jack.

shops carry the EP, you can order it for \$4.00 postpaid from Robb Murray himself, (444 St. James Place, Chicago, Ill. 60614). If you've done some computer composition, we'd love to hear from you. ●

COMPATIBLE INTERACTION

The concept of user interaction with video discs has been given a big boost by Vidmax's "Mystery Disc" (see review in April), but actually the disc represents only the simplest kind of interaction. Its on-screen commands that prompt the viewer's participation are considered Level 1 by those who design and distribute interactive video discs. Level 3—the big time—involves the participation of a computer to process information from both disc and user and keep the interaction going on its complex course.

In between lies Level 2, in which random-access memory (RAM) is built

into the player to store programming information from the disc. Both Sony and Pioneer make industrial players that fit the Level 2 definition, but until recently they've been unable to accommodate discs made for one another because of different information-coding schemes in the discs. Now the 3M Company's Optical Recording Project—a custom-pressing service for laser video discs—has developed what it calls "tandem digital dump capabilities" for discs. A disc's second audio channel, which is used for the digital information that must be "dumped" (loaded) into the player's memory, is encoded both ways. A Sony player will read only the Sony encoding; a Pioneer model will behave comparably. Thus a single disc can do tandem service. With such progress in these areas, wouldn't it be nice if the next generation of home laser disc players came equipped with sufficient on-board RAM? ●

COMPACT DISC IS A REALITY. THE WORLD'S BEST-SELLING ARTISTS

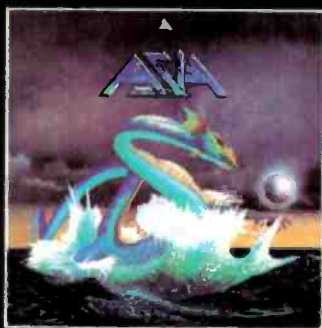
The introductory release from Warner/Elektra/Atlantic provides the discriminating record buyer with a selection of music that will truly demonstrate the superior sound qualities of the Compact Digital Audio Disc.

Warner/Elektra/Atlantic Compact Discs provide the ultimate in state-of-the-art music. The sound cascading out of your speakers recreates the live ambiance of the concert hall. Now you can hear Foreigner like you've never heard them before... the ultimate in high fidelity. The reason: The Compact Disc is read by a laser instead of a stylus. There is no physical contact with the disc; therefore, no wear, tear or loss of quality. With a minimal amount of care this disc will virtually last forever. Each disc provides up to one hour of sound quality unparalleled in the history of pre-recorded entertainment.

Compact Discs from Warner/Elektra/Atlantic capture the sound, immediacy and emotional high of the concert hall.

From Asia to Eddie Rabbit, from Stevie Nicks to Grover Washington, Jr., you will have the best in music from Warner/Elektra/Atlantic... a cornucopia of the finest music available in this new format from influential artists such as: Fleetwood Mac, The Cars, Foreigner, Jarreau, Donald Fagen, Phil Collins, George Benson, Teresa Stratas, Abba, Christopher Cross, Schimmel, Eric Clapton, Roxy Music. These artists, and many more, have committed their music to the Compact Digital Audio Disc.

Together, we make lasting impressions.



Foreigner
Records

Asia
Asia

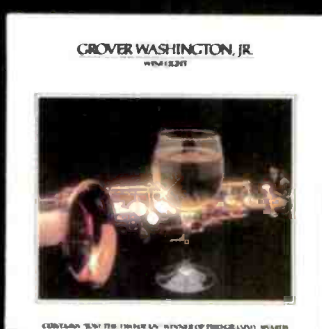
Phil Collins
Hello, I Must Be Going



Teresa Stratas
Unknown Kurt Weill

Christopher Cross
Another Page

Genesis
And Then There Were Three



Schimmel
Tango Project

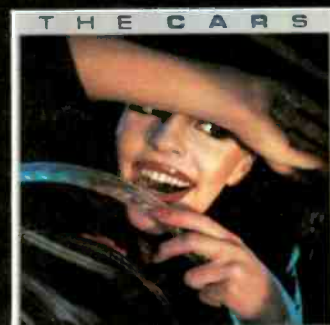
Donald Fagen
Nightfly

Grover Washington, Jr.
Winelight

**WARNER
ELEKTRA
ATLANTIC**

COMPACT

HAVE JUST PUT THEIR NAMES ON IT.



George Benson
Give Me The Night

Fleetwood Mac
Rumours

Stevie Nicks
Bella Donna

Roxy Music
Avalon



Al Jarreau
Breakin' Away

Eric Clapton
Money & Cigarettes

The Cars
The Cars

Eddie Rabbit
Step By Step

Abba
Greatest Hits Vol. II

Talking Heads
Remain In Light



WE MAKE LASTING IMPRESSIONS

A Warner
Communications
Company



digital audio DISCS

Circle 21 on Reader-Service Card

Pop and classical music releases on video disc, video cassette, and digital compact disc

RUBINSTEIN AND RUNDGREN ON VIDEOCASSETTE

FIFTIES PERFORMANCES BY HEIFETZ, PIATIGORSKY, AND RUBINSTEIN ATTAIN HISTORICAL STATUS; SONY'S FIRST POP VIDEO 45s RANGE FROM IMAGINATIVE TO MAD-AVE SLICK.

CLASSICAL

JASCHA HEIFETZ; GREGOR PIATIGORSKY.

Jascha Heifetz, violin (with Emanuel Bay, piano); Gregor Piatigorsky, cello (with Ralph Berkowitz, piano). KULTUR 1101, \$59.95 (black-and-white videocassette).

ARTHUR RUBINSTEIN.

Arthur Rubinstein, piano (with Jascha Heifetz, violin; Gregor Piatigorsky, cello). KULTUR 1102, \$59.95 (black-and-white videocassette).

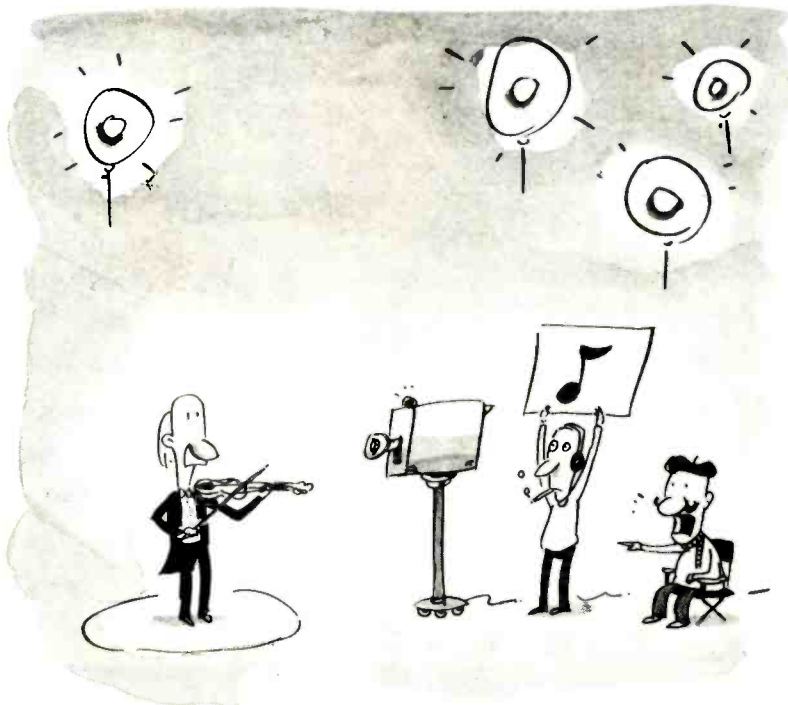
JAN PEERCE; MARIAN ANDERSON; ANDRÉS SEGOVIA.

Jan Peerce, tenor (with Nadine Conner, soprano; orchestra); Marian Anderson, alto (with Franz Rupp, piano); Andrés Segovia, guitar. KULTUR 1103, \$59.95 (black-and-white videocassette).

This month, it's a blast from the past—a look at a handful of concert-hall legends, captured on film in the 1950s and offered for your entertainment and edification on three tapes in Electric Video's line of Kultur videocassettes. The tapes are collections of short features, apparently made either for television or for theatrical release—the program notes, unfortunately, offer no clue as to their origins. Naturally, they are in black-and-white (often quite crisp) and of variable audio quality (often quite poor); and by today's standards, their stazy production conceits seem a bit quaint—as if the scriptwriters had tried to find common ground between classical music and *Father Knows Best*.

Yet, to be fair, these programs do what they set out to do: They present strings of brief selections, performed by great artists and put into a sugar-coated context for the general public. Anyone interested in the performers

involved will find them worth at least a viewing or two. (Some video outlets, particularly in larger cities, offer them among their rental tapes. Your decision whether to buy them will depend upon the relative strength of your collecting



PATRICK McDONNELL

impulses and your devotion to the artists, on one hand, and your tolerance of low-fidelity sound, contrived dialogue, and worshipful narration, on the other.

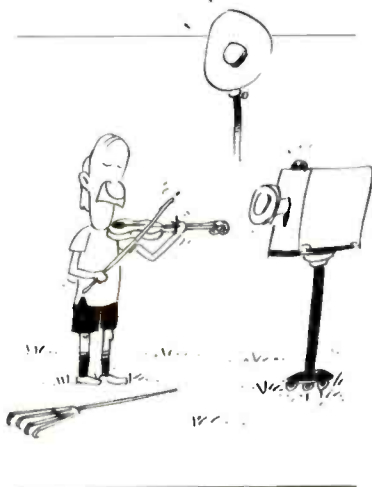
The first tape includes two features on Jascha Heifetz and one on Gregor Piatigorsky, each about a half-hour long. The first Heifetz segment is a sort of documentary: We see the violinist's name emblazoned on concert posters, and then glimpse him onstage, while the voice-over discusses his preeminence in tones of controlled rhapsody.

Then we are transported to Heifetz's California retreat, where we see him, middle-aged and still dark-haired, playing Ping-Pong and tennis, target-shooting with a pistol, and (in a series of hands-only shots that could be of anyone) changing a tire and digging in the garden. All this passes with merciful swiftness, though, as does a sequence about his pretour practice routine that is full of hyperbolic sports similes: "If he has lain fallow for a month or so," we are told, "he must begin slowly, as a baseball pitcher must begin slowly in the spring—and for the same reason." And, later, "He must literally be as fit as a prize fighter; for during an ordinary hour-and-a-half concert, he might lose as much as three pounds without moving from his tracks."

Thus, in a series of smooth dissolves, we see Heifetz quickly make his way from a simple, left-hand pull-off drill through bowed chordal scales to a passage from the Bach chaconne, before he puts down his practice fiddle and takes up his 1731 Stradivarius to play the first full piece on the tape, the Prelude from Bach's E major Partita, S. 1006. Except for a segment a bit later showing Heifetz's fingers negotiating Wieniawski's *Scherzo-Tarantelle* in slow motion, the rest of the feature consists of uninterrupted performances.

In the second Heifetz segment on the same tape, the dramatic pretext is simpler: Heifetz, walking across the campus of Pomona College, is cornered by a professor who has promised to bring the violinist (and his accompanist, Emanuel Bay) back to his class. Heifetz agrees, reluctantly, and after brief play at a question-and-answer session, he sensibly plays an "impromptu" recital.

One gets the distinct impression that all these performances are not quite "live," if only because there are too many camera angles (including lots of nice over-the-shoulder views of the fingerboard) called too smoothly into play for a crew using bulky 1950s film equipment. Yet the audio and video aspects are synchronized impressively, and the performances are pure, undoctored Heifetz—as archaic stylistically as the films themselves but thoroughly captivating. The Bach prelude, despite a moment or two of edgy intonation and some mechanistic passage-work, shows steady propulsiveness. Elsewhere—in



Debussy's *La Fille aux cheveux de lin*, for instance—the playing is warm to the point of sentimentality, and toward the end Heifetz adds a rich, soupy portamento. Similarly, in the Brahms *Hungarian Rhapsody* No. 7, he affects a rather soft timbre but inflects phrases sharply, bends tempos, and embellishes generously all the way through, even adding a brief cadenza. In the *Scherzo*, Brahms's contribution to the *F-A-E* Sonata (coauthored with Schumann and Dietrich), this high-Romantic style is put to the service of a hot, emotional intensity.

There are also, of course, fireworks galore: Besides Wieniawski's *Scherzo-Tarantelle*, there are his popular Op. 4 Polonaise, Heifetz's own arrangement of Dinicu's *Hora staccato*, and the Auer violin-piano arrangement of Paganini's Caprice No. 24. This last, curiously enough pales in comparison with the wild solo violin original, and one rarely encounters it except on old recordings: yet it offers

the kind of fascination to be found in a Godowsky keyboard transcription and, given the right mood, can be entertaining.

Piatigorsky, in his brief segment, spends his time dodging the queries of a female television-show host who whines that her listeners expect to hear juicy inside tidbits about her guests. The cellist avoids providing these, primarily by obliging other characters in the skit who want him to play his instrument. This he does with greater elegance and less excess expressivity than Heifetz, offering a nicely sculpted rendering of the *Bourées* from Bach's C major Cello Suite, S. 1009; the Largo from the Chopin cello sonata; an Anton Rubinstein Romance and a Tchaikovsky waltz, both perfumed and insubstantial; "Masques" from Prokofiev's *Romeo and Juliet*; and, as a powerful closing, a passionate performance of a Schubert variation set.

The tape devoted to Arthur Rubinstein proceeds along lines similar to those of the Heifetz tape—a partly biographical segment, a performance segment, and a "filler," this time an interesting (but again, stagy) look at the "Million Dollar Trio" (Rubinstein, Heifetz, Piatigorsky) in rehearsal. The Rubinstein-only segments can cloy, even when the pianist is playing, since he seems always conscious of his image on the screen.

The first segment finds him in the recording studio, setting down some Schumann pieces (only a few bars are heard), listening to playbacks, and choosing takes. He is approached by one Mr. Johnson, who says he wants to make a film about the pianist, but Rubinstein doubts that classical music and film are ready to mix. Still, he agrees to a further meeting, at his home; and it is here that the biographical side of the presentation is offered, in the form of Rubinstein's explanation of the large Kanarek triptych showing the path he took from his marriage, in Paris, through his Carnegie Hall debut, to what was then his home, in California. Thereafter, he gives a stirring performance of Chopin's *Military* Polonaise, before being joined by his children, for whom he plays "Pop Goes the Weasel" (surely a Rubinstein rarity).

In the second film, a close-up of Delacroix's famous portrait of the composer signals the start of an all-

Chopin program, held in Rubinstein's living room—an ideal salon setting if ever there was one—before a small group of, presumably, family and friends. At times, the "eavesdropping" nature of the scripting is silly: "Do you want some moonlight?" the pianist asks the assembled; "Oh, please, Arthur," a woman says, and he plays the F sharp Nocturne. Now and then, Rubinstein's comments become more enlightening: He notes that, although Chopin is often depicted as having been frail, the C sharp minor Scherzo "takes more strength out of me than any other piece I know," that the mazurka in the same key, Op. 30, No. 4, is "the most original and most Polish of all Chopin's compositions," and that the A flat Polonaise, Op. 53, is "closest to my heart."

Sadly, you need a healthy imagination to judge the performances, because the sound is too poor to convey more than the outlines of Rubinstein's poetic shaping of these pieces, with which he was so strongly associated. In dense textures the sound is simply distorted; and, when Rubinstein attempts to end a phrase pianissimo, the sound engineer boosts the gain, keeping the level constant under an increasing barrage of noise.

For the Rubinstein-Heifetz-Piatigorsky segment, our narrator is a screenwriter assigned to create a scenario for the trio's film—because, he tells us, "my producer said people wouldn't stand for just music on the screen." When he meets the three, they look at him (or us, actually; the camera takes the screenwriter's vantage point) with comic puzzlement, as Heifetz asks, "What kind of story can you make for a trio—not a *triangle*, I hope?"

But for the most part, they are left to rehearse—or rather, to play through—the first movement of Schubert's Op. 99 Trio and the first three movements of Mendelssohn's Op. 49. They do stop for a brief gloss of the problems facing soloists who collaborate in chamber performances; yet, in light of the three very different solo styles we've seen on these two tapes, the tight, close blend they achieve is astonishing. Even considering the mediocrity of the tape sound, one wishes at the end of the Mendelssohn third movement that there had been room on the film for the

finale.

The last tape is as odd a mixture as a grab bag can be: Jan Peerce and Nadine Conner sing operatic arias and a duet; Marian Anderson sings spirituals; and Andrés Segovia plays a few guitar works. Taken separately, however, these three mismatched segments are quite interesting. First up are Peerce and Conner, who return to an empty theater to retrieve a score, and find a music-loving night watchman listening to opera records on an old gramophone. They insist on singing for him, and take to the stage, each to sing one aria (Peerce's is from *L'Africaine*; Conner's, from *Don Pasquale*) before joining in a duet from *Lucia*. They take a few seconds to describe the operatic context from which each is drawn; and the performances themselves are actually staged and costumed—not a bad mode of presentation for operatic excerpts on video, once you get rid of the night-watchman business.

The singing is adequate to the task—full-bodied and unpretentious. But somehow I find much more to admire, vocally, in the Anderson segment. Basically, the treatment is biographical, not unlike that of the first Heifetz feature—a mixture of scenes concisely conveying her life story, mixed with performances and pretour rehearsals. The music consists for the most part of spirituals and traditional songs, but Anderson's manipulation of tempos, phrasing, and particularly the lower register of her rich contralto, turns these light pieces ("He's Got the Whole World in His Hands," "Oh What a Beautiful City," and "Comin' Through the Rye") into gleaming gems. The high point is an extraordinarily moving, sparsely accompanied, intense performance of "Crucifixion."

Finally, we drop in on Segovia in his postwar Paris apartment, with its splendid view of the Eiffel Tower. This is the most straightforward of the programs: Segovia plays, offers a brief analysis that is long on poetry, short on history, and then plays some more—no narrators, no props, just music. The works are Segovian standards, music he still plays today (at 90), albeit with nothing like the energy, brightness, and sure-handedness of yore. Here the guitarist is at his peak, and the arpeggiated figures of Bach's short D minor Lute Prelude, and the Iberic

fantasy of Torroba's sonatina, and the virtuosic invention of Sor's "*Magic Flute*" *Variations* all seem to ripple forth with too much power and fleetness to come from the stubby fingers we see in the fretboard close-ups.

Whatever sentimental excess, storyboard silliness, and technical problems these tapes embody, they capture performers and performance styles that are now part of our cultural history. I'd love to see more of this historical material become available—preferably, with straight performances predominating and staged skits used only where nothing else is available. But either way, the ability to conjure these images and sound ultimately outweighs the shortcomings of the medium.

—ALLAN KOZINN

POPULAR

THE UTOPIA SAMPLER.

Todd Rundgren, video director & audio producer. Sony 97W 00007, \$15 (Beta Hi-Fi); 97W 50004, \$20 (VHS Stereo).

TODD RUNDGREN.

Todd Rundgren, video director & audio producer. Sony 97W 00009, \$15 (Beta Hi-Fi); 97W 50006, \$20 (VHS Stereo).

DURAN DURAN:

Girls on Film; Hungry like the Wolf.

Kevin Godley & Lol Creme, video directors (Girls...); Russell Mulcahy, video director (Hungry...). Sony 97W 00005, \$15 (Beta Hi-Fi); 97W 50002, \$20 (VHS Stereo).

JESSE RAE:

Rusha; D.E.S.I.R.E.

Jesse Rae, Woody Wilson, Bob Lampel, video directors; Jesse Rae & Rod Houston, audio producers. Sony 97W 00004, \$15 (Beta Hi-Fi); 97W 50001, \$20 (VHS Stereo).

MICHAEL NESMITH:

Rio; Cruisin'.

William Dear, video director; Michael Nesmith, audio producer. Sony 97W 00006, \$15 (Beta Hi-Fi); 97W 50003, \$20 (VHS Stereo).

Back in 1975, Todd Rundgren created several ¾-inch videotapes in his home library, using a custom-made video synthesizer and recordings of works by Stravinsky, Ravel, and Debussy. He took the tapes to the Sony Corporation, where he was told, thanks, but there simply is no market for music video. Call it fate or call it a fake-out, but Sony has apparently changed its mind. For Rundgren produced, directed, or served in a consultatory role for three of the company's first six Video 45s, the 12- to 15-minute videocassettes that contain two or three songs each and sell for \$15 in Beta Hi-Fi and \$20 in VHS stereo.

Rundgren has long been something of a techno-freak. His instrument,

whether in audio or video, is the recording studio. Having started out as an audio engineer in his teens, he went on to lead his own groups (Nazz, Utopia), produce various artists (the Band, Hall & Oates, Grand Funk), and record and tour as a soloist. Many of his 16 albums are one-man-band, self-produced affairs. Among the most memorable is 1976's "Faithful," on which he exactly replicated half a dozen hits by the Beach Boys, the Beatles, and other artists, playing all the instruments and singing all the vocals himself.

After fully mastering the art and craft of audio recording, Rundgren moved on to video, sinking most of his album royalties into the construction of Utopia Studios (in Bearsville, N.Y.) where several of the Sony 45s were taped. Upon its completion in 1979, he received his first major commission—from a very young RCA Selecta-Vision—to program Tomita's version of Gustav Holst's *The Planets*. RCA planned to use the work as a

demonstration of its brand-new CED system and of its commitment to original music-video programming.

Rundgren illustrated half of the score and screened it at several conventions. It was mostly dreamy stuff—floating images and computer-generated graphics all put together on Bearsville's Rutt-Etra video synthesizer. Unfortunately, the project became far more expensive than anyone had anticipated, and Rundgren ran out of funds. *The Planets* was destined to obscurity anyway, since the Holst estate refused to grant the synchronization rights for Tomita's version of the original work.

Rundgren continued with his own projects. In the late Seventies, he was among the first to use video with his live performances, accompanying them with a dozen or so strategically placed monitors that displayed oozing color patterns reminiscent of mid-Sixties light shows. His inventive, almost home-made-looking work bears very little resemblance to the slick,

expensive productions of such acts as Devo, Billy Joel, or Duran Duran. As with his best audio recordings, his video performance and direction are wry and playful, his visual images meeting and mating with the lyrics with rhythmic precision and conceptual accuracy. Unlike Duran Duran's, his cassettes contain no violence, and his attitude toward the female anatomy is more celebratory than sexist. His animations are brightly colored and swirling, and he tends to favor odd juxtapositions of different-sized shapes and images.

On *Feet Don't Fail Me Now* (not to be confused with Little Feats' LP "Feats Don't Fail Me Now") from "The Utopia Sampler," the band members are dressed up as giant rodents. As the cut starts, they peer over the edge of a bathtub; later they dance atop red-checked, then black-checked floors. Backed by an infectious melody, they fret over their eventual fate from inside a sink, a



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UTOPIA, or the Four Rodents: Kasim Sulton, Rundgren, Roger Powell, John Wilcox

drain looming ominously at the center of the screen.

But Rundgren isn't out to be just cute. On the same cassette, he takes Utopia's *Hammer in My Heart* and by rapidly repeating single frames of various activities—a hand strumming a guitar, a stick hitting a drum—creates clipped, hammerlike images, all timed precisely to the song's bubble-gum-pop beat.

Hideaway, from "Todd Rundgren," finds the artist as a tiny figure climbing up the side of an enormous torso. He lands just below its navel and sings "I'm not trying to invade your privacy." It's a suggestive image, but it's funny and tasteful. On *Time Heals the Wounds That No One Can See*, Rundgren's image fades in and out of a series of René Magritte-like animations. On *Can We Still Be Friends*, a miniature ballerina dances atop Rundgren's grand piano, and is then multiplied and superimposed on his face, where he watches her intently. Unfortunately, Rundgren's voice comes off poorly here and throughout the 45. In this case, the problem stems partly from the miking, which emphasizes his nasal tone, and partly from the off-screen band which sounds as though it was recorded inside a garbage can. The audience applause at the end of *Can We Still Be Friends* doesn't help matters; the whole clip seems like a classic example of TV overdubbing at its worst.

In fact the Rundgren solo tape has exceptionally poor sound—the

synthesizer and piano parts drag along as though played back ever-so-slightly slower than the speed at which they were recorded. "The Utopia Sampler" is better, though still not as good as one would expect. The songs on both cassettes are among the less adventurous of their respective artists' work: Strong melodies, straightforward lyrics, and simple rhythms. They're all a kind of bubble-gum pop, updated with new-wave trappings. In light of his ability to successfully illustrate a challenging score like *The Planets*, it's surprising that Rundgren didn't choose at least one number from his real hard-rock repertory. The most interesting cut is Utopia's *You Make Me Crazy*, though even here it seems as though the primary consideration was visual potential rather than musical integrity.

The same can be said of Scottish singer/songwriter Jesse Rae's music—only bagpipes distinguish it from run-of-the-mill bar-band fare. But though *Rusha* and *D.E.S.I.R.E.* are not particularly interesting, the visualizations of them are. (Rae's kilts do contribute a certain *je ne sais quoi*.) *Rusha* features a wonderful segment in which a real ballerina toe-dances her way across an animated keyboard and, at other times, over a troop of marching Russian soldiers. Watching it, I kept thinking how Rundgren-like the piece was. Sure enough, the credits rolled by to reveal that the segment had been taped at Utopia.

Duran Duran's music, British synth-pop, is certainly the most

contemporary-sounding of any of the Video 45s. And, neither *Girls on Film* nor *Hungry like the Wolf* comes across as well in its audio-only version as it does in Beta Hi-Fi; I've never heard synthesizers sound so distinctive. But though the music is raw rock and roll, the video is slick Madison Avenue—uninspired technical perfection that places heavy demand on the mature adult imagination. *Hungry like the Wolf* was shot on-location in the Pacific; *Girls on Film* features seminude models, some of whom get involved in mud wrestling. (The latter track was directed by ex-10cc members Kevin Godley and Lol Creme.) One hopes for a bit more content on the full-length tape, which Thorn-EMI will release at a later date.

Michael Nesmith's songs, excerpted from 1981's hour-long tape and disc *Elephant Parts*, are well-crafted guitar-based pop. Unlike Duran Duran's *Hungry*, which was a No. 1 single, neither *Cruisin'* nor *Rio* is likely to make it to the Top 40. But, like Rundgren's and Utopia's selections, his music does lend itself to illustration. The Latin-flavored *Rio* features Nesmith in a fantasy land of Carmen Mirandas; *Cruisin'* is a parody of California lifestyles. Unfortunately, the latter's visuals wear as thin as the vamping that backs its singsong melody. In fact, both videos seem light relative to the music's programmatic potential.

The Video 45 is a great concept: With little of the video music currently available in full-length cassette or disc sufficiently interesting to warrant an hour's viewing time, 10 or 12 minutes seems just about right. Details remain to be ironed out, of course. Utopia's John Wilcox and the song title *You Make Me Crazy* are identified at the beginning of the clip, but there are no personnel credits or song titles for the other two tracks. On the other 45s, some credits are included and some are not, and this is as true of the packages as it is of the tapes.

A final note: Pioneer should have laser disc video singles out in Japan some time this year, though there's no word on whether they'll be released in the U.S. One is an excellent light-show accompaniment to live footage of Jimi Hendrix, programmed by Steve Bech, a West Coast computer-freak counterpart to Rundgren. —IRA MAYER

Compact Disc REVIEWS

ALL BUT ONE OF THESE CDs WERE MADE FROM ANALOG RECORDINGS, AND THE IMPROVEMENTS ARE STILL STARTLING.

POPULAR

PHIL COLLINS:

Face Value.

Phil Collins, producer. VIRGIN CDV 2185 (analog recording; digital Compact Disc). LP: Atlantic 16029.

MICHAEL JACKSON:

Off the Wall.

Quincy Jones, producer. Epic CDCEPC 83468 (analog recording; digital Compact Disc). LP: PE 35745.

BILLY JOEL:

The Stranger.

Phil Ramone, producer. CBS 35DP 2 (analog recording; digital Compact Disc). LP: PC 34987; reviewed 12/77.

BILLY JOEL:

The Nylon Curtain.

