

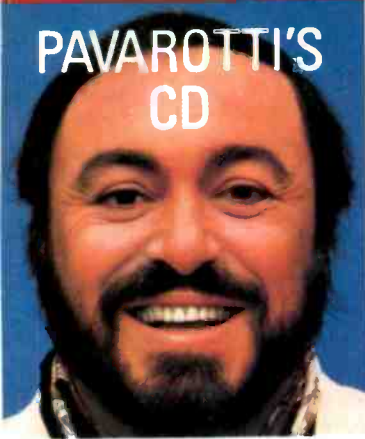
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FEATURING NEW TECHNOLOGIES

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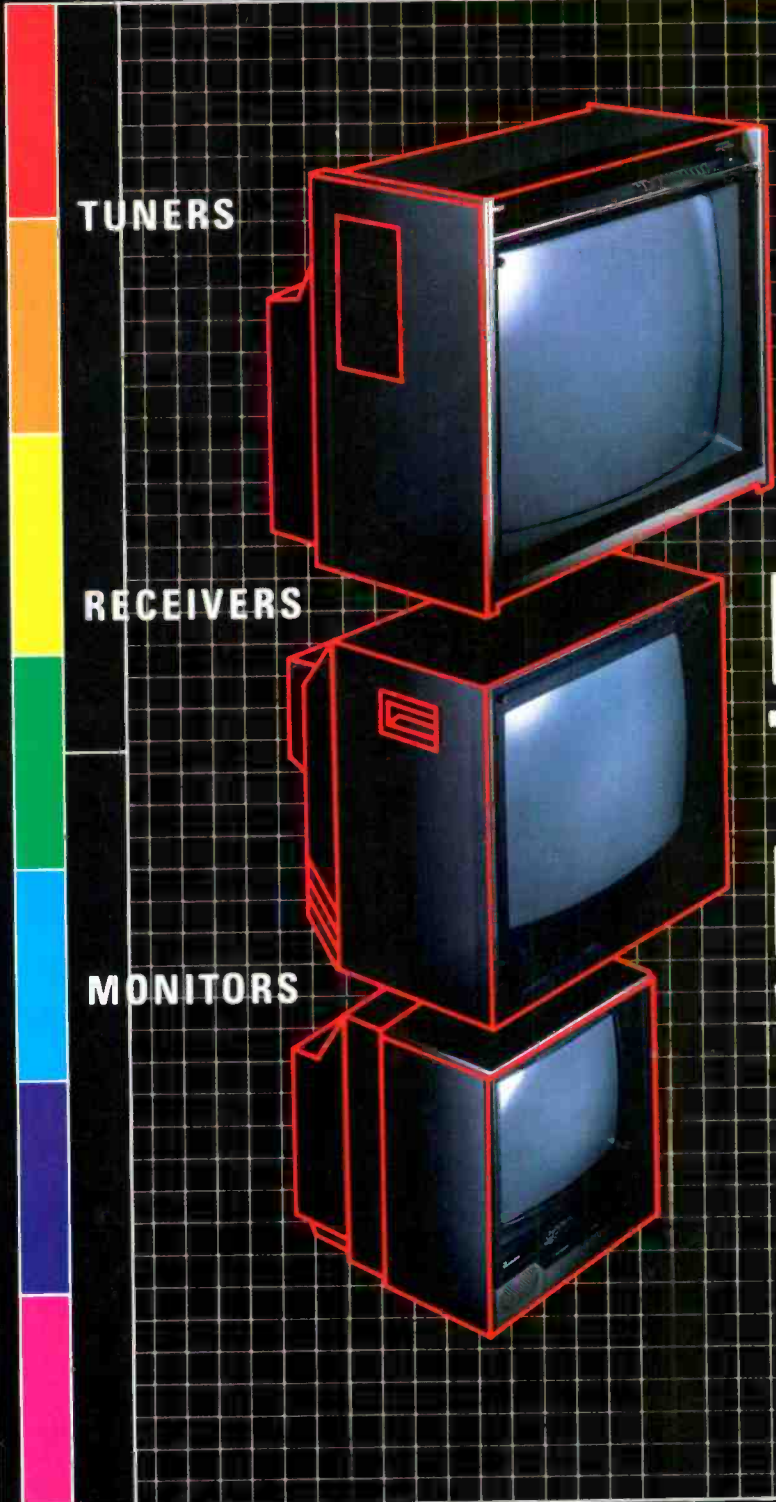
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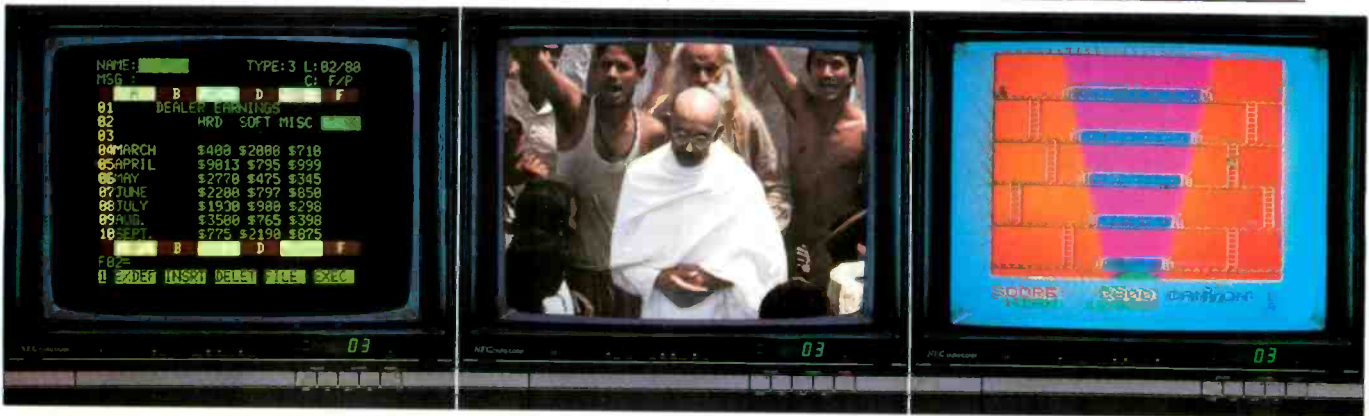


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VOLUME 34 NUMBER 3

MARCH 1984

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About This Issue

Inside the Pages of March's High Fidelity

AS THIS ISSUE goes to press, I've just returned from the Winter Consumer Electronics Show—the trade-only exposition where manufacturers introduce the latest in home electronics gear to their dealers. Next month, we'll present full coverage of the show (a preview appears in this edition on pages 10 and 11), but one aspect is worthy of note here: the continued focus on the Compact Disc. New players were everywhere, several manufacturers displayed prototype machines for cars, and record companies promised a broad array of new releases for later this year.

But underlying the mainstream of euphoria was a current of disenchantment with how some Compact Discs sound. Since the first releases were reviewed (see our January 1983 issue), music critics have alternately lauded and damned CD sound; today, a consensus has formed that though the hardware may be close to perfect, the software is sometimes deficient.

Several months ago, HIGH FIDELITY began its own investigation of what is behind the dissatisfaction with CD sound. First, pop music critic Sam Sutherland interviewed engineers and producers on what steps are taken in transferring the original recording to the CD format. He found that because most pop CDs are derived from analog master tapes, many imperfections can—and do—creep in between the original tape and the final product.

Concurrent with Sutherland's research, regular contributor E. Brad Meyer conducted experiments to discover why the same recording may sound different in the CD and LP formats. And, almost as an example of "zeitgeist," Bob Carver (of Carver Corporation) visited our offices recently while we were reviewing Sutherland's and Meyer's reports. As we discussed with him our Compact Disc investigation, he disclosed that he had been working on a "black box" to give CDs a more LP-like balance and ambience. (Carver eventually unveiled the device at the CES.) These three exclusive reports, which appear under the heading "Do CDs Sound Better?", provide much food for thought—and at least suggest that the tarnished silver lining of CD sound could use a little polish.

Also very visible at the Consumer Electronics Show was the new generation of separate television components. There's little question that the familiar all-in-one TV set is rapidly being supplanted by high-performance separate monitors and tuners and combined monitor/receivers. This issue includes special foldout charts listing more than 50 of these components and their important features.

A quick look at our music coverage for this month: What were the top pop and jazz recordings for 1983? By the time you read this you'll already know the "official" results—the Grammy Awards. Those notwithstanding, we asked our critics to list their Top 10. Of course, they didn't agree—so we're printing the individual choices. Does your list match any of theirs? See page 79. On the classical side, Paul Kresh explores the roots of so-called American music and provides an extensive discography of more than 125 recordings.

And remember: Next month's issue will contain a special report on new products introduced at the Winter CES.—W.T.



COVER DESIGN: Skip Johnston

Photos: William Whitehurst

ON THE COVER: (from top) RCA VJM-2023 monitor/receiver,

Pioneer TVM-190 monitor, Mitsubishi AM-1301 monitor/receiver

Luciano Pavarotti Photo by Mark Kozlowski/Courtesy London Records

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Letters

All Digital Is the Best Digital

Last fall I bought a Compact Disc player and have since accumulated more than 30 CDs. About five of these are fully digital, with the rest being made from analog master tapes. I can honestly say that the discs made from analog masters almost always sound infinitely worse than those made from digital tapes. Analog recordings of Asia, Men at Work, the Police, Dionne Warwick, and other pop artists sound compressed, even in the CD format.

On the other hand, I have a copy of an Elton John disc made from an analog recording remixed specifically for Compact Disc, and it sounds extremely good—better even than some of the fully digital CDs. Does this mean that the CD format is so true that the results depend totally on the studios' recording and mixing techniques? It certainly seems to reveal all of their mistakes. Perhaps the best recordings for this new medium would be of live sessions with no overdubbing.

Jeff Vinkemulder

Ramstein A.B., West Germany

See our special report on the sound of current Compact Discs, beginning on page 47.—Ed.

"Electronify" vs. "Amplify"

I appreciated Will Crutchfield's review of George Crumb's *Apparition* [December, 1983]. As associate engineer responsible for amplifying the piano on the piece, I was rather tickled that he misinterpreted how the amplification was used.

Contrary to Crutchfield's assumption, Crumb's score calls for all of the sounds from the piano—both those produced by the keyboard and those produced inside the piano—to be amplified. The microphones we used were two Crown PZM-30LPs, whose limited bass response was reinforced in some sections by an Audio-Technica AT-813. The signals were individually equalized and mixed into mono, and the result was sent through a Yamaha power amp into a Urei 811 studio-monitor speaker, mounted on a stand about six feet behind pianist Gilbert Kalish.

There was no attempt to "electronify" the piano. Rather, our goals were to improve the balance between the inside-the-piano playing and Jan DeGaetani's voice and to make the piano in general seem "bigger" without altering its basic sound. Since Crutchfield could not hear the latter I consider our job well done.

Paul D. Lehrman
Cambridge, Mass.

Information, Please

I would like to join the Boston Audio Society, but I have not been able to find its address. Can you please forward it to me?

William J. Dowling
Chestnut Hill, Mass.

Despite its name, the Boston Audio Society (or

BAS) is an international organization with members all across the United States. The reason is its interesting and informative newsletter, *The BAS Speaker*, which supplements the monthly meetings enjoyed by local members. For membership information, write the Boston Audio Society, P.O. Box 7, Kenmore Square Station, Boston, Mass. 02215-0007.—Ed.

In your December 1983 issue, Alexander Retsoff mentions record-cleaning equipment from several companies whose addresses I cannot find, including Keith Monks, VPI, and Allsop. Could you please tell me how to contact them?

Harold Robinson
San Francisco, Calif.

Allsop's address is P.O. Box 23, Bellingham, Wash. 98227; VPI's is P.O. Box 159, Ozone Park, N.Y. 11417. We do not have a current address for Keith Monks Audio.—Ed.

Of Pearls and Oysters

We live in a rural area; our nearest source of records is 20 miles away, in Santa Rosa, where there are three chain outlets: Record Factory, Warehouse, and Rainbow Records. All carry a large stock of Top-40 discs and a smattering of classical ones; none will special-order anything. There are a few smaller places, one of which carries a pretty good stock of jazz and classical and will special-order albums.

In the November '83 issue of *HIGH FIDELITY*, John S. Wilson reviewed the Jimmy Giuffre album "Dragonfly." Since he had undoubtedly received his review copy three to four months before the magazine reached me, and since KJAZ-FM had been playing "Dragonfly" for at least three months, one would expect the album to have been on the market by mid-November. But it wasn't. It isn't even listed in the current *Phonolog*. It appears that only reviewers and disc jockeys can get records these days. What is someone like me to do? Why would a record company promote a disc that isn't available?

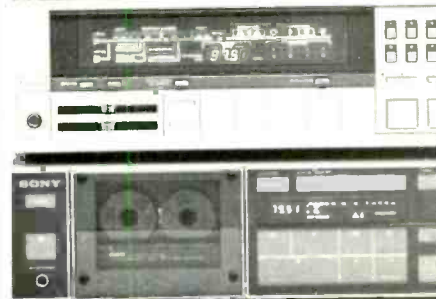
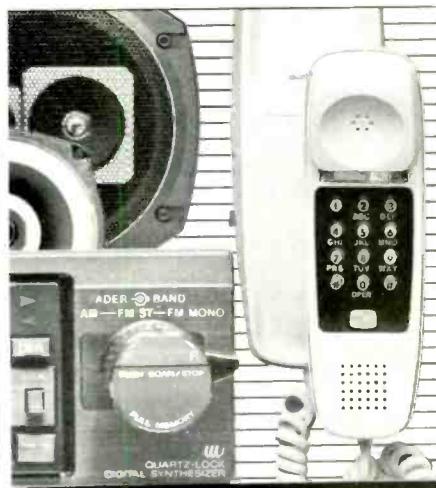
I have been following Mr. Wilson's reviews for years and seldom has he ever led me astray. I would appreciate any comment or suggestions he might have.