Phil Ramone, producer. CBS CDCEPC 85959 (digitally mastered analog recording; digital Compact Disc). LP: TC 38200; reviewed 12/82.

JON and VANGELIS:

The Friends of Mr. Cairo.

Vangelis, producer. Polydor 800 021-2 (analog recording; digital Compact Disc). LP: 6326.

QUARTERFLASH

John Boylan, producer. Geffen CDGEF 85439 (analog recording; digital Compact Disc). LP: 2003.

KEVIN ROWLAND & DEXYS MIDNIGHT RUNNERS:

Too-Rye-Ay.

Clive Langer, Alan Winstanley, Kevin Rowland, producers. Mercury 810 054-2 (analog recording; digital Compact Disc). LP: 4069.

Among the most common theories offered in advance of the Compact Disc's general availability is that purely digital programs provide the best showcase for CD's benefits. That may explain why, thus far, the number of classical titles overwhelmingly exceeds pop, rock, r&b, and country entries. But a sampling of mainstream albums in CD form argues against the all-digital notion and, in the process, supports the technology's mass-market goals. Although commercial pop recordings generally don't afford as dramatic a foil for the CD's gains in

dynamic range, they still benefit from improvements in stereo separation, imaging, and distortion, and often sidestep the issue some skeptics are still fretting over—namely, high-frequency reproduction of acoustic-instrument timbres.

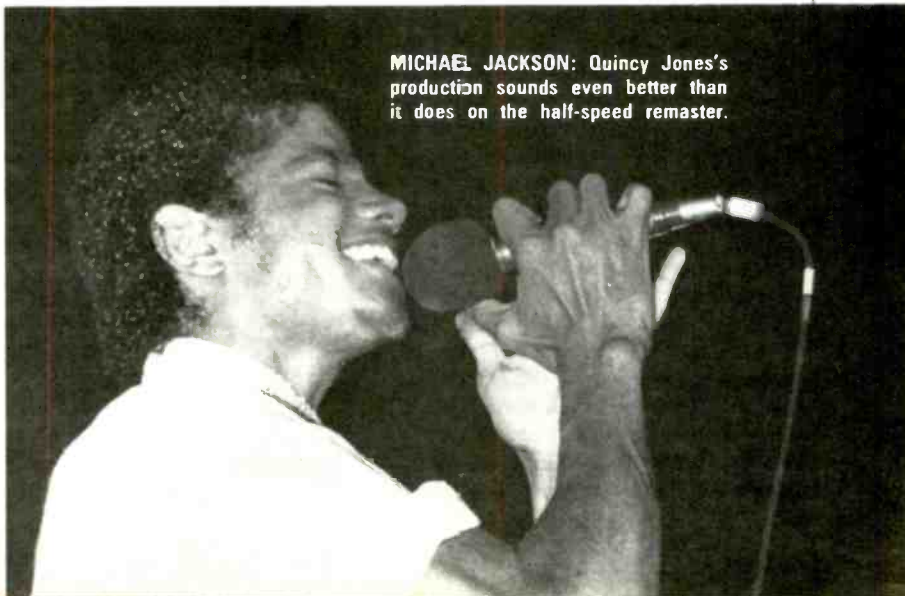
Four of the CDs listed above were auditioned against their LP counterparts and one against its half-speed remastered recording. But even in that last case, the gap between the LP and the CD was wide. The vanishingly low noise and the more open frequency response were even apparent on the optical discs made from older master tapes. And, after years of slaving to scrub, brush, vacuum, or bewitch my LPs into quietude, the CD's utter absence of surface noise seemed eerie.

Less obviously, the generous use of electronic signal processing in these

multichannel productions would probably obscure any upper-frequency anomalies that might exist. Only one of the CDs offered a few brief, if notable, moments of that preternatural high-end brilliance that unnerves some listeners.

In fact, the most dramatically processed studio confection, Phil Collins's "Face Value," is enhanced. Its electronic effects—from synthesized instruments to liberal uses of echo, phasing, flanging, and other outboard processing—are all rendered in greater detail. As for dynamic range, on that album's best-known song, *In the Air Tonight*, the entry of Collins's muscular drums midway through is startling: The cavernous bass drum, visceral toms, and shimmering cymbals effectively shatter the tense reserve of the early verses.

Michael Jackson's LP "Off the Wall" exemplifies producer Quincy Jones's expertise at extracting power and nuance from conventionally manufactured LPs. CBS's half-speed version of that album eked out modest improvements over the already dazzling mass-market version, but the CD "Wall" adds new weight and detail to the entire set. The laudably precise imaging again proves even more solid in CD. On the opening *Don't Stop 'Till You Get Enough*, which offers a richly swirling, dynamic arrangement spiced with kinetic percussion, shuttling horn choruses, and mesmeric bass and drums, the benefits of CD are apparent from the opening bass figure. The new richness gained in Jackson's ebullient



MICHAEL JACKSON: Quincy Jones's production sounds even better than it does on the half-speed remaster.

vocals is typical of the CD's consistent superiority, even over the recording's most pristine analog version. The only jarring effect I heard, a shift in tonal balance for the repeating synthesizer riff on *Rock with You*, eventually proved more a correction than an aberration.

At least as revelatory is "The Friends of Mr. Cairo," the best-known studio collaboration between former Yes vocalist Jon Anderson and Vangelis, whose production and arrangements predictably use extensive electronics. The twosome's lavish skeins of textured synthesizer would seem to preclude any palpable improvements in dynamic range and to perhaps even nullify CD's theoretical reduction in distortion. Yet again, the audition was truly ear-opening. More stable stereo imaging added a new vividness to this intentionally impressionistic work. And the greater headroom resulted in an alluring spaciousness without undercutting the improved presence of Anderson's vocals or the various percussive effects, especially on *State of Independence*.

By contrast, Dexys Midnight Runners' "Too-Rye-Ay" strongly relies on conventional instrumentation—banjos, fiddles, horns, and voices. Yet it too gains from its new digital form. The presence added to leader Kevin Rowland's exaggerated vocals won't appeal to those listeners already uncomfortable with his bold stylistic strokes. But fans should relish the heightened drama the CD brings to these lusty performances, and fence-sitters will have to admit that the band's bravura is enhanced by the added detail.

Ironically, one of the few artists to boast several titles on CD is also one of the few examples of digital's mixed blessings. Billy Joel's "The Nylon Curtain," digitally mastered by veteran producer Phil Ramone, does gain clarity in its Compact Disc version, but it also offers an instance where that high-frequency issue comes to the foreground. Hard cymbal strikes by drummer Liberty DeVitto veer on *Laura* toward a harsh, clanging attack that on CD proves even more jolting. On the other hand, that one infraction must be pitted against some attractive, if nominal, improvements. The slightly



ROWLAND: bold stylistic strokes

veiled character of Joel's vocals on his earlier, pivotal "The Stranger" remains in CD, but it can still be considered an improved work on the basis of its presence, imaging, and separation.

The final entry, the debut album for Quarterflash, does raise the question of whether certain radio-active production styles have much to offer when transferred to CD. Although imaging and presence are improved, the music's narrow dynamic range minimizes whatever additional refinements the digital configuration might have offered. Since the arrangements were already shrewdly designed to place chief vocalist Rindy Ross's work in an undisputed spotlight, any gains in presence and timbre seem minuscule at best. —SAM SUTHERLAND

CLASSICAL

HANDEL:

Water Music: Suite in F.* Royal Fireworks Music.

Academy of Ancient Music, Christopher Hogwood, dir. [Peter Wadland, prod.] OISEAU-LYRE 400 059 (analog recording; digital Compact Disc) [price at dealer's option] LP, DSLO 595, \$10.98; Cassette, KDSLCL 595, \$10.98. [*From DSLO 543, 1978.]

Given the number of *Water Music* and *Fireworks* recordings swelling the catalog, it's all to the good that the first such coupling to be transferred to

CD is an original-instrument version by one of the finest bands in the field, Christopher Hogwood's Academy of Ancient Music. The players, particularly the strings, revel in the crisp, biting, and somewhat tangy sound of their instruments, showing both technical assurance and seemingly inexhaustible vigor. Even setting aside the issue of the "rightness" of original timbres or the "wrongness" of modern ones, there is something about the mixture of the old strings, their bright wind counterparts, and the theorbo underpinning that provides sheer visceral appeal when the playing is this good.

Of course, those who do not find these sounds so irresistible and dislike the performance-practice ideals espoused by the Academy will find here the gamut of objectionably "authentic" gestures. From the opening bars of the F major *Water Music* Suite (in a reading drawn from an earlier recording of all three suites), for instance, the double-dotting is extremely sharp—what Paul Henry Lang described, in a less extreme context, as "close to triple-dotting." Some may be bothered, too, by the low pitch (A = 415); or the temperament, which sometimes makes intonation seem tenuous; or the occasionally edgy (but usually quite beautiful) sound of the natural horns. Moreover, Hogwood takes allegros and the livelier dance steps at an uncompromisingly quick clip that conservative listeners may find too rollicking. I love it—it heightens the festive, jolly atmosphere of the *Water Music* and emphasizes the bombast of the *Fireworks* Music.

By and large, Hogwood goes by the book, taking all repeats and using sparse embellishment. But unlike his practice in *Messiah* (Oiseau-Lyre LP, D 189D3; excerpts on CD, 400 086), where he strove to faithfully re-create the work as Handel performed it on a specific occasion (at the Foundling Hospital, 1754), here Hogwood exercises some editorial freedom. To the *Water Music* Suite, he adds (or, conjecturally, "restores") two movements in F (Allegro, Hornpipe) from 1715 that—two years later, at the time of the famous river party for which the *Water Music* was assembled—would become part of the D major Suite. In *Fireworks*, he wisely forsakes what is believed to have been

the original outdoor scoring—winds, brass, and percussion—adding to a hefty body of winds and brass an even heftier string section. The percussion remains, too—three timpanists and three side-drum players, who are by no means reticent.

These analog recordings are miked closely enough to pick up some clicking of keys in the winds yet apparently distantly enough to lend the whole a bright, live ambience. The CD transfer is crystal-clear—but so is the LP pressing; in A/B comparison, the two prove almost indistinguishable sonically, though, when the bass is turned all the way up, the rumble and low-end distortion of the LP contrast with the quiet clarity of the CD. Another kind of discrepancy turns up in the annotations: Along with a few different timings for *Fireworks* movements, the LP jacket incorrectly gives the date of Handel's death as 1756; the CD cover renders his dates correctly, 1685–1759. Will the vaunted accuracy of the new sound medium extend as well to packaging?

—ALLAN KOZINN

OFFENBACH:

Overtures (5);
Les Contes d'Hoffmann;
Barcarolle (arr. Rosenthal).

Berlin Philharmonic Orchestra, Herbert von Karajan, cond. (Michel Glotz and Günther Breest, prod.) DEUTSCHE GRAMMOPHON 400 044 (fully digital Compact Disc) [price at dealer's option]: LP: 2532 006, \$12.98. Cassette: 3302 006, \$12.98.
Barbe-bleue (arr. anon.); *La belle Hélène* (arr. Haensch); *La Grande-Duchesse de Gérolstein* (arr. Hoffmann); *Orphée aux enfers* (arr. Binder); Vert-vert.

However often one may have been told before, the fizz never quite goes out of the surprise that Offenbach's evergreen overtures are mostly by other hands. Of the five given here, only the one to *Vert-vert* (the dark horse of the lineup) is from the composer's own pen. The sixth selection, the Barcarolle from *Les Contes d'Hoffmann* (recycled from *Die Rheinnixen* of 1864), is of course no overture at all, nor even purely instrumental, though Manuel Rosenthal, who takes credit for the arrangement, is hardly the first to have edited out the vocals.

The so-called Offenbach overtures in widest circulation (and there is really nothing else to call them) came into being for the benefit of German audiences who liked their evenings at the light opera to start off not only with the pop of a cork, as it were, but with a nice big slice of *Torte*. The

John Lanchbery types of the day obliged, in some cases (as in *Barbe-bleue* and *La Grande-Duchesse de Gérolstein*) with expanded versions of Offenbach's conciser introductions (that had played perfectly well in the French capital), newly stuffed with extra tunes from the operettas in question and puffed up with extra winds; in others, they cannibalized scores to assemble new overtures of their own. Thus the famous Overture to *La belle Hélène* is attributed to one Edmund Haensch, and the quintessential exemplar of the genre, the Overture to *Orphée aux enfers*, is the handiwork of Viennese conductor Carl Binder.

National boundaries mean less in music today than they once did (and perhaps still should), and, in light of the history, there is in any case no very shocking incongruity in gathering an Offenbach bouquet like this one far from Paris in the very heart of Prussia. But nationality alone does not settle all matters of temper and style, and within the league of German-speaking lands surely a snappy bandleader like Willi Boskovsky would make a more congenial exponent than the imperial Karajan of Offenbach's foxy frivolities. In softer passages, as in the Overture to *Barbe-bleue*, the Berlin autocrat elicits so delicate a touch that the sonic

experience is practically subliminal; a feather borne on the breezes could never whisk the triangle so lightly. In the great swirls like the *Orphée* cancan, he charges like a storm trooper, pressing on like grim death. There are lilting moments, charmingly flexible in tempo, in the Overture to *La Grande-Duchesse*, though Karajan makes heavy weather of its parade-ground militarism. And despite very smart intercutting from waltz to gallop, the Overture to *La Belle Hélène*, as executed here, is coldhearted and not much fun. The first moments of the Barcarolle are entrancing, but the strings entering in place of *Giulietta* and *Niklausse* instantly push the caressing strains from the Venice of romance to the Swamps of Easy Listening. It is hard to trust one's instincts when the Overture to *Vert-vert*, the single genuine article, proves of the six offerings both the most beguiling in itself and the most beguiling in performance. But without question, the musical touch in all respects is deftest and surest here, and nothing is wasted, from the hushed opening with its tapping snare drum and the elfin Gypsy dance to the false ending and segue into the hurtling fanfares of the finale.

—MATTHEW GUREWITSCH



BERLIN AUTOCRAT: The imperial Karajan misses Offenbach's foxy frivolities.



Leppard: very successful on his own terms

Orfeo: Three Backward Glances

Leppard's modern hybrid version of Gluck's opera outpoints two recordings with greater claims to authenticity.

Reviewed by Nicholas Kenyon

IT MAY SEEM SURPRISING to begin by asserting that Gluck's *Orfeo ed Euridice* has some important problems in common with Handel's *Messiah*, whose many recordings Teri Noel Towe recently described here in entertaining detail (January, February). First neither work achieved a definitive form during its composer's lifetime; the opera, like the oratorio, was changed to suit changing circumstances, and no single form can be claimed as authentic. Second, both made use of one outstanding eighteenth-century singer, the castrato alto Gaetano Guadagni. Gluck designed the role of Orfeo for him and altered it considerably when he was no longer available to perform it; Handel altered *Messiah* considerably for him in the 1750s, providing the brilliant version of "For He is like a refiner's fire" and new versions of other alto arias. Third—and most important for this discussion—*Orfeo*, like *Messiah*, did not disappear from the repertory during the nineteenth century. Instead, it was developed and transformed, becoming something rather different from the work of its creator. And this transformation has, in both cases, affected our understanding of the works in this century.

All these factors assume significance when we assess modern recordings of *Orfeo* and attempt to choose among them. The variety of versions means that almost all the recordings offer different accounts of the score, and more than one can be said to be

faithful to Gluck. The writing for castrato means that any modern attempt at authentic realization must be limited, because castratos—fortunately or unfortunately, depending on your point of view—no longer exist. And the nineteenth-century tradition of the opera means that listeners may well expect something very different from what Gluck wrote; indeed, there is a case for saying that this opera has grown from its original state into a work of art that no longer belongs only to the eighteenth century.

Now the record industry moves in mysterious ways, and I suppose the most startling aspect of these three new recordings is that two of them actually record all the same music. It's a measure of the purist temper of our time's that both Riccardo Muti and Sigiswald Kuijken have chosen to return to Gluck's original conception of the opera, which dates from 1762 (a version that I think was previously represented in the catalog only by Václav Neumann's clumsy recording with Grace Bumbry, Angel SBL 3717, and Ervin Lukács's account with Julia Hamari, Hungaroton SLPX 12100/1). The third newcomer, Raymond Leppard, uses a nineteenth-century conflation of scores, revised and arranged for his revival of the work at the Glyndebourne Festival in 1982, a production that marked Janet Baker's farewell to the operatic stage. (American audiences could be forgiven for not realizing she had ever taken up such a career.)

Orfeo is not a long opera. Originally, in 1762, it formed only one small part of the emperor's name-day celebrations in Vienna and was given between a French play and a grand ball. Highly unusual in several

respects, it reduced the number of solo characters to three, Orfeo, Euridice, and Amore, giving by far the greatest play to the first; it used the chorus prominently and in an integral manner; and it incorporated the dance elements closely into the drama. Some of the influences on Gluck's scheme were French; others came from his librettist Raniero Calzabigi; others represented what Winton Dean in the *New Grove* calls the "crystallization of existing tendencies" away from the conventions of opera seria toward a more directly expressive form.

Still, the 1762 *Orfeo* is scarcely violently dramatic. It has rather the aspect of a series of static tableaux: Shepherds lament; Orfeo confronts the Furies; Orfeo finds the Elysian Fields; and so on. Its shape is perfect and its concision remarkable. It seems to have been conceived to match what we know of Guadagni's personal style, which, according to Burney, was rather remote: "As an actor he had no equal on any stage in Europe: His figure was uncommonly elegant and noble; his countenance replete with beauty, intelligence, and dignity; and his attitudes and gestures were so full of grace and propriety that they would have been excellent studies for a statuary." Burney also records that when Guadagni went to London, he displeased the audience by refusing to step out of his role, as it were, to acknowledge applause and give encores in the conventional manner: "With his determined spirit of supporting the dignity and propriety of his dramatic character . . . he so much offended individuals and the opera audience in general that, at length, he never appeared without being hissed." (Daniel Heartz, who quotes these comments in his

Nicholas Kenyon, critic for the London Times, is now also editor of *Early Music*, a quarterly publication of Oxford University Press.

illuminating Royal Musical Association paper on the singer [PRMA 94, 1967-68, p. 111], draws a parallel between Guadagni and the contemporary British actor David Garrick in their insistence on dramatic verisimilitude.)

In 1769, for an entertainment at Parma, *Orfeo* was staged again, but Guadagni was not available. Instead, there was a soprano castrato, Giuseppe Millico, and so Gluck transposed the entire role upward. This may be seen as an intermediate version of little importance. More significant, when the opera came to be staged in Paris in 1774, Gluck had to lengthen it to a full evening's entertainment, satisfy the French taste for large amounts of ballet, and replace the castrato lead by a voice with which the French would be familiar, an *haute-contre*, or high tenor.

This revision is fascinating and is really the source of most arguments about *Orfeo*. It is the production least well represented on record: Only one version has been made, by Hans Rosbaud in 1956 with the tenor Léopold Simoneau as Orfeo (Philips/Epic, currently unavailable). Yet this revival produced some marvelous music that many are reluctant to give up, including the Dance of the Furies and the long flute solo in the middle of the Dance of the Blessed Spirits. There are extra arias, too, that some argue, surely rightly, disturb the concision of the 1762 version, but that others argue, equally rightly, are fine music in their own right. Further complicating matters, Gluck revised all the recitative in the opera in the course of translating it into French. Many of the details we associate with nineteenth-century versions originate here, and Dean's assertion that this 1774 version is "slacker, more disseminated" overlooks the refinements and improvements in the recitative that add to the work's dramatic power. Perhaps it would be truer to say that they simply translate it into a more demonstrative kind of opera. Nevertheless, to take just one example, after one has heard the tiny, heart-stopping overlapping of the voices as Orfeo looks back at Euridice, it is hard to accept again the plainer sequence of events in the original.

Such considerations must have weighed heavily with Berlioz when he revived the opera in 1859. Though he did not wish to abandon what he saw as improvements, he wished to reinstate the role of Orfeo in the alto register—but for a woman: his friend and adviser, the remarkable mezzo-soprano Pauline Viardot-Garcia. Her success in the role established it as a vehicle for female mezzos, and such it has remained. However, at this stage the opera was still in French. Thirty years later, for a revival at La Scala in 1889, the text was put back into Italian and a score published by Ricordi that modified Berlioz's edition. His original version, further edited by Saint-Saëns, was published in 1890, but it is the Ricordi edition that has held sway on our

stages for most of this century and that forms the basis of the Leppard recording. (For a detailed, number-by-number listing of the different versions, see the invaluable contribution on this opera by Max Loppert to the book *Opera on Record*, edited by Alan Blyth, Harper Colophon, 1982.)

So in these three recordings the listener may choose between two that claim to be faithful to Gluck's original score and one that represents a conglomeration of so many different hands that it is difficult to disentangle them. I would be inclined to choose one of the first two—but there are problems. The two "original" versions could scarcely sound more different.

In line with the frankly idiotic approach to performance practice that characterizes his Verdi recordings, Muti is textually scrupulous but cares little for the sound or likely playing and singing style of the original. He cultivates a heavy, sustained texture, which, with the Philharmonia Orchestra and the woolly singing of the Ambrosian Opera Chorus, quickly becomes glutinous in the extreme. "Just like a Bruckner motet," said someone who listened to the opening funeral choruses, and the comparison is all too apt. There is precious little articulation, the lines cannot breathe, and little detail can be heard. The emotional approach is wearily intense, and the lugubrious lyricism with which Muti douses everything in sight puts a very wet blanket on the proceedings. At its lightest, his approach is a kind of Italian quasi-Elgarian *nobilmente* that effectively undermines the lyrical restraint of Gluck's musical language.

By contrast, the choral and orchestral sound of the Kuijken recording is an almost unalloyed delight. Using the period instruments of La Petite Bande, Kuijken creates light, sparkling orchestral textures: The dances are sprightly, and there is an unearthly translucence in the famous Dance of the Blessed Spirits, and even more so in the lilting triple-time Ballo later in the act, that is entralling. The choir, the Ghent Collegium Vocale, is light-voiced—too light, some may feel, for the great confronta-

tion in the second act that Berlioz so admired for its violent scrunches in the orchestra (which here, at least, you can hear: they are not drowned out by choral volume). But the voices have such beautiful poise and tenderness, singing yearningly in the 3/8 choruses at the end of Act II, and are so well balanced, that they seem to express everything in the score to perfection. The style is, admittedly, often disconcerting: Phrases are left in the air; their rise and fall removes the comfortable, continuous legato sound that we—probably unjustifiably—associate with Gluck.

The soloists in the two versions also sound very different. In Muti's, Agnes Baltsa is a noble, affecting hero, and in different circumstances one might have been enthusiastic about her performance. (Muti's use of a female alto in the 1762 score, of course, already gives more than a hint of the nineteenth century to his account, and that is reinforced by the performance style.) But whenever Baltsa begins to show vigor and power, Muti contradicts her. Take the great recitative "*Nuni, barbari*," with its fierce cries and unrelentingly insistent string accompaniment: Muti simply smooths the strings out to a quiet chugging noise in the background, so that they hardly impinge. The same happens in the magnificent scene in which Orfeo realizes he has lost Euridice: Baltsa is committed, but the accompaniment sounds as if it were emanating from a distant, wool-padded room.

Take that same recitative, "*Nuni, barbari*," in Kuijken's version, and the contrast could scarcely be stronger. The string players bite excitingly into their period instruments and are incisively recorded. And above them, the countertenor René Jacobs presents a quite different rhetorical style: thin, reedy, and fierce. At times in this recording, Jacobs at his best recalls Burney's description of Guadagni. In the Act II scene "*Che puro ciel*" (whose extraordinary accompaniment of plaintive solo oboe, fluttering flute, and violins is bewitchingly done), he sings simply and creates a superb atmosphere. But elsewhere (Continued on page 104)

GLUCK: *Orfeo ed Euridice*.

CAST:
Euridice Margaret Marshall (s)
Amore Edita Gruberová (s)
Orfeo Agnes Baltsa (ms)
Leslie Pearson, harpsichord; Ambrosian Opera Chorus, Philharmonia Orchestra, Riccardo Muti, cond. [John Mordler, prod.] ANGEL DSBX 3922, \$26.96 (digital recording; two discs, manual sequence). Cassettes (2): 4X2S 3922, \$19.96.

CAST:
Euridice Marjanne Kweksilber (s)
Amore Magdalena Falewicz (s)
Orfeo René Jacobs (ct)
Robert Kohnen, harpsichord; Ghent Colle-

gium Vocale, La Petite Bande, Sigiswald Kuijken, cond. [Adelheid and Andreas Glatt and Pieter Andriessen, prod.] ACCENT ACC 8223/4, \$23.96 (two discs, manual sequence) (distributed by AudioSource, 1185 Chess Dr., Foster City, Calif. 94404).

CAST:
Euridice Elisabeth Speiser (s)
Amore Elizabeth Gale (s)
Orfeo Janet Baker (ms)
John Mallandaine, harpsichord; Glyndebourne Chorus, London Philharmonic Orchestra, Raymond Leppard, cond. [John Rushby-Smith, prod.] ERATO NUM 750423, \$21.98 (digital recording; three discs, manual sequence) (distributed by RCA).

An Adult's Garden of Mozart

Welcome as their reissue is, the historic Glyndebourne opera recordings represent but one vein, and not necessarily the most rewarding, of a rich performance tradition.

Reviewed by Conrad L. Osborne

AT THE TIME OF my earliest operatic passions, the Busch/Glyndebourne sets, plus the Beecham *Zauberflöte*, were the Mozart complete-opera discography. The *Così* did not much come to my attention (indeed, *Così* was then practically an unknown work in this country, and only just getting to its feet in Europe), but the *Figaro* and, especially, the *Giovanni* and *Zauberflöte* were frequent sources of pleasure and instruction. Not that my family owned them, but others' did, and besides, they were often on the radio: I recall particularly a New York opera program that was on the air daily, but in a quarter-hour slot. Thus, one heard one of the fat old albums 15 minutes at a time (three 78 sides, plus a couple of minutes' talk), like an adventure serial, and in the course of a little over two weeks would make one's way through the entire piece.

That was one-half of a Child's Garden of Mozart in the mid-Forties. The other half was the Mozart of the Metropolitan Opera, heard on the air or, if one had access, in the house. Glyndebourne-on-Records and The Met represented the two ways of "doing" Mozart, and both represented faded glory, for Glyndebourne was then a prewar memory and the Met a bastion of fading old masters. The difference in tone between them was, for me, perfectly symbolized by the popular images of their respective Dons. The Met's Ezio Pinza, plausible Broadway and Hollywood box office and almost weekly Firestone or Telephone Hour radio guest, appeared in countless print ads, white jacket, brilliant smile on virile Latin mug, women, palm trees, etc., etc. Glyndebourne's Don (the Met's no longer, though still its Count and Papageno), John Brownlee, cropped up as one of Calvert Whiskey's Men of Distinction, who generally sat in high-backed leather chairs in someone's library, highball in hand, crisp suit, slightly pompous set to the jaw. No smile, no women, no palms—globes and hunt prints.

When these sets resurface I think of all this and more of purely personal resonance, and this time I rummaged back to the Met and Salzburg air checks of the late Thirties and early Forties. How did the old dichotomy sound, and what would it mean to one who has survived the return of the harpsichord, the postwar Viennese school, the Martin translations, Ponnelle on teevee, *Così* way off there in the new Met with every blessed note restored—and is determined to outlive even the Eugene Berman *Giovanni* designs, which as I write rear their scabbed old heads for the Centennial Season?

In a way, it doesn't mean all that much. In the modern Mozart discography, the Glyndebourne performances are of greater historical interest than any other kind, and in all the old Mozart one can hear clearly what stood in genuine need of reform. Or perhaps reform is not an appropriate term. Modern Mozart has come on strong while Modern Romantic and Verismo have floundered, not simply because the continuo is correct, textures are clean, and big voices don't matter quite so much in this music.

It has come on because these operas show the reconciliation of conflicts within the social framework, the eventual subordi-

nation of individual needs to group consensus, the absorption of rebellious or antisocial behavior by what we call civilization. They are thus less dependent on large personalities and sharp individualities than are operas that set the individual against society to the death, that show the failure of social institutions to meet human problems, or that glorify the individual against the group. They respond more favorably than later works to what we like to call the modern "ensemble" style of production, by which we really mean homogenization of individual performances and increased systematization of directorial and conductorial control. Finally, our audiences (opera audiences, at least) seem to take great comfort from the underlying statement of these pieces done this way—that although people behave badly and stupidly and get themselves into what seem like serious conflicts, they will stop short of the ultimate disagreements and work it all out. When the block's in order and everyone's in church Sunday mornings, you go to the theater to see rape, murder, and sacrilege; but when there are bombs in the synagogues and muggings in the elevator, you'd like to be told that it'll all be OK.

Artistically, though, the fact that Modern Mozart feeds its audience is by no

MOZART: *Così fan tutte*, K. 588.

CAST:

Fiordiligi	Ina Souez (s)
Dorabella	Luise Helletsgrüber (s)
Despina	Irene Eisinger (s)
Ferrando	Hedde Nash (t)
Guglielmo	Willi Domgraf-Fassbänder (b)
Don Alfonso	John Brownlee (b)

Glyndebourne Festival Chorus and Orchestra, Fritz Busch, cond. [David Bicknell, prod.] SERAPHIM IC 6127, \$17.94 (mono; three discs, manual sequence). Cassettes (3): 4X3G 6127, \$17.94. [From HMV originals, 1935.]

MOZART: *Don Giovanni*, K. 527.

CAST:

Donna Anna	Ina Souez (s)
Donna Elvira	Luise Helletsgrüber (s)
Zerlina	Audrey Mildmay (s)
Don Ottavio	Koloman von Pataky (t)
Don Giovanni	John Brownlee (b)
Masetto	Roy Henderson (b)
Commendatore	David Franklin (bs)
Leporello	Salvatore Baccaloni (bs)

Glyndebourne Festival Chorus and Orchestra, Fritz Busch, cond. [David Bicknell, prod.] SERAPHIM IC 6126, \$17.94 (mono; three discs, manual sequence). Cassettes (3): 4X3G 6126, \$17.94. [From HMV originals, 1936.]

means a recommendation. *Should* these operas be reassuring? Is a society about to fall apart, hanging on by the thread of its conventions, a reassuring spectacle? For that matter, if one is seeking reassurance, how much of it is there in the resolution of a conflict that has held no real threat, no real danger all along?

It says a great deal, I think, that our audiences will receive a performance of *Idomeneo* or even *Clemenza di Tito*—operas whose scores contain little of the immediate appeal of the Da Ponte pieces and whose theatrical artifices are imposing obstacles to anyone who *wants* to suspend disbelief—with, so far as I can determine without actually pinching behinds or taking blood samples, the same level of response elicited by *Don Giovanni*.

It is all too pat and too comfortable for me. The fact that “daring” directorial concepts sometimes turn up does not really affect the comfortableness, either, because, to make us uncomfortable, we would have to at least momentarily believe in the proceedings. And that is quite out of the question, for two reasons. First, in live opera, the sound-reality will in the long run always outweigh the sight-reality if there is a gap between the two. Surely no one in an opera audience will succeed in blocking out the sound of the performance to receive the sight of it, whereas the reverse is not only feasible but is quite generally practiced. And while today’s sights are sometimes “disturbing,” today’s sounds are always comfortable, or at least trying to be. And second, when, in any form of theater, the characters start acting in accordance with the dictates of an imposed production concept or as movable bits in someone’s system of visual symbolism, rather than in accordance with the behavioral logic of those characters under the given circumstances (that logic and those circumstances then being the generating force of the concept or the symbolism rather than the other way around), belief is precluded—forget it.

So, when Ponnelle has his teevee Figaro use one of his first-act arias to lead a sort of revolutionary servants’ stomp through the castle corridors, we are barred from belief on several levels at once. First, the choice forcefully announces that the director’s wish to somehow represent a sociopolitical aspect of subtext outweighs the character’s own reasons for singing the piece, which are personal. Second, it lets us know that the director is at a loss to find any means of allowing his message to emerge from the actions of the characters—that is to say, that he has no dramatically valid means for presenting his “message,” even if it is organic to the drama. Third, although we cannot judge the acting abilities of his Figaro (Hermann Prey), since not even history’s greatest actor can create truthful behavior without an action, there is certainly nothing in his genial German face or in



HIGH FIDELITY ARCHIVES

The Met’s Don, Pinza, was plausible Hollywood box office.

his warm, relaxed, unconcernedly off-pitch singing that would convey the slightest toughness or threat. Finally, who can possibly hear this meaning in this music? And who, however musically dull, cannot imagine at least some flicker of the music Mozart would have written for that meaning?

Most of this multilayered nonbelief, though, is received in some belowdecks compartment in the awareness of the lay listener/viewer, who simply hasn’t the means to decode the incredible. Note, however, that the scene gives every surface appearance of being theatrically pregnant and serious, far more so than the standard ways of representing it—which are usually no better acted and sung, and whose dramatic reality is likely to be just as dim, if not quite so ill-fitting, to most observers.

In the old Met/Salzburg performances, on the other hand, with Bruno Walter the conductor and Pinza the Don and Figaro, one senses the potential for disintegration that Ponnelle and his cast are attempting to suggest as they play in their teevee opera nursery. Lord knows this is not because of any production concept at all, or because of any authenticity about performance practice (except—how odd a notion!—performance practice of the period in which the performance is actually taking place and in which the audience is actually living). It is simply because the conductor and the singer fulfill the immediate, obvious actions of moments and scenes. The recitative leading into “*La ci darem la mano*” is one kind of example. There is nothing complicated in the Don’s intention here, but the scene becomes something the likes of which has

not been experienced since, because Pinza actually carries it out: He takes it that every element at his disposal—his vocal technique, his magnificent Italian, his range of choice as to note values, tempos, dynamics—is at the service of enveloping Zerlina in his sexuality. Pinza the Don will do anything to accomplish this, nothing must stand in his way. Text and conductor must assist Pinza the singer in carrying it out. Therefore, one feels not only a seduction about to happen, but the urgent need behind it, a need that will call all these forces into play in total disregard of other persons or circumstances. And *that* man is dangerous, whether or not the director has some point to make or the harpsichord tinkles a trenchant embellishment.

And so the old Mozart, for all that is “wrong” with it, at certain points quite transcends anything offered by the most meticulous modern presentation. It doesn’t do so with much consistency. The old performances are too far from having a conscious, shared dramatic technique, a consistency of process, for reliable results, and their casting, especially in the Met performances, sometimes has no artistic logic at all. Their basic advantage is that they are free of imposed constraints and intellectualizations, so that gifted artists can pursue their impulses and develop their individualities. So, of course, can less gifted ones.

Thus, in the general wreckage of the 1940 Met *Figaro*, Pinza and Jarmila Novotna are able to do for their roles something that even fine artists seem to have lost the knack for—persuading you of the absolute necessity of hearing about their lives. Scenes of secco recitative and individual moments in ensemble scenes take you along with their communicative urgency, rather than impressing you with their refined shapeliness and correct taste. The musical “highlights” of these roles make their impact not only because they’re brilliantly sung, but because they’re theatrically natural moments in a living character’s life—they’re prepared for. Although they are presented with a great deal more bad old performer’s “ego” than is ever the case these days, in an odd way they “stick out” less than they do in a modern “ensemble” performance, where one sits up because the rest is so dull or because the director has decided it’s suddenly the Hungarian revolution or the Crucifixion. We are made aware that what we pine for is not striking ideas or propriety, but simply the fulfillment of more moments, scenes, roles by a few more “egos.” Then there would be something to make an ensemble *of*, some conflicts whose resolution would matter.

The Pinza and Novotna of 1940 accomplish all this in a repertory hodgepodge of a performance under a conductor of no special distinction as a Mozartean (Ettore Panizza) who, however, does show that he recognizes the importance of working with a singer when something good is

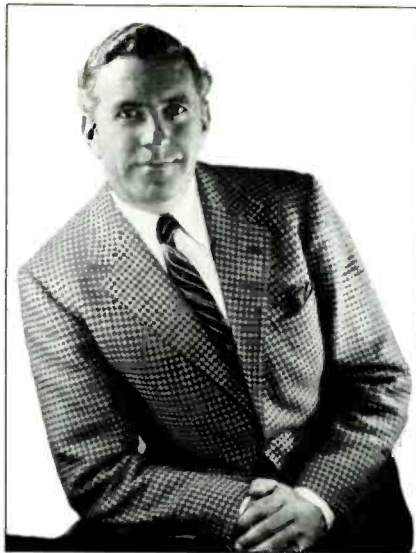
going on, so that at the close of "Non so più," for instance, he is right with Novotna's special, strongly grounded timing of the rests, taking it from the value of the situation as it plays and carrying it out with the orchestra. He shows, in other words, the basic dramatic sensibility any decent operatic conductor is supposed to have, what we used to consider the ground-level credential for admittance to the pit.

But of course most of the individual performances of this era, including these, owed a great deal to the work of conductors of more than ground-level credentials, men like Tullio Serafin and Walter. Pinza had first learned the Don with Serafin, a man who by all reports actually enjoyed working with singers and who took it as an important aspect of his job to explore with them how their peculiar strengths might serve the music, and vice-versa. (But one cannot succeed in such work without having troubled to learn a great deal about singing—there's the catch.) He hadn't the benefit of more recent enlightenments, and so was at liberty to love the sound of Ponselle, Rethberg, and Gigli together in the mask trio.

We have little to go on when it comes to Serafin's characteristics as a Mozart conductor, though there is quite a bit of evidence on him as an opera conductor in general—a musician who, while he worked intensively with each singer in what amounted to a teaching capacity, dominated the actual performance far less than conductors who claim to serve only the text.

Walter, like Furtwängler, used to be referred to as a "symphonic" conductor of opera. This meant, first, that his operatic orchestra sounded very much like his version of the Central European symphony orchestra of the time, but, second, that despite all the formal differences between opera and symphony, Walter found a common ground for them as Romantic drama—an overt conflict among personalities and forces of larger than everyday dimension. In such an operatic universe, it must be one of the functions of the conductor to underline the natures of those personalities and forces, and to use his orchestra to magnify the dramatic qualities of key passages.

The adjective "symphonic" can also be taken to imply an emphasis on structure, on the working out of a design that of its nature embodies conflicts and their resolutions. I suspect that this meaning carried greater force at the time, in the context of run-of-the-house operatic conducting. Today, most operatic conducting at the professional level is structurally tight and logical. One expects it. The few conductors who put their attention elsewhere are widely considered incompetent. (This would include some of the lesser or older Italians and an occasional oddity like Prêtre, whom I continue to cherish even when I don't like the results precisely because he is eccentric—that is, he has purely personal and possibly even momentary ideas about the music, and



HIGH FIDELITY ARCHIVES

Glyndebourne's Don, Brownlee, was a Man of Distinction.

some of them relate to coloristic, descriptive qualities rather than to structure.)

So I doubt that Walter's conducting of Mozart operas has all that much design information to impart to a modern listener, particularly one who has come to know the works through recordings. What it will convey, though, is about twice the urgency you've grown accustomed to. This is perhaps more obvious in *Giovanni* than in *Figaro*: The weighting given the major ensembles, the force of Anna's accompanied recitatives, and above all the brooding intensity of the statue music, the stops-pulled-out final scene (sample detail: the crashing string tremolando under the statue's "cibo celeste . . . cibo mortale"), along with the basic format and thrust of the singing (I refer to the type of singing, not the quality) make a high Romantic drama of the piece. It sounds like old-fashioned middle-period Beethoven, and you may call it wrong—I call it pumping some blood into it.

The Salzburg of Toscanini and Walter and their crew of big-framed singers was ended by the spread of the Nazi stain. Glyndebourne was given its artistic launching (courtesy of the Christies) by the anti-Nazi exiles Fritz Busch and Carl Ebert. Without the money or the clout to lure the international glamour singers, they did have good rehearsal time and a theater of chamberish dimension. They did valuable work by showing the possibilities of these advantages, by preserving a sort of dedicatory festival identity, by bringing *Così* out of the closet, and by simply getting the works down on internationally distributed recordings.

For these reasons, as well as for the sake of purely historical curiosity (preservation of the work of a number of artists otherwise scantily documented), these albums should be given the dignity of continued catalog life, as indeed they have been, allowing for a few gaps in domestic pressing availability. The above reasons, though, are their principal excuses for existence—they must take the place of supplemental versions for collectors of appropriate interests.

In the *Così*, there are two outstanding pieces of individual work, by Ina Souez and Brownlee. Souez's would be, I think, the most powerful argument for acquiring the set, for her Fiordiligi is not only of high quality but of quite a different sort from any on records since. She has a broad, solid soprano with a booming chest register. The latter blurts out raucously in a few spots, but it also contributes to the full-throated propulsiveness of the singing. She draws a good, true legato, has tolerable flexibility and dynamic control, and makes a wonderful case for the tasteful employment of portamento in Mozart—listen to her beautiful teasing of the line through "Di scrivermi ogni giorno," and see if you don't agree. According to Rudolf Bing's recollections of the early Glyndebourne days, Souez had to be pried away for her second summer from Beecham at Covent Garden, where she was scheduled for Micaëla. If this was the Micaëla, who the hell was the Carmen?

Brownlee's Alfonso is still a competitive one. He owned a lean, clear high baritone with some honest ring at the top. It was a bit guttural toward the low end, and not large; in the reaches of the Met and in predominantly low-lying roles, it deteriorated rapidly into a dry, leathery instrument, as is evident even as early as the 1940 *Figaro*. So it is nice to have him in still-fresh shape. His Alfonso doesn't have much of a Latin flavor, but is stylistically careful and vocally firm; his leading of the "Soave sia il vento" trio shows some real mastery.

The other two women are more ordinary. Luise Helletsgrüber is a soprano Dorabella, and a rather light one at that, of the vaguely hooty *Kopfstimme* school, the tone pale and the intonation nagging along the underside of things. Musiciansly, but that's about it, and with this Fiordiligi, it's too bad a more brazen Dorabella wasn't enlisted. Irene Eisinger seems a representative German soubrette of middle-house standing, and does precisely what you'd expect of a Despina of that sort. (In fairness, though, one might not have expected it then.)

Heddle Nash's Ferrando comes up stronger than I had recalled: The voice has warmth and fullness in the middle, a slightly gummy, nasalized way of covering the break, and an odd half-ring on top—but at least half, after all. He sings with a good rhythmic springiness and phrases cleanly. (Continued on page 105)

Behind the Scenes

Music news and commentary by James R. Oestreich

IRCA, KIRA Nominees

Gould's *Goldbergs* by three lengths. The CBS recording that has already garnered several awards is a clear frontrunner for the 1983 HF/International Record Critics Award on the basis of its showing at the nomination stage, with 24 votes from 46 nominators (representing 16 countries). Other leading contenders include Mackeras's *Cunning Little Vixen* (London, 21 votes), Giulini's *Falstaff* (DG, 19), Kleiber's *Tristan* (DG, 18), the LaSalle's Zemlinsky quartets (DG, 14), a Boulez recording of Schoenberg vocal and orchestral works (*Die Jakobsleiter, Erwartung*, etc.) as yet unreleased here (CBS, 11), Solti's *Figaro* (London, 10), Gardiner's *Fairy Queen* (Archiv, 10), and Karajan's *Lohengrin* (Angel, 10). Nineteen recordings received six or more votes to make the list of nominees and another eight were added as "special choices" of the eight IRCA judges (this year representing Belgium, France, Great Britain, Romania, Spain, Sweden, Switzerland, and the U.S.). My own choice fell to the Curzon/Britten recording of Mozart Piano Concertos Nos. 20 and 27 (London)—though I've had pangs of regret at not being able to add also Geoffrey Simon's fine, fascinating account of the original version of Tchaikovsky's Second Symphony (Chandos), and a twinge or two at overlooking an important domestic release with which I am not in total sympathy, Joshua Rifkin's well-executed recording of the "original" setting of Bach's B minor Mass (Nonesuch).

In the three years I've tallied the nominations, I've been struck by the spread of critical opinion. Almost every substantial recording attracts at least one vote. (Each nominator is allotted 20.) And when a sizable work appears in two recordings within a year, the vote tends to split down the middle. Last year, for example, there was *Zauberflöte*, with Haitink edging out Levine and making the list by a single vote. This year's most striking case was *Orfeo*, with the votes almost evenly divided among the three recordings reviewed by Nicholas Kenyon elsewhere in this issue; none of the three made the list. What these multiple recordings (as well as many solitary ones) appear to accomplish, then, is to make one listen anew to—and be struck again by—the music, with relatively little regard for

specific performances. Or do they? Perhaps the split is between fans of the respective performers (or performance styles), and it's the music that matters less. Some of each, no doubt, and other factors as well.

If Deutsche Grammophon dominates the IRCA list, with eight of its own entries plus three Archiv nominees, Erato fares strongest in the Koussevitzky running, with three recordings out of 15. This year we changed the nomination process for the Koussevitzky Award, given annually to a work by a living composer in its first recording. Since we have far more nominators from America than from any other country (an imbalance that is offset in the final judging), it has been easier—with a single vote allotted to each nominator—for an American work than for one from another country to accumulate support. Therefore, we now allow each nominator up to five votes, and the result is a list with a slightly more "international" cast. Highest scorers were Del Tredici's *In Memory of a Summer Day* (Nonesuch, eight votes), Tippet's Triple Concerto (Philips, eight), Reich's *Tehillim* (ECM, six), and Xenakis's *Cendrèes*, et al. (Erato, six). Other works to make the list either by amassing four votes or via a judge's special choice include, on Erato, Ohana's *Messe and Lys de madrigaux*, and—after some initial confusion as to whether Rostropovich's is a first recording—Dutilleux's *Timbres, espace, mouvement*.

An interesting sidelight to this year's nomination process arose out of our continuing effort to make the awards still more "international." Last year we added a nominator from Australia; this year we were able to establish contact with two from South America, both from Argentina. One responded plaintively, able—given the current state of the record market in that country—to name only one recording, a home-produced album of Argentinian music. But a week later came the response from the other Argentinian, a full listing of 20 choices for IRCA and another several for the Koussevitzky—as cosmopolitan a list as was submitted. Was only the one critic able to travel, to import? One can scarcely draw firm conclusions from this alone, but we'll try to find out more about the Argentinian record market and pass it on.

The judging sessions for this year's awards will have taken place—earlier than ever—by this issue's cover date, in Aix-en-Provence in late July. As usual, we'll provide our final accounting in the December issue.

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Reviews



Carl Nielsen: a work of very great substance in a riveting performance—See page 85.

BERLIOZ: *Symphonie fantastique*, Op. 14.

Cleveland Orchestra, Lorin Maazel, cond. [Robert Woods, prod.] TELARC DG 10076, \$17.95 (digital recording).

Utah Symphony Orchestra. Varujan Kojian, cond. [Jeffrey Kaufman, prod.] REFERENCE RECORDINGS RR 11, \$25 (45 rpm; two discs, manual sequence) (Reference Recordings, Ltd., P.O. Box 77225X, San Francisco, Calif. 94107).

Berlioz's opium-inspired programmatic tour de force cries out for fanatical interpretation, but few performances have displayed the requisite demonic abandon. Years ago, the Cleveland Orchestra recorded the work under its music director, Artur Rodzinski, and one might have held high hopes for a maestro who—according to the memoirs of his widow—carried a loaded revolver to all of his concerts and rehearsals. Rodzinski may indeed have been paranoid and even psychopathic, but his performance showed the reverse side of his derangement: It was overcontrolled and emotionally repressed, so as to reveal nothing whatever incriminating.

His successor of nearly half a century later, for all his comparable technical control, is scarcely more successful. Like Rodzinski, Maazel shows the influence of his time: If the older maestro worked under

the spell of Toscanini's stringent classicism, Maazel is "mellowed out," occasionally sounding bland and unctuous. True, the Cleveland plays beautifully for him, with full-throated tuttis, and some ravishingly quiet detail in the "Scène aux champs." But it sounds as if our young artist had imbibed cocoa rather than cocaine!

Telarc's recording is truly impressive, with the most commanding bass-drum thwacks I have encountered, yet with musical verity as well. (My audio system had momentary difficulty tracking the very last note of the "Marche au supplice"—simply a word of warning, not a condemnation.) The third movement is broken between sides, unlike CBS's presentation of the analog Maazel/Cleveland *Fantastique* (M 35867), but credit Telarc for choosing an unobtrusive spot for the break.

The Kojian/Utah account is here presented in its analog version on two 45-rpm discs; the same performance was also recorded digitally, a version awaiting release on a single 33 $\frac{1}{3}$ -rpm LP (and presumably also on Compact Disc). Here, too, the sound is very fine indeed, with unusually spacious, lustrous highs and a huge dynamic range. The Utah forces, however, muster less impact, and the bass drum is less overpowering. Kojian shows some

Reviewed by:

John W. Barker	Nicholas Kenyon
John Canarina	Allan Kozinn
Scott Cantrell	Paul Henry Lang
Kenneth Cooper	Irving Lowens
R. D. Darrell	Karen Monson
Peter G. Davis	Robert P. Morgan
Kenneth Furie	James R. Oestreich
Harris Goldsmith	Conrad L. Osborne
Matthew Gurewitsch	Andrew Porter
David Hamilton	Patrick J. Smith
Dale S. Harris	Paul A. Snook
R. Derrick Henry	Susan T. Sommer

affinity for the score, but his, too, is a relatively lightweight, mild-mannered statement.

Since the performance takes three sides in this format, Reference Recordings generously uses Side 4 to give audiophiles a duplicate copy of the fourth and fifth movements. If Reference is correct in assuming that those movements will get the most play—and I won't deny it—perhaps even more sales could have been generated had just Sides 3 and 4 been offered, to keep from boring equipment owners with the preliminaries.

H.G.

BRITTEN: *Various Works*.

Various soloists; City of Birmingham Symphony Orchestra, Simon Rattle, cond. [John Wilan, prod.] ANGEL DS 37919, \$12.98 (digital recording). Cassette: 4XS 37919, \$9.98.

Quatre Chansons françaises (Jill Gomez, soprano); Young Apollo, Op. 16 (Peter Donohoe, piano; Felix Kok and Jeremy Ballard, violins; Peter Cole, viola; Michal Kaznowski, cello); Canadian Carnival, Op. 19; Scottish Ballad, Op. 26 (Donohoe and Philip Fowke, pianos).

BRITTEN: *Scottish Ballad*, Op. 26. MARTINŪ: *Concerto for Two Pianos and Orchestra*.

Joshua Pierce and Dorothy Jonas, pianos; Luxemburg Radio Symphony Orchestra, Ettore Stratta, cond. [Jeffrey Kaufman, Tom Null, and Chris Küchler, prod.] VARÈSE SARABANDE VCDM 1000 330, \$15 (digital recording).

The selections are less miscellaneous than they may appear: Except for Britten's *Four French Songs*, which date from 1928 (when the composer wasn't yet 15!), all these works were written in the U.S. during the European war years—Britten's *Canadian Carnival* and *Young Apollo* in 1939 and *Scottish Ballad* in 1941, MartinŪ's two-piano concerto in 1943.

The *French Songs* and *Young Apollo* went unpublished in Britten's lifetime. The songs in fact went unperformed until 1980. *Young Apollo*, however, was performed, and was even assigned an opus number, but

N.B.—For additional reviews of classical recordings released on digital Compact Discs, please see NEW TECHNOLOGIES, "Music Reviews."—Ed.

Critics' Choice

The most noteworthy releases reviewed recently

BEETHOVEN: String Quartets (complete). Talich Qt. CALLIOPE CAL 1631/40 (10), June.
CESTI: Orontea. Müller Molinari, Jacobs. HARMONIA MUNDI FRANCE HM 1100/2 (3), May.
GERSHWIN: Songs. Hendricks, K. and M. Labèque. PHILIPS 9500 987, July.
GLASS: The Photographer. Zukofsky, Riesman. CBS FM 37849, June.
HAYDN: Die Jahreszeiten. Moser, Tappy, Huttenlocher, Jordan. MUSICAL HERITAGE MHS 834655 (3), July.
HAYDN: Symphonies (6). L'Estro Armonico, Solomons, CBS 13M 37861 (3), May.
HAYDN: Symphonies Nos. 42, 43. Monadnock Music, Bolle. TITANIC TI 101, May.
KODALY: Háry János. Takács, Nagy, Feren-

csik. HUNGAROTON SLPX 12187/9 (3), June.
MOZART: Flute Quartets (4). Kuijken. ACCENT ACC 8225, June.
MOZART: Piano Concertos Nos. 20, 27. Curzon; English Chamber. Britten. LONDON CS 7251, Apr.
MOZART: Symphonies Nos. 38, 39. Bavarian Radio Symphony, Kubelik. CBS IM 36730, July.
PFITZNER: Songs (17). Fischer-Dieskau, Höll. PANTHEON ORFEO S 36 821, May.
POWER: Masses and Motets. Hilliard Ensemble, Hillier. EMI ELECTROLA RÉFLEXE 1C 069-46402, Mar.
PUCCINI: Turandot. Ricciarelli, Domingo, Karajan. DG 2741 013 (3), June.
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), Apr.

SCHUMANN: Symphony No. 3; Manfred Overture. Los Angeles Philharmonic, Giulini. DG 2532 040, May.
SHOSTAEVICH: Unpublished Works. Rozdestvensky. VOX CUM LAUDE VCL 9035, Apr.
SZYMANOWSKI: Orchestral Works. Kasprzyk, Serrkow, Wit. EMI GERMANY 1C 165-43210/2 (3), July.
TCHAIKOVSKY: Songs (17). Fischer-Dieskau Reimann. PHILIPS 6514 116, July.
TCHAIKOVSKY: Symphony No. 2 (orig. version). London Symphony, Simon. CHANDOS ABRD 1071, May.
WAGNER: Tristan and Isolde. Price, Kollo. Kleber. DG 2741 006 (5), Feb.
CAMBRIDGE BUSKERS: Soap Opera. DG 2532 072, June.
COLOGNE MUSICA ANTIQUA: Conversation Galarte. ARCHIV 2534 006, July.
OFRA HARNOY: Arioso. DISCOPAEDIA MBS 2013, Mar

was promptly (and permanently) withdrawn by the composer for reasons apparently unknown. The piece—a seven-and-a-half-minute free-form fantasia written for the odd combination of piano, string quartet, and string orchestra—is a grabber, from its arrestingly full-throated opening through its pages of surging lyricism dotted with weird and wonderful effects like the quartet's glissando harmonics.

In terms of the free flight of imagination, the *French Songs* are pretty remarkable too: the vivid atmosphere of Hugo's "June Nights," the soaring climax of Verlaine's "Wisdom," the otherworldly ease with which the death of a small child's mother is encompassed in Hugo's "Childhood," the uneasy peace of Verlaine's "Autumn Song." Other composers have achieved something like this degree of orchestral confidence at so tender an age, but this degree of emotional understanding? (And working in a foreign language, yet.)

Canadian Carnival and the *Scottish Ballad* are less audacious but still lively orchestral showpieces in the 15-minute range. In both cases, the gimmick is the composer's playful use of folk tunes in unexpected contexts, the most obvious instance being the grotesquely scampering climactic Vivace section of *Canadian Carnival*, in which "Alouette" is heard in something like the spirit of Berlioz's "March to the Scaffold." The piece is a fairly straightforward uninterrupted suite whose effectively contrasting sections indeed recall, as annotator Donald Mitchell proposes, the sound worlds of Mahler and Copland. Can't you hear Copland in his Americana period in the violins' spiccato chattering in the second-section *Allegro molto alla danza*? And perhaps the trio of a Mahler Ländler in the sweet harp-accompanied tune explored by paired winds (first clarinets, then flutes and oboes, later trumpets, horns, and trombones) in the ensuing *Andante amoroso*?