C. R. Sager
Guerneville, Calif.

John S. Wilson replies: *The only solution I can see is to purchase records by mail, which is how many small jazz labels function since they cannot compete with Top-40 product for distribution and in-store space. I usually include addresses with my reviews, and I think any newspaper or magazine that publishes reviews of small-label jazz should follow suit.*

Jimmy Giuffre's "Dragonfly" is on Soul Note, which is distributed by Polygram Special Imports. According to the distributor, the disc should be available from Tower Records in San Francisco. If not, write to Daybreak Express, P.O. Box 250, Van Brunt Station, Brooklyn, N.Y. 11215. Daybreak handles mail order for PSI. Incidentally, "Dragonfly" is listed in the current Schwann catalog.—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.



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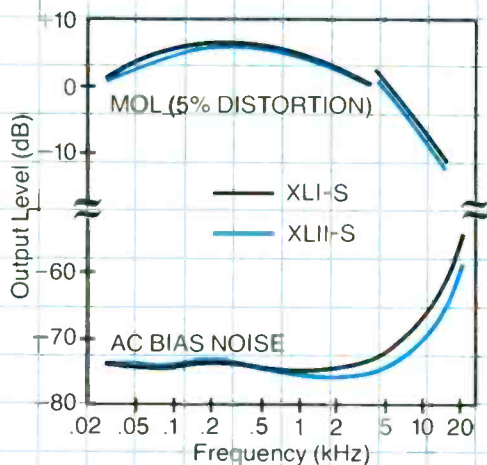
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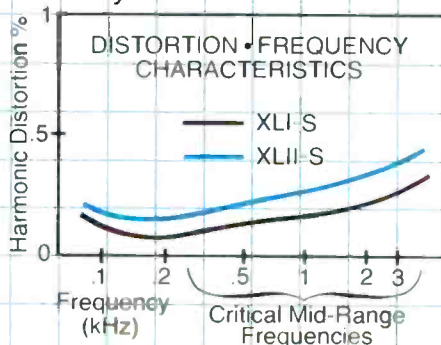


As a result, the dynamic range of each tape has been significantly expanded. So you get a

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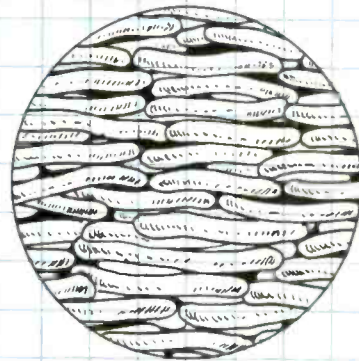
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CrossTalk

Practical answers to your audio and video questions by Robert Long

How Much Power?

When I went to buy speakers for my receiver—a Sony STR-VX550, rated at 50 watts per channel—I saw the Sony SSU-400s. On the back they said “60 watts, max. power,” so I thought they would be a good match. But their instruction manual recommends a 30-watt receiver. And on the box it says “3-way,” but they have no midrange drivers. I’m so confused that I’m scared to use the speakers. Please advise.—Abid Hussain, New Orleans, La.

I don't know what to make of your statement about the three-way speaker system having no midrange driver (the SSU-400 does have three drivers), but you needn't worry about the power ratings. Sony doubtless means that the speakers need no more than 30 watts to be driven adequately, but will work well even with 60 watts. In any event, the difference between these figures is not great enough to be of concern. Most such power ratings are almost meaningless, anyway: The speakers will work—though less well—with smaller amplifiers and are unlikely to be damaged in normal use by more powerful ones.

Magnetic Storm

I have read that you should never turn on the power when a tape deck is in the recording mode, because it will magnetize not only the heads, but the rest of the machine as well. That's just what my little girl inadvertently did, however. I've also read that the subject of magnetization has been overplayed. I used a TDK demagnetizer on my deck and have noticed no problem whatsoever in playing or recording cassettes, but I'm still wondering whether I will have to replace a machine I like (a Sony FX-30) or risk degrading my tapes.—Porter C. Holman, New York, N.Y.

It may be possible to cause gross magnetization this way on some decks, but certainly not on all. In fact, most decks can't be turned on in the recording mode in the first place. And cassette decks in general seem less plagued by residual magnetization than open-reel decks.

I think a repair shop *should* be able to measure residual magnetism, but readers keep telling us that their shops don't have the necessary meter. In that case, you'll

have to rely on your ears—which should detect a dulling of the highs and increased hiss on repeated playings of any cassette if the metal parts over which the tape must pass have become magnetized. You may want to make up two identical tapes with music and blanks designed to test for this. Play one of them at least 20 times (though in severe cases, one pass is enough to produce audible degradation), then play the other tape for comparison. If they still sound identical, forget the whole thing.

At Home with CDs?

Should I plan to buy a Compact Disc player (and everything that goes with it) and start collecting CDs, or can I use the money as down payment on a house, as I've always planned? In other words, are CDs going to replace my conventional albums and stereo, or what?—Tammie Ward, New York, N.Y.

If you have to give up your home to buy a Compact Disc system, the price is too high. But even if you're half serious, you seem to overestimate the cost of going CD. (Prices for basic players have dropped into the \$500 range, and you can use them with your present system.) I do think CDs will replace LPs eventually, but I also think that most new recordings will be available in both formats for some years.

Equalizer Magic

My Pioneer receiver pushes 65 watts through Jensen 12-inch, three-way loudspeakers. For the money I spent, the matchup can be simply ear-punishing without losing a thing. An ADC SS-110 equalizer also enhances the setup. A friend has an 85-watt Realistic receiver with 15-inch, three-way loudspeakers, and he just can't match the sound. Can the equalizer make up a 20-watt difference, or is it just the equalizer's performance and clarity that make it sound like more?—Gene Wolanin, Williamsport, Ind.

Forget the “20-watt” difference: In this case, it amounts to only about 1 dB, which is barely perceptible. And you're presumably basing these figures on rated power; actual power short of clipping may be quite different. For example, the Pioneer receiver could conceivably have several dB of

dynamic headroom and the Realistic little or none, which would give your setup a power advantage when playing music. Another possibility is that your speakers are more sensitive than your friend's or that they have a more appealing balance and lower distortion.

An amplifier's capabilities are as they are no matter what kind of signal is fed to its input. Thus, an equalizer can in no way increase the power of the amplifier—only, at best, the subjective perception of loudness, depending on the sort of equalization applied—and its ability to clean up reproduction that's less than perfectly transparent is similarly limited. Equalizers are very useful devices, but they have no magical powers.

A Scan That Can't?

My Akai GX-F44R cassette recorder has an “introscan” feature designed to play the first ten seconds of each song on the tape. It doesn't work well on the tapes I recorded on the deck, though it does work with tapes at a reputable shop where I took the recorder for repair. The technician says there is no way of adjusting the feature. Any suggestions?—Ramon A. Garcia, Omaha, Neb.

You don't say in what way the feature fails to work well with your tapes, but several possibilities come to mind. With any such feature, you need at least four seconds of real silence so the device can “hear” the intersong blanks during fast-wind, and you need music without big “holes” in it—which, to the deck, would seem to be just other blanks. Classics and speech often have such holes, and there really isn't anything you can do except to keep the signal level as high as possible without overloading the tape when you record it.

Conversely, if you make your tapes from any signal source having a high background noise level that continues between songs—such as weak FM stations or scratched discs—the feature will take the noise for signal and go right by your unquiet blank. Once the recording is made, your only remedy is to erase the noise between the songs, which is hard to do without erasing any of the music. So the main point is to keep the signal level up and the noise level down on all tapes you make.

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

AUDIO/VIDEO

Currents

News, new products, and new technologies

CES Preview: What's in Store for '84

Though full coverage of the audio and video gear introduced at the Winter Consumer Electronics Show in Las Vegas will appear in these pages next month, we know how eager you are to get the first word on new developments. This preview is a foretaste of what's to come, based on information gathered at a hectic round of preshow press briefings in New York. The equipment described here should be available this summer.

Sometimes, however, products or technologies announced at (or before) a CES don't make it to retail shelves quite on schedule. Such is the case with VHS Hi-Fi. At last June's summer show, JVC outlined how it was tackling the problem of recording a frequency-modulated (FM) stereo soundtrack on a videocassette (see "Tech-Fronts," September 1983). But Panasonic disagreed with JVC's choice for a noise reduction system, and the two electronics giants retired to the conference table to talk things out. Though JVC and Panasonic have yet to announce their own marketing plans, it is rumored that Hitachi will introduce a VHS Hi-Fi recorder in April based on the "standards" developed by all three companies.

● Portable Video First

The Winter CES has been the traditional venue for the introduction of new video equipment, and this year Kodak's booth will no doubt draw huge crowds eager to see the world's first 8mm portable video system, built to the standards agreed upon last year by the international 8mm Video Standardization Conference ("Tech-Fronts," July 1983). At a special preshow press briefing, Kodak demonstrated the Kodavision 2000 system, which consists of a one-piece camera/recorder, or camcorder; a stay-at-home cradle in which the camcorder is placed for home viewing and battery charging; and a tuner/timer module that snaps into the cradle for off-the-air recording. Kodak is also offering two grades of blank 8mm cassettes for the system: a standard-grade metal-particle formulation and a high-grade metal-evaporated tape. At first, both formulations will be available only in



Kodavision 8mm portable video system: camcorder in cradle for home viewing (inset)

90-minute lengths.

The camcorder section of the system comes in two versions. The Models 2400 and 2200 each have a black-and-white CRT viewfinder, a 1/8-inch Newvicon pickup tube with a sensitivity of 20 lux, and a 6:1 power zoom lens with automatic iris. The more expensive Model 2400 also has automatic focus and three video heads for improved special effects.

Prices for the various elements of the system are \$1,900 and \$1,600 for the 2400 and 2200 camcorders, respectively; \$200 for the Model 2020 camcorder cradle; and \$300 for the Model 2022 tuner/timer module. Prices for the cassettes will be announced closer to the market introduction date for the system, which is in late summer.

● Laser Tracking



NAD (above) and Sanyo CD players



NAD claims that its Model 5200 Compact Disc player is superior to more costly

designs in its ability to track dirty or flawed discs. The improved performance is said to derive from a frame-synchronizing circuit that eliminates data losses caused by timing jitter, and a new logic processing circuit that analyzes bit-error patterns, thereby doubling the system's capacity for error-correction both before and after signal deinterleaving. The nonprogrammable NAD 5200, priced "in the mid-\$600 range," will have some tough competition from manufacturers competing more on price and features than on higher performance. Sanyo, for instance, is offering the CP-200 with 16-selection programmability for \$550, and rumor has it that General Electric will soon introduce a player that some industry observers believe could be sold for as little as \$350.

● Audio, Video Tapes

Though made with pure metal particles, TDK's new HX audio cassette tape is not a Type 4 formulation: Its lower bias requirement suits it for use with your deck's Type 2 (chrome or chrome-equivalent) setting. The HX formulation (not to be confused with the Dolby HX Pro headroom-extension circuit) is said to offer about 1 1/2 dB more dynamic range than "standard" Type 2 tapes.

TDK also has two new videotape formulations: Extra High Grade Hi-Fi and High Definition Professional. Because of



its extremely low dropout rate, the Extra High Grade formulation is said to be particularly appropriate for use in Beta Hi-Fi and VHS Hi-Fi recorders. In addition, TDK claims that this formulation has 3 dB better luminance and 5 dB better chrominance signal-to-noise ratios than the company's standard-grade videotape. High Definition Professional, or HD Pro, is TDK's new top-of-the-line formulation. It uses an ultrasmall magnetic particle for a packing density three times greater than the density of the Extra High Grade tape. According to the company, luminance and chrominance signal-to-noise ratios are 2 dB and 1 dB better, respectively, than those for Extra High Grade. As of press time, no prices for any of these tapes had been announced.

• Three Decks from TEAC



TEAC will market three new high-performance cassette decks this spring, ranging in price from \$725 for the V-900X to \$475 for the V-700X. The V-900X is a three-head, two-motor design equipped with a tape-tuning system to automatically adjust sensitivity, bias, and equalization. The deck

includes all three popular noise-reduction systems—DBX, Dolby B, and Dolby C.

• CD for the Road



Philips, inventor and codeveloper with Sony of the Compact Disc system, is demonstrating a prototype car CD player at the Winter CES. Philips states that more work remains to be done in improving motional stability and disc-loading mechanics; meanwhile, it's interesting to see how the company envisions a car CD player's controls. Note that aside from the "open/close" button—which presumably causes a disc holder to emerge horizontally from behind the track/program selector display—all the buttons are labeled exactly the same as the transport controls on a cassette player.