The playfulness of *Canadian Carnival* is sufficiently overt that it comes through reasonably well in Rattle's precise, clear, extroverted, deadpan performance. The *Scottish Ballad* proves more elusive, and I have the feeling that neither of our "premiere" recordings has gotten its measure. Consider the clanging two-piano chords, mostly in even-value lento half notes, with which it opens. Do you suppose they would sound this matter-of-fact if the soloists were, say, Richter and Ashkenazy? Although Angel's soloists and orchestra seem to me more alert than Varèse's to the music's rhythms and colors, neither team seems really to have explored the emotional resonances of those musical shapes: the opening lento, funeral march, and more lyrical trio that make up the slow first half, the allegro molto reel of the second.

There is, for example, a moment in the allegro molto (beginning at bar 281) where the soloists suddenly regroup and launch a sustained statement built on a rhythmically driving figure that has just been heard a couple of octaves higher. Britten marks this passage *ff* and *con fuoco*, but even without these markings shouldn't the performers notice that the music is drawing here on a new energy source? Again, the Angel performers produce a more decisive result; but where's the "fire"?

It is possible that more imagination of the sort I miss in the *Scottish Ballad* performances would make a more attractive case for the Martinů concerto. The piece, in which two relatively brief Allegros bracket a somewhat longer Adagio, has a pleasant enough communicative voice expressed in reasonably individual ideas that don't go anywhere, instead noodling along until the composer thinks up something new to try. It's as if the freely singing Romantic sensibility of a Grieg or Rachmaninoff were being subordinated to the busy-ness of a would-be "modernist," and the availability of two pianos offers an almost irresistible

invitation to sewing-machine clatter. I wonder, though, whether it would sound so clattery in our hypothetical Richter-Ashkenazy collaboration.

Note that the Varèse disc contains less than 36 minutes of music (some twenty-three for the Martinů and thirteen for the Britten). The sound is impressive in a "demonstration" sort of way (nice crisp transients and the like), but the orchestra doesn't have much presence. Angel's sound is somewhat fuller and more colorful, and Gomez sings the *French Songs* appealingly enough—she is firm and even lush in the midrange, less focused on top. Texts and translations are included. K.F.

DONIZETTI: Don Pasquale.

CAST:

Norina	Magda Kalmár (s)
Ernesto	János Bándi (t)
Dr. Malatesta	István Gáti (b)
Don Pasquale	József Gregor (bs)
A Notary	Tamás Szüle (bs)

Hungarian Radio and Television Chorus, Hungarian State Orchestra, Iván Fischer, cond. [László Beck, prod.] HUNGAROTON SLPD 12416/8. \$38.94 (digital recording; three discs, manual sequence).

COMPARISONS:

Saraceni, Schipa, Badini	Sera. IC 6084
Sciutti, Oncina, Corena	Lon. OSA 1260
Popp, Araiza, Nesterenko	Euro. 300 382

This is an even harder performance to get a handle on than the recent Eurodisc *Don Pasquale*. Both have unmistakable qualities but fail to diminish the feeling that the piece, which wouldn't seem *that* elusive, has been steadily slipping away from us since the hardly overwhelming first stereo recordings, the London and the recently rereleased DG.

To describe the Hungaroton performance as "low-key," for example, might make it sound like the DG, which it doesn't really resemble except that neither is in any mad rush or is inclined to crispness of accent. But the DG—the last *Don Pasquale*

to be recorded in Italy (Florence May Festival under Ettore Gracis), where the quite competent older HMV/Seraphim, Philips/Epic, and Cetra versions were made—has a stylish sense of flow that has been missing from the most recent entries, from Angel (Sarah Caldwell conducting, SBLX 3871), Eurodisc (Munich Radio forces under Heinz Wallberg), and now Hungaroton.

The stylologists would have us believe that this sense of flow can be acquired only by: (a) having been born Italian back when the style was still spoken by a few natives, or (b) buying a diploma from the Famous Stylologists School. You'll have to ask them to explain how the liveliest and most persuasive performance frameworks came to be created by: (1) Milanese forces in 1932 under the canny Carlo Sabajno (Seraphim), who would certainly qualify under (a) above, and (2) by Viennese forces in 1964 under István Kertész (London), born in Budapest in 1931. My feeling is that the more specifically the performers deal with the content of the material, rather than the surface mannerisms so beloved of the stylologists, and find their own personal connection to it, the more likely it is that the result will exude what we identify *after the fact* as "style." Kertész's sparkling and seductive performance has it in abundance; if only it had a consistent vocal standard to match.

Some more recent Hungarians, bass József Gregor and conductor Tamás Pal, gave evidence of having found a similarly infectious connection to the comic operas of Rossini and Donizetti in the "Great Buffo Scenes" recital (Hungaroton SLPX 12359) that I went on about so in March. Maybe that was an illusion sustainable by the excerpt format. But then, the "Cheti, cheti" duet from *Don Pasquale* was given there in its six-and-a-half-minute entirety, and that performance, also with Gáti as Malatesta, seems to me to have a more spontaneous and believable sense of fun than the one in the complete set.

Gregor remains an attractive Pasquale. Like Eurodisc's vocally even more imposing Yevgeny Nesterenko (listen to the effect *he* can make with the sudden fortissimo D flats and middle Cs of "E verissimo!" in the recitative with Malatesta before "Cheti, cheti") and to a lesser extent DG's Alfredo Mariotti, he combines a handsome legitimate singing voice with a winning sense of warmth, and he sounds more comfortable than Nesterenko, if not as easy as Mariotti, in the Italian patter. But Gregor appears not to be the self-starter that a Fernando Corena (London) or Sesto Bruscantini (Cetra) is, at least in this repertory, and there's not much happening elsewhere in this performance to help him get rolling. The best moment is the aftermath of Norina's slap in Act III ("E finita, Don Pasquale," etc.), which Fischer takes at a broad enough tempo to allow Gregor and Kalmár really to deal with and register the import of the situation. Pas-



Comissiona: "bargain" digital Franck

quale's hurt is genuine enough that for once Norina seems really affected by it.

Otherwise this performance mostly runs a correct but polite and rather dutiful course. Kalmár sings a smooth, decisive, agreeable Norina. The voice, although light, is more substantial than the wisp with which Graziella Sciutti (London) managed still to create such a lively character, and is also more fluid than the more present but pecked-at sound of Lucia Popp (Eurodisc). Both Sciutti and Popp trace the passage-work more confidently, though, and Kalmár like most of her rivals mostly shakes wishfully at the trills. All in all, not a terribly strong field; the most satisfying performances all-around are those of Alda Noni (Cetra) and Anna Maccianti (DG).

Gáti is probably the best of the stereo Malatestas, which leaves him well below the less than awesome level of Afro Poli (Seraphim), Mario Borriello (Cetra), or Giuseppe Valdengo (Epic). He's not offensive vocally or dramatically, and if the voice is rather monochromatic, the color is pleasant enough. Bándi's Ernesto is more of a problem, sounding generally pressured and of no better than student-workshop quality in Acts I and II. Like the more robust but not exactly attractive Juan Oncina (London), he sounds better in the serenade and duet of Act III, perhaps because of the more distant microphone placement. Eurodisc has an asset in the agreeable light tenor of Francisco Araiza, but even he is more sensibly compared with the featherweight Ugo Benelli (DG) than with Cesare Valletti (Cetra) or Alfredo Kraus (Angel), let alone the likes of Tito Schipa (Seraphim).

Like the Angel and Eurodisc performances, the Hungaroton is uncut (London makes only some small recitative cuts, including the line that Nesterenko has such fun with), and the sound, while clinically

unresonant, is OK. The opera happens to sequence nicely over three discs—one act apiece, with the first four scenes each contained on one side—but this makes for an expensive format. You should listen before buying to hear what this set does for you, and you should also see whether the more extroverted Eurodisc set has more grabbing power for you than it has so far had for me. Among current options, I would incline to a coupling of London and Seraphim. A good mono reissue of the Cetra set would merit serious consideration. K.F.

DVOŘÁK: Concerto for Cello and Orchestra, in B minor, Op. 104. TCHAIKOVSKY: Variations on a Rococo Theme, Op. 33.

Robert Cohen, cello; London Philharmonic Orchestra, Zdeněk Mácal, cond. [Barry McCann, prod.] MUSICAL HERITAGE MHS 4690, \$7.75 (\$4.95 to members) (add \$1.95 for shipping; Musical Heritage Society, 14 Park Rd., Tinton Falls, N.J. 07724).

I recall the debut a few years ago of the young Robert Cohen (then a mere teenager) with pleasure. He is no less successful here, in his American recording debut. (Classics for Pleasure, which produced this recording, released an Elgar concerto in England, which I haven't heard.)

Although Cohen doesn't shape either of these demanding virtuoso vehicles with the wisdom and finesse of their greatest interpreters, he displays a solidly assertive command of his instrument and ultimately wins at least one listener's affection with his refreshingly committed, unaffectedly expressive phrasing. He leaves no doubt that true greatness will come in due time. Even now, he gets more from these works than many a touted superstar.

Zdeněk Mácal, who once recorded the Dvořák with Anja Thauer and the Czech Philharmonic (DG, never issued here), seems to have mellowed his interpretation in the intervening years. He paces the music (in the Tchaikovsky, too) with consideration for his soloist's wishes but obtains punctilious playing from the London Philharmonic and draws out a lot of woodwind detail (beautifully delineated by the airy, well-defined recording). MHS's pressing is above average, and, as a modern bargain version, this is a disc you can't refuse. H.G.

FRANCK: Symphony in D minor. SAINT-SAËNS: Le Rouet d'Omphale, Op. 31.

Orchestre National de France, Leonard Bernstein, cond. [Hanno Rinke and John McClure, prod.] DEUTSCHE GRAMMOPHON 2532 050, \$12.98 (digital recording). Cassette: 3302 050, \$12.98.

FRANCK: Symphony in D minor.

Houston Symphony Orchestra, Sergiu Comissiona, cond. [Seymour Solomon, prod.] VANGUARD AUDIOPHILE VA 25016, \$8.98 (digital recording.)

FRANCK: Symphony in D minor; Le Chasseur maudit.

Philadelphia Orchestra, Riccardo Muti, cond. [John Mordler, prod.] ANGEL DS 37889, \$12.98 (digital recording). Cassette: 4XS 37889, \$9.98.

The Franck Symphony, itself an exemplar of cyclic form, tends to appear in cycles: Every few years, there is a deluge of five or six new versions, and then the dignified old chestnut drops back out of sight.

Bernstein's remake (he recorded the work during his New York Philharmonic years for Columbia) can be given short shrift: This is a "personal" interpretation, with all the climaxes intensified to near-hysteria and all the lyrical portions either swollen and listless or treated with perfunctory understatement. The heating and churning in the third movement represent a crude approximation of the old tub-thumping Stokowski approach. Performances of this sort insult both listener and music.

The delicate tracery of the Saint-Saëns tone poem (a kind of gourmet "Dance of the Hours") shows that Bernstein remains a potentially gifted leader (if only he'd keep a firm grip on himself!) and that the French National Orchestra is capable of true refinement. DG's sound, though realistic enough and despite luminous winds, is prone to murkiness.

A year or so ago, Comissiona pro-

grammed the Franck D minor with the Baltimore Symphony at one of their New York concerts. On the evidence here, the Houston Symphony is a different sort of aggregation: The heft, as opposed to the Baltimore's compact linearity, suggests that Houston employs a larger complement of players—and that the ghost of Stokowski, who led the group in the late 1950s, still hovers about. This entails both gains and losses. The greater effulgence produces a kind of bloated grandeur, and certain passages—e.g., the strings at the start of the first movement's *Allegro ma non troppo*—lack the Baltimore's cohesive energy. This is a tasteful but bland D minor, and the recording, though rich-toned, is a bit diffuse in timbre. At the price, however, this qualifies as a "bargain" digital record.

Muti's reading of the symphony shows little more than an almost apologetic determination to get from start to finish with unexceptional professionalism. This is an extremely noncommittal, faceless rendering, executed with a generalized, "electric blanket" warmth by the Philadelphians, who—after decades of Stokowski and then Ormandy (I also remember an outstanding D minor with Beecham as guest conductor)—seem to be playing the work in their collective slumber. They are, however, roused by the shorter tone poem. Angel's sound, too, is a bit unfocused for the sym-

phony, acuter for the filler.

None of these releases alters my previous recommendations for the symphony: Cantelli (RCA AGL 1-4083); Montoux (RCA ATL 1-4156); Bartholomé (Ricarcar RIC 009). H.G.

GLUCK: Orfeo ed Euridice—See page 72.

ISABELLA LEONARDA: Mass, Op. 18, No. 1. HILDEGARD OF BINGEN: Kyrie eleison.

Arkansas University (Fayetteville) Schola Cantorum, instrumentalists. Jack Groh, cond. [Marnie Hall, prod.] LEONARDA LPI 115, \$8.98.

The Leonarda label has established its credentials as a serious outfit devoted primarily, though by no means exclusively (female-chauvinistically?), to exploring the music of female composers. This release represents an enterprising foray into an area just beginning to come to light: the music of nun-composers. The results are historically fascinating, if musically a little disjunct as to style and quality.

Isabella Leonarda (1620-1704), born Isabella Calegari of a prominent family in Novara, became an Ursuline nun at age 16 and rose to become an abbess and a provincial mother vicarress. She must have pos-

(Continued on page 83)

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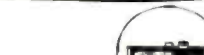
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Smetana Operas: *The Bartered Bride* and Beyond

Reviewed by Peter G. Davis

TO JUDGE FROM their generous representation on discs, Smetana's eight operas have long been central to the Czech repertory. Supraphon has now recorded *The Bartered Bride* four times, *Dalibor* three times, and *The Kiss* twice, and the five others all exist in one or more versions. Even Dvořák's operas have not received so much attention; we are still waiting for the first recordings of at least two important scores, *Dimitrij* and *Armida*.

But then, Smetana has always occupied a special place in Czech affections. He was the first to give his country a true musical identity, composing works as fresh and original as they are technically assured. His operas in particular seem to spring from a deep national consciousness. Only *The Bartered Bride*, a lighthearted picture of peasant life, has become a favorite the world over, but that lovable comedy presents just one side of Smetana's operatic personality. He also composed historical drama (*The Brandenburgers in Bohemia*), grandiose epic (*Dalibor*), a festive apotheosis of the Czech nation itself (*Libuše*), and four other very substantial comic operas, each with a distinct individuality.

As much as I admire and enjoy these works when they surface on records or, less frequently, in performance, I cannot honestly say that the preference outside Czechoslovakia for *The Bartered Bride* is wholly unjustified. Take *Dalibor*, for example, the one other opera that does turn up now and then in Europe. Each revival elicits enthusiastic articles from critics praising the work's noble, high-minded, inspirational character and deploring its neglect on world stages; audiences listen with due respect, and the opera vanishes after a few performances. Obviously there is something about *Dalibor* that resonates in the Czech soul but that the rest of us can appreciate only from a distance.

Despite his great talent, Smetana was no Verdi or Wagner, and *Dalibor*, for all the many pages of gorgeous music, seldom transcends its awkward dramatic postulates. Yes, I know all about *Il Trovatore* and dozens of other supposedly far-fetched *ottocento* librettos, yet Verdi could take nearly any situation, no matter how absurd or contrived, and distill dramatic truths from the moment through his intense identification with the characters' emotions. So could Beethoven, for that matter, in *Fidelio*, whose story vaguely resembles *Dalibor*'s, but Smetana succeeds only fitfully with his "rescue" opera. *Dalibor* is a fif-

teenth-century knight who takes the law into his own hands, slays the murderer of his best friend, Zdeněk, and is imprisoned as a dangerous insurrectionist. Milada, impressed by *Dalibor*'s heroic bearing before his accusers, disguises herself as a jailor's assistant in order to maneuver *Dalibor*'s escape. The plot fails, and, instead of gaining freedom, the two lovers are killed by the king's army.

The elements of the story that appealed to Smetana were obviously the underlying themes of freedom, selfless love, popular antipathy for authority, and the power of music as symbolized by the dead musician,

Something about *Dalibor* resonates in the Czech soul.

Zdeněk. The composer's response is deeply felt, no doubt about it, yet I finally remain unconvinced that his music is potent enough to transfigure these faintly ridiculous events into "episodes of a shining, symbolic quality," as one adherent has described *Dalibor*. The hero's attitude is difficult to accept; oddly enough, the more we learn about him, the more unreal and unattractive he appears. (Beethoven never made that mistake with Florestan; the audience is told just enough to suggest a man who stands for all the unjustly oppressed.) *Dalibor*'s only concern is a selfish one, his own personal freedom. And that he should fall in love at first sight with Milada in boy's clothes seems incredible, especially since he seems totally obsessed by the memory of his beloved Zdeněk. (I can already see this subtext taking over when some avant-garde German director turns *Dalibor* into the first gay-lib opera.)

Despite its dramatic flaws, *Dalibor* always strikes responsive chords in a Czech audience. Others will find pages of genuine beauty—*Dalibor*'s vision of Zdeněk in prison, for example—offset by a lot of dull, ceremonial music, and cardboard supporting characters spouting empty rhetoric. I would not urge *Dalibor* on any opera company, but a recording is the ideal way to savor its best moments.

Supraphon's latest performance is no great shakes; Vilém Přibyl sounded in fresher voice on the 1967 recording (Beno

Blachut was even better on *Dalibor* No. 1), and the two sopranos lack distinction. Even at that, the music's basic requirements are decently met, the sonics are satisfactory if a trifle dull, and Václav Smetáček conducts as though passionately convinced by every note.

The Kiss is something else again, and I can imagine this charming opera coming to life in a sensitive production with a superb cast of singing actors. This was Smetana's sixth stage work, written after he had become totally deaf. The libretto, of exceptional literary quality, is by Eliška Krásnohorská, who later supplied the composer with texts for *The Secret*, *The Devil's Wall*, and *Viola*, the last based on Shakespeare's *Twelfth Night* and unfortunately never completed.

On the surface, the plot of *The Kiss* is a bagatelle. Lukaš, a recent widower, has returned to court his first great love, Vendulka, and asks for a kiss on the day of their betrothal. She refuses; kissing before marriage would be disrespectful to the memory of Lukaš's late wife. He fails to understand such sensitivity, and a furious argument ensues. After a series of intrigues involving efforts by the pair's friends and relatives to get them back together, Lukaš finally regrets his testy behavior, Vendulka forgives him, and the two make up—with a kiss.

Much more goes on between the two principals than this brief synopsis suggests. Like Isolde's love potion, the controversial kiss is a mere device that triggers all sorts of disturbing developments and soul-searching, as trivial incidents so often do in real life. Lukaš and Vendulka obviously belong together, but before they can establish a workable love relationship, each must test, discover, and learn to accept the other's bad points as well as good; the process clearly recalls the love-hate bickering of Shakespeare's Beatrice and Benedick or Katherine and Petruchio. Though Krásnohorská may lack the Bard's energy and subtler perceptions of human behavior, she creates three-dimensional figures and places them in effective theatrical situations, all lightly brushed with a touch of real poetry. Even the subsidiary characters are endearing: Vendulka's long-suffering father, her worldly-wise aunt, and the high-spirited farm girl, Barče.

Smetana illustrates this warm human comedy with a score that is far more gentle and introspective than the boisterous *Bartered Bride* yet equally spontaneous and inventive. Arias, duets, and ensembles grow organically from a seamless symphonic fabric, which gives the impression of having been composed in one breathless moment of inspiration. It is virtually impossible to single out highlights, but some listeners may be familiar with Vendulka's haunting lullaby sung over the cradle of Lukaš's baby. (Jarmila Novotná made an

exquisite recording many years ago.) This bewitching lyrical interlude is perhaps the most poetic moment of the opera as the girl imagines herself a dove winging past the soul of Lukaš's dead wife, who entrusts Vendulka with the care of her child and husband.

Supraphon's latest performance, on Pro Arte pressings, is, like the *Dalibor*, perfectly competent in all departments, forthrightly interpreted by a practiced provincial cast and recorded in a rather muffled acoustic. Some day it would be pleasant to hear the opera sung by major voices—if only Decca/London were to follow up its magnificent Janáček opera series with a similar project devoted to Smetana. Until that millenium arrives, these discs will have to do, only a serviceable introduction to an enchanting score.

However legitimately Smetana's other operas may claim our attention, *The Bartered Bride* will always take first place, even in Czechoslovakia. In part, its universal appeal is due to the high quality of its melodic content and profuse musical variety; for all the sophistication of Smetana's later stage works, he never quite recaptured the same creative urgency and vitality. In addition, like all great comic operas, *The Bartered Bride* asks to be taken very seriously. Mařenka and Jeník are introduced as lovers coping with a familiar opera-buffa problem: parental disapproval of their union. Their opening duet, though, depicts them as anything but a frivolous couple. The music's bittersweet coloring strikes an elegiac, almost tragic tone, while firm pedal points and a vocal line that continually revolves around the tonic note, B flat, indicate that their love is very real and more than able to withstand the storms to come.

In the course of the opera, both gain in stature—Jeník through his ready wit and

self-reliance, Mařenka through her sense of teasing fun, quick temper, and capacity for deep emotions, especially when wounded by Jeník's supposed betrayal. Nor are the other characters neglected; Vašek is not merely a stuttering ninny, but a pathetic lad who instantly captures the audience's sympathy, while Kecal, the self-important marriage broker, betrays a dangerous streak underneath his buffo patter. Even the lovers' mothers, the kindly Ludmila and the snappish Háta, are cleverly differentiated. Smetana's music brings all these personalities to life, even when he steps back to view country-folk society portrayed irresistibly in sequences of dances and entertainments.

Loving care has gone into this new recording, and Supraphon has come up with a performance that must be considered close to definitive. Two Czech singers now well-known on the international operatic circuit are entrusted with the leading roles, and they are totally disarming. Gabriela Beňačková-Čápková's silvery soprano and eagerly communicative vocal presence suit Mařenka perfectly, and Peter Dvorský uses his ingratiating lyric tenor to fine effect as Jeník. The other singers are all well cast and highly capable, Zdeněk Košler has the orchestra playing with bracing verve and easy lyrical grace, and the bright clarity of the digital engineering results in the most impressive sound I've yet heard from this label. There is an admirable recording on EMI Electrola (IC 149-30967/9) with Pilar Lorengar, Fritz Wunderlich, and Gottlob Frick, conducted by Rudolf Kempe, but that performance is sung in German, a language that always seems to take the bite from the music and reduce Smetana to the level of Lortzing. Nothing can quite take the place of an inspired Czech cast singing *The Bartered Bride* with gusto, love, and pride, and that is exactly what this splendid Supraphon production offers. **HF**

sessed enormous energy, for, grounded early in music, she composed much throughout her long life, entirely in her spare time (her "rest periods," she called them) amid a life of spiritual devotion and administrative responsibility. What survives in published form is reckoned at more than 200 pieces in some 20 printed collections. There are a few instrumental chamber pieces, but the bulk of her output is understandably religious and primarily liturgical. Most of her compositions are classified as "motets," including settings of traditional liturgical texts for vespers and other occasions. There are four Mass settings, one published as Op. 4 in 1674, the other three issued as a set, together with some shorter pieces, as Op. 18 in 1696. Formally entitled *Messe concertate con stromenti, e motetti*, Op. 18 specifies from one to four voices, two violins, violone or theorbo, and organ.

It is the first of the 1696 Masses that appears here, scored for mixed solo and choral voices. In regional fashion, it includes only the first three sections of the Mass Ordinary (Kyrie, Gloria, Credo), the latter two subdivided into three sections each. One would like to proclaim it a discovery, but, in truth, it is not. Its harmonic range is rather simplistic, and its "concerted" treatment of solo and choral forces is unimaginative. The sort of music routinely written for Italian churches in the latter half of the seventeenth century, it represents a stylistic epoch between Carissimi and Alessandro Scarlatti. This is not to demean it—and we have so little of this genre on records that any specimen is welcome—but the work is just a trifle perfunctory.

The performance could be better: The instrumental work is good, but the singing becomes a bit rough, and the overall direction is rather square. Still, perhaps the main problem is that this was not the best place in Isabella Leonarda's output to start. Rosemary Roberts, in her article on the composer in the *New Grove Dictionary*, stresses the imaginative style of the motets, and one would like to hear examples; they may be more personal and expressive. It might even be fun to have samples of her instrumental work.

Hildegard of Bingen (often called "Saint," as here, though never officially canonized), was a remarkable example of the many important female visionaries and writers in the Middle Ages, long studied and respected by medieval specialists—which fact gives the lie to rabid feminist accusations that (male, of course) historians have ignored or suppressed important female personalities of the past. Her sizable entry in *New Grove* testifies to the considerable attention she has received. Born in 1098 of a prominent German family, she became a Benedictine nun and, before her death at an unusually advanced age in 1179, one of the most respected religious and female personalities in an age that included St. Bernard and Eleanor of Aquitaine. Her

SMETANA: *Dalibor*.

CAST:
 Milada Eva Děpoltová (s)
 Jitka Nada Šormová (s)
 Dalibor Vilém Přibyl (t)
 Vitek Miloš Ježil (t)
 Vladislav Václav Zitek (b)
 Budivoj Bohuslav Maršik (b)
 Beneš Jaroslav Horáček (bs)
 Judge Karel Hanuš (bs)
 Brno Janáček Opera Chorus, Brno State Philharmonic Orchestra, Václav Smetáček, cond. [Zdeněk Zahradník, prod.] SUPRAPHON 1416 2921/3, \$29.94 (three discs, manual sequence).

SMETANA: *The Kiss*.

CAST:
 Vendulka Eva Děpoltová (s)
 Barče Božena Effenberková (s)
 Martinka Libuše Márová (ms)
 Lukaš Leo Marian Vodička (t)
 Frontier Guard Zdeněk Jankovský (t)
 Tomeš Václav Zitek (b)

Father Paloučský Eduard Haxen (bs)
 Matouš Karel Hanuš (bs)
 Brno Janáček Opera Chorus and Orchestra, František Vajnar, cond. [Zdeněk Zahradník, prod.] PRO ARTE 3PAL 3005, \$29.94 (three discs, manual sequence).

SMETANA: *The Bartered Bride*

CAST:
 Mařenka Gabriela Beňačková-Čápková (s)
 Ludmila Marie Veselá (s)
 Esmerelda Jana Jonášová (s)
 Háta Marie Mrázová (ms)
 Jeník Peter Dvorský (t)
 Vašek Miroslav Kopp (t)
 Principal Comedian Alfréd Hampel (t)
 Krušina Jindřich Jirdrác (b)
 Kecal Richard Novák (bs)
 Mícha Jaroslav Horáček (bs)
 Indian Karel Hanuš (bs)
 Czech Philharmonic Chorus and Orchestra, Zdeněk Košler, cond. [Zdeněk Zahradník, prod.] SUPRAPHON 1116 3511/3, \$47.94 (digital recording, three discs, manual sequence).

Latin lyrics, entirely religious, include a full liturgical play as well as short pieces, to which she added her own melodies. Uniting contemporaneous styles of the secular-vernacular poets with those of the late plainchant hymnodist, she figures in the same tradition that was simultaneously generating liturgical drama. Her texts include both conventional liturgical material and her own vision-poems. Her melodies, though chantlike, involve curious segmentations and unusual melodic turns.

A gorgeous record recently appeared on the British Hyperion label (A 66039, April), offering eight of Hildegard's lyrics beautifully realized by solo and group voices, with discreet instrumentation. Another full record of her compositions, including standard liturgical ones, has been issued on the German Psallite label (242/040 479), but I have not yet been able to obtain a copy. Her one piece here, the merest filler at the end of Side 2, is a simple monophonic Kyrie, sung adequately by unison female voices.

Among the nicer features of this release, aside from its good sound and pressing, is the wonderfully extensive background information Leonarda provides: not only full sleeve notes, but a leaflet containing an interesting essay by Jane M. Bowers on Italian nuns and music during the seventeenth and eighteenth centuries. These notes, as much as the music itself, make clear that there is a wide vein of interesting musical literature yet to be investigated. J.W.B.

LORTZING: Der Wildschütz.

CAST:

Baroness Freimann	Edith Mathis (s)
Gretchen	Georgine Resick (s)
Countess Eberbach	Doris Soffel (ms)
Nanette	Gertrud von Otenthal (ms)
Baron Kronthal	Peter Schreier (t)
Count Eberbach	Gottfried Hornik (b)
A Guest	Bernd Riedel (b)
Baculus	Hans Sotin (bs)
Pancratius	Reiner Süß (bs)

Berlin Radio Chorus and Children's Chorus, Berlin State Orchestra, Bernhard Klee, cond. [Bernd Runge, Michael Horwath, and Renate Kupfer, prod.] DEUTSCHE GRAMMOPHON 2740 271, \$32.94 (three discs, manual sequence).

COMPARISON:

Rothenberger, Wunderlich, Prey, Ollendorff, Heger EMI IC 149-28534/6

As in the case of Loewe (see HF, March), Lortzing slips back into SCHWANN with this recording, the first complete *Wildschütz* I can recall entering the domestic catalog. (London had a Leipzig excerpts disc some years ago.) The opera may indeed prove more appealing than *Zar und Zimmermann*, the Lortzing opus that has heretofore been judged most suitable for the U.S. market, but I'm not sure that this recording will make a terribly persuasive case. Its only advantage over the Sixties Electrola recording is the inclusion of an English as well as German text.



Solti: at his best in the Mahler Rondo-Burleske, capturing its demonic element ideally

The opera itself, dating from 1842, crams in about every German comic plot device that will fit into three acts: While the elderly schoolmaster Baculus, about to marry pert young Gretchen, tries to regain the favor of his employer, Count Eberbach, the leering Count and his Greek-antiquity-adoring wife are trying to fix up their sister and brother, respectively. By astounding coincidence, neither sister nor brother has been seen since childhood, and so both Baroness Freimann and Baron Kronthal seize the opportunity of arriving early, in lower-class disguise, to scout the prospects incognito. Added wrinkle: The baroness disguises herself as a man! Complications ensue, and ensue, necessitating many ensembles until it all sorts out. In the end, it is revealed that Baculus actually shot his own donkey, and not one of the Count's deer, meaning that he isn't a poacher (*Wildschütz*) after all and making the opera's title a wee fib.

Especially in the new recording, which has the same air of dogged conscientiousness heard in the *Merry Wives of Windsor* featuring many of the same people (DG 2709 065), Lortzing's music tends to sound like the product of long noodling sessions at the keyboard, waiting for the arrival of catchy ideas that never come. If you go back to the Electrola recording, you will hear a good deal more shape in the phrasing (Heger performances don't often overwhelm you with their bold imagination but sound more impressive when you compare the traps other conductors have fallen into and the problems they have failed to solve) and a uniformly stronger cast.

Mathis, who would once have been cast as the ingenue, Gretchen, sounds badly out of sorts here, with the top reachable only by chancy lunge, while Schreier is a bit squealier-sounding than usual—no match for Rothenberger and Wunderlich. Hornik sounds as if he has a voice waiting to come together, but it just doesn't come into focus as he treads cautiously—again, no match for Prey. Sotin has a major voice, but it's all over the place, with no noticeable guiding intelligence, allowing Electrola's Fritz Ollendorff to walk all over him.

Resick sings Gretchen attractively (giving way to a speaker in the spoken dialogue), but even here Lotte Schädle had more vocal bite and spirit. The smaller roles are more evenly matched, though the gap widens in the dialogue, where DG gives us mostly droning monotone. The dialogue is also less heavily pruned in the Electrola recording.

At last glance, all four of the Lortzing operas Electrola recorded in the Sixties were available as imports—in addition to the Munich *Wildschütz*, the Dresden *Zar und Zimmermann* (1C 183-29302/4, formerly on Seraphim) and Berlin *Undine* (1C 149-30218/9) conducted by Heger and the Munich *Waffenschmied* (1C 153-28930/1) conducted by Fritz Lehman. (There's also a more recent recording of Lortzing's last opera, the one-act *Die Opernprobe*, 1C 065-28835, which I haven't heard.) The performances admittedly incorporate the comic-cliché attitudes that I still believe could profitably be replaced by honest belief, but at least the performers did make choices, which were carried through in the work. K.F.

MAHLER: Symphony No. 9, in D.

Chicago Symphony Orchestra, Georg Solti, cond. [James Mallinson, prod.] LONDON LDR 72012, \$25.96 (digital recording; two discs, manual sequence). Cassettes (2): LDR5 72012, \$25.96.

COMPARISON:

Karajan/Berlin Phil. DG 2707 125

Georg Solti continues what promises to be his second Mahler cycle on discs with a new version of the Ninth, thereby bringing the Chicago Symphony another step closer to completing *its* second cycle. Solti's first Ninth featured the London Symphony (London CSA 2220); Giulini led the Chicagoans in theirs (DG 2707 097).

Solti's immediate predecessor was Herbert von Karajan, whose spectacular account appeared two years ago (HF, November 1981) and still leads the field. That performance has a warm, glowing, passionate intensity not matched here. (To be fair, it isn't matched in any other recording I've heard, either.) This is not to deny the Chicago Symphony's magnificent play-

ing or Solti's obvious sincerity and dedication to the score, but the work remains under too tight a rein.

The long, complex first movement doesn't flow naturally and inexorably; it seems to be straining to go somewhere. There is, of course, a feeling of strain in the music, yet there should still be a sense of motion toward a destination, which I don't feel here. At just over 30 minutes, Solti's first movement is the longest of the six versions I had available for comparison. Mahler's marking for this tortuous and tortured movement is simply *Andante comodo*—*comodo* implying a comfortable, leisurely pace, not the crawl we get so often, here most egregiously.

Solti also has the longest second movement, lacking in both flow and rustic charm. True, the reading is leisurely, as required in the opening tempo, but it is not clumsy and rude, as also required.

The Rondo-Burleske finds Solti at his best (here his timing is the shortest), with firecely vehement string playing, powerful and wonderfully sonorous horns, and the music's demonic element captured perfectly and with tremendous energy. If each movement's intrinsic character were so well conveyed, this Ninth would go to the top of the list.

As Karajan has demonstrated, the final Adagio *can* deliver its message at an extremely slow tempo. Solti's is a very objective view of this serenely great movement. One can admire the orchestra's playing and his excellent control of it, and yet remain unmoved. The expression seems to come from without rather than from within. There just is not the feeling, as with Karajan and the Berlin Philharmonic, that everyone's life depends on this performance—a feeling that, though present less than a generation ago, is all too rare in music-making these days.

Extensive and authoritative notes and analysis by the late Deryck Cooke grace the set. The recording is very natural, not as garish and unpleasant as Solti's recent Mahler Second. As with many Chicago recordings, the string sound is a bit dry, lacking the bloom of the Karajan version.

Notwithstanding my carping this is in many ways an impressive achievement—and will undoubtedly win a Grammy next year. J.C.

MARTINŮ: Concerto for Two Pianos and Orchestra—See Britten.

MOZART: Così fan tutte; Don Giovanni—See page 74.

NIELSEN: Symphony No. 3, Op. 27 (*Sinfonia espansiva*).

Elisabeth Rehling, soprano; Michael Wilhelm Hansen, baritone; Danish Radio Symphony Orchestra, Yuri Ahronovitch, cond. UNICORN-KANCHANA KP 8006, \$11.98. Cassette: UKC 8006, \$11.98. [Recorded in performance, 1981.] (Distributed by Harmonia Mundi U.S.A.)

Less epic in tone than the composer's Fourth and Fifth Symphonies, Nielsen's Third of 1911 combines the essential geniality of the Second with a suggestion of the darker mood of the later works. According to Nielsen authority Robert Simpson, himself a respected composer, "*espansiva* means the outward growth of the mind's scope and the expansion of life that comes from it." Annotator Hugh Ottoway writes that "the continual thrusting outward of Nielsen's tonality, as against the departure-in-order-to-return that is basic to classical tonality, is peculiarly appropriate to such a concept."

Thus, the turbulent first movement begins in D minor and ends in A major, though retaining the key signature of the former throughout. (It does begin with an arresting and rhythmically spastic succession of short, unison As, which gives some idea of where one is heading.) Similarly, the pastoral second movement proceeds from C major to E flat major, and the triumphant finale opens in D major and ends unequivocally in A major, three sharps and all.

All this would hardly matter were the music of little substance, but it is of very great substance indeed, even if from time to time it betrays the influence of Brahms. (Some of the woodwind solos in the slow movement find their kin in the parallel movement of Brahms's First Symphony.) But Nielsen's personality is already extremely strong in this fascinating and enjoyable work, and one can only wonder yet again why his music has never really captured the public's imagination and admiration.

This live recording by Soviet-born Yuri Ahronovitch and the Danish Radio Symphony conveys excellently the work's great sweep and majesty as well as its more bucolic moods. The intensity of much of the playing is so riveting, in fact, that the quieter moments come as quite a relief—doubtless what the composer had in mind.

An unusual and affecting moment occurs at the end of the second movement, when two offstage voices singing wordlessly are added to the orchestral texture. Here they're heard distantly enough, yet there is an odd fuzziness to their sound, as though they were offstage but heard over a loudspeaker in the hall.

Ahronovitch's approach is frequently vehement, accompanied by much grunting. As in his past work, he often overdoes perfectly innocent score indications: The concluding timpani beats into the final chord are marked simply *poco rit.*; not only is the *rit.* extremely *molto*, but there is a pause before the last chord big enough to drive two Mack trucks through. In addition to going against the composer's wishes, this is just plain unmusical. (It carries to an extreme the idea of the Luftpause normally inserted before the final chord of baroque

works, which I find equally unmusical.)

Accustomed as I am to the applause included in some live recordings, I was unprepared for the four-minute ovation, complete with rhythmic clapping, included here, surely something only Ahronovitch and perhaps his mother would want to sit through repeatedly. There is also a brief brass and timpani fanfare—according to the fine print on the label, "the traditional Scandinavian orchestra's way of paying tribute to a particularly fine performance." It is a fine performance, but I don't need it hammered into me. J.C.

OFFENBACH: Le Violoneux.

CAST:

Reinette Marie Modeste (s)
Pierre Gilles Butin (t)
Père Mathieu Christophe Mortagne (b)

Les Deux Aveugles.

CAST:

Patachon Régis Ducrocq (t)
Giraffier Gilles Butin (t)

Instrumental ensemble, Louis-Vincent Bruère, cond. [Z. Jovanovic, prod.] BOURG BG 2003, \$10.98 (distributed by Qualiton Records, 39-28 Crescent St., Long Island City, N.Y. 11101).

OFFENBACH: Croquefer.

CAST:

Fleur de Soufre Chantal Reyjal (s)
Ramass'ta Tête Régis Wilem (t)
Croquefer Jean Kriff (t)
Boutefeuf Jean de Beer (b)

Instrumental ensemble, Louis-Vincent Bruère, cond. [Z. Jovanovic, prod.] BOURG BG 2004, \$10.98.

These records form part of a series giving the music of some of Offenbach's lesser-known entertainments, the staples of his troupe at the Bouffes Parisiens. They range from one-act burlesques and curtain-raisers to mere comedy turns. Here, they are sung by music-hall voices, backed by a small and varying group of instruments: piano, woodwind, trumpet, percussion. The aim—largely realized—is to reproduce the wacky verve and quasi-improvisational feeling of the originals. The music may not be top-drawer Offenbach, but its pep and easy melodiousness are always listenable.

For these productions, especially, knowledge of French is an asset. The discs give only the music (and an occasional *mélodrame*—music under spoken text), but much of the wit lies in the words; the dialogue, which can amount to two-thirds of one of these japes, is here given complete in an accompanying insert only in French. (These texts, photocopied from the original edition are sometimes difficult to read.) A very short English synopsis is given.

The text is full of puns, outrageous gags, and in-jokes (some of which require a knowledge of contemporary French society and manners). And Offenbach adds his musical jokes: The love duet in *Croquefer*, a spoof of the medieval genre of operas and plays, quotes from *La Juive* and the love (*Continued on page 87*)

Jellicle Cats, Angelical Cats

Reviewed by Matthew Gurewitsch

ON OCTOBER 7 of last year, *Cats* took New York by storm. Like London some 17 months before, the city capitulated without so much as a show of resistance. There had been warning, first in tales travelers told, then in a scrawled prophecy beside the un-sleeping feline gaze that suddenly began sweeping the streets from billboards and the backs of buses. Now, after the conquest, the greenish-gold gleam in those unfathomable eyes betokens dominion, and words that once sounded like a war cry ("Cats—Now and Forever") seem a conservative projection. What with the crowds encumbering the Broadway sidewalk and the lobby of the Winter Garden in the foredoomed hope of scaring up extra tickets, patrons must do virtual battle to gain entry to the surreal dump where the Cats reclaim jubilant fealty eight times a week.

Their majesties make up a motley court. Taken from the pages of T. S. Eliot's minor children's classic, *Old Possum's Book of Practical Cats* (along with unpublished material from the same period, supplied by the poet's widow), the eminences include: Jennyanydots, the Old Gumbie Cat, who sleeps by day and runs the household by night; the rowdy, contrary Rum Tum Tugger, always on the wrong side of every door; baronial Bustopher Jones, strutting in white spats from feast to feast; shady Mungojerrie and Rumpelteazer, two quick-change comedians never out of mischief; Gus, the down-at-heel, has-been Theater Cat, reliving the moment he made history as the pirate Growltiger, undone by love for the Lady Griddlebone; Skimbleshanks, the Railway Cat, in charge (by and large) of the Sleeping Car Express; nefarious Macavity, the Mystery Cat, a.k.a. the Hidden Paw; Mr. Mistoffelees, who does magic; and Grizabella, the Glamour Cat, fallen on hard days, lost in memory of the time when she knew what happiness was.

The star turns they do as they emerge one by one from the crackerjack ensemble string together into a brilliant vaudeville, and even something more. Going minimally but critically beyond his principal source material, Trevor Nunn (artistic director of the Royal Shakespeare Company, hitherto best-known in these parts for his staging of *Nicholas Nickleby*) has seized on a hint of story that gives the spectacle the directedness of dramatic action. Once a year, the Jellicle Cats assemble for the Jellicle Ball, where, under the light of the Jellicle Moon, the ancient lawgiver Old Deuteronomy makes what is known as the Jellicle Choice, announcing the cat who can now be reborn

and come back to a different Jellicle life. Who will it be? The question having been posed early (in "The Invitation to the Jellicle Ball"), the ensuing numbers—however arbitrary the sequence—register not only on their own terms as song and dance, but also as implicit bids for immortality, or the closest cats get to it. They demand consideration sub specie aeternitatis.

Nunn's textual contributions amount only to some lines scattered here and there (with an assist from Richard Stilgoe) and the admirably concentrated lyric for the hit "Memory" (decocted from Eliot's own "Rhapsody on a Windy Night"). As an adapter, Nunn has changed tenses and pronouns, and spliced in, in a fashion that makes the passage resonant, oracular, and apt to the moment, casually pretentious philosophical musings on the meaning of past happiness from Eliot's "The Dry Salvages." Through the swirling indirection of the Jellicle festivities, Nunn's clues prepare an apotheosis.

(You will be wondering about the honorific term *Jellicle*. Contextually, it often suggests qualities of sibylline intuition, independence, and daring. Elsewhere, the definitions become so circuitous and inclusive that the word ceases to refer to anything particular at all. There is reassurance, though no promise, in such vagueness. We may all be Jellicles; the election may light on anyone.)

From the first moment, the physical production by John Napier (lit by David Hersey) captures the cosmic potential. Plunged into darkness, the house begins to glimmer with pinpricks of dancing starlight. All at once, pairs of eyes blink out from every corner to signal the fall from the empyrean; and with the drop to ground level, the Cats swarm the aisles prowling and unseen, quizzing their visitors from behind glowing visors, until the rising brightness discloses them to view in all their fantastical ragbag splendor, their appearance and actions rife with allusion. Old Deuteronomy's conical ears evoke the cusps of illumination that blaze on the brow of Michelangelo's Moses. Grizabella's wasted finery harkens back to powdered days of aristocracy, long gone. The Rum Tum Tugger, aspiring to the condition of Mick Jagger, bursts on the scene from the other side of the cyclorama, leaving the sky itself in tatters. And at the climax, the clouds open to receive the cat blessed with a new and Jellicle (angelical?) life.

From *Joseph and the Amazing Technicolor Dreamcoat* and *Jesus Christ Super-*

star to Evita, Andrew Lloyd Webber has proved himself an inspired pasticheur. Reportedly, the lyricist Tim Rice, who was his collaborator on that string of smashes, always fashioned his words to fit Webber's music, and the composer began working with the *Old Possum* poems to find out how he would fare with a preexisting text to call the tune. His witty gift did not forsake him. He ventriloquizes in a vast repertory of styles, from the snappy swing harmonies of the Andrews Sisters ("The Old Gumbie Cat") and the thrusting beat of rock 'n' roll ("The Rum Tum Tugger") to skipping music-hall narrative ("Bustopher Jones") and bubble-gum stuff for the kiddies ("Skimbleshanks"). Jazz and disco have also left their mark, but not all Webber's influences are from pop. There is a signature passacaglia for Grizabella, and the ecstatic duet of Growltiger and Griddlebone (sung "in danger of their lives") steals its rapture from Puccini.

Song by song, the material ranges in quality from the excellent to the functional (with lapses into the lousy), but the score as a whole, like the book, is stronger than its parts, knitted into coherence by anticipation and reprise. The Overture sounds a Jellicle theme later developed in extended dance sequences (flashily choreographed by Gillian Lynne) along with Old Deuteronomy's shambling processional, a reminder of the impending election. Long before Macavity breaks cover, his stealthy tune animates the shadow with his menace. Grizabella's song, "Memory" (preemptively released by Barbra Streisand and predestined to be as widely and variously interpreted as "Mood Indigo"), is delivered by two different voices, hauntingly and significantly, in three far-flung fragments. Best of all, the threadbare little tag that goes with Mr. Mistoffelees' parlor tricks trumpets forth anew as the fanfare of Jellicle resurrection. The greatest wonder issues from the least, drawn forth by a chain of harmonic progression.

The primary sources in the *Cats* discography are the original-cast recordings from London and Broadway, two discs each. Despite huge reinforcements of synthesizers, the sounds Stanley Lebowitz draws from his larger New York contingent closely resemble what is heard from London's Harry Rabinowitz with a predominantly acoustic band. But the London Cats are, by and large, a gentler, friendlier, more domestic bunch than Broadway's lions and tigers. Stephen Tate, who plays Gus on the London album, makes his monologue a nostalgic affair ("Well, the theater's certainly not what it was") utterly different in kind from the razzle-dazzle portrait of pique, wounded vanity, and hauteur offered by Broadway's Stephen Hanan ("And I say now, these kittens, they do not get

trained!"). Brian Blessed, known to Masterpiece Theater viewers as the Augustus of *I, Claudius*, conveys Old Deuteronomy's grizzled authority in a croaking actor's bass quite unlike Ken Page's suave though ill-tuned and unsteady gospel tenor. If the records tell true, Elaine Paige's London Grizabella is but a chanteuse with a good song to sing; Broadway's Betty Buckley, who plays more subtly with her song's shifts from 12/8 to 10 to 6, gives a more searching reading, and to judge from the picture on the inner sleeve of the disc of excerpts from the Broadway album, she projects an eloquent, battered shyness in stance, expression, and gesture. (Janet L. Hubert, whose silvery, moonlit tones are heard on the Broadway album in the stanza of "Memory" incorporated into the section "The Moments of Happiness," has lately assumed the part of Grizabella at the Winter Garden, investing her with the lofty grief of an outcast queen.)

But the variances extend beyond niceties of performance. If through most of the show the two casts present identical material, the lines are often reassigned from chorus to solo, or from one speaker to another, to noteworthy different effect. In London it is the lady, on Broadway the pirate, who reports that she "seemed enraptured by his manly baritone." "Mungojerrie and Rumpelteazer," which in London is a first-person duet ticked off in triplets, becomes on Broadway a pantomime to a solo vocal accompaniment in the third person, sung in circusy, grinding common time. Strangest of all, where Broadway's Groultiger and Griddlebone sing their verismo duet (to an Italian translation of lines previously delivered to paint the scene), the London lovers launch into the boozy barroom "Ballad of Billy McCaw," which, though inaptly placed, is worth the hearing. And then there are all the little textual changes, some of them signal. "Memory" begins in London with "Midnight," on Broadway with "Silence."

The compleat *Cats* fancier will thus no doubt want to have both albums. Others may as well base their selection on the toss of a coin. But there is also a third, more economical option: the previously mentioned disc of excerpts from the Broadway recording, featuring the pieces of "Memory" fitted together in a neatly structured single version suitable for jukeboxes, and a short, reorchestrated pass through the instrumental "The Jellicle Ball." Skipping the Overture, the selections from Act I begin with the indispensable Prologue ("Jellicle Songs for Jellicle Cats"), thereupon jumping over the chanted "Naming of Cats" (no loss) and "Invitation to the Jellicle Ball" (no loss musically, but too bad for continuity) to everything but "Bustopher Jones." In Act II, there are just two excisions. The mood-setting "Moments of

Happiness" and the brilliant but longish "Groultiger's Last Stand" have been discarded in favor of the shorter "Skimble-shanks" and "Macavity" (not to mention "Mungojerrie and Rumpelteazer" from the first act), which are far inferior. But the final trajectory ("Mr. Mistoffolees," "Memory," "The Journey to the Heavenside Layer"—that place of wonder one Jellicle only will see—and "The Ad-Dressing of Cats," with its demonstratively meaningless hyphen) is preserved intact.

In all its incarnations, there is an irony about *Cats* that would not have been lost on Old Possum, T. S. Eliot himself. All civilization bore down on him; and his ear was supremely attuned to the cross-cultural incongruities that fling high culture into collision with the common plight of what he famously called "humankind," which could not "bear very much reality." In the new language he created for English poetry, there was place for Catullus, for Dante, for Shakespeare, for Wagner, Sophocles, Laforgue, and the argot of the corner pub. Yet every echo, whatever the source, turned under his hand into learned reference. He never spurned the broad public, but he lacked the common touch. In the pavilion of light verse, his is no very exalted pedestal. The vignettes later collected in the little volume *Old Possum's Book of Practical Cats* (which in its time has been refused its place in the Eliot canon) first showed up in letters to the poet's godchildren, who must have greeted them with a delight that could never die. And despite the elephantine whimsy of the names, there are felicities of conceit and diction in the poems that have fascinated youngsters far beyond Eliot's family circle; but when the time comes, most readers surely lay them aside with other childish things. Webber, who remembered their characters and tricky rhythms with affection, and Nunn, who with Napier, Hersey, and Lynne helped him shape that memory into a vision, have given the creatures of Eliot's donnish contrivance a new and Jellicle lease on a life that promises to last in the popular imagination forever, as advertised. **HF**

CATS: Original Broadway cast recording.

Music by Andrew Lloyd Webber; lyrics by T. S. Eliot and Trevor Nunn. Stanley Lebowsky, cond. [Andrew Lloyd Webber and Martin Levan, prod.] GEFEN 2GHS 2031, \$16.98 (two discs, manual sequence). Cassettes (2): 2G5 2031, \$16.98. (Selections available on GHS 2026.)

CATS: Original London cast recording.

Harry Rabinowitz, cond. [Andrew Lloyd Webber, prod.] GEFEN 2GHS 2017, \$16.98 (two discs, manual sequence). Cassettes (2): 2G5 2017, \$16.98.

(Continued from page 85)

duet from *Huguenots*—the latter in a very funny way; for, though the man has not declared his love, the woman launches into one of the most famous moments in French opera assuming he has, and here the spindly soprano voice only adds to the fun. In the Finale, the principals sing that all the creators of the piece have been taken to Charenton—the notorious French asylum.

In many ways, these records come closer to the spirit and the light-hearted gaiety of this music than do other, more musically sophisticated, recordings. **P.J.S.**

SAINT-SAËNS: Le Rouet d'Omphale, Op. 31—See Franck.

TCHAIKOVSKY: Swan Lake, Op. 20*; The Sleeping Beauty, Op. 66†; The Nutcracker, Op. 71‡.

Ambrosian Singers‡, Philharmonia Orchestra, John Lanchbery, cond. [John Fraser, prod.] ANGEL DSC 3931*, 3932‡, \$38.94 each (digital recordings; three discs, manual sequence); DSB 3933‡, \$25.96 (digital recording; two discs, manual sequence)‡. Cassettes: 4X3S 3931 (3)*, 3932 (3)†, \$29.94 each; 4X2S 3933 (2)‡, \$19.96.

TCHAIKOVSKY: The Sleeping Beauty, Op. 66.

Leningrad Philharmonic Orchestra, Viktor Fedotov, cond. DEUTSCHE GRAMMOPHON 2740 274, \$32.94 (three discs, manual sequence).

BBC Symphony Orchestra, Gennady Rozhdestvensky, cond. EURODISC 300 575, \$29.94 (three discs, manual sequence). Cassettes (3): 500 575, \$29.94.

Because of the increased popularity of dance during the last decade or so, Tchaikovsky's three ballets have finally established themselves with the public in their full-length form. Even so, uncut performances of the music are rarely if ever encountered in the theater; to hear them so performed one must turn to discs. Luckily, there are enough complete versions of all three scores currently available to give the prospective buyer a wide choice of performing styles—six *Swan Lakes*, seven *Sleeping Beautys*, and nine *Nutcrackers*.

Virtually all these recordings show at least some awareness of the music's theatrical identity, a concern for nuances of phrasing and flexibility of rhythm that dancers would find necessary. In this respect, they differ from most of the excerpts discs, which concentrate instead on orchestral virtuosity and gorgeousness of sound and betray a rhythmic rigidity at odds with the demands of the stage.

Addicted as I am to late-nineteenth-century ballet, I gravitate to those performances on disc that would work best in the theater—for which reason I had greatly looked forward to hearing the new recordings by John Lanchbery, one of the most distinguished of present-day ballet conductors and a former music director of the Royal Ballet, the Australian Ballet, and American Ballet Theater. Sad to say, they are

disappointing. Though often energetic in manner, they rarely sound sufficiently animated, mainly because of a pervasive rhythmic squareness. The scene in the *Sleeping Beauty* Prologue featuring the highly dramatic entrance of the wicked fairy Carabosse and her subsequent cursing of the infant princess, for example, simply plods along at a fairly steady gait and fails to communicate any tension or menace. As a result, the intervention of the Lilac Fairy, one of Tchaikovsky's most magical strokes, goes for little.

Of the three Lanchbery recordings, *The Nutcracker* is the best, though even here he sounds insufficiently engaged by the music to reveal its full melodic and emotional splendor. All the performances are complete. *The Nutcracker* even containing, in Act II, a gigue omitted from the orchestral score and orchestrated for this occasion by the conductor from the surviving piano version. For *Swan Lake*, Lanchbery, like Bonyng (London CSA 2315), Ozawa (DG 2709 099), and Previn (Angel SCZX 3834), uses a reconstruction of Tchaikovsky's 1877 score (in which the Act III pas de deux is orchestrated in part by Vissarion Shebalin) rather than the version arranged by Riccardo Drigo in 1895, two years after the composer's death, which we invariably hear in the theater today. Ansermet (London CSA 2204) uses the familiar Drigo recension, for which reason his recording is well worth having, especially as it is so beautifully performed. (Maurice Abravanel may also use this version, but I have not heard the Vanguard set, SRV 223/4.) Angel provides Lanchbery with clear but glassy sound; music of this kind needs something warmer. However, Angel's surfaces, improved out of all recognition, are virtually silent.

In the case of *The Sleeping Beauty*, the performances of Viktor Fedotov and Gennady Rozhdestvensky are far more persuasive, the former brilliant and exciting, the latter elegant and charming. On the whole, I prefer Rozhdestvensky's account of this greatest of full-length ballet scores for its blend of grace and propulsion, and I also find the sound produced by the BBC Symphony more sympathetic than that of either the Leningrad Philharmonic or the Philharmonia. Ansermet's performance (London Treasury STS 15496/8), though somewhat cut and less vividly recorded, is still superb and is, moreover, a bargain. **D.S.H.**

TCHAIKOVSKY: Variations on a Roco Theme—See Dvořák.

TIPPETT: Concerto for Violin, Viola, Cello, and Orchestra.