• Jensen's New Look



Front end with flip-down display screen



Jensen, in a bold departure from the look

and feel of most car radio/cassette players, is introducing the five-model ATZ series of computer-controlled front ends. As you can see in the photos of the top-of-the-line ATZ-500, instead of rotary knobs flanking the central control panel, there are control-bearing "wings" (volume and tuning controls on the left and station presets on the right) that fold out to cover the space usually occupied by a front end's control shafts. The LCD time/frequency/mode display screen folds down to reveal less frequently used controls. The five models differ in features and power output. (The ATZ-500's four-channel amplifier section is said to put out a total of 40 watts.) Prices range from \$520 to \$320.

• Facets of the Diamond



Wharfedale, the English speaker maker, has a compact system just 10 inches high and 7½ inches deep designed especially for wall mounting. The Diamond uses a 4½-inch bass/midrange driver and a ¾-inch plastic dome tweeter in a computer-optimized bass-reflex enclosure. Sensitivity ("efficiency") is said to be 86 dB for a 1-watt (0-dBW) input. Price has not yet been announced.

Model AT152LP
Vector Aligned™ Dual Magnet™
Stereo Phono Cartridge

**"I would rank it...
among the best phono
cartridges now available,
and...suited for use in
the finest of systems."**

—NORMAN EISENBERG
Ovation Magazine

Direct Plug-in
to P-Mount arms plus
universal mounting adapter



audio-technica.

Basically Speaking

Audio concepts and terms explained by Michael Riggs

How HF Tests Cassette Decks: Part I

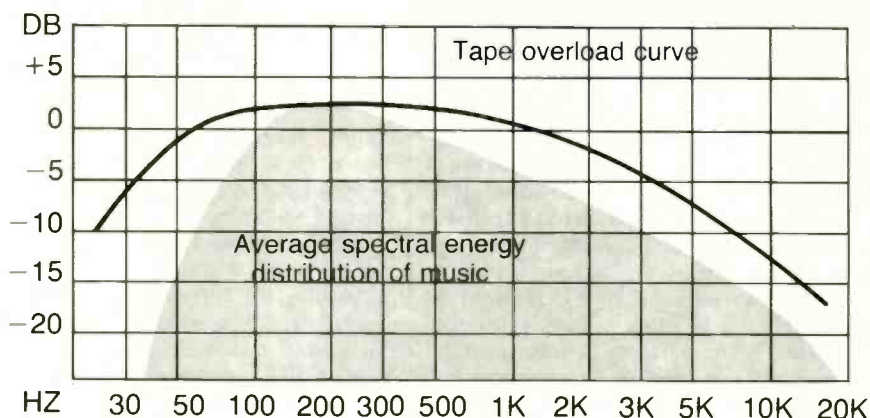
FREQUENCY RESPONSE is one of the most important, and most basic, indexes of fidelity. But for a cassette deck, it's a pretty complicated matter. The reason is that a deck's response is bound up with the characteristics of the tape: Neither has a frequency response independent of the other, which is why we always specify the tapes we use for testing.

Playback response is measured with a standard BASF test tape prerecorded with tones at spot frequencies from 31.5 Hz to 18 kHz. For flat response, a deck must have a high-quality playback head whose azimuth alignment to the tape is the same as that of the head that was employed to record the tones, and its playback equalization must conform to the standard of the International Electrotechnical Commission (IEC).

Unfortunately, azimuth is a problematic issue. Heads are aligned using calibration tapes (such as the BASF), which are assumed to have been recorded with the correct azimuth (i.e., with the head gap exactly perpendicular to the direction of tape travel). But these tapes turn out not to be identical. Thus, a deck adjusted to one calibration tape will probably seem misaligned when tested with a different one. The result will be an apparent high-frequency rolloff, its severity depending on the magnitude of the azimuth disagreement.

As a practical matter, the problem this creates is one of compatibility. A commercially recorded cassette or a tape made on another machine may not be accurately reproduced. But a well-designed and otherwise properly adjusted deck should do a fine job of playing back its own recordings, because the azimuth of its recording head will be aligned to that of its playback head.

Low frequencies also present a problem, albeit a very minor one. Most playback heads exhibit low-frequency response irregularities known as "head bumps." (Phrenologists, take note.) But because the tones on the test tape are at discrete frequencies with spaces between them, these are not fully reflected in the playback response measurement. Although we do render the curves all the way down to the tape's lower limit, they should be interpreted as showing the overall lie of the bass response rather than its exact shape. This is why the tabu-



A frequently asked question is why we measure record/play response at -20 dB (relative to DIN 0 dB) when everyone, including us, recommends setting peak recording levels 20 to 25 dB higher. Why don't we run curves at DIN 0 dB? In fact, Diversified Science Laboratories does check response at 0 and -10 dB, to give us an idea of the test deck's high-frequency headroom. We comment if it is unusually good or bad, but we don't print the curves because they don't represent the deck's frequency response when recording music, even with the meters peaking at 0 dB or higher.

The graph above shows why. The shaded area represents the approximate average spectral energy distribution of orchestral music; the curve above it indicates the maximum recording level (for 3 percent distortion) of a good Type 1 tape in a typical high-quality cassette deck. If the deck's meters are allowed to peak a few dB above DIN 0 dB, the music's maximum midrange energy will hit just about at the tape's overload point in that frequency range (as shown). Because the musical energy falls off faster at lower and higher frequencies than does the tape-saturation level, the tape can handle the entire signal with low distortion and flat frequency response.

But it would be a different story if the spectral distribution were flat, with the same amount of energy at all frequencies. The signal would far exceed the tape's capacity in the bass and treble, causing gross distortion and a severe high-frequency rolloff. It is this unnatural condition that is simulated by a frequency response measurement at DIN 0 dB. A -20-dB level is just low enough to guarantee that the response will not be limited by tape saturation, which would disguise the deck's actual capability under typical recording conditions.

lated response below the graph cuts off at 315 Hz.

The record/play curves—which show the frequency response for tapes recorded and played back on the machine under review—are run with swept sine waves, so they do accurately reflect the low-frequency response. The important thing to remember about these curves is that they represent the frequency response with the specific tape formulations used for the testing. Substituting a different tape without readjusting the deck's bias, recording equalization, and sensitivity usually will give different results. We therefore test each deck with the three tape formulations (a Type 1 ferric, a Type 2 chrome or ferricobalt, and a Type 4 metal) for which the manufacturer says it has been set up. And if the deck has any automatic or user-accessible manual adjustments for bias, equalization, or sensitivity, we use them to trim it up before making any measurements or doing any listening.

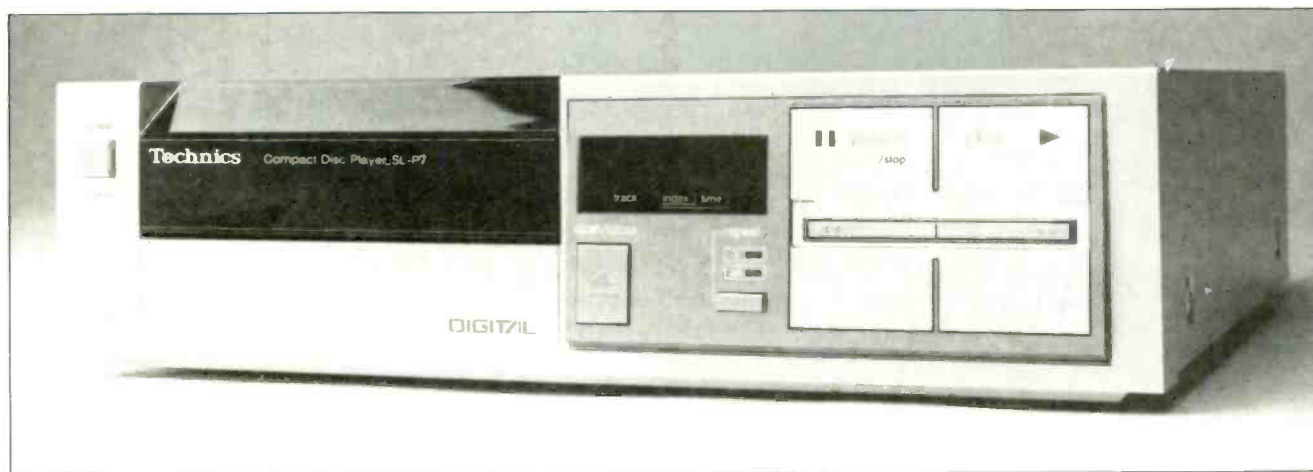
Bias and equalization affect the basic frequency response, shown on the graphs by the solid curves. Most noise reduction systems, such as Dolby B and C, tend to exaggerate any response errors. (Response with noise reduction is indicated by broken-line curves.) DBX is the principal exception to this rule. Although it will double response errors in measurements made with swept sine waves, it ordinarily will not have this effect on music signals. Instead, it will cause a slight, normally inaudible modulation of the music's dynamics.

Sensitivity adjustment affects Dolby tracking only. If it is not correct, the error will manifest itself in the Dolby response as anomalies that do not follow the shape of the curve made without noise reduction. The severity of such mistracking is level-dependent, and our curves show just about the worst case. A well-adjusted deck will exhibit Dolby mistracking of no more than 1 or 2 dB.

HF

New Equipment Reports

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



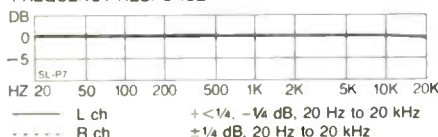
STEVEN MARK NEEDHAM

Technics Builds a Basic CD Player

Technics SL-P7 Compact Disc player. Dimensions: 12½ by 3½ inches (front panel), 12½ inches deep plus clearance for connections. Price: \$700. 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.

All data obtained using the Sony YEDS-7, Technics SH-CD001, Philips 410 055-2, and Philips 410 056-2 test discs.

FREQUENCY RESPONSE



DE-EMPHASIS ERROR

+ 1/4, -0 dB, 1 to 16 kHz

CHANNEL SEPARATION (at 1 kHz) 92¾ dB

CHANNEL BALANCE (at 1 kHz) ±0 dB

S/N RATIO (re 0 dB; A-weighted)
without de-emphasis 98½ dB
with de-emphasis 103½ dB

HARMONIC DISTORTION (THD+N; 40 Hz to 20 kHz)
at 0 dB ≤ 0.013%
at -24 dB ≤ 0.051%

IM DISTORTION (70-Hz difference frequency;
300 Hz to 20 kHz)
0 to -30 dB < 0.01%

LINEARITY (at 1 kHz)

0 to -60 dB no measurable error
at -70 dB + 1/2 dB
at -80 dB + 1½ dB
at -90 dB + 4½ dB

VALUE HAS ALWAYS BEEN one of Technics's strong suits, so it comes as no surprise that the company is among the first to market a Compact Disc player in the relatively moderate \$700 price bracket. This has been achieved not by skimping on quality, but by taking advantage of new large-scale integrated circuits (LSIs) and by trimming away nonessential features, such as remote control, elaborate programmability, and a headphone jack. The omissions are minor (especially when you consider the comparatively primitive features of typical analog turntables), and they in no way impair the SL-P7's basic operation.

In fact, its complement of cueing options is very strong. Besides PLAY and PAUSE (which doubles as the stop key), there are two pairs of keys labeled "skip" and "search/index." Pressing SKIP during play moves the laser pickup a track at a time in the direction indicated on the key. A single tap sends the laser to the beginning of the current or next band; a sustained press propels it rapidly across the disc until the desired track number appears on the display and you release the key. Or you can use SKIP to select the track at which playback will commence when PLAY is pressed.

As its name implies, SEARCH/INDEX is a dual-function control. In the stop mode, it can be used to specify the index number within a track at which play will begin. (The track number is set first with SKIP.)

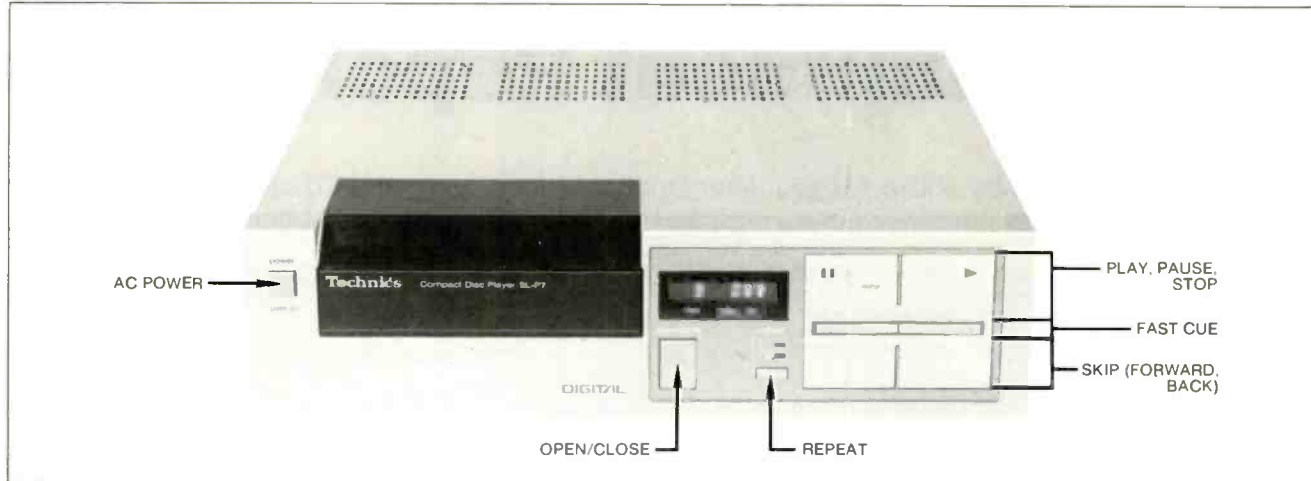
During this procedure, the display shows the track and index numbers; when PLAY is pressed, the index number is replaced by elapsed time from the beginning of the track.