György Pauk, violin; Nobuko Imai, viola; Ralph Kirschbaum, cello; London Symphony Orchestra, Colin Davis, cond. PHILIPS 6514 209, \$12.98 (digital recording). Cassette: 7337 209, \$12.98.

The term "triple concerto" brings Beethoven to mind, of course, but his solo instruments are piano, violin, and cello. Except for Mozart's one-movement *Sinfonia concertante* in A major, K. Anh. 104 (not completed by Mozart), there seems to be no precedent for Michael Tippett's Triple Concerto for string trio, written in 1978-79. Annotator John Warrack mentions Brahms's Double Concerto as a surprising ancestor. He might also have cited a lesser-known double, that of Delius, for there is much in the extended slow sections of Tippett's score, particularly in the solo writing, to suggest that this is the kind of piece Delius might have written were he alive today; the haunting principal theme of the central slow movement, which begins Side 2, provides a case in point. In sharp contrast, I have always found Tippett's busy and difficult brass passages, not only here but in the Third and Fourth Symphonies, very similar in style to those of William Schuman. (I don't know whether Tippett is familiar with the work of his distinguished American colleague.)

In spite of these similarities (I hesitate to call them "influences"), Tippett is very much his own man, with a highly personal style of writing. He is at his best in slow, lyrical passages; his fast, aggressive writing can seem a bit forced. Fortunately, he supplies more of the former in the Triple, an extended songful and rhapsodic work, tightly organized, in which the trio members are treated mostly as soloists instead of as an ensemble. The more forceful moments occur at the beginning and toward the end of the score, framing the long lyrical sections and providing sharp contrast.

The percussive ending is abrupt and unexpected. Also unexpected, because so out of keeping with its surroundings, is a brief, jazzy interlude for percussion with brass interpolations between the second and third movements. I'm told the composer wanted, at that point, something completely unrelated to the rest of the work—as different as possible. That it certainly is.

My earlier acquaintance with this piece came in two 1981 concerts. My impression is more positive here than it was on either of those occasions, in London and New York, when the work seemed rambling and diffuse. While it may be true that there is no substitute for a live performance, the immediacy obtainable in a recording, with the sound hitting you directly from the speakers, can be more beneficial in assessing new and unfamiliar music than a concert presentation, where one is often at some distance from the performers and where there are acoustical considerations and audience distractions. In any case, this is an important release of a significant composition by an always interesting and often provocative composer. The work's original performers, György Pauk, Nobuko Imai, Ralph Kirschbaum, and Colin Davis and the London Symphony Orchestra, re-create it in a beautiful, sensitive performance, superbly recorded.

It's unfortunate, however, that a work just a little over half an hour long, and meant to be played without pause, should be split over two sides. Surely it could have been accommodated on one, leaving room for something of related interest. But then, as I have noted before, Philips is not noted for its generosity in filling a record. **J.C.**

Recitals and Miscellany

CATS: Original Broadway cast recording; Original London cast recording—See page 86.

MARILYN HORNE LIVE AT LA SCALA.

Marilyn Horne, mezzo-soprano; Martin Katz, piano. [Paolo Dery, prod.] CBS MASTERWORKS M 37819. Cassette: MT 37819. [Price at dealer's option.] (Recorded in performance.)

F.M. ALVAREZ: La Partida. COPLAND: At the River; Ching-a-ring Chaw; Long Time Ago; Simple Gifts. FOSTER: Beautiful dreamer; Jeanie with the Light Brown Hair. GRANADOS: La Maja dolorosa, No. 1. HANDEL: Semele; Awake, Saturnia . . . Iris, hence away. MONT-SALVATGE: Canción de cuna. OBRADORS: El Vito. POULENC: Le Bestiaire. ROSSINI: Semiramide; Eccoli affline in Babilonia . . . Ah, quel giorno ognor rammento. TURINA: Farruca. ANON.: Cloris sighed.

To judge from the album, the recital Marilyn Horne presented at La Scala on a date (or dates?) undisclosed by CBS did not differ in any particular from programs she has

been offering all over the world for years. The selections, in several languages, range from the baroque to the more accessible twentieth century, with sophisticated folk-song settings of various provenance, some nostalgic salon music, and the inevitable bel canto scena that makes people feel they got their money's worth. The whole thing comes off as planned, and no doubt made, live at La Scala in Milan, a most enjoyable musical afternoon.

But despite the excellence of the singing, which is fluent, assured, sensitive, and brilliantly colored, there are good reasons why the concert might better have been left to pass unrecorded. For all his virtues as an accompanist, Martin Katz is still only a pianist, and the tubby concert grand he plays does little to enhance any of the material. Often, it actually detracts. According to the liner notes (unattributed, and no wonder), the piano in the anonymous "Cloris sighed" (English, late-sixteenth or early- (Continued on page 105)

The Tape Deck

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

Leonine Pride

Of pianistic lions, that is, led by three magnificent Russian-bred specimens, two of them roaring to captivated auditors. Crowning his career, Vladimir Horowitz's 1982 televised London concert (RCA Red Seal digital/chrome, ARE 1-4572, \$12.98) is a magisterial demonstration of absolute subjugation of an audience. But tape buyers are denied the bonus record of the pianist's spoken reminiscences. And there are greater artistic rewards in his earlier mono Schumann *Kinderszenen* and Chopin First Ballade (reissued with his 1980 Rachmaninoff Second Sonata in XRK 1-4329, \$7.98) as well as in the 1979-80 "On Tour" disc, featuring a fine Clementi sonata and delectable Rachmaninoff polka (plus an over-mannered Chopin Barcarolle, etc., in ARK 1-4322, \$9.98). These two analog/ferric cassettes, however, lack notes, in line with RCA's former policy.

Sviatoslav Richter awes Japanese concertgoers—by lyrical eloquence as well as virtuosity—in Vox Cum Laude's first digital/chrome Melodiyas (VCS 9027/8, \$10.98 each): Schubert's enchanting A major and A minor Sonatas, D. 664, 784; and Schumann's three *Novelletten*, coupled with a tantalizing selection of Chopin preludes (13 of 24). Scarcely less Leonine, the third release in Emil Gilels's complete Beethoven sonata series for Deutsche Grammophon pairs his grandly expansive yet often unexpectedly lighthearted No. 17 (*Tempest*) and No. 18 (digital/chrome 3302 061, \$12.98).

Many lesser but still formidable lions prowl the recording studios. Another Russian, Igor Zhukov, is more attractively recorded in Scriabin's Op. 11 Preludes (Turnabout CT 4788, \$5.98) than he was in the deleted Melodiya/Angel series of the composer's sonatas. The Israeli Daniel Barenboim drops his baton for a second battle with Beethoven's *Diabelli* Variations (DG digital/chrome 3302 048, \$12.98), which proffers appeals to which I am unfortunately anesthetic.

Among American lions, Russell Sherman shows matured powers in a remake of his 1977 Advent/Sine Qua Non Beethoven *Appassionata*, now coupled with the engaging, more lightweight Sonata No. 7 (Pro Arte digital/chrome PCD 108, \$9.98), first of a projected complete series recorded in Europe. Peter Serkin expands his provoca-

tively non-Romanticized Chopin series with the *Andante spianato and Grande polonaise* plus six shorter pieces (RCA digital/chrome ARE 1-4356, \$12.98). From the past, there's a "Great Performances" resurrection of the agelessly vital 1957 mono recording of Franck and Rachmaninoff variations by Leon Fleisher with Szell and the Cleveland (CBS Masterworks MYT 37812, price at dealer's option). And a 0.5 series reissue of the still grimly impressive 1959 stereo version of Liszt's *Totentanz* by Byron Janis with Reiner and the Chicago is coupled with the same artists' hitherto unreleased Schumann concerto of the same vintage—unusual for the conductor's indulgence of the soloist's vagaries (RCA chrome ARE 1-4668, \$12.98).

Native piano-music specialists. Ruth Laredo and Noël Lee earnestly set forth the appeals of representative works by Samuel Barber and Charles Tomlinson Griffes (Nonesuch digital/ferric 79032-4, \$11.98, and 71049-4, \$5.98), while John Cobb and Yvar Mikhashoff dramatically demonstrate the more profound originalities of Charles Ives's First and Second (*Concord*) Sonatas (Spectrum SC 255 and 220, \$7.98 each).

And supreme keyboard poets. The Czech pianist Ivan Moravec (with producer Max Wilcox) matches his Nonesuch Janáček jewel of last month with what surely is the most magical *sounding* recording and may well be the most magical reading of Debussy's six *Images* and three *Estampes* (Vox Cum Laude digital/chrome VCS 9037, \$10.98)—surpassing in grace, vivacity, and subtlety of nuance even the fine Arrau/Philips versions of September 1982 (7300 965). And the late Clifford Curzon's belated legacy of 1970 Mozartean treasures is an incomparable coupling of the Concertos Nos. 20 and 27 with an infectiously enthusiastic English Chamber Orchestra under Benjamin Britten (London CS5 7251, \$10.98).

Avant-garde (sort of). Current compositional activity in "advanced" musical idioms is sparsely represented on recordings—even less on musicassettes that come to my attention. Of recent pertinent examples, perhaps only one is fully qualified. That comes, not surprisingly, from the most consistently progressive American record producer, Nonesuch: the two major piano works by one of the, if not *the*, most significant native master of advanced idioms, Elliott Carter. His recent *Night Fantasies*—a modern exemplar of the nightmare-phan-

tasmagoria genre that so fascinated medieval artists and nineteenth-century Romanticists—receives a near-ideal exposition from Paul Jacobs, one of the four pianists who commissioned it. And Jacobs is even more gripping in the boldly dramatic Sonata of 1945-46 (Nonesuch digital/chrome 79047-4, \$11.98).

Far less substantial but more immediately appealing than most moderately avant-garde chamber works are those given assured presentations by the Kronos Quartet: Ken Benshoof's engaging *Traveling Music* and the Australian Peter Sculthorpe's somber Eighth Quartet—both laboring valiantly in the shadow of the *Six Bagatelles* by Master Microminimalist Anton Webern (Sounds Wonderful SWC 8201, \$11.50 including shipping, from P.O. Box 14362, San Francisco, Calif. 94114)—a first-rate example of state-of-the-art chrome-cassette processing.

Regardless of their (by no means exorbitantly) difficult idioms, all these works really *move*, both motionally and emotionally—more than I can say for Lukas Foss's pretentious *Round a Common Center*, despite the presence of guest stars Orson Welles and Yehudi Menuhin. The Cantilena Chamber Players fare better with Yehudi Wyner's heartfelt, improvisatory *Intermezzi*. But what really matters here is the first recording in more than a decade of Aaron Copland's highly distinctive, often witty Piano Quartet of 1950 (Pro Arte digital/chrome PCD 120, \$9.98).

Ironically, some successful "avant-garde" works are actually rearguard reversions to unabashed Romanticism or escapes to quasi-transcendental "minimalism." Witness David del Tredici's *In Memory of a Summer Day* (*Child Alice*, Part 1), by soprano Phyllis Bryn-Julson and the St. Louis Symphony under Leonard Slatkin (Nonesuch digital/ferric 79043-4, \$11.98), and Philip Glass's *The Photographer*, by a choral-orchestral ensemble under Michael Riesman (CBS FMT 37849, price at dealer's option). Though each release makes a persuasive case for the music (and includes essential notes and texts), the schmaltzy, repetitious treatment of the Alice tune and the endless Glassy ostinatos make maddening demands on one's patience.

My prescription is remedial ear-cleaning with Stravinskian astringencies: Paul Jacobs and Ursula Oppens's freshly revelatory *Petrushka* and *Three Pieces* for string quartet in piano-duet transcriptions (Nonesuch digital/ferric 79038-4, \$11.98). **HF**

BACKBEAT[®]



His first album is just hitting the streets, but Vaughan and his blues guitar are already well-known among rock's elite.

Stevie Ray Vaughan

by Steven X. Rea

CONSIDERING THE COMPANY he has been keeping lately, Stevie Ray Vaughan should have a head the size of a watermelon. The 28-year-old blues guitarist, brand-new to the record business, has been hobnobbing with Mick Jagger, Ron Wood, and Keith Richards, using Jackson Browne's studio free of charge, listening closely to the advice of veteran industry talent scout John Hammond, dashing over to Montreux, Switzerland—at the behest of producer Jerry Wexler—and dishing up some exemplary lead guitar licks on David Bowie's current hit LP, "Let's Dance."

Vaughan has been lauded by all the aforementioned notables and a slew of superlative-slinging rock critics as the greatest thing to happen to the blues since Eric Clapton and Jeff Beck brought their revitalized British brand of same to these shores back in the Sixties. The commotion began about a year ago when Jagger, after seeing a videotape of Vaughan and his band Double Trouble, invited them to play for a private party at New York's hot new-wave club Danceteria. The rock press was there

and dutifully reported on the proceedings. There were even rumors that Vaughan and Co. might accompany the Stones on their 1982 European tour. Then Atlantic Records' Wexler flew to Austin, Texas, to see them in their natural environs. He was so impressed that he arranged for Vaughan and Double Trouble to play in July of '82 at the Montreux Jazz Festival in Switzerland—even though they had no recording contract. Montreux was where Bowie and Browne, among others, first witnessed Vaughan's guitar pyrotechnics.

Vaughan, whose older brother Jimmy is lead guitarist with the Fabulous Thunderbirds, grew up in a section of Dallas called Oak Cliff. He dropped out of high school in his junior year and moved to Austin, where he played in a succession of bands (including one with singer Lou Ann Barton) and worked various odd jobs to make ends meet. In 1978, he formed Double Trouble with bassist Tommy Shannon and drummer

Chris Layton, and together they have been working the southwestern club circuit ever since. In an interview a few weeks before the release of his debut album "Texas Flood" on Epic, the singer-songwriter-guitarist talked about his background, his band, his music, and his inspiration. With all the hoopla surrounding him, this slow-talking Texan with the soft, scratchy voice sounded as unimpressed and as down-home as a cactus stump.

Backbeat: When did you first pick up a guitar, and what sort of things did you listen to?

Vaughan: I've been playing for about 20 years, since I was eight. I listened to Lonnie Mack and all the records my brother used to bring home—Buddy Guy, B.B. King, Jimi Hendrix, Jeff Beck, the Who. There were a lot of things going on then.

Backbeat: When did you start playing professionally?

Vaughan: I guess I was about 13 or so.

Backbeat: I've read that you started out in roadhouses, school dances, and such, and

then moved on to clubs like Arthur's and the Funky Monkey in Austin. When did you begin to realize that your guitar playing transcended mere competence?

Vaughan: Well, I had always liked my playing, but then I began to realize that other people were getting off on it too. The notes were coming across the way I was trying to get them across, as opposed to—I don't know how to describe it, exactly—as opposed to just coming out.

Backbeat: Can you recall when that was?

Vaughan: Probably when I was 15, something like that.

Backbeat: Do you still have any guitar heroes?

Vaughan: Yeah, my brother. And B.B. and Albert King. Buddy Guy still does it to me. [Vaughan covers Guy's *Mary Had a Little Lamb* on "Texas Flood."] There's no reason to stop liking all those guys I admired in the first place. Never will be.

Backbeat: What about white blues guitarists like Bloomfield and Clapton?

Vaughan: They're great, but they're not the same as somebody like Albert or B.B. There's a big difference.

Backbeat: And Hendrix?

Vaughan: How can you ignore him? He was wonderful. . . . I only wish I had seen him live.

Backbeat: When did you record "Texas Flood"?

Vaughan: On November 11 and 12 of last year. We did two tracks the first day and the other eight the next [in Browne's L.A. studio]. We did the vocals here in Austin a few months later. Then we mixed it in New York in early March. We just finished mastering a couple of weeks ago.

Backbeat: Are you happy with the way it turned out?

Vaughan: Pretty much. . . . There are some things about it that I don't like—a few places where the bass pops, a couple of things that could've been better technically. But overall I like it a lot, which surprises me, since I'm usually really hard on myself.

Backbeat: John Hammond is credited as executive producer. What exactly does that mean?

Vaughan: He supervised the mixdown and the mastering.

Backbeat: I understand that your contract with Epic stipulates that Hammond work with you on all of your records. Is it valid to say that he "discovered" you? He is considered responsible for discovering and nurturing the careers of Springsteen, Dylan, and Count Basie, among others, so you're certainly in good company.

Vaughan: We've talked about that. He doesn't really know what it means when somebody says that he "discovered" somebody. I had heard of him for a long time, he had heard some tapes of ours, and we just wanted to work together—you know? And we're planning to work together for quite some time.

Backbeat: Wasn't there some talk of being on the Rolling Stones' label?

Vaughan: Some, but it never amounted to much.

Backbeat: How did you hook up with them in the first place?

Vaughan: My manager, Chesley Millikin, is also the general manager of the Manor Downs horse race track and an old friend of the Stones. Once, when Jagger came down to the track, Chesley gave him a videotape of a show we had done. Jagger took the tape and must've liked it. Supposedly, Keith Richards still has it in his limo and watches it all the time. You'd think he'd be sick of it by now.

At any rate, they called and asked us to work at a private party in New York. It was also an audition for a record deal and for some opening dates for their tour. As I said, those never came about—the Stones were too busy touring, doing movies, and working on their albums. But we played for a long time that night. We were only supposed to play for 35 minutes, but it ended

up being more than two hours. Every time we stopped, Jagger would tell us to keep playing.

Backbeat: Had you been shopping for a label deal for a long time, sending out demo tapes and all that?

Vaughan: Well, yes. I've wanted to make records for as long as I can remember. Who doesn't? But this was the first good chance I got.

Backbeat: Did you ever do any small-label recordings, any self-financed releases?

Vaughan: I've played on other people's records, but I haven't made any of my own before now.

Backbeat: Even though Bowie's record has dance and r&b elements, it's much more slick and refined than your own. Was it a big contrast for you to play in that production context?

Vaughan: It was fun. What I played wasn't really that different than my usual style. Bowie would do his vocals and then say, "Plug in and play." Sometimes he wanted
(Continued on page 103)

Stevie Ray Vaughan & Double Trouble: Texas Flood

Steven Ray Vaughan, Double Trouble, &
Richard Mullen, producers
Epic AL 38734

Stevie Ray Vaughan's guitar playing is designed to elicit gasps: Every cluster of notes is an invitation to amazement. This multiple-climax approach could easily prove exhausting (when you know a corker of a solo is due for arrival in four bars, you steel yourself for another bluesy barrage), but Vaughan's feisty attack makes for terrific entertainment. On the title cut of "Texas Flood," for example, he takes a standard 12-bar blues and develops one fierce, ominous solo after another, breaking up his vocal phrases with furious snippets of instrumental commentary that complement the song's subject (the upheaval of the elements). It's a showy turn, but it definitely does its job. Or he'll take an ordinary piece of material, Buddy Guy's *Mary Had a Little Lamb*, and let out with a run that's like a rapid series of pinpricks.

Vaughan makes you concentrate on his technique, calling attention to the undercurrent of menace he creates on *Dirty Pool*, where his rumblings suggest simmering anger on the verge of eruption; to the jazzy chording on the instrumental *Rude Mood*; to the jaw-dropper passages that emerge out of *I'm Crying*. That's what makes this debut album, supervised by executive producer John Hammond (with a half-century of talent-spotting behind him, from Billie Holiday to Bruce Springsteen), such an effective platform for Vaughan: Nothing is allowed to get in the way of his hotshot style. The songs are basic blues, shuffles, impressionistic instrumentals, and roadhouse rockers; the bassist and the drummer keep the beat, Vaughan's singing is functionally gritty, so the suspense comes in thinking, "What's the kid gonna do next?" He gets undivided attention.

In a way, listening to "Texas Flood" is like seeing a run-of-the-mill detective film with an unknown actor who does astonishing variations on hackneyed situations: You may not want to sit through that particular movie again, but you'll be sure to check out his next one. In "Texas Flood," Vaughan is playing Blues-Guitar Hero. Because one hasn't come along in a decade or so, since Duane Allman (the '60s were full of them, from Mike Bloomfield and Eric Clapton to Johnny Winter and Peter Green), his repertoire of licks is bound to draw a crowd.

While Vaughan has a commendable range of influences—there are suggestions of Les Paul, Jimi Hendrix, and Link Wray throughout the LP—"Texas Flood" is limited by its preponderance of stripped-to-the-bone blues and by songs that primarily serve as outlines for Vaughan to color in with his Fender. Flamboyant as he is fronting Double Trouble (the Texas band was known as Triple Threat when Lou Ann Barton was their vocalist), it's just as much fun to hear his lead guitar as part of David Bowie's "Let's Dance" album. He clicks expertly into Nile Rodgers's brand of modern dance-funk, bobbing and weaving behind Bowie's deadpan vocals, wailing under the title song's fade-out as Bowie sings, "Let's sway under the moonlight/This serious moonlight." Like Allman, Vaughan seems to find angles in his sideman assignments that his own band doesn't require him to explore.

"Texas Flood" may have a narrower and less "contemporary" format than that of "Let's Dance," but it also has an expansive talent at its center and production that captures him at full run, with guitar work that's coarse, bruising, yet surprisingly lyrical. If the LP's range from the jump-shout-'n'-holer opener *Love Struck Baby* to the almost elegiac *Lenny* at its end is an accurate indication, Vaughan has a careful of ways to knock fans of ensnaring guitar work for a loop.

MITCHELL COHEN

Reviews

Edmunds: Soupy Synths 'n' Rock 'n' Roll



Edmunds: an excellent collection that celebrates rock's greatest traditions

Dave Edmunds: Information

Dave Edmunds & Jeff Lynne, producers
Columbia FC 38651

Yes. Electric Light Orchestra's electronic maestro Jeff Lynne had a hand in two of the tracks. Yes, there are synthesizers galore—Lynne's, Dave Edmunds's, and ELO's Richard Tandy. But though a cursory look at "Information" might suggest that Edmunds has sold out to the latest electro-pop craze, this is, upon listening, definitely not the case. The feisty Welsh rocker's latest is also one of his best, and the shimmering electronic stylings of *Slipping Away* (penned by Lynne), *The Watch on My Wrist*, the title track, and several other tunes are just that—stylings.

In fact, the synthesizers lend an engaging unpredictability to the proceedings. One minute Edmunds's keening tenor is warbling a Rolling Stones (by way of the J. Geils Band) kind of blues like *Wait*, and the next it's phasing and echoing its way through a soupy mix of synthesizers. John David's walloping bass lines and Dave Charles's thumpingly emphatic drumming keep the course steady, offering rhythms that surge and gallop, and a sense of continuity not to be argued with.

Among the standouts on this all-around excellent collection is the Edmunds-composed title track. Here, the singer-gui-

tarist serves up some dreamy Everly Brothers-style harmonies that careen along contrapuntally with some big fat guitar lines and gurgling synthesizer motifs. *I Want You Bad*, which sounds like a missing Lovin' Spoonful hit, is an NRBQ tune that Edmunds delivers in a sharp, sprightly '60s pop groove. Other high points include the winsome *What Have I Got to Do to Win?*—an Edmunds-David collaboration—and a stomping country rave-up of Otis Blackwell's *The Shape I'm In*, which features Geraint Watkins's accordion.

Longtime Edmunds cohort and keyboardist Watkins bashes a piano like nobody else, and his influence throughout cannot be overstated. On Moon Martin's rollicking *Don't You Double* ("double-cross me baby"), for instance, his roadhouse honky-tonk piano merges head on with some booming bass and drums and a sinewy slide guitar.

Edmunds—whose first and biggest hit was a novelty remake of Smiley Lewis's *I Hear You Knocking*—can never be accused of blazing new trails in rock and roll. From Berry to bluegrass and from rockabilly to the Everlys, Elvis, and the blues, he continues to pay homage to rock's greatest traditions, all the while maintaining a zealous forthright enthusiasm. Whether collaborating with like-minded ex-Rockpile-mate Nick Lowe or synth-happy, frustrated-Bea-

tle Lynne, Edmunds demonstrates a knowledge and a love of rock that is highly contagious.

STEVEN X. REA

Delia Bell

Emmylou Harris, producer
Warner Bros. 23838-1

The best female country singers sound as if they've shown up to teach Sunday school a little hung over from Saturday night; there's a hesitant choke in the voice, a combination of resolve and remorse. Delia Bell has that sound down pat, whether she's singing about sneaking off for an adulterous assignation (*Back Street Affair*) or preparing to meet Jesus on the mountain (*Good Lord A'mighty*). This album, her first for a major label, has been designed as a showcase for her by Emmylou Harris, and it has been chiseled with great care, from the song selection—Carter Family standards, spirituals, and songs dwelling on such secular matters as sputtering passion and the geographical determinants of infidelity (*Don't Cheat in Our Hometown*)—to the musicians, who play the basically acoustic arrangements as though the De-twanging of Country (also known as the post-Billy Sherrill era) had never occurred.

There are no syrupy violins on "Delia Bell," just Byron Berline's vigorous fiddle. No corny backup crooning, just the

deft harmonizing of Holly Tashian and Emmylou Harris. Anyone, in fact, who fondly remembers Harris as a member of Gram Parsons's Grievous Angels and as part of Bob Dylan's "Desire" album will relish hearing her clear soprano underlining Bell on *Coyote Song* and the classic weeper *I Forgot More (Than You'll Ever Know About Him)*.

The whole project is closely related to such minimally amplified, traditionally textured Harris LPs as "Roses in the Snow," "Blue Kentucky Girl," and "Light of the Stable," and that resemblance sometimes gets in Bell's way. While it's difficult to go wrong with Chet Atkins, John Anderson (who contributes a rough-hewn duet vocal on George Jones's *Flame in My Heart*), Berline, Glen D Hardin, Emory Gordy, and Carl Jackson (hell, Barbara Walters could probably make a decent country LP in this company), Bell has to work hard to get across her own personality. In fact, there are some tracks that could be billed as "Emmylou Harris's Hot Band Featuring Delia Bell." Throughout the album, however, from the honky-tonk homilies of *Back Street Affair* and *Flame in My Heart* to the speculations on mortality in *Lone Pilgrim* and *Will You Miss Me*, Bell proves that she can do more than just hold her own. Nothing she does comes off as contrived; her voice maintains a ring of real life, encompassing the heartache of the here and now and the promise of hereafter. Much of "Delia Bell" is worthy of being put alongside albums by John Anderson and Ricky Skaggs, two other preservationists doing their part to reclaim a lost spirit in country music.

MITCHELL COHEN

Joe "King" Carrasco & the Crowns: Party Weekend

Richard Gottcher, producer
MCA 5404

Someone has finally figured out how to get the jumpy, hopelessly cheerful Tex-Mex sound of Joe "King" Carrasco & the Crowns down on vinyl. On "Party Weekend," veteran producer Richard Gottcher (Blondie, Marshall Crenshaw, the Go-Go's) has matched the quartet's rollicking, Farfisa-organ-dominated tunes with a wall-opping beat and a clear, ringing pop style.

The result is 12 festive, funky tracks that are simultaneously slick and tacky, that crackle with a smart "modern" sound and at the same time exude pure '60s cheesiness—the kind that comes only from years of listening to Sam the Sham & the Pharaohs and Question Mark & the Mysterians.

Sixties singles acts that were hard-pressed to find an LP's worth of new material often recycled their tunes. Ever true to his unabashedly schlocko pop-music roots, Carrasco does the same (the title track, the rocking *Let's Go*, and *Buena*), but it doesn't matter because the new readings are

just that: new, enlivened, and expanded. There's also a wonderful south-of-the-border send-up (some might say rip-off) of *Louie, Louie* titled *Lupe*, in which Carrasco and company—keyboardist Kristine Cummings, bassist Brad Kizer, and drummer Dick Ross—veer dangerously close to the original and then throw in a few skewed notes to avoid a plagiarism suit.

Throughout "Party Weekend," Gottcher brings out Cummings's fine keyboard work: On *Gracias* her organ sounds like Mexican ice-skating music; on *Let's Go Nutz* her keyboards glide around with cool aplomb; and on *Kantina* she weaves in and out of various ethnomusical motifs. In fact *Kantina* comes closest to being the centerpiece on this album full of good stuff. With his whiny vocals and plunking guitar, Carrasco offers up a musical travelogue, yelling "Kantina around the world" as he and the Crowns dip into Egyptian, Turkish, Spanish (matador music), and other exotic rhythms and cultural references.

Though the overall mood is suggested by *Party Weekend*, Carrasco's sensibilities can run a little deeper: *Tears Been a-Falling* is a gloriously slow, almost wistful ballad that he sings like he means it (or almost). It's simultaneously sad and sappy in the finest pop tradition—just one more reason to latch on to this fine, fun collection.

STEVEN X. REA

Goanna: Spirit of Place

Trevor Lucas, producer
Atco 90081-1

This young septet hasn't chosen the title for its debut casually. "Spirit of Place" tackles nothing less than a panorama of life in Australia, focusing on the texture of its modern culture but gazing back as well, beyond its rugged colonial past all the way to its tribal prehistory. That sense of perspective has already earned the band and its maiden recordings sizable commercial and critical recognition at home, but fortunately you don't need to be Australian to enjoy their music.

If anything, Goanna invokes the British folk traditions of the continent's earlier settlers as well as the American pop and rock that have been fixtures there in recent years. The closest parallels, both topically and instrumentally, lie in the best English and American electric folk-rock of the late '60s and early '70s: Goanna forges an amplified, guitar-based ensemble style, modal-shaped melodies, and lyrics in the venerable tradition of the narrative ballad.

While the set opens with a romantic confession sparked by jazzy chord progressions and tough syncopations (*Cheatin' Man*), its highlights arise from more ambitious themes. *Solid Rock (Sacred Ground)* is a bristling, up-tempo picture of civilization and genocide, building from the insect-like buzz of an aboriginal didgeridoo through tense rhythm-guitar chords and taut

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tom-tom accents. This urgently sung protest song is both mournful and threatening, the winds of change that nearly erased native tribal culture ("White man, white law, white gun") still blowing menacingly at the song's end.

Elsewhere, chief songwriter and lead vocalist Shane Howard offers a gently melancholy look at modern alienation and social disillusionment (*Razor's Edge*) that moves into an angry but concerned love song (*Scenes*), which straddles both the personal and the communal dimensions of the emotion. If Howard's imagery sometimes verges on the fuzzy-headed, the passion and precision of the performances compensate.

Folk-rock fans may hear echoes of Fairport Convention at its most electric, which seems inevitable given the involvement of producer Trevor Lucas, himself a second-generation Fairport member. Like that group, Goanna impresses throughout as an ensemble, not just a mouthpiece for its songwriters; also like Fairport, its vocal identity is dictated as much by the blend of male and female voices as by their sturdy harmonic bedrock and folk sources.

Goanna sounds at once conservative and refreshing, much as Dire Straits did five years ago, and Howard and company stand out less as a result of any bold innovation than what might be construed as iconoclasm. Whatever the reason, "Spirit of Place" is an engaging debut, laudable for its musical finesse and unmannered topical gravity. SAM SUTHERLAND

Elton John: Too Low for Zero

Chris Thomas, producer
Geffen GHS 4006

After diverging from a seemingly foolproof hit formula to try a succession of disappointing partnerships in the late '70s, Elton John has spent his past few albums attempting to edge back toward the infectious pop/rock style that made him a platinum titan in the mid-Seventies. Last year's "Jump Up!" signaled the return of original lyricist Bernie Taupin as one of several writing partners and offered musical evidence that John was back on course. Despite its reserved commercial reception, that project contained John's most engaging songs and freshest performances since his chart-topping heyday: One assumed that he would carry his back-to-basics strategy further.

He has done precisely that on "Too Low for Zero," his third Geffen album. In addition to Taupin serving as central lyricist for all 10 songs, the recording brings back the original studio and stage band: guitarist Davey Johnstone, drummer Nigel Olsson, and bassist Dee Murray. Together with John's rippling grand-piano figures (occasionally augmented by synthesizer), the instrumental quartet revives the lush but deceptively spare ensemble sound of their biggest records.

At first listen, this gathering of the tribe strongly evokes the soft-focus charm of the old records: The Olsson/Murray rhythm section, always an undersung but integral force behind John, meshes smoothly; Johnstone's journeyman guitar work spans both crisp leads and full rhythm work reliably enough; and all three players match the frontman in poise when blending for backup vocals. Why, then, isn't the album as satisfying as its precursors?

The answer lies in the songs, and in Taupin's lyrics in particular. John's melodic gifts are neither diminished nor enhanced when compared to recent outings, and the material on "Too Low for Zero" runs the familiar gamut from bittersweet ballad to alternately bouncy and bristling up-tempo rock showcase. Even the topics dovetail with past albums: collapsing relationships, lost youth, the kinkier aspects of life in the fast lane via terse, good-humored vignettes.

But Taupin, while more disciplined than in his often flowery boom years, still insists on imparting an aura of poetic self-importance to these songs. Even though he supplies an artful melding of love song and career assessment for John's tough, upbeat music in *I'm Still Standing*, and shows a playfully kinky side in *Whipping Boy* that harks back to the tongue-in-check excursions of the old days, his lyrics don't linger in the memory.

That leaves John's nimble vocal stylings and the band's admittedly crisp attack as principal virtues. On the set's best moments, including the brooding title song, the blackly comic *Religion*, *I Guess That's Why They Call It the Blues*, and the two songs above, atmosphere may be enough—at least for John's oldest fans. But it does appear that the heartening regeneration heard on "Jump Up!" has stalled on "Too Low for Zero." SAM SUTHERLAND

The Plimsouls: Everywhere at Once

Jeff Eyrich, producer
Geffen GHS 4002

The 1981 debut album by the Plimsouls was sunk by the same Knack-lash that torpedoed records by 20/20, the Cretones, the Pop, and any number of L.A. bands that were courted by record companies in the wake of *My Sharona's* thump up the charts. When the Knack's second LP stiffed, it looked as though it was all over for Los Angeles-based "power pop," and "The Plimsouls" was one of the casualties. Fortunately, the band has been given a second shot: The small-label release of the single *A Million Miles Away* rekindled interest in their pungent rock and roll, and now we have "Everywhere at Once," an album that combines put-upon petulance with musical assertiveness, sneering vocals with clanging guitar.

It's a sound most associated with the bratty garage bands (and parallel pop devel-

opments) of the mid-Sixties, and on *Lie, Beg, Borrow and Steal*, *Play the Breaks*, *Magic Touch*, and *My Life Ain't Easy*, to name just a few tracks, the Plimsouls adapt the themes and postures of that era without getting gimmicky. They don't dwell on the psychedelic touches, or the Byrds-Stones-Beatles miniquotations, or the arrangements that could have been copied out of the Standells' songbook; they take these referents as a given, and spring forward.

Although you might not guess it from the music, which has a snappy insistence and a plenitude of sing-along choruses ("whoa-oh"s and "yeah"s are thrown around with abandon), the predominant subject of "Everywhere at Once" is stress. Peter Case, the band's chief writer and rhythm guitarist, sings in a throaty voice about things falling apart, luck going bad, swinging a 9-pound hammer, relationships stalling and crumbling. "I'm at the wrong end of the looking glass," he moans on *A Million Miles Away*, as lead guitarist Eddie Munoz cleverly approximates the exhilarating clamor of *Eight Miles High*. It's this mood of adolescent agitation, as much as the band's instrumental bias, that calls to mind the snarlings of '66.

For an '80s band, it's not easy to reach back for '60s punkish defiance, 12-string guitar, wheezy harmonica, Farfisa organ, and a general air of insolence without sounding condescending or self-conscious, or weighing the music down with more ironic distance than the form can bear. Part of the problem with the Chesterfield Kings—an enjoyable band from upstate New York that has a strict policy of only doing cover versions of songs by obscure bands like the Moving Sidewalks—is that the concept builds a trap. But Case and the Plimsouls are more selective, and come up with material, self-generated and borrowed, that does more than just trigger the memory. "Everywhere at Once" has flaws—some of the lyrics are klutzy, a couple of songs approach the cartoonish stridence of *Wild in the Streets's* Max Frost and the Troopers, and *Inch by Inch* could have come from any faceless a.o.r. band—but the Plimsouls wind up on the right side of the looking glass. They have a clear perspective of the past without being trapped in it. MITCHELL COHEN

The Police: Synchronicity

Hugh Padgham and the Police,
producers. A&M SP 3735

New albums by the Police would do well to carry the caveat: "It is unwise to pass judgment on this record until you have listened to it at least four times." That's what it takes to fully digest what this band has to offer, and it's worth every minute. There simply are damn few pop bands as good as the Police, and none better. And there will be few releases this year as satisfying as "Synchronicity."

Make no mistake—the Police are only a rock band. This album's first single, *Every Breath You Take*, is built on a chord progression (I-VI-IV-V) that's as old as rock and roll itself, and several other tunes are powered by drummer Stewart Copeland's simple but rock-steady 4/4 pulse. Yet Copeland, bass player/vocalist Sting, and guitarist Andy Summers are among the handful of modern players who successfully create what can best be described as "world music." Combined with a level of musicianship far superior to most rockers', the international flavor of their rhythms, harmonies, and instrumental textures sets the Police apart.

Part of the world-music effect is achieved through the trio's distinctive use of the synthesizer, an instrument that is becoming increasingly prominent in their work. At the same time, they're moving away from the busy arrangements common to "Zenyatta Mondatta" and "Ghost in the Machine" and toward a less cluttered, more expansive sound. *Walking in Your Footsteps* uses synths, percussion, and guitar noises to create a primordial atmosphere for Sting's occasionally rather silly lyrics about the dinosaur age. *Tea in the Sahara* is as spacious and austere as the desert itself: Summers's echo-laden chords, laid over steady, uncomplicated bass and drums, shimmer and swell like an elusive mirage. And the words, based on the Paul Bowles novel *The Sheltering Sky*, are not only apposite—they're good.

About the only track that can be passed over after one listen is Summers's *Mother*, a shrill bit of caterwauling in 7/4 meter. But the other songs (all of them written by Sting, except for Copeland's *Miss Gradenko*) are rich in musical and lyric ideas. These guys are unusually literate; it's unlikely that, say, Joan Jett would refer to Homeric myth and the Faust legend in a single song. Yet they haven't forgotten how to rock, or how to make music that comes from the heart. (*King of Pain*, the album's most powerful track, is proof enough of that.) "Synchronicity" is a combination of brains and brawn that's nearly unbeatable.

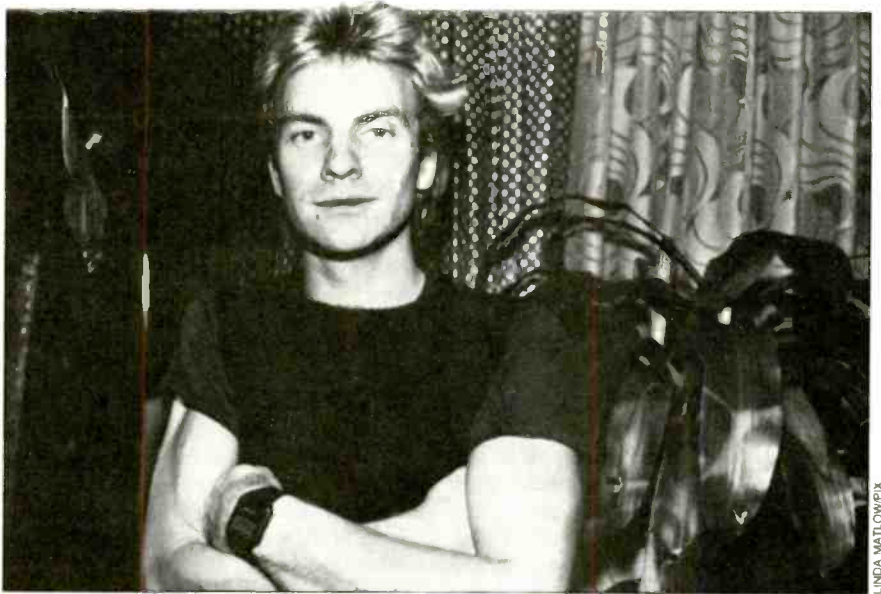
BARRY WELLDON

R.E.M.: *Murmur*

Mitch Easter & Don Dixon, producers
I.R.S. SP 70604

R.E.M.'s music is instantly enticing, a blend of bracing guitar interplay and winding melodies that suggest intimacy with various factions of mid-Sixties pop (folk-rock, early psychedelia, Mersey-beat), but the band doesn't reveal everything at a superficial glance. Listening to R.E.M. can be like watching a silhouette move behind a shade: No matter how animated the outlines, some details remain a mystery.

The truth is, the words of this Athens, Ga., quartet's songs tend toward the cryptic, and even when you think you're getting



LINDA MATLOW/PK

The Police's Sting: brains, brawn, and topflight musicianship

the point they may veer off and elude you. Take *Pilgrimage's* verse: "Rest assured this will not last/Take a turn for the worse/Your hate clipped and distant/Your luck a two-headed cowl." (It could be "a two-headed cow;" without a lyric sheet it's hard to be certain.) But if R.E.M. wants to stay partially shrouded, that's fine. When a band has the kind of exhilarating knack for pop song construction that it shows off on *Catapult*, *Laughing*, *Radio Free Europe* (a remake of its debut independent single), and *Moral Kiosk*, it really doesn't matter that a phrase like "moral kiosk" seems pretentious.

There's a sullen gravity in many of R.E.M.'s lyrics: "Not everyone can carry the weight of the world," the band sings on the brooding ballad *Talk About the Passion*, and at another point it asks, "Could it be that one small voice doesn't count in the world?" The contrast between this philosophical speculation and the jangly, wiry bounce of the playing creates an off-beat tension. Much of the credit for the atmosphere of "Murmur" has to be attributed to coproducer Mitch Easter, whose recent work with the dB's and the Bongos, as well as with R.E.M., has helped to define this branch of neo-pop. All of these bands start with the standard two-guitars-bass-drums format (R.E.M. occasionally adds keyboards and strings, very effectively on *Perfect Circle*), and then scatter off at odd angles that are far less frivolous than they seem.

"Chronic Town," R.E.M.'s acclaimed 1982 EP, probably remains the best introduction to the band, with *Gardening at Night*, *Carnival of Sorts (Box Cars)*, and *Wolves*, *Lower* prime examples of the way it interlocks simple elements, short phrases, and repetitive musical fragments to create a taut, imaginative sound. But several of this album's dozen tracks are so melodically captivating, and played with such resilient

zing, that reservations fall by the wayside. You have to lean into "Murmur," meet it more than halfway, but the effort is rewarded: The shadow-pop of R.E.M. makes an indelible impression.

MITCHELL COHEN

Slickaphonics: *Wow Bag*

Slickaphonics, producers
Enja 4024

The Slickaphonics are yet another band to emerge from New York's so-called "punk-funk" movement, and, as with Defunkt and James White and the Contortions, it features veteran jazz/r&b players funking it up. The difference is that these guys not only have been sidemen with well-known avant-garde and mainstream jazz greats, but they've spent a couple of years together roughing up their polished edges in various dives around Manhattan and Europe.

The result is an often sparse but ingeniously arranged album that, at its best, is wildly imaginative; given the trendiness of their genre, the Slickaphonics have developed an admirably original approach and distinctive band sound. Recorded in New York City for the adventurous West German Enja label, "Wow Bag" is a bare-bones production whose reliance on room sound ambience is reminiscent of '60s and '70s straight-ahead jazz albums. Indeed, my only carp is that their music warranted slicker production.

At its bottom sit drummer Jim Payne—an r&b vet who has played with Hank Ballard and the Midnighters, Mary Wells, and Michael Brecker, among others—and bassist Mark Helias, a former sideman or Anthony Braxton, Dewey Redman, and Barry Altschul. The pair delivers precise, solid funk patterns that are derived from the complex James Brown/Tower of Power canon of sixteenth notes. While one might wish to hear more of Payne's

punchy, pleasantly assertive drumming in the mix, he and Altschul function admirably together, especially on the title track, where their pulse is exemplary. The swirling, impressionistic guitar parts that Allen Jaffe provides are the band's only real harmonic substance, and his distortion effects sometimes mask his chordal sophistication. As a musical unit, though, this rhythm section works, sometimes quite distinctively.

But the real key to the band's sound is a front-line horn duo that cooks with authority and zest. Trombonist Ray Anderson is a virtual firebrand, moving easily between stratospheric bopping smears and low-down growls. As the group's vocalist, he's like a latter-day Louis Jordan, scatting, rapping, and singing with the loose-limbed accuracy that is the mark of a great jazz/r&b singer. Anderson has recorded and toured with all manner of jazz personalities (Braxton, Benny Wallace, Eddie Gomez), and here he adds frontman panache to his fully formed improvisational skills. Saxist Steve Elson plays with a thick, edgy command and swings smoothly between wild multiphonics and more conventional, staccato rhythm-and-blues runs. Together the horn lines are at turns funny, deft, and circuitous, usually avoiding the kind of Crusaders-like clichés that a tenor/trombone lineup can fall into with this kind of music. That the players' agility shows off the surprising and compositionally sound nature of their arrangements is best heard on *Electro Plasma*, where Anderson doubles an angular, finger-bending bass line with Helias as Elson moves upward in counterpoint. (Since "Wow Bag," Elson has joined David Bowie's band; he has been replaced by David Wilensky.)

Topping the mix is a lyric sensibility that is often nothing short of hilarious, especially when Anderson barks out the commands to *Step on Your Watch*, the dance anthem that leads off Side 1: "Put your watch on the floor, step on your watch: Rolex, Timex, digital, snooze alarm. . . ." Despite the lack of modern dance-music production values—and the Slickaphonics definitely play for dancers—"Wow Bag" is the work of a strong band from which one hopes to hear more. CRISPIN CIOE

The Jackie Wilson Story

Prepared by Gregg Geller & Joe McEwen
Epic EG 38623

Most of the 24 songs collected on "The Jackie Wilson Story" inspire cruel thoughts. You want to throw a wet sheet over the backup singers, tie the violinists' hands behind their backs with their strings, and sentence the arranger to a life of writing commercials for dishwashing liquid. You have to listen through a lot of intolerable slop to hear what Wilson had to offer: a flamboyant, operatic soul style and an irrepressible energy that communicated a desire to entertain—even if it meant bat-

ting horn charts more suited for the likes of Paul Anka.

The assemblers of this double-album tribute (Wilson has been incapacitated since his heart attack in 1975) have done their best to make a case for Wilson as a significant recording artist. They've even skipped over some of his more egregiously arranged ballads in favor of jumpier tracks from "Soul Time" and "Jackie Sings the Blues" (better choices than his Al Jolson LP, or "The World's Greatest Melodies"), and it's a credit both to them and to their subject that the set is as illuminating as it is. Side 1 starts off with five '57 to '59 hits cowritten by Berry Gordy Jr. before he founded Motown, and all of them hold up despite the inappropriate musical settings: the slangy debut *Reet Petite, To Be Loved* (an early sign of Wilson's melodramatic tendencies), *Lonely Teardrops, That's Why (I Love You So), I'll Be Satisfied*.

When Gordy stopped supplying the songs, Wilson's recording career became far bumpier; it makes you wonder how he would have fared at Motown, or at an equally sympathetic label such as Atlantic. (All of his solo work was on Brunswick.) For every track as convincingly sorrowful as *Doggin' Around* or as enjoyably bubbly as *Baby Workout*, there were two, three times as many mistakes: florid ballads (*Night*), tinny pop (*The Tear of the Year*). When Wilson tried to inject some soul, the

echoing pop chorus would torpedo his efforts, as on *Am I the Man*. His voice, however, was always a powerful instrument—listen to the twists and leaps he pulls on *Danny Boy*, of all things—and in '66 and '67, when he got good songs to work on and a capable producer, Carl Davis, he delivered his greatest performances with *Whispers (Getting Louder)* and *Your Love Keeps Lifting Me (Higher and Higher)*. Hearing those two cuts on Side 4 brings into bold relief so much of the dross on Sides 2 and 3.

It would be an understatement to say that Brunswick mishandled Wilson. But it would also be wrong to throw all the blame for the schmalz at the record company: As Clyde McPhatter's replacement in Billy Ward & the Dominoes in 1953, Wilson was applying his pipes to *Rags to Riches*, so the inclination toward soggy pop was already there. Even so, it's sad that there are relatively few records that display him in a favorable light. The best you can do is put on *I'll Be Satisfied* and visualize him on stage at the Brooklyn Paramount, springing backward from the waist, then snapping back up again and spinning on his heels, a dazzling series of moves matched by the animation of his vocal performance. "The Jackie Wilson Story" tries to give him a fitting salute, but this is one album that should have been a videodisc.

MITCHELL COHEN

Jazz

Mose Allison: Lessons in Living
Philippe Rault, producer
Musician 60237-1

Mose Allison's deceptively affable vocal mien has long been his calling card, but that trait has also tended to obscure his abilities as a songwriter and pianist. Shaped by his Delta origins, mated to a more sophisticated harmonic sense and elegant pianistic technique, his songs drew him from a mostly instrumental repertoire into the role of a singing "jazz sage," to quote the liner of one of his most popular Atlantic albums. But the public attention that he captured on that label in the early Sixties has diminished considerably, simply because he has chosen to stick with a spare, winsome stance.

This live set, culled from Allison's appearance at last summer's Montreux festival, supplies a long overdue summary of his style. Though the material represents some of his best-known work, he is a virtually brand-new ensemble: drummer Billy Cobham, bassist Jack Bruce (the same rock stalwart best known for his role in Cream but a credentialed British jazz player before that), guitarist Eric Gale, and alto saxophonist Lou Donaldson. The date begins with Percy Mayfield's *Lost Mind*,

then winds through a program of other signature songs given comfortable but potent readings. Although Allison ventured into electric piano for some recent live work and his first Elektra/Musician studio album ("Middle Class White Boy"), his Montreux appearance found him performing again on acoustic piano. His voice sounds as limber and laconic as on his relative "hit" dates of 20 years ago.

While not a formal "best of" sampling, "Lessons in Living" is a satisfying précis of Allison's work, aided considerably by first-rate live recording and generally solid support from the band. Newcomers to Allison's arch, slice-of-life writing and low-keyed delivery will find these performances revelatory for their mix of intelligence and easy, swinging musicianship. Old fans will be heartened by the crisp interplay of the band. Either way, it's a warm and enjoyable update on a true original. SAM SUTHERLAND

**Tommy Sancton's
Black Eagle Jazz Band: 1971**
Black Eagle BE 6 (126 Front St.,
Marblehead, Mass. 01945)

Ten years ago, traditional jazz bands tended

to be rather stodgy copies of second-generation groups like Turk Murphy's or New Orleans ancients like George Lewis. So the development in the Boston area of the New Black Eagle Jazz Band during the past decade has been particularly exciting. In addition to producing such strong, individual voices as Stan McDonald on clarinet and soprano saxophone, Stan Vincent on trombone, Tony Pringle on cornet, and Eli Newberger on tuba, the band has set standards for a growing number of similar young groups to follow.

This disc, torn from the sticky clutches of a rock-and-roll producer, gives a revealing glimpse of the ensemble's formative stages. The New Black Eagle was organized in 1968 by Tommy Sancton—a Harvard sophomore from New Orleans who studied clarinet at Preservation Hall with George Lewis—and Pringle, a computer engineer, who had recently arrived from Liverpool. That ensemble reached its peak in the Spring of 1971 when it played at the New Orleans Jazz and Heritage Festival. It then made this record, which was never released and which, 11 years later, has been ransomed by Sancton (now a writer for *Time* magazine) and the present members of the band.

The album "1971" is interesting for its evidence of the strong New Orleans roots that Sancton brought to the band. His clarinet is actually much stronger and more forceful than Lewis's willowy sound. Jim Klippert is an eruptive, rugged trombonist and Pringle has a brash and feisty tone that has become somewhat tamer in the intervening years. The repertory includes Scott Joplin's *New Rag*, a light and airy bit of New Orleans orchestral ragtime; A. J. Piron's *Red Man Blues*; and the New Orleans perennials *Ice Cream* and *Lord Lord Lord*.

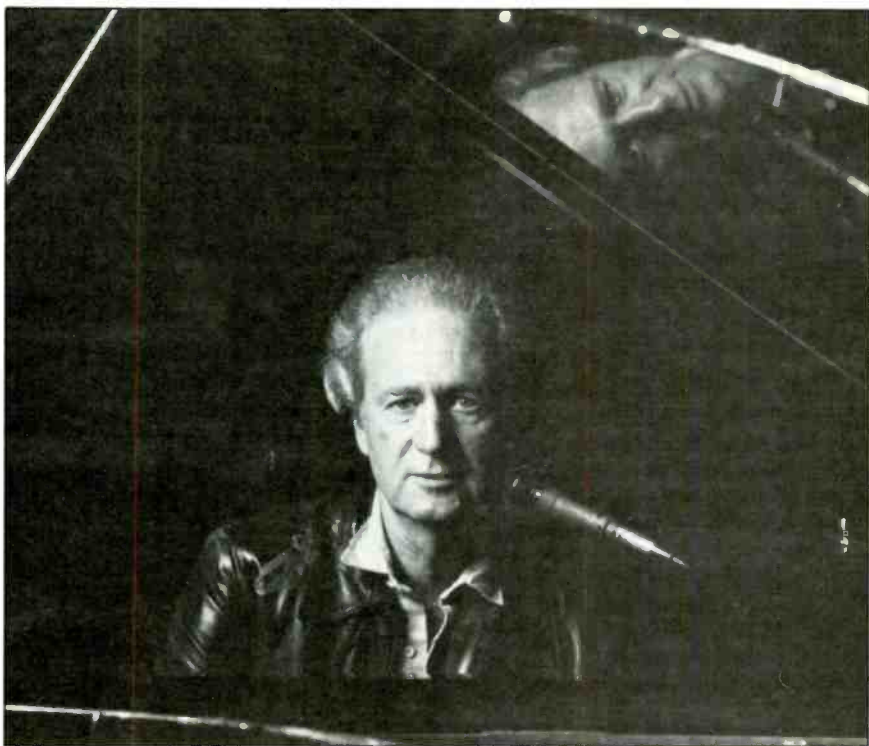
The group's only weakness is its suggestion of the thin, springy bounce that frequently has affected English trad bands' rhythm sections—although drummer Pam Pameijer, still with the Black Eagle, was beginning to get a stronger sound. One other notable difference between this early edition and later ones is the broad, sturdy bottom that the band has acquired since Eli Newberger abandoned the piano and wrapped himself up in a tuba.

JOHN S. WILSON

The John Carter Octet: *Dauwhe*

John Carter, producer
Black Saint BSR 0057

Contemporary jazz—that is, jazz that stretches the limits of the improvisational art—has not always been easy on the listener. Groups like Air and the Art Ensemble of Chicago, as well as longer-lasting performers like Cecil Taylor, Ornette Coleman, et al., have often produced music more interesting to themselves than to their audience.



FRED VALENTINE

Allison: a first-rate live recording of the singing "jazz sage"

Clarinetist John Carter is not going to change all that with "*Dauwhe*," but he has, I think, produced music that manages to be exploratory as well as listenable. I suspect the primary reason for his success is that he has maintained a strong control over the proceedings via well-crafted compositions and the sheer power of his own, quite remarkable playing.

The name that keeps coming to mind as one listens to this ensemble of three woodwinds, trumpet, tuba, bass, drums, and percussion is Duke Ellington. *Ode to the Flower Maiden*, for example, sounds like one of Duke's titles, and the warm, but highly unorthodox horn voicings are reminiscent of his kind of risk-taking. On *Enter from the East*, Carter and saxophonist Charles Owens play a volatile but conversational dialogue over Luis Peralta's far-reaching percussion sounds. *Soft Dance* makes a mild gesture toward traditional jazz, then moves farther out, and *The Matting Ritual* has a near-Stravinsky quality.

The centerpiece of the album is the title track, which roars with the energy of Coleman's early records, yet somehow manages to retain Ellington's sensuous textures. Carter plays an astonishingly inventive solo, stretching the limits of his already wide-ranging instrument. Play this track for anyone who feels that avant-garde jazz is inaccessible.