In PAUSE or PLAY, pressing SEARCH/INDEX moves the pickup quickly across the CD in the direction indicated on the control key until you release it. The scan speed depends on how long you hold the key down, increasing substantially after a few seconds of continuous pressure. We were happy to find that the SL-P7's track and time readouts keep pace with the pickup, and that when SEARCH is activated from the play mode, you can still hear the output from the disc, albeit speeded up and at a reduced level. (Some players leave you "flying blind" during high-speed searches.)

Other features include the ability to repeat a disc or a track automatically and provisions for timer-activated playback (in conjunction with an external timer). There are also a couple of special jacks on the back panel. The one labeled "Synchro Rec" is a mini jack for synchronized recording with certain Technics cassette decks and for what the company calls "direct operation" with appropriately equipped Technics amplifiers. The latter causes the amplifier to switch its input selector to the CD position when PLAY is pressed, or the SL-P7 to go into PLAY when

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

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

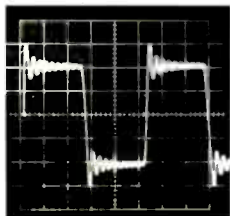


TRACKING & ERROR CORRECTION
 maximum signal-layer gap $\leq 800 \mu\text{m}$
 maximum surface obstruction $\leq 800 \mu\text{m}$
 simulated-fingerprint test pass

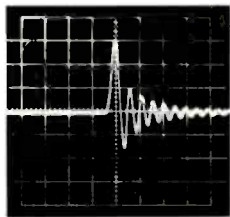
MAXIMUM OUTPUT LEVEL 1.93 volts

OUTPUT IMPEDANCE 330 ohms

SQUARE-WAVE RESPONSE (1 kHz)



IMPULSE RESPONSE



the amplifier's source selector is turned to CD. The second jack, a five-pin DIN socket, is intended for unspecified applications with future components.

Disc loading is by means of a slide-out drawer mechanism, which normally is operated with a conveniently placed button. (It can also be closed by pressing PLAY or pushing hard on the drawer.) When a disc is loaded, the player immediately reads its index information and displays the total playing time and number of tracks. This readout remains until you press SKIP or PLAY.

We found the SL-P7 very easy to use. The front-panel control keys are a little stiff, and the player makes more mechanical noise than do most others, but these are small points. A more important consideration is the unit's resistance to external shock—among the best we have encountered, regardless of price.

The data from Diversified Science Laboratories also disclose first-class performance. Frequency response is, for all practical purposes, perfectly flat over the audio band, and channel separation is greater than 86 dB all the way to 20 kHz. Noise and distortion figures are likewise excellent. The latter are particularly impressive, not only at high signal levels but at very low ones as well. This total absence of audible distortion is mirrored in the linearity measurements, which show essentially perfect performance down to -70 dB and an incon-

sequential amount of compression below that. Square waves and impulses show some well-controlled, inaudible ringing from the digital-to-analog (D/A) converter's steep output-smoothing filters, but are otherwise quite clean. And the player's output impedance is very low, assuring a good interface with other components.

Most significant is the SL-P7's superb performance in the tracking and error-correction tests, which are designed to give an idea of how well a player compensates for disc flaws, dirt, scratches, and the like. In this respect, it is better than all but a couple of the other players we have tested, including some much costlier models. The only stumble was at the highest (900-micrometer) level of the track with calibrated information-layer gaps. Technics credits this feat to its new "Ultra Super Decoding Algorithm," which it developed for the SL-P7 and the slightly more expensive (\$800), programmable SL-P8.

There is much to admire in this new Technics player and almost nothing to fault. Considered strictly as a reproducer of Compact Discs, the SL-P7 stands in the ranks of the best. And though it lacks a few of the luxury features available on some other models, the ones included are well executed and adequate for all the everyday requirements of CD playback. In today's market, that makes this latest entry from Technics a real bargain.

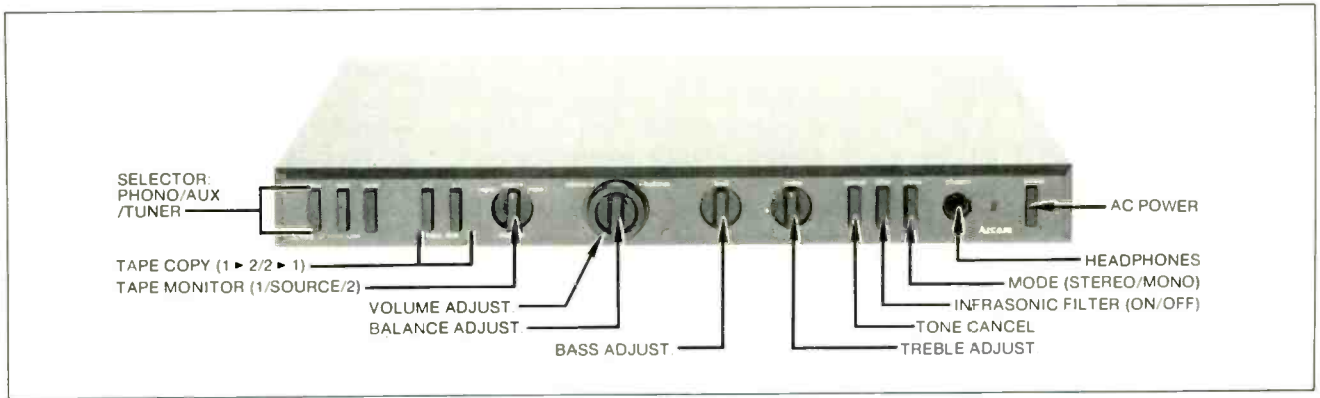
A Modular Preamp From England

Arcam C-200 preamplifier. Dimensions: 17 by 13 1/4 inches (front panel), 11 1/4 inches deep plus clearance for controls. Price: \$750. Warranty: "limited," three years parts and labor. Manufacturer: A&R (Amplification & Recording) Cambridge, Ltd., England; U.S. distributor: Arcam (U.S.A.), Inc., 2141 Terrace Lane, Skaneateles, N.Y. 13152.

FOR SOME REASON, the idea of modular construction has traditionally appealed more to British equipment designers than to those in other countries. Its primary virtue (which must override somewhat higher manufacturing costs) is the versatility of the resulting product: The user can tailor the component to his needs and update it more easily than is possible with conventional equipment.

"Arcam" is the brand designation for the products of A&R, otherwise known as Amplification & Recording, Ltd., of Cam-

bridge, England, which uses the modular approach effectively in its C-200 preamplifier. The individual modules are designed for specific types of inputs (line—or aux—fixed-coil phono, or moving-coil phono). The phono modules can be further customized, at so-called DIP switches accessible on the bottom panel, for the pickups you choose. The moving-coil (MC) module is rated for a normal sensitivity of 160 microvolts (μV) and an input impedance of 330 ohms in parallel with 1 nanofarad (1,000 picofarads). The alternate switch positions



OUTPUT AT CLIPPING (1 kHz)	
main output	8.6 volts
headphone output	2.1 volts
HARMONIC DISTORTION (THD; 20 Hz to 20 kHz)	
	<0.01%
FREQUENCY RESPONSE	
	+0, -1/4 dB, 17 Hz to 18.5 kHz;
	+0, -3 dB, <10 Hz to 47 kHz
RIAA EQUALIZATION	
fixed-coil phono	+<1/4, -1/2 dB, 20 Hz to 20 kHz;
	-23/4 dB at 5 Hz
moving-coil phono	+<1/4, -1/2 dB, 20 Hz to 20 kHz;
	-3/4 dB at 5 Hz
SENSITIVITY & NOISE (re 0.5 volt; A-weighting)	
	sensitivity S/N ratio
aux input	50 mV 92 1/4 dB
fixed-coil phono	1.5 mV 77 3/4 dB
hi. sens.	0.75 mV 78 1/2 dB
moving-coil phono	80 μV 78 3/4 dB
hi. sens.	30 μV 80 dB
PHONO OVERLOAD (1-kHz clipping)	
	normal hi. sens.
fixed-coil phono	285 mV 145 mV
moving-coil phono	16.5 mV 5.6 mV
INPUT IMPEDANCE	
aux input	16k ohms
fixed-coil phono	50.9k ohms; 85, 185, or 300 pF*
moving-coil phono	340, 110, 32, or 11 ohms
OUTPUT IMPEDANCE	
main output	360 ohms
tape output	≤ 2,000 ohms
headphone output	155 ohms
CHANNEL SEPARATION (at 1 kHz)	65 1/2 dB
INFRASONIC FILTER	-3 dB at 26 Hz; =12 dB/octave

*See text.

change the sensitivity to 60 microvolts, the resistance to 100, 30, or 10 ohms, and the capacitance to 100 nanofarads. The fixed-coil (MM) input module is rated at 3 millivolts (mV), 47,000 (47k) ohms, and 50 picofarads (pF); the alternatives are 1.5 millivolts, 30,000 or 8,000 ohms, and 150, 270, or 370 picofarads.

Some of these options may look a little strange at first glance. They presumably allow for pickups that will profit from somewhat special handling. When Diversified Science Laboratories measured these inputs, it found the resistive and capacitive values of the input impedances to be only slightly higher than the ratings in each case. DSL also tried moving all of the multiple-option DIP-switch elements to their "non-standard" positions. For the fixed-coil module, this yielded a minimum resistive loading of 7,600 ohms and maximum capacitance of 400 picofarads. We report sensitivity according to the IHF standard; the Arcam ratings, which are exactly 6 dB higher than DSL measured in each instance, doubtless derive from a different standard.

Because the C-200 has space for only two input modules plus the standard (non-optional) tuner input, you would have to give up the aux input to use both phono modules. (One of our test samples was delivered in this configuration, which makes the front-panel selector designations incorrect and suggests that Arcam expects most customers to choose a single type of pickup.) Arcam says the modules are user-replaceable, so you're not permanently committed to any initial configuration.

Also supplied in the basic package are two tape monitor loops, each with its own back-panel input level adjustment, and two pairs of main output jacks. Arcam offers an optional electronic crossover board that provides a split feed to the output jacks for biamping. All inputs and outputs are regular pin jacks, though the special input modules (aux or phono) have five-pin DIN jacks as well. (Arcam notes that DIN connections are available for all functions, but we wouldn't expect many users in the U.S. to choose that option.)

The AC input and outputs—also on the back panel—require special connec-

tors: You can't simply plug the line cord of a cassette deck, for example, into one of the accessory outlets. The entire connection panel is recessed almost three quarters of an inch into the case. If you have short plugs and can dress the leads downward, you need leave no clearance at the back, though this probably won't prove practical in most setups.

The front-panel headphone output is powered from its own amplification stage (omission of which in some preamps limits the user to modest levels, at best, with typical headsets). Plugging into it automatically cuts off the signal to the line outputs—and therefore to the speakers—which strikes us as the most practical arrangement for most purposes. Arcam says the headphone jack's output is optimized for both high- and low-impedance headsets, but the measured output impedance seems on the high side for driving low-impedance models, which often are rated at around 8 ohms.

The tone controls have the least influence on perceived sound of any we can remember testing. The BASS has virtually no effect above 500 Hz and shelves below about 100 Hz, with a maximum range of ±5 dB. The TREBLE is even gentler, having almost no influence below 2 kHz and barely achieving the rated ±5 dB at 20 kHz. The first time we tried these controls (on an FM station with a good, quiet top end, but little sparkle and no deep bass in the program material), we were convinced they weren't working, so subtle was their aural effect. The fastidious may find they provide the gentle nudge that conventional controls so easily turn into overstatement; sonic extravagance is beyond their range. The calibration (at "soft click" stops) is unusually accurate, in 1-dB steps at the frequency extremes. The tone-control circuits are non-inverting, incidentally, so signal phase is not reversed when you push the tone-cancel switch.

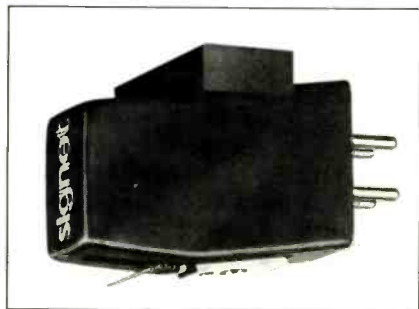
The infrasonic filter is quite effective. It begins attenuating response at relatively high frequencies. (Response is down about 1 dB at 45 Hz.) But the rolloff is very gradual at first, and the full 12-dB-per-octave slope is attained only in the infrasonic region, below 20 Hz. By the time the warp

frequency region is reached (at around 5 Hz), output is down by more than 20 dB.

Both sonically and ergonomically, the C-200 has a quietly endearing quality. Its sound can't be faulted. The functioning of the controls similarly produced no complaint, and the preamp's appearance is handsome. It seems a little odd at first that you can't turn off the tape-copy feature (you can only switch the direction of the

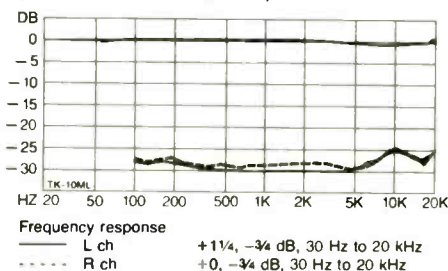
copying feed) and that the volume element is outside the balance element in the controls. But these factors posed no practical problems and were quickly assimilated when we started using the preamp. There is no LOUDNESS (which we seldom use anyway), but the BASS can be adjusted for modest degrees of compensation. And it's nice to work with a product that's so distinctly out of the ordinary.

State of the Art, By Signet



Signet TK-10ML fixed-coil (moving-magnet) phono cartridge, with MicroLine multiradial diamond stylus. Price: approx. \$375 to \$400 (varies somewhat from market to market). Warranty: "limited," three years parts and labor. Manufacturer: Made in Japan for Signet Div., A.T.U.S., Inc., 4701 Hudson Dr., Stow, Ohio 44224.

FREQUENCY RESPONSE & CHANNEL SEPARATION (test record: JVC TRS-1007 Mk. II)



THE LAST TIME WE TESTED a Signet cartridge (the TK-7LCa, in November 1982), we were mightily impressed. The TK-10ML follows that model's basic approach in employing Signet's Twin-Flux moving-magnet system, in which a separate magnet is used for each channel. But it also incorporates a number of recent technological innovations to make it a truly state-of-the-art phono pickup. Oxygen-free copper is used in the omega-shaped toroidal coils, which are connected directly to the gold-plated output contacts. This design is said to result in a very efficient generator with a low output impedance, minimizing its sensitivity to capacitive loading by tonearm leads and phono inputs. And the stylus tip is a nude MicroLine diamond mounted in a rigid, low-mass boron cantilever.

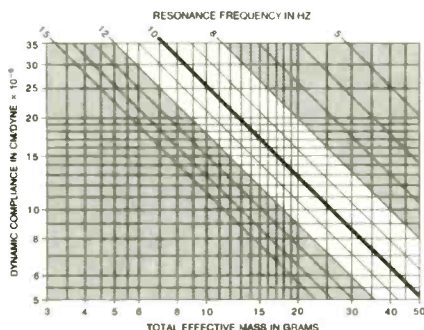
The MicroLine shape (like some designs from other companies) represents a closer approach to the shape of the cutting stylus than was deemed possible—without record damage—even a few years ago. The effective scanning radius, which determines front-to-back contour and thus the stylus's ability to trace high frequencies and sharp transients, is extremely small. Conversely, the radius of the vertical contour is quite large, to spread the bearing surface up and down the groove wall. (For this reason, Signet says you may "rediscover lost nuances in worn surfaces" when the MicroLine rides, at least in part, where no stylus has ridden before.)

Diversified Science Laboratories tested the TK-10ML into the manufacturer's recommended load of 47,000 (47k) ohms in parallel with 200 picofarads (pF). The resulting response and separation curves are almost unique in their absence of perturbations—particularly as the test sweep approaches the pickup's high-frequency resonance, which here seems virtually nonexistent. The square-wave photo shows a near-ideal waveshape, with what little ringing there is attributable mainly to the cutterhead used in making the test disc, rather than to the cartridge. Distortion is quite low, the vertical-tracking and stylus-rake angles (VTA and SRA) appear to be spot-on, and channel balance is virtually perfect.

The TK-10ML tracked all of the "torture test" bands on the CBS STR-100 and STR-120 test discs with no misbehavior at 1 gram—the bottom of the vertical-tracking-force window (1.0 to 1.5 grams) specified by Signet. DSL conducted the remaining tests at Signet's recommended 1.2-gram VTF, at which the cartridge successfully played all of the high-level bands on the STR-112 test record.

In fact, the only matter requiring a cautionary note is that of arm matching, which can be complicated by the TK-10ML's combination of high compliance and above-average weight. Unless your tonearm is a low-mass design, the system's bass resonance may be forced down into the infrasonic warp region. If the arm is excep-

Tonearm/Cartridge Matching Graph



By means of this nomograph, you can quickly and easily determine the compatibility of any cartridge and tonearm we have tested. Ideally, the arm/cartridge resonance frequency (indicated by the diagonal lines) should fall at 10 Hz, but anywhere between 8 and 12 Hz will assure good warp tracking and accurate bass response. (It is usually okay to let the resonance rise as high as 15 Hz, although we don't normally recommend this.)

Begin by looking up the weight and dynamic compliance shown in the cartridge report and the effective mass listed in the turntable or tonearm report. Add the weight of the cartridge to the effective mass of the tonearm to get the total effective mass. Then find the point on the graph where the vertical line for the total effective mass intersects the horizontal line for the cartridge's dynamic compliance. For a good match, this point should fall in the white region, between the 8- and 12-Hz diagonal lines.

When necessary, you can back-figure compliances and effective masses for cartridges and tonearms tested before we began reporting these figures directly (in January 1983). For cartridges, look up the vertical resonance

frequency (measured in the SME 3009 Series II Improved tonearm) and the cartridge's weight. Add 15 grams (the SME's effective mass) to the cartridge weight to get the total effective mass. Then find the intersection of the vertical line representing that mass with the diagonal line representing the measured resonance frequency. Now you can read off the compliance from the horizontal line passing through the point of intersection.

For tonearms, look up the vertical resonance frequency as measured with the Shure V-15 Type III cartridge. Find the intersection of the diagonal line for that frequency with the horizontal line representing the Shure's dynamic compliance of 22.5×10^{-6} cm/dyne. Reading down the vertical line on which the point of intersection lies will give you the total effective mass of the arm with the Shure V-15 Type III mounted in it. Then subtract 6.3 grams (the weight of the V-15 Type III) to get the tonearm's effective mass.

Because of differences in measurement techniques, manufacturers' specifications for compliance and effective mass often differ from our findings and may therefore yield inconsistent results if used with this graph.



YOU WIND UP WISHING IT WERE MORE THAN ONE WEEKEND A MONTH.

You might find yourself in a chopper, cruising the treetops at 90 miles per hour. Or doing something more down to earth, like repairing an electronic circuit. What you won't find yourself doing is getting bored. Because this isn't ordinary part-time work. It's the Army Reserve.

You'll get valuable skill training. Then one weekend a month, and two weeks each summer, you'll put that training to good use, while receiving good pay and benefits.

But maybe most importantly, you'll come away with a feeling deep down that you were challenged and came through. And that doesn't disappear when Monday rolls around.

See your local Army Reserve recruiter about serving near your home. Or call toll free 1-800-USA-ARMY.

**ARMY RESERVE.
BE ALL YOU CAN BE.**

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.

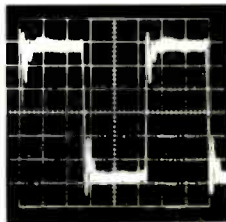
The TDK Professional Reference Series...it'll sound impressive to your ears. So share the pleasure with your friends; they'll appreciate it.

 **TDK**[®]
THE MACHINE FOR YOUR MACHINE

AUDIO New Equipment Reports

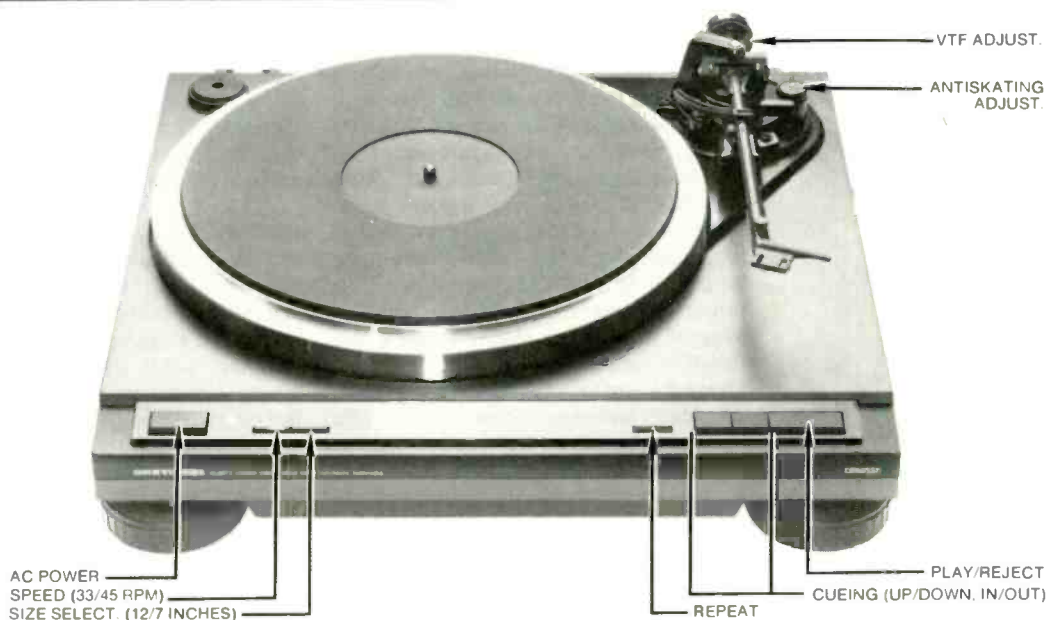
Channel separation	≥ 27 dB, 100 Hz to 7.5 kHz; ≥ 24½ dB, 100 Hz to 20 kHz
SENSITIVITY (1 kHz)	0.69 mV/cm/sec
CHANNEL BALANCE	+¼ dB
VERTICAL TRACKING ANGLE	21°
MAX. TRACKING LEVEL (re RIAA 0 VU: 1.2 grams)	
lateral	> +18 dB
vertical	> +12 dB
DYNAMIC COMPLIANCE (vertical)	≈ 24 × 10 ⁻⁶ cm/dyne
RECOMMENDED EFFECTIVE TONEARM MASS	
optimum	≈ 2.8 grams
acceptable	up to ≈ 8.7 grams
WEIGHT	7.7 grams

SQUARE-WAVE
RESPONSE (1 kHz)



tionally well damped, it still might negotiate nonflat discs successfully, but the cartridge is certainly better suited to one that doesn't pose the problem in the first place. Most turntables that are as advanced in design as this pickup already are fitted with such arms, so perhaps the point is semimoot, but it should not be overlooked if the TK-10ML is to perform at its superb best.

Such performance can fairly be called "flawless." In the listening room, it's hard to remember that you're listening to a phono cartridge; the TK-10ML seems to let you listen right through the record to the master tape. And such self-effacement is the ultimate objective of any pickup cartridge. In short, Signet's latest prodigy need make no apology to any competitor of any description at any price.



A Fine Turntable From Onkyo

Onkyo CP-1055F two-speed (33 and 45 rpm) automatic single-play direct-drive turntable. Dimensions: 17 by 15¼ inches (top), 6 inches high with cover closed; additional 10¼ inches clearance above and 2½ inches behind required to open cover fully. Price: \$300; extra SH-21E headshell, \$12; optional RC-5T wired remote control, \$50; optional RU-08 wireless remote control, \$200. Warranty: "Unlimited," two years parts and labor. Manufacturer: Onkyo Corp., Japan; U.S. distributor: Onkyo U.S.A. Corp., 200 Williams Dr., Ramsey, N.J. 07446.

THIS IS THE FIRST time we've tested an Onkyo turntable, and after getting to know the CP-1055F, we wonder what took us so long. It is a well-engineered example of a familiar format: an automatic single-play model built around a quartz-locked direct-drive motor and a straight, low-mass tonearm with a plug-in headshell.

Onkyo calls the design "fully automatic," which is appropriate, though the phrase might cause it to be confused with record changers (which some manufacturers formerly insisted on calling "automatic turntables"). You can cue the arm manually if you want, but the power cueing works so well—with separate buttons for up/down

and in/out arm motion—that you'll probably favor it to save your records from scratches. It does take a while to get used to, though, because each successive touch of the in/out button will reverse the direction of arm motion. For record cleaning, you just move the arm slightly off its rest to start the platter turning.

Automatic operation is even more straightforward: Simply unlatch the arm support, select the appropriate platter speed and record diameter with two buttons at the left of the base, and press PLAY. The arm sets down in the leadout groove, plays the disc, and returns to its support (as it does when you begin play manually). If you

AUDIO New Equipment Reports

SPEED ACCURACY (105 to 127 VAC)	
no measurable error at either speed	
WOW & FLUTTER (ANSI weighted peak)	
average	±0.05%
maximum	±0.06%
TOTAL AUDIBLE RUMBLE (ARLL)	-63 dB
EFFECTIVE TONEARM MASS	≈5½ grams
VTF-GAUGE ACCURACY	
reads approx. 10% higher than actual applied VTF, 0.5 to 3.0 grams	
TOTAL LEAD CAPACITANCE	120 pF

have 10-inch LPs or other formats that are even more arcane, you must start them manually. But the separate controls for size and speed do permit automatic play of 7-inch LPs and 12-inch 45s. If you press REPEAT, an entire side will play over and over until you press the button again. (An LED tells you whether or not this feature is engaged.)

The system includes some finely polished details. For instance, if the arm is in the raised position, it will not return automatically at the end of a side, so you can cue manually as close to the label as you want without fear of triggering REJECT. Our test sample sometimes failed to return the arm after playing a side, but otherwise the system worked flawlessly.

A jack at the back of the base accepts either of two accessory remote controls. The wireless RU-08 duplicates the play/reject, up/down cueing, and repeat controls on the CP-1055F; the wired RC-5T includes in/out cueing as well. The base has four shock-mount feet, and the platter, drive, and arm are isolated from it on a secondary shock-mounted assembly. Although this inhibits transmission of external vibration through the system, it doesn't prevent it altogether (as the owner's manual takes pains to point out). Normal precautions against feedback should be exercised, though we consider the turntable's performance average or better in this regard.

The tonearm assembly is more modern than those of many similar models. It dispenses with the relatively massive S-shaped design that used to be standard, but retains the plug-in headshell. As you would expect in a straight arm of this sort, the headshell is more of a mounting platform than a true "shell"—again, to keep mass low. This allows the arm to accept even very compliant pickup cartridges without lowering the bass resonance into the frequency range where warp tracking becomes a problem. As further insurance, a decoupling compliance near the pivot damps the resonance, reducing its severity and broadening the selection of pickups that can be used with-

out ill effects.

Balance is set "statically" (with a counterweight, rather than a spring), and vertical tracking force (VTF) is then adjusted by rotating the counterweight until the appropriate calibration on the weight is opposite a fixed mark on the arm. The advantage of static balance is its reliability—making the Onkyo's 10-percent miscalibration all the more surprising. The discrepancy is not big enough to put the applied VTF outside most pickups' recommended ranges if you dial in the median value, but because the applied force is on the low side, the likelihood of distortion and record damage is greater than if the VTF were high. The counterweight is calibrated in tenths of a gram, so a 10-percent correction is easy to achieve if you want perfect accuracy. For further fine tuning, there's an antiskating bias adjustment near the base of the arm.

Although the CP-1055F has a strobe display, there's no pitch control to adjust speed. You are unlikely to find this a limitation, however, since both speeds are spot on over a wide range of line voltages. Flutter and rumble measurements, too, are very fine. The rumble figures came out the same whether Diversified Science Laboratories used the usual test-lacquer technique or the Thorens spindle adapter. DSL reports that the energy is concentrated at multiples of 17 Hz, implying that it comes from essentially a single element in the drive chain.

The CP-1055F can be recommended for its combination of performance and convenience. The low-mass tonearm suits it to high-compliance pickups in particular—a class that includes many fine models—though the arm's relatively high degree of damping should allow acceptable performance with many low-compliance models that ordinarily would call for more massive arms. (You can always add mass to an underweight combination, but removing it from an overweight one is usually prohibitively difficult.) So although this may be the first Onkyo turntable we've reviewed, we're confident it won't be the last.

An Attractive Kenwood Receiver

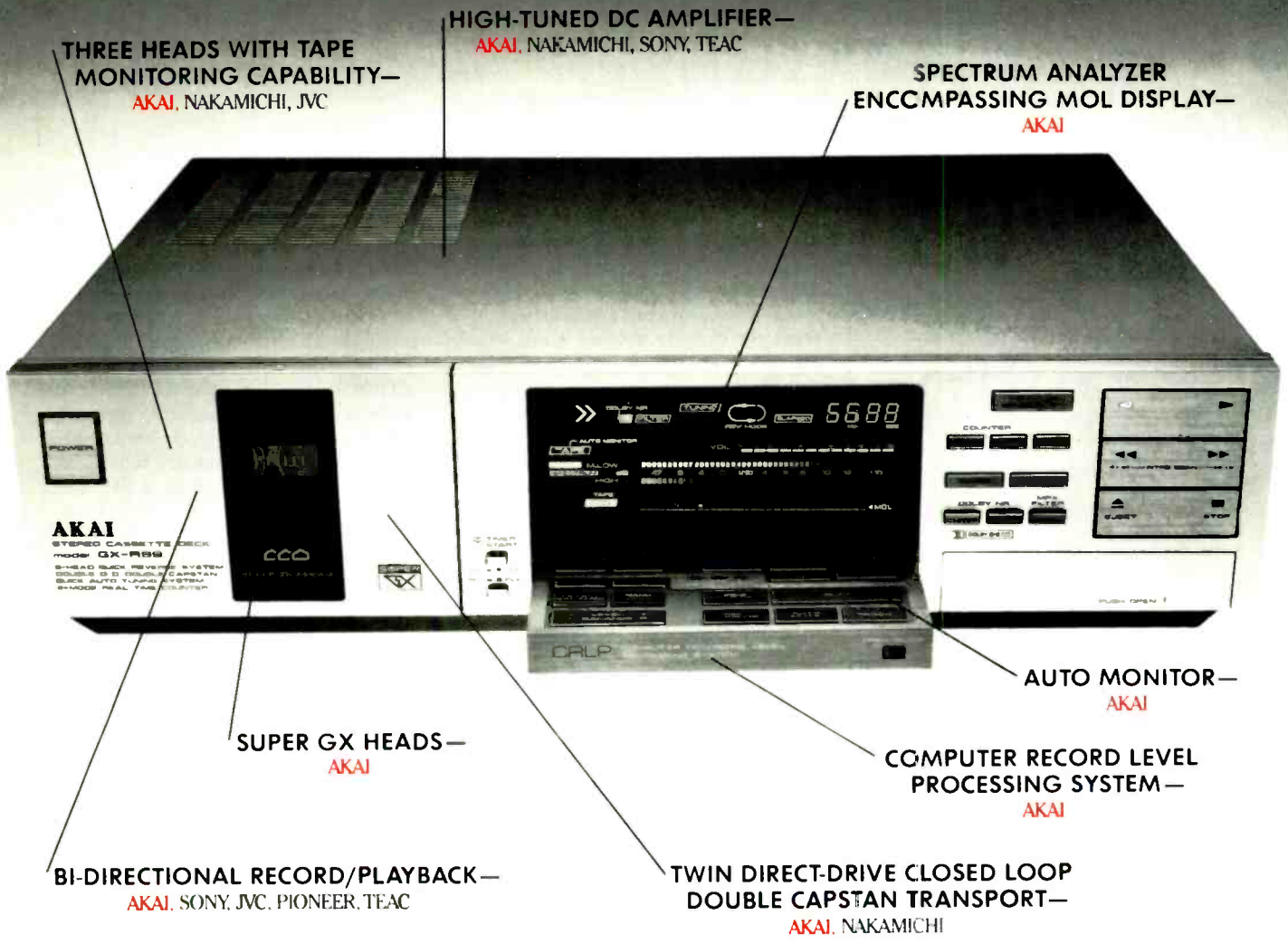
Kenwood KR-950 AM/FM receiver. Dimensions: 19 by 5¼ inches (front panel), 12 inches deep plus clearance for controls and connections. AC convenience outlets: two switched (200 watts max. total), one unswitched (200 watts max.). Price: \$530. Warranty: "limited," two years parts and labor. Manufacturer: Trio-Kenwood Corp., Japan; U.S. distributor: Kenwood Electronics, Inc., 1315 E. Watsoncenter Rd., Carson, Calif. 90745.

THE VIRTUES OF KENWOOD'S receivers are well established: high-speed DC circuitry in the company's so-called zero-switching amplifier stages, and quartz phase-locked-loop digital synthesis in the tuner section. The KR-950 repeats these features relatively unchanged in a fresh format—which is no faint praise.

The tuner section can memorize six stations on each band. Though we don't really pay much attention to the AM sections of home tuners and receivers, the station-pulling power of the one in this model proved so much better than average in our listening tests that it deserves special men-

tion. The sound is good by AM standards, but what really impressed us was the number of stations that could be picked up with the automatic scan, using only the supplied loop antenna and the less sensitive of the scan-stop settings. And with the other sensitivity setting, we found we could use the automatic scan for DXing—listening to distant stations that would be totally unreceivable on typical AM/FM tuners. We're not talking about high fidelity here, but the extra capability can be enjoyable nonetheless. (Incidentally, there is a back-panel multiplex output for a stereo-AM adapter.)

YOU'RE LOOKING AT THE SIX BEST AUTO-REVERSING DECKS YOU CAN BUY.



THREE HEADS WITH TAPE MONITORING CAPABILITY—
AKAI, NAKAMICHI, JVC

HIGH-TUNED DC AMPLIFIER—
AKAI, NAKAMICHI, SONY, TEAC

SPECTRUM ANALYZER ENCOMPASSING MOL DISPLAY—
AKAI

AKAI
STEREO CASSETTE DECK
model: GX-R99
3-HEAD BUCK REVERSE SYSTEM
DOUBLE D-D RESONANT CAPSTAN
BI-DIR. AUTO TUNING SYSTEM
8-MODE REAL TIME FILTER

SUPER GX HEADS—
AKAI

AUTO MONITOR—
AKAI

COMPUTER RECORD LEVEL PROCESSING SYSTEM—
AKAI

BI-DIRECTIONAL RECORD/PLAYBACK—
AKAI, SONY, JVC, PIONEER, TEAC

TWIN DIRECT-DRIVE CLOSED LOOP DOUBLE CAPSTAN TRANSPORT—
AKAI, NAKAMICHI

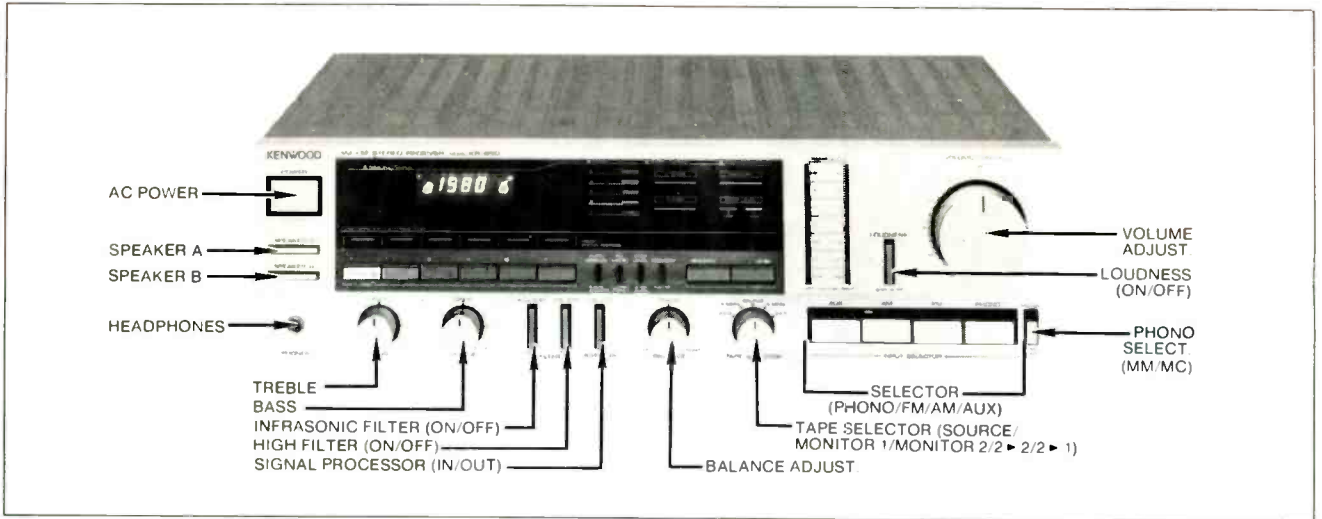
Staying ahead of the competition in auto-reversing cassette decks has been an AKAI tradition for the past 14 years. Now we're introducing the all-new GX-R99, a deck that has so many advanced features you'd have to buy six other auto-reversing decks to get them all.

Features like our Computer Record Level Processing System, that sets a tape's bias, equalization and tape sensitivity, measures a tape's MOL, then sets the optimum recording level. A Spectrum Analyzer encompassing MOL

display, which displays frequency response with greater accuracy. AKAI's exclusive Auto Monitor. And our super GX heads. So super, they're guaranteed for 17½ years of continuous play.

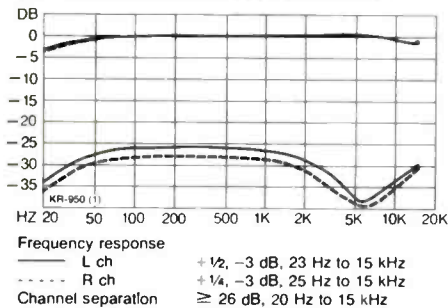
It's easy to see why the GX-R99, just one of four great AKAI auto-reversing decks, is called the Dragon Slayer. And to find out why it's getting more praise than all the other guys combined, write to AKAI, P.O. Box 6010, Dept. H9, Compton, CA 90224.

AKAI
Hi-Fi & Video. *///*

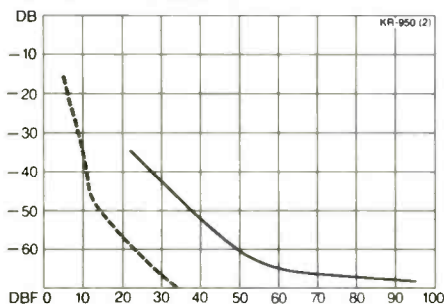


FM tuner section

STEREO RESPONSE & CHANNEL SEPARATION



FM SENSITIVITY & QUIETING



Stereo sensitivity (for 50-dB noise suppression)
 37 3/4 dBf at 98 MHz, with 0.34% THD+N
 (38 1/2 dBf at 90 MHz; 38 dBf at 106 MHz)
 Mono sensitivity (for 50-dB noise suppression)
 14 1/2 dBf at 98 MHz

Muting threshold 20 dBf
 Stereo threshold 20 dBf
 Stereo S/N ratio (at 65 dBf) 65 1/2 dB
 Mono S/N ratio (at 65 dBf) 75 1/2 dB

CAPTURE RATIO	1 dB
SELECTIVITY	
alternate-channel	55 3/4 dB
adjacent-channel	6 1/4 dB
HARMONIC DISTORTION (THD+N)	
	stereo mono
at 100 Hz	0.28% 0.082%
at 1 kHz	0.14% 0.078%
at 6 kHz	0.22% 0.125%
STEREO PILOT INTERMODULATION	0.15%
IM DISTORTION (mono)	0.037%
AM SUPPRESSION	53 1/2 dB
PILOT (19 kHz) SUPPRESSION	74 3/4 dB

The manual tuning advances by 100 kHz (half a channel) per step on FM, 10 kHz (one full channel) per step on AM. As usual, you have the option of either advancing one step at a time (by tapping the appropriate control bar) or moving rapidly up or down the dial (by holding it in). Manual tuning stops at the end of the band, rather than jumping automatically to the opposite end. A big plus is the front-panel tuning "meter"—a series of five red bars that light progressively and gradually (that is, growing brighter as signal levels climb above the threshold point) to show you what you're getting from your antenna. This is a big help if you have a rotator.

As in many receivers, the mode switch automatically defeats the muting when it's in the mono position and provides no override when in stereo. A stereo muting override really isn't needed, however, because the muting and stereo thresholds are both at 20 dBf, where stereo reception is almost unlistenable noisy. (In mono, the signal-to-noise ratio is still well above 50 dB at the muting threshold.) Sensitivity, selectivity, and capture ratio are typical of today's best receivers, as are the remaining measurements for this section.

To accommodate moving-coil pickups as well as fixed-coil ("MM") models, the preamplifier section offers a switchable head amp in the phono section. The shunt capacitance in the fixed-coil position is

higher than average, but most pickups should take the measured 265 picofarads in stride, provided the tonearm lead capacitance is low. (One reason for keeping this figure down is that it can always be raised if necessary with outboard capacitors, but it usually is difficult or impossible to reduce.) The low filter is too gentle (at 6 dB per octave) to be very effective against the infrasonic signals generated by severe record warps; fortunately, the head amp has some inherent low-frequency rolloff, adding more than 8 dB to the filter's 5-Hz attenuation.

The high filter also is very gentle, softening hiss but certainly not eliminating it. The tone controls are the shelving type (the bass, classically so) with a range of very close to ± 10 dB—roughly, below 100 Hz and above 7 kHz, respectively. The loudness compensation, which is unaffected by the volume setting, shelves the bass below about 100 Hz at a level 11 dB higher than that of the treble above about 1 kHz. There is no buffer in the tape outputs (the connection between them and the aux input is direct). This setup ensures minimum possible noise and distortion in the tape feed, but some attached tape decks may adversely affect the signal through the amplifier when they're turned off.

The amplifier section is quite powerful, with low distortion. It easily exceeds its rating (80 watts, or 19 dBW) into 8-ohm

About the dBW . . .

We currently are expressing power in terms of dBW—meaning power in dB with a reference (0 dBW) of 1 watt. The conversion table will enable you to use the advantages of dBW in comparing these products to others for which you have no dBW figures.

WATTS	dBW	WATTS	dBW
1.00	0	32	15
1.25	1	40	16
1.6	2	50	17
2.0	3	63	18
2.5	4	80	19
3.2	5	100	20
4.0	6	125	21
5.0	7	160	22
6.3	8	200	23
8.0	9	250	24
10.0	10	320	25
12.5	11	400	26
16	12	500	27
20	13	630	28
25	14	800	29

The New **Boston C700.**

Good enough for your living room.

Tough enough for your car.

This is the new Boston C700 two-way automotive speaker system. We designed it to meet the same high standards we set for our home speakers.

The C700 is a component-quality speaker system. It has a long-throw 5¼-inch polypropylene woofer, our optical-precision CFT/2 1-inch copolymer dome tweeter, and a five-element crossover network.

Both drivers use high-technology materials that survive extremes of temperature and

humidity that can destroy ordinary car speakers. We have baked the C700 to make sure it would play on sunny days, and frozen it in dry ice to make sure it would play on cold days. We have submerged it in water, taken it out and played it, to make sure it would play on rainy days. To provide better protection against accidental overload, we added a "smart" tweeter protection circuit that makes changing fuses a thing of the past.

Although the C700 will probably be the most reliable part of your car music system, it is also a Boston Acoustics speaker. We designed it, we build it, and we expect you to judge it on the basis of its acoustic excellence. When you do, we think that you will choose the C700, even over car speakers that cost more. It delivers the performance and value that have quickly earned Boston's reputation among listeners and reviewers around the world.



Thinline housing takes only one inch above panel.

Genuine two-way speaker system with L/C crossover at 3,000 Hz.

Exclusive CFT/2 1-inch copolymer dome tweeter.

Paralign™ magnet structure for exact, permanent alignment of critical voice coil and magnet structure components.

Long-throw 5¼ inch woofer delivers solid, deep bass.

Only 1½ inches clearance needed under mounting panel.

Would you like to talk with us?

Send us this coupon (or write us) to receive a free, full-color leaflet describing the C700. If you wish (it isn't necessary), write in your daytime phone number; we'll call you, give you the name of your nearest C700 dealer, and answer any questions about the C700 or other Boston products.

Name _____
Address _____
City _____ State _____ Zip _____
Daytime telephone (optional) _____
Area Code _____ Number _____

Boston Acoustics, Inc.
(C700)
247 Lynnfield Street
Peabody, MA 01960

Boston Acoustics

RX-505 Unidirectional Auto Reverse Cassette Deck



Nakamichi didn't invent auto reverse... We perfected it!...The RX-505



Unidirectional Auto Reverse Mechanism



Discrete 3-Head Configuration



Asymmetrical Dual-Capstan Transport



Precision Electronics

If you're willing to gamble performance, choose *any* auto-reverse deck. If gambling isn't your style, audition the RX-505—the auto-reverse deck that meets *Nakamichi* standards of perfection.

We *invented* the Discrete 3-Head configuration to ensure you of *total* performance. We know that only *physically* discrete recording and playback heads can be adjusted for perfect magnetic azimuth and optimized to utilize a tape's *full* potential.

We *invented* the Asymmetrical Dual-Capstan Dif-fused-Resonance transport to eliminate vibration-induced flutter and isolate the tape from reel perturbations. We perfected the transport so inter-capstan guides and pressure pads aren't required. With them removed, scrape flutter is gone and music emerges with *incredible* clarity.

We created precision equalizers and direct-coupled electronics to match our unique recording and playback heads and ensure unparalleled response and remarkably low distortion.

Until now, these tech-

nologies couldn't be applied to an auto-reverse deck that *records* and plays in both directions. Our newest creation—UDAR—Unidirectional Auto Reverse—changes that.

UDAR is a radically new concept in auto reverse. Tape doesn't change direction; the head doesn't "flip over." Such tricks cause azimuth misalignment and destroy frequency response. Instead, UDAR turns the *cassette* as you do by hand. UDAR is fast, reliable, and gentle. And, since the tape always moves in the *same* direction, there's *no* bidirectional azimuth error. The RX-505 provides *Nakamichi* performance on *both* sides!

Learn what *perfect* auto reverse is all about. Audition the RX-505 at your *Nakamichi* dealer. It has everything you expect from *Nakamichi*—and many

unique features that make auto-reverse *recording* easier than ever. You'll also find the RX-303—a 2-Head deck with the same transport and many of the features of the RX-505.

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



 Nakamichi

AUDIO New Equipment Reports

SUBCARRIER (38 kHz) SUPPR. 89 dB

Amplifier section

RATED POWER 19 dBW (80 watts)/channel

OUTPUT AT CLIPPING (at 1 kHz; both channels driven)
8-ohm load 19½ dBW (89 watts)/channel
4-ohm load 19 dBW (80 watts)/channel

DYNAMIC POWER (at 1 kHz)
8-ohm load 20¾ dBW
4-ohm load 19 dBW

DYNAMIC HEADROOM (re rated power, 8-ohm load)
+13¼ dB

HARMONIC DISTORTION (THD; 20 Hz to 20 kHz)
at 19 dBW (80 watts) ≤ 0.012%
at 0 dBW (1 watt) < 0.01%

FREQUENCY RESPONSE
+0, -¼ dB, <10 Hz to 30.4 kHz;
+0, -3 dB, <10 Hz to 118 kHz

RIAA EQUALIZATION
fixed-coil phono ±¼ dB, 20 Hz to 20 kHz;
-¾ dB at 5 Hz
moving-coil phono +¼, -1½ dB, 20 Hz to 20 kHz;
-8½ dB at 5 Hz

SENSITIVITY & NOISE (re 0 dBW; A-weighting)

	sensitivity	S/N ratio
aux input	17 mV	79 dB
fixed-coil phono	0.28 mV	76½ dB
moving-coil phono	26 µV	73 dB

PHONO OVERLOAD (1-kHz clipping)
fixed-coil phono 205 mV
moving-coil phono 20 mV

INPUT IMPEDANCE
aux input 42k ohms
fixed-coil phono 48k ohms; 265 pF
moving-coil phono 100 ohms

OUTPUT IMPEDANCE (to tape)
from aux input direct
from tuner section 1,700 ohms
from phono inputs 475 ohms

DAMPING FACTOR (at 50 Hz) 67

CHANNEL SEPARATION (at 1 kHz) 65½ dB

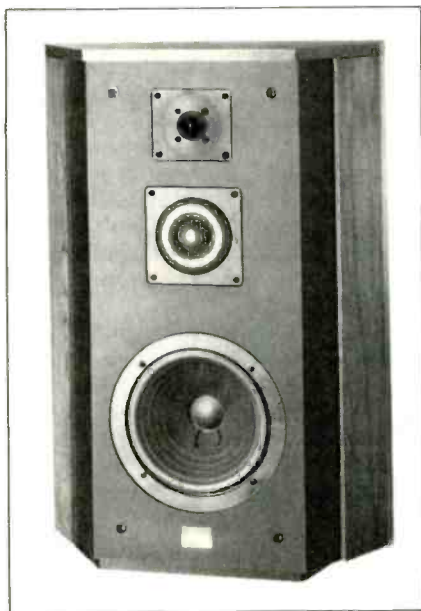
HIGH FILTER -3 dB at 6.3 kHz; 6 dB/octave

INFRASONIC FILTER -3 dB at 20 Hz; 6 dB/octave

loads, even with steady-state test signals, and produces the equivalent of 20¾ dBW (120 watts) into that load on pulsed signals that more nearly approximate music. Output into 4 ohms is lower, however, which suggests that the KR-950 is not designed to drive very low impedances. In fact, Kenwood has wired the speaker switches for a series connection, to prevent the reduced impedance that paralleled pairs would present to the amplifier's output stage. Low-impedance speakers probably would not be a good choice for this receiver, and if you connect two speaker pairs, they may not sound their best if they're played simultaneously.

Overall, we find the KR-950 a very pleasant receiver to use and listen to. It doesn't bedazzle or confuse you with features, but it has all the practical ones that most users will want. (Plus, there's an adapter loop for adding more features—say, an equalizer or ambience unit, or both.) It has bidirectional dubbing (many receivers don't), an easy-to-use, high-performance FM tuner, and an exceptional AM tuner for a high fidelity receiver. Finally—and perhaps best of all—the price is surprisingly modest.

Advent's First Three-Way Loudspeaker



Advent 6003 floor-standing loudspeaker, in particle-board enclosure with walnut veneer finish. Dimensions: 22 by 32¾ inches (front), 8¾ inches deep. Price: \$380 each. Warranty: "limited," five years parts and labor. Manufacturer: Advent, Div. of International Jensen, Inc., 4138 N. United Parkway, Shiller Park, Ill. 60176.

UNTIL NOW, IT WAS virtually an article of faith that Advent would never introduce a loudspeaker like the 6003. One of the last things we would have expected was a three-way model from the manufacturer who for so many years had championed the advantages of two-way design. The people behind the new product say that this was not a step lightly taken, but that they felt the requirements of the very best music sources—fully digital recordings especially—demanded it. The challenge was to develop a three-way capable of reproduction superior to that of the best two-way they could build.

Typically, a good three-way loudspeaker will have better power-handling, lower distortion, and more uniform dispersion than a comparable two-way speaker. But the addition of a separate midrange unit makes obtaining smooth frequency response and good driver blending more difficult. Not only must the quality of the drivers be high, but they must be joined by a very carefully designed—and usually rather elaborate—crossover network.

In the 6003, frequencies above 4.5 kHz are handled by an improved version of Advent's Direct Report tweeter, first introduced in the Model 5002 (test report, March 1981). This is a 1-inch dome driver with a high-temperature voice coil immersed in ferrofluid to increase its power-handling capacity. The woofer is a 10-inch acoustic suspension unit that reproduces the range below 750 Hz. For the 2½ octaves in between, Advent has developed an entirely new polypropylene midrange driver ap-

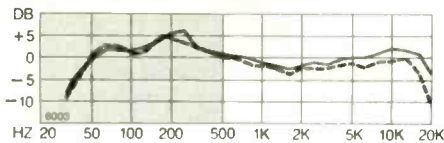
proximately 5 inches in diameter, with a 2-inch central dome. The outer part of the driver, surrounding the dome, is a doughnut-shaped ring. As with the tweeter, the voice coil is bathed in ferrofluid. This design is said to combine good power-handling and linearity with wide dispersion throughout the midrange.

All of the drivers are flush-mounted on the front baffle in a vertical array, for low diffraction and stable imaging. A further refinement is the "swept-wing" tapering of the front panel, to reduce the potential for undesirable reflections. The drivers normally are hidden behind a dark brown, removable grille of acoustically transparent cloth. A recess in the back panel holds thumb-screw binding posts for bared wires or spade lugs, and a tweeter fuse.

Advent's placement recommendations are sketchy, suggesting that you put the speakers where they will sound the best. Diversified Science Laboratories therefore tried several positions before settling on the one used for the measurements reported here, with the speaker's back against the rear wall. Sensitivity is about average, and the impedance curve is smooth and well controlled. It peaks to 21.8 ohms at bass resonance (about 45 Hz), drops to a minimum of 5.2 ohms at 100 Hz, then rises to 12.1 ohms at 1 kHz before dipping again to a local low of 5.6 ohms at 10 kHz. Thus, the 6003 should be an easy load for any good amplifier.

In DSL's 300-Hz pulse test, the speaker accepted the full output of the test amplifier (equivalent to 27¼ dBW, or 530 watts,

ROOM RESPONSE CHARACTERISTICS



SENSITIVITY (at 1 meter; 2.8-volt pink noise, 250 Hz to 6 kHz) 89 dB SPL
 AVERAGE IMPEDANCE (250 Hz to 6 kHz) 9 ohms

into 8 ohms), delivering a calculated peak sound pressure level (SPL) of 116¼ dB. Distortion measurements confirm the 6003's high power-handling capability. At a moderate 85-dB sound pressure level, total harmonic distortion (THD) averages less than ½ percent over the entire test range (30 Hz to 10 kHz) and less than ¼ percent from 100 Hz up. Naturally, distortion rises with increasing level, but even at 95 dB SPL, the average THD is less than 1 percent from 30 Hz to 10 kHz and just over ½ percent above 100 Hz. The average distortion approximately doubles at a very loud 100 dB SPL. Aside from the unusually low distortion at bass frequencies, the only peculiarity turned up by the measurements were consistent, small peaks at 160 and 400 Hz (1¼ and 2 percent, respectively, at 95 dB SPL), perhaps caused by a driver resonance. They are not audible on music, however.

Third-octave response is within ±4½ dB from below 50 Hz to above 16 kHz on-axis and within ±4 dB off-axis. From about 800 Hz up, it is smoother than these figures would suggest (especially off-axis). Most

of the spread is contributed by a rise in the lower midrange and bass. The very close tracking of the on- and off-axis curves confirms Advent's claim of wide, uniform dispersion.

We tried the 6003s in several positions, but wound up doing most of our listening with them placed several feet from any wall. Overall, they sound smooth, clean, and detailed, with a tendency to richness that sometimes thickens voices or imparts an unflattering heaviness to instrumental reproduction. This occasionally prompted us to turn down our preamplifier's bass control, but on much music the effect is inoffensive (or even pleasant, depending on your taste). Stereo imaging is precise and gives a good sense of spaciousness to the sound.

The 6003 is an intriguing and largely successful first outing for Advent on the treacherous waters of three-way speaker design. Making a loudspeaker as complex as this one both good and not too expensive is difficult; Advent's achievement in this regard seems certain to make the 6003 a competitive product in its class.

Manufacturers' Comments

Audionics CC-3 power amplifier, July 1983. Thank you for your very fair and accurate review. The CC-3's higher-than-average steady-state distortion results from the relatively low amount of negative feedback used in the design. As you noted, we are more concerned with stability under dynamic operating conditions than with specsmanship based on conventional bench testing.

We might also mention that our specifications for the bridged mono configuration are very conservative. In reality, it will produce nearly 300 average continuous watts into 8 ohms and almost 400 watts into 4 ohms. The CC-3 is one of the very few amplifiers designed for bridged operation with 4-ohm loads.

Charles Wood
 President
 Audionics of Oregon

DBX NX-40 noise reduction unit, August 1983. Thank you for your kind remarks. Some minor points:

We have lowered the NX-40's retail price to \$129.

The frequency-response curves shown, however uniform, are somewhat misleading because they were made with swept sine waves. We advocate using pink noise to measure all systems—ours or anyone else's—that vary their dynamics with time or input signal, since such a method shows accurately how they will perform with music.

We were a bit surprised to find no mention of the amount of noise reduction available from the unit (greater than 30 dB with most cassette decks). And perhaps some commentary on how the unit sounded on demanding music might have been of interest to your readers.

Leslie B. Tyler
 Vice President of Engineering
 DBX, Inc.

Technical Editor Michael Riggs replies:

It sounded very good, and it did indeed eliminate all vestiges of tape hiss. Also, David Moran (of DBX) points out that on page 38, third column, the last word of the fourth line should be "output," not "input."

If noise, hum and distortion turn you off, turn on Sansui's new AU-D77X* integrated amplifier for pure, true sound.

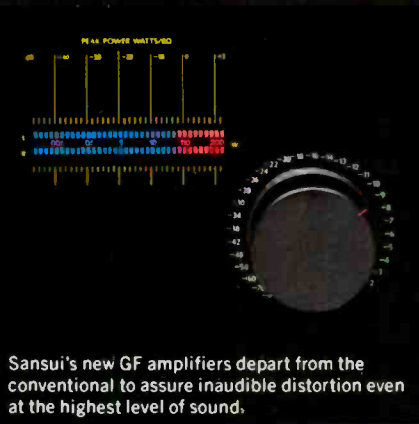
Only Sansui offers a trio of exclusive noise-eliminating innovations.

First, the unique Super Feed-forward DC power amplifier system routs virtually all types of distortion at all frequencies in the power amplifier.

Then, DD/DC circuitry, another Sansui breakthrough, produces high speed response and unmeasurable TIM in the predriver stage of the power amp.

And finally, Sansui's latest contribution to silent performance, the Ground Free circuit, remarkably reduces Interface Hum Modulation (IHM) distortion in the power supply.

The result is clean, uncluttered music that's virtually free of noise, hum and distortion. (You also get this impeccable



Sansui's new GF amplifiers depart from the conventional to assure inaudible distortion even at the highest level of sound.

performance with Sansui's 130-watt* top-of-the-line AU-D11 II integrated amp.)

One outstanding performer deserves another. The TU-S77X tuner adds a new dimension to the state-of-the-art. Its new FM multiplex decoder improves channel separation and reduces distortion significantly. Also available is the TU-S77AMX tuner which automatically receives and switches to every approved AM stereo broadcast system.

The AU-D77X and TU-S77X make the perfect tuner/amp combination for people who appreciate great technology as much as they enjoy the silence in great sound. Get the "Silent Treatment" at your Sansui audio specialist, or write for literature.

SANSUI ELECTRONICS CORPORATION
Lyndhurst, NJ 07071; Carson, CA 90746
Sansui Electric Co., Ltd., Tokyo, Japan

THE SILENT TREATMENT



Putting More Pleasure in Sound.



* AU-D77X—110 watts, 0.0028% THD; AU-D11 II—130 watts, 0.0025% THD. Minimum RMS, both channels driven into 8 ohms, from 10-20kHz.

OF COURSE IT'S POSSIBLE
TO GET GREAT FM SOUND IN YOUR CAR
WITHOUT A PIONEER SYSTEM.



Cars move and radio stations don't.

This rather basic precept has always created a lot of havoc for people trying to get good, clear, clean sound on their car's FM tuner.

Because the farther you get from the station transmitter, the weaker the station's signal becomes.

Not to mention the stuff like buildings, mountains, and overpasses that bounce the signal around like a ping pong ball, turning the music into something that sounds like frying mush.

Of course, if you do get lucky and get clean reception, you immediately reach over and crank up the volume to take advantage of this situation.

Leading directly to the other problem. Speaker distortion.

Of course, you do have options in solving these problems. You can find a drive-in radio theater.

Or better yet, you can equip your car with a new Pioneer sound system. A system that features Supertuner™ III and Maxxial™ speakers.

Supertuner III is an FM stereo car tuner with reception so clear, you'll think you're listening to a cassette.

Because Supertuner III virtually eliminates three-signal-intermodulation, multipathing, and loss of weak signals. In other words, all the aggravating things that cause you to bang your fist on the dashboard of your car.

No other car tuner can do this. At any price. None. A fact that Pioneer

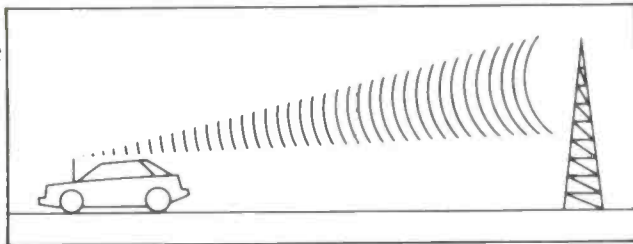
continues to prove in road tests against the highest quality tuners currently on the market. Time after time in these tests, Supertuner III is the clear winner.

But what good would this be, if the speakers put back in what Supertuner III has taken out.

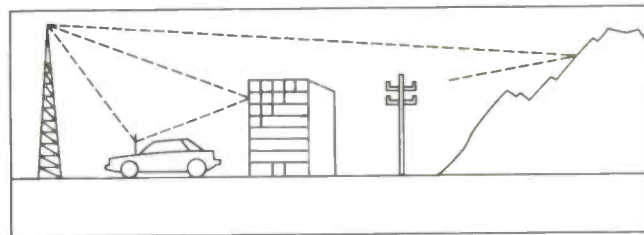
That's why you need Maxxial speakers. Extremely efficient speakers that can handle up to 100 watts of Max Music Power. A rating system comparable to one of those used to measure the power handling of Pioneer home speakers.

Which means that you can boost the volume on your favorite song (now that you can receive it clearly) and still get clean, undistorted sound.

Maxxial speakers are a complete line of the most popular sizes. With compact yet powerful Strontium Magnets that enable their big power handling capability to fit into tight spaces. And our line of



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.



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.

universal fit Supertuner IIIs offer digital display, electronic pre-set tuning, auto reverse decks with Dolby.* And more.

So if you want to hear music the way it was recorded and broadcast in the first place, take this word of advice.

Park the system you have in your car. And get moving on a new one from Pioneer.



 **PIONEER®**
Because the music matters.



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

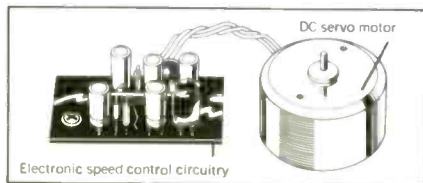
For extraordinarily clear FM reception, the Concord HPL-532 has an exclusive 4-gang digital tuner that provides exceptional station sensitivity & selectivity.

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.

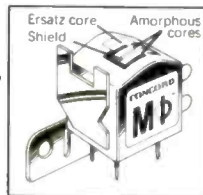


The result? Superior speed accuracy, lower wow and flutter, and over double the motor life.

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



CAR STEREO

SPEAKER SHOPPING TIPS

**Pointers on choosing your
next set of car speakers, and
the significance of placement**

ANYONE WHO HAS EVER shopped for car speakers knows how frustrating the experience can be. Meaningful specifications are virtually nonexistent, and it's close to impossible to judge what the speakers will sound like when they're finally installed. Is there a rational way to approach the problem? Can a shopper increase his chances of getting the kind of sound he wants?

We put those questions to the car-stereo people at Bose Corporation. By its collaborative efforts with Delco-GM, Bose has shown just how good a system can sound when it is designed specifically to match a particular automobile's acoustics. But Bose also offers a line of after-market car speakers, and we reasoned that a company dedicated to the field might have some valuable insights into the shopping problem. David Howe, Bose's car-stereo manager, was refreshingly frank with us; while stressing that there are no easy solutions, he offered practical tips.

BY

PETER DOBBIN

THIS FUTURISTIC-LOOKING fellow is Morgan, whose microphone-equipped ears enabled the engineers at Bose to produce the speaker-response graphs displayed on the next page.

Placement Is Important—No matter what speakers you buy, their position in the car will determine whether or not you'll hear what you paid for. The graphs accompanying this article were all generated by Bose and demonstrate what the driver will hear from a pair of 4½-inch speakers mounted in a variety of locations in three different cars. Each graph shows the summed response from microphones placed in a dummy head's ears. The dummy, affectionately known as Morgan, is the tireless worker who helped in the design of the Delco-GM/Bose factory-installed system. (See "The Autophile," November 1982.)

Use these graphs as a general guide when mounting your speakers. Notice, for instance, the difference in response when the same speakers are moved from a Mazda GLC's front doors to its rear side panels. As if by magic, usable output is extended down to about 80 Hz, the deep midrange trough becomes less severe, and the treble response smooths out.

Beware of Buzzwords—Car speaker companies periodically wage war over things like magnet size or cone material. A few years ago, you could actually buy a 6-by-9-inch speaker with an 80-ounce (5-pound!) magnet. Not only did the oversize magnet reduce the speaker's efficiency, but the motor structure was so massive that it tended to rip away from the rest of the speaker when the car bounced over a bump.

Today's new buzzword is "plastic cones," but Howe says plastic has little inherent advantage over paper if the latter is formed properly. And because plastic softens when heated, a plastic speaker that has been cooking under the rear window on a summer afternoon will probably sound quite different from one that's cool.

Specs May Mislead—In just about all instances, specifications should play only a minor part in your buying decision. No standard exists for the testing of car speakers, leaving it open for a manufacturer to choose a measurement technique that makes his models look good. Responding to competitive