There are things one can carp about: Carter clearly didn't have enough time to rehearse his ensemble, and it shows in faulty execution and miscues. The rhythm section, when it plays well, is superb. When it doesn't (particularly on Side 2), the group simply doesn't swing the way it should.

Cornetist Bobby Bradford sometimes sounds a little too facile for this kind of music, going for the easy solution rather than for the more provocative ends that Carter is seeking. But these minor problems surely would not have occurred had Carter been given the kind of budget that, say, Grover Washington Jr. gets to make an album. And though he's probably not going to get it, "*Dauwhe*" nonetheless stacks up as one of the best contemporary jazz albums I've ever heard.

DON HECKMAN

Miles Davis: *Star People*

Teo Macero, producer
Columbia FC 38657

Miles Davis's return from retirement continues to gather momentum. In fact, this new release is the first that begs no concessions to his inactivity, his physical condition, his state of mind, etc. But it does raise questions about the current direction of his music. *Come Get It* and *Speak* are representative of Davis's recent infatuation with his own kind of fusion jazz; *It Gets Better*, *Star People*, and *Until* revive an older, more traditionally focused jazz; and *Star on Cicely* (for his wife, Cicely Tyson) manages to mix both styles.

Come Get It is really a rhythmic interaction in which high-energy but essentially nonmelodic bursts of sound from the horn players are juxtaposed against a roiling, nonstop rhythm. If nothing of musical significance emerges from the performance, one is nonetheless impressed by the continued strengthening of Davis's technical skills.

Something dramatic happens to the

production sound on *Speak*, perhaps due to substantial overdubbing, or, conversely, to a badly balanced, peculiarly equalized "live" studio pickup. Guitarist John Scofield is urged into an unnatural—for him—heavy-metal sound. But the real focus is Davis's backup accents and phrases, which are played in ensemble with an Oberheim synthesizer (also played by him). It's an interesting sound, I suppose, for those who have been curious to hear how Miles would sound playing lead in a brass section.

It Gets Better is indeed better, in part because the improvisations are based on one of the most interesting harmonic schemes Davis has used in years. Not quite the blues, and attributed, incredibly enough, to Lightnin' Hopkins, the sequence keeps turning in unexpected directions. The result is a fine muted solo in a style that will be more familiar to Davis's older fans than to his newer ones. Scofield also sounds excellent here, playing with great poise and sensitivity. Even the production makes a major contribution in its skillful mixing of the trumpet and guitar textures.

U'n'l and *Star on Cicely* represent opposite sides of a coin. The former is a wonderfully appealing melody. Yet its impact is severely diluted by an oppressively repetitive pedal-bass figure that locks both the piece and the improvisations. *Star on Cicely* is an equally attractive if much denser line that travels through a windingly chromatic path. Yet, once again, the persistent repetitions of the rhythm (compounded here by Davis's comping on Oberheim) rob it of its vitality.

A similar problem plagues *Star People*, a track that might otherwise have become a Davis treasure. His own performance on trumpet is, in fact, a treasure—six choruses of mainstream-blues improvising that can stand comfortably alongside his best work. Yet, inexplicably, Davis (and, presumably, producer Teo Macero) have placed drummer Al Foster's incredibly tinny-sounding cymbals in the very front of the mix. The intrusion, especially during Davis's solo, is irritating to the point of distraction.

Why such a determined effort to distract from his finest playing on the album? Who knows? Perhaps it was just a mistake. Perhaps Miles feels uncomfortable about returning to a personal playing style that he has often belittled. If so, one hopes his apprehension is only momentary. We do not, after all, need another fusion group. But we do need Miles Davis.

DON HECKMAN

Jim Galloway Quartet: Thou Swell

John Norris & Bill Smith, producers
Sackville 4011 (Box 87, Station J,
Toronto, Ont. M4J 4X8 Canada)

Jim Galloway is a Scottish saxophonist who has been playing in Canada for the past 20



TOM COPI

McCroby in the act of puccoloing

years. In Toronto he leads what he calls his Wee Big Band and a small, more traditional group, the Metro Stompers. The quartet on this disc—the great Kansas City pianist Jay McShann, Galloway, bassist Don Thompson, and drummer Terry Clarke—is something else again. Although it is rooted in the swing era, it does not reflect any particular group of that period.

The McShann on "Thou Swell" is not the blues-and-boogie McShann you may be accustomed to hearing, but a superb melo-dist and balladist in the vein of Ellis Larkins. Relieved of his need to stay within the limits of traditional blues, McShann has never sounded better. And Galloway is an absolute gem. He plays a small curved soprano sax in a manner that approaches Johnny Hedges's smooth, soaring attack, his horn's beautifully singing tone occasionally colored by off-center growls. His melodic, full-throated style is sublime on *Someone to Watch over Me*, Ellington's gorgeous *Black Butterfly*, and even on *Sweet Sue*, which he turns into a light-stepping bit of joy.

Galloway and McShann are completely themselves; they compare with, but never sound the least like, the team of Earl Hines, Joe Poston, and Jimmie Noone in Noone's late-Twenties Apex Club band in Chicago. And the combination of the saxist's flowing lines and the pianist's jaunty, rhythmic attack puts the quartet in the ranks of the great jazz combos of the pre-bop era.

JOHN S. WILSON

Ron McCroby: Plays Puccolo

Carl E. Jefferson, producer
Concord Jazz CJ 208

Whistling in jazz has been a marginal art. Toots Thielemans tends to do a fair amount

of it, but his guitar and harmonica have always been his primary means of expression. Bob Haggart comes to mind for his *Big Noise from Winnetka* and Meade Lux Lewis for *Whistling Blues*, but Haggart is really a bassist and Lewis a boogie-woogie pianist.

For Ron McCroby, it's the other way around. Though he plays reeds, he is primarily interested in being a whistler—or, as he prefers to designate himself, a "puc-coloist." Puccoloing, he explains, means whistling in the piccolo range. All this may sound like a gag until you hear what McCroby can do with his lips and a little air. Indeed, he appears determined—and able—to make whistling a legitimate jazz art form.

Working with a group that includes Sam Most on flute, McCroby develops such jazz standards as Clifford Brown's *Joy Spring* and *Daahoud*, Benny Golson's *Along Came Betty*, and Miles Davis's *Boplicity*. His whistling in duet with Most is as precise, musical, and fluid as his partner's flute work. He has an astonishing ability to project polish and sensitivity in his flurries of flowing runs. And he has the control to sustain two full-bodied, slow ballads—grace notes, running fills, and all.

His masterpiece—possibly the definitive example of puccoloing—is his adaptation of *Whistle While You Work* as *Puc-colo While You Work*. In this up-tempo bit of Latin rhythm for flute, puccolo, and rhythm section, the excitement of McCroby's soaring, surging, free-flowing whistling is absolutely contagious. JOHN S. WILSON

Max Roach Quartet: In the Light

Giovanni Bonandrini, producer
Soul Note SN 1053

Max Roach may be the only drummer who can lead a group without depending on drum solos to assert his position. With his quartet of several years—Cecil Bridgewater on trumpet and flugelhorn, Odean Pope on tenor saxophone, and Calvin Hill on bass—he plays a role equal to that of the trumpet or the saxophone, his drums constantly shifting colors and accents within the ensemble. While one is always conscious of them, they are never obtrusive.

This is particularly true of "In the Light." Roach takes only one relatively brief solo (on *Straight No Chaser*) and, rather than using fireworks to attract attention, depends on broken phrasing and on shading, color, tone, and structural development.

Because of its unusual balance, this is always a fascinating group to hear. "In the Light" contains two compositions each from Thelonious Monk, Tadd Dameron, and Roach. Additionally, Oscar Pettiford's charming *Tricotism* offers Hill an opportunity for a strong and disciplined bass-solo against some tight, compact backing. (Continued on page 106)

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STEVIE RAY VAUGHAN

(Continued from page 93)

a specific part, but most of the time it was just whatever I wanted to do.

Backbeat: What happened with Bowie? You were in rehearsal with him, all set to embark on a massive international tour, and then suddenly it was announced that you were out and Earl Slick was in. I read that Bowie didn't want you promoting your own record. Is that accurate?

Vaughan: Well, all I can tell you is that there were some difficulties with the contracts and that sort of thing. There were problems between the managements. It just didn't work out—that's all I would like to say about it. I'm sorry, and everybody is sorry, because it could have been a good thing.

Backbeat: If you had gone on the tour, where would that have left your band?

Vaughan: It would have left them waiting, and that's no fun for them. But they were willing to do it. It would have been a big thing for me, too—to leave them behind for any length of time. My band is really

My brother and B.B. King are my guitar heroes.

important to me. We're very close. During the Bowie rehearsals, when I was gone for a month at a time, I'd come back and we'd plug in our axes and play and get all happy. It seemed as if we didn't even have to warm up or anything.

Backbeat: How long have you been playing together?

Vaughan: Chris Layton, the drummer, has been in the band five years. Tommy Shannon, the bass player, has been with us since January of '81, but he and I had played together off and on for 10 or 12 years.

Backbeat: Is the Austin music scene a close, tight-knit community?

Vaughan: Yeah, we're all friends. There's a lot of jamming and gigging around with different people just for fun. But it doesn't change as much as it used to. A lot of the bands are staying together longer.

Backbeat: Do you think there has been a resurgence of interest in blues recently? A revival?

Vaughan: Yeah, I do. A lot of people think it's on the way down again, but I disagree. It appeals to a certain type of people—I guess you could call them middle-class. I don't see it ever going out of style—it's part of a tradition.

Backbeat: Do you ever get sick of the blues? Do you ever want to play something else?

Vaughan: If I want to play something else it has nothing to do with liking or not liking

the blues. Because I'll always like it. That last song on the record, *Lenny*—now, that's not blues, but it's not jazz. I don't know what it is. I just call it a pretty song.

Backbeat: Do you like rockabilly?

Vaughan: I like good rockabilly.

Backbeat: Where do all those British neo-rockabilly bands fit in?

Vaughan: Well, some of them are good. Some of them get a little too nostalgic. There are bands around here, though, like the LeRoi Brothers, that are really serious. They look, sound, and *are* rockabilly. A lot of that music came out of Fort Worth, Dallas, and Austin too.

Backbeat: How often does Double Trouble play live? Last year, for instance, how many shows did you do?

Vaughan: Oh God. Last year? I'd say we averaged four to five nights a week at least. Often we'd play eight, 10, 12, 14 days without stopping. When we were on the road, we would play two or three gigs a day. I would guess we did well over 200 dates last year.

Backbeat: Mostly in Texas?

Vaughan: No. There was a time when we played a lot around this area, but that was only because of a transportation problem: Those vans start wearing out after a while, and they cost more than you make to keep them running. We do the West Coast, the East Coast—haven't done too much in the Midwest or in the Pacific Northwest.

Backbeat: When you went to Montreux for the festival, did you play anywhere else in Europe?

Vaughan: We played London. It went over well. I guess they were a little surprised, because the first thing we heard when we walked onstage was "What the hell is that?" I had on my kimono and my hat and poncho. I guess they're used to seeing leather jackets and grease nowadays.

Backbeat: What about the immediate future? Do you plan to tour?

Vaughan: Of course. Right now we're just taking a breather. Soon we'll put our heads together with the record company, the booking agency, and the management, and work out where we're going to go. We'll probably hook up with a major act's tour and then do some of our own gigs in smaller halls and clubs. And then we'll think about the next record and the next video.

Backbeat: You have a video out now?

Vaughan: We did one of *Love Struck Baby* at a place called the Cherry Tavern in New York. We changed the name of the place in the video. Four years ago I got married in a club where we used to play all the time called the Rome Inn. When they closed it down, the owner gave me the sign, so in the video we put that up behind me on the stage.

The tape is pretty straightforward. There's a little bit of humor in it and a whole lot of fun without a whole lot of problems. If only life were like that. **HF**

ORFEO

(Continued from page 73)

he often sounds strained, particularly in the lower register, where he almost fades away. He swoops distractingly from note to note, and while the style of declamation is often unusual and striking, it is not carried out well enough to command respect.

Jacobs's vocal inadequacy, therefore, is a severe drawback to Kuijken's recording, if not as severe as Muti's stylistic inadequacy is to his. What of the other soloists? In the Muti version, Margaret Marshall is an Euridice who complements his approach perfectly, with squeezed tone and long legato lines that rarely dance or breathe. For Kuijken, Marjanne Kweksilber is altogether more exciting, with a thrillingly projected Act III aria that bounds with energy. In the recitative scenes with Orfeo, Kweksilber sounds involved and alive, whereas the corresponding scenes with Baltsa and Marshall sound cold, contrived, born of the recording studio. Muti's Amore is Edita Gruberová, fine but large-scale; Kuijken's is the lithe, pretty-voiced Magdalena Falewicz, who makes her lilting Act I aria into a highlight of the whole performance, with its drily plucked strings and clucking eighteenth-century oboes.

What, then, has Leppard's version to offer? I should make it plain that I have never been a keen enthusiast for Leppard's recordings, and his recent account of Rameau's *Dardanus* (Erato STU 71416) was, as I argued in these pages (June 1982), disastrous. But from the start it is clear that this *Orfeo* is entirely different. Like *Dardanus*, it is born of a live stage performance, but this has a conviction acquired over a long period of rehearsal and performance that was lacking in the Rameau. Both choir and orchestra sound alert and well rehearsed, there is total agreement on articulation and phrasing, and the music is firmly projected. Admittedly, the sound is unadventurous in comparison with Kuijken's. There are no experiments here, and nothing is being risked. Leppard's recording will not change our notions of Gluckian performance style as Kuijken's could well do. But on its own terms it is splendidly successful.

Leppard, as usual, tries to have his cake and eat it in his edition. There is a lot of music recorded, and the opera spills over onto a fifth side, unlike other versions. It is typically confusing to have both the grand final chaconne from the 1774 French version, and then the final chorus from the 1762 Italian version. There is little stylistic cohesion to the edition and performance, and Leppard is content to modify the opera as it has been inherited from the nineteenth century rather than offer anything new.

Yet it works. Baker as Orfeo, though she may at times be sorely taxed by the role's tessitura, carries immense conviction. It was surely a mistake to include on record (though it may not have been to per-

form onstage) the huge Act I display aria written for 1774, which more clearly than any other single change lifts *Orfeo* out of the restrained mold of the 1762 version. Baker is hard put to it to sustain the runs and trills, and her account pales beside the thrilling bombast of Marilyn Horne in Georg Solti's version. (London OSA 1285. This however, and confusingly, is not a recording of a nineteenth-century conflation but of a quite different and pointless conflation of 1762 and 1774 material by Charles Mackerras. Which is not to be confused with Mackerras's own recording, Vanguard HM 66/7, of a different interleaving from 1762 and 1774. And so on.)

Baker's dark, sometimes husky voice may not be to all tastes, and it tends to pall after a while. But the dramatic impact of her singing is so powerful as to sweep aside most doubts. She benefits immensely (and here again I find myself on the side of the nonpurists) from the use of the improved recitatives, even in their re-Italianized

Leppard tries to have his cake and eat it—and it works.

form. The last great scene of Act III, in which Orfeo is separated from Euridice, is a miracle of dramatic timing: Baker's breathless cries, evincing growing realization of what she has lost, are marvelously paced, and Leppard's crisp accompaniment supports every nuance of her singing. Her final outburst is quite frightening: As she confronts Amore, about to commit suicide, she does something I have never heard on record, transposing her line "*Le dovute a miei casi ultime furie*" up an octave to produce a scream of pain.

Throughout this final act, too, I relish Gluck's added sophistications for the 1774 edition, which are preserved here (albeit in different form). The two bassoons, instead of one, that accompany Orfeo's ineffably sad "*O diletta*," the withholding of the chords in the breathtaking rest when Euridice dies, and the dropping chords of Amore's "*Mi desti prova*": All these details are wonderfully effective—not to mention the inclusion of whole movements such as the trio "*Divo Amore*." This ensemble finds Leppard's other soloists, Elisabeth Speiser as Euridice and Elizabeth Gale as Amore, at their best. Elsewhere, Speiser often sounds strained, and Gale has a worrying wobble in the voice; but the trio, with perfectly poised violins and dark violas, is glorious. It precludes all worry about the fact that Gluck wrote it for Paris as a duet for soprano and tenor in French; what a version for three female voices in Italian has to do with him is doubtful, to say the least.

The advantages and disadvantages of

these recordings are also displayed by their treatment of the opera's single most famous aria, a piece for which, I daresay, some listeners will buy their recording: Orfeo's lament "*Che farò*." Its open, transparent C major tonality has a simple serenity; to use this to convey grief is an extraordinary concept, and one realizes what Gluck meant when he said that to alter any aspect of it would risk turning it into a puppet dance. Horne achieves something akin to that when she and Solti, convinced that the aria is meant to be despairing, plow into it with a sort of suppressed hysteria that is quite at odds with the music. (I did encounter a nineteenth-century German score that had changed Gluck's *Andante* marking to *Vivace con disperazione*: Perhaps that is what Horne has in mind.)

Kuijken's recording respects the sharp-edged phrasing of the string accompaniment, and the violins sing the melody plangently. But really, Jacobs is intolerable here: He swoops and fawns, and though he includes some appropriate ornamentation that has been attributed to Guadagni himself (and is reproduced in the *Cambridge Opera Handbook* on the opera) and makes a case for separated pairs of eighth-notes, the result is affected in the extreme. Baltsa sings simply and affectingly at very slow speed, but Muti trudges along with a mushy, soupy background that destroys the aria's effect. Baker is noble, perhaps a bit matronly, and certainly a little pedantic in the way she elides "*senza Euridice*." But the performance has a warmth and strength that enable it to communicate powerfully, however remote it may be from the feeling of the original.

In the end, then, Leppard's is the most satisfactory of the new versions. It carries dramatic conviction in a way that others do not. Reviewing these three issues in the *Gramophone*, a colleague wrote that Kuijken's should be regarded as "only for those who must have *Orfeo* with original instruments." That irritating remark misses the point entirely: I would love *Orfeo* with period instruments, in a style that approaches Gluck's first conception, and in this direction Kuijken's new recording offers revelations. If you already possess a recording of the opera and can afford two, this is one to buy: It will influence the future history of the opera far more than will Leppard's conventional reading. But the trouble is that on its own terms Kuijken's account is simply not good enough, dominated as it is by Jacobs's inadequate performance as Orfeo—a character who is rarely offstage or out of the center of the musical picture. We are now entering a period in the history of recording when original-instrument performances will not be pigeonholed for specialists, but will compete on the open market, which is exactly as it should be. In this case, the best performance happens to be not such a one, but Leppard's. **HF**

CLASSICAL REVIEWS

(Continued from page 88)

seventeenth century) "closely approximates the sound of an accompanying lute or guitar," but the timbres of a plucked or strummed instrument are not to be had by fiat. Horne's noble legato and chaste, glinting embellishments deserve to be put on disc in a more stylishly arranged courtly bouquet.

In the absence of an orchestra, the operatic excerpts by Handel and Rossini are also heard to less than best advantage, despite Horne's peerless vocalism and sharp, pointed dramatic presence; surely she has documented her accomplishments in this area sufficiently amply in unreduced versions, and her current fashion of exalting Rossini's fireworks with blazing Mozartean purity is superbly represented in her recent recording (with Katz) of the cantata *Giovanna d'Arco*, written for the composer's companion, later his wife, Olimpia Pélissier, scored for overwhelming voice and (overwhelmed) piano.

The Spanish group contrasts the sublime Moorish flourishes of the Alvarez and the ferocity of the lush, plashing Turina and the sterner Granados with the lulling, sultry airs of the Montsalvatge and the exuberance



HENRY GROSSMAN

Horne: peerless vocalism, sharp presence

of the Obradors. Horne adapts effortlessly to the many moods. Katz does best in the derivative impressionism of Turina and in the discreet movements of Montsalvatge; the more exclamatory requirements of the others are met with an undue clatter.

The two artists are most fully in harmony in the second half of Poulenc's *Le Bestiaire*, the sections devoted to the frolicsome Dolphin, the hesitant Crayfish, and the philosophical Carp, forgotten of Time. (The opening sketch, of the Dromedary, is atypically dull and humorless in delivery; the second, the Tibetan Goat, has the curi-

ous emptiness that comes about when interpreters know they have missed a point; the third, the Grasshopper, seems too ascetic.)

In the arrangements of American folk-songs, the singer manages, as the pianist does not consistently, to underplay Copland's excessive artiness, bringing soaring spirits to "Ching-a-ring Chaw" and the gift of true simplicity to the famous Shaker tune. Her phrases in "Long Time Ago" are beautifully big and open, and Katz catches the right perfumed sentiments, especially in Copland's deft patches of scene painting. "At the River" finds the arranger at his most studiously, irritatingly *faux-naïf*; but Horne's straightforward inflection rescues its native majesty—until, that is, by dint of overemphasis of *God* (the word, not the being), she snatches a vulgar defeat from the jaws of poetic victory. Of the Foster songs, "Beautiful dreamer" is faceless, though entirely proficient. "Jeanie with the Light Brown Hair," sung, as Horne announces, "*per dire arrivederci*," makes a more lasting impression of affectionate tenderness. Alas, the audience cuts in, by no means for the first time, with approval as tactless, abrupt, and cacophonous as jeering. M.G.

MOZART

(Continued from page 76)

sometimes blandishingly. Unfortunately he trips over the aria, trying to get too fancy with mezza-voce effects.

The Guglielmo of Willi Domgraf-Fassbänder has always hit me as dislikable. Yet he was a fine baritone—a good Lieder singer, a splendid Papageno and *Figaro* Count in German, and later quite impressive in heavier Italian roles (e.g., *Rigoletto*) *auf Deutsch*. But the language seems to have made an enormous difference, for his Italian is dreadful—not only sloppily pronounced, but somehow pasted all wrong onto the set of his voice. And while he seems to have had some strong impulses about more serious characters, here there is only a sort of generalized affability, which when strained through the above-mentioned problem emerges as a snarled smugness. I trust it was different in the theater.

As for the *Giovanni*, it has on the female side 1) Souez, showing the same assets she displays for Fiordiligi and making much of them as Anna—distinctly worth hearing, 2) Helletsgrüber again (see above) stretched closer to her limits by Elvira, and 3) Audrey Mildmay, John Christie's wife, who evidently contributed importantly to the working spirit of early Glyndebourne, besides being inspiration for the whole shebang. She has an octave in the middle (F to F) where she's fairly secure, and there she sings carefully and with evident understanding of the music

and the language. In the rest of the range, she squeaks through, sometimes literally.

Brownlee, again in prime vocal condition, is the Don. The reliability of his singing, the intelligence and diligence of his work, go some distance toward compensating for his lack of vocal sensuousness and temperamental dash, but finally this is a prosaic Don with a coating of forced heartiness—we're back to Calvert Whiskey.

For Leporello, Glyndebourne imported Salvatore Baccaloni. He had a fluent, fruity light bass of true singing properties, and is up to a piece of serious work here, quite different from all those later Met evenings of slithering pitch and corn-pone antics (*polenta*, I guess it'd be, and lots of it). For some reason (I've wondered if it were recorded separately), the Catalog Aria finds him in worse vocal condition than the rest, the voice grainier and less well defined; except for that, this ranks with the best of the Leporellos.

The remaining males keep the bottom from falling out, but little more: Koloman von Pataky is a sweet, mild-sounding Ottavio; Roy Henderson's harmless as Masetto; and David Franklin, the Commendatore, shows a pleasing middle range and a fuzzily covered top that won't scare anyone—sort of the David Ward of his day.

Busch (I listened again this time, figuring there must be more there than has ever met my ear) still strikes me as a solid, straightforward Mozartean, inclined to push the quicker tempos a bit but otherwise middle-of-the-road in all respects. His work

certainly isn't quirky or fussy, and is much to be preferred to that of many others, but I fail to hear any special quality in it. The *Così*, I think, comes off rather better than the *Giovanni*, which depends so much on the sustaining of dramatic tension—frequently a recitative passage will emerge with considerable life only to have the following number fall into a purely musical niceness. The stop-and-go of 78-rpm side takes may have been partly responsible. But I note, too, that where he shares singers with the Salzburg casts (Helletsgrüber's Elvira, Aulikki Rautawaara's *Figaro* Countess), Walter secures the more compelling performances. (Granted, Walter's are live performances, Busch's not.) *Giovanni* is given in its standard complete form, *Così* with the once-standard theater cuts (that means no duet No. 7, just one aria apiece for Ferrando and Dorabella, and perhaps 20 percent less recitative). The continuo instrument is the pianoforte.

Seraphim's packaging is bare-bones, just a cast list and synopsis for supporting material. Pressings are run-of-the-domestic-lot, serviceable without doing anything to "bring up" the sound, which is nonetheless perfectly enjoyable once the ear is mono-adjusted.

The same series will be reviving the *Figaro*, which is much the weakest of the three and missing all its recitatives to boot, and the Beecham *Zauberflöte*, which is on a higher plane of interest altogether. And we can always keep on the alert for better-sounding Walter pirates. HF

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Drummer Max Roach: shading, color, and broken phrasing in lieu of fireworks

DEBORAH FEINGOLD

BACKBEAT REVIEWS

(Continued from page 100)

Monk's *Ruby My Dear* provides a solo showcase for Bridgewater's dark and mellow flugelhorn, while Pope's broad, warm saxophone gets equal time on *If You Could See Me Now*. A waltz version of *Good Bait* sweeps as gracefully as if the bait were Viennese, and Roach's *Henry Street Blues* gets an energetic reading.

The only piece that does not come together properly is the leader's long *In the Light*. Though it starts with an interesting series of extended, suspended lines over shifting drum work, it eventually proves to be static—at the end of eight minutes and 40 seconds, none of the four players has made any progress. JOHN S. WILSON

The World Rhythm Band: *Ibex*

Jeff Pressing, producer
Discovery Records DS 865
(P.O. Box 48081, Los Angeles, Calif. 90048)

The stream of musical groups from Australia in recent years has been astonishing, particularly considering it has a population of only 14 million. Most of the talent that has reached some sort of international prominence has been rock- or pop-based—from Helen Reddy and Olivia Newton-John to Rick Springfield and Men at Work.

Jazz from the Antipodes has been notably absent. Not since the Australian Jazz Quartet arrived some two decades ago has there been a significant improvisational act to come from the island continent. The World Rhythm Band may break that trend. Admittedly, the group is not purely Australian: Pianist Jeff Pressing, the leader and primary composer, is an American, and percussionist Alex Pertout is from Chile. But the remaining three members—saxophonist John Barrett, bassist Jeremy Alsop,

and drummer Peter Blick—are authentic Aussies.

More important than nationality is their music, which is very good, indeed. The band's international stance is directed, on this album, toward a West African influence. And "influence" is the proper word, since the WRB's sound is fully contemporary, with major prominence allotted to Pressing's synthesizers. The metric underpinnings, however, are something else.

On *Stumbling Along*, a 15/8 rhythm propels the band through a series of soaring improvisations. At one point, Pressing overdubs a contrapuntal impromptu between two synthesizer lines. *Lesser Trocater*, written in 5/4, begins with jaunty Latin percussion then moves quickly into a bright, rapidly moving line that owes a little to Lennie Tristano, a bit more to George Russell. And, when Pressing and Barrett solo, they do not focus on the first beat of the bar, as so many musicians do when they improvise in unusual meters.

Hüseyni Saz Semaisi, with its daunting, off-the-wall Turkish accents, evolves into an impressive flute improvisation from Barrett, and *Flight* somehow manages to merge a Phrygian-based melody with a 12/8 African-style rhythm. *Ibex*, the title track, moves back and forth between 4/4 and 7/8, and *Home and Mind* starts with a mainstream jazz line that quickly moves into the outer limits of free improvisation.

If all of this sounds boringly technical, the music does not. Unlike those bands who expect to be congratulated for their extraordinary technical prowess, the World Rhythm Band seems to ask that you simply listen. It's unlikely that they'll provide much competition for Men at Work, but the serious jazz listener would do well to check out this group. Australian or otherwise, they're one of the jazz arrivals of the year. DON HECKMAN

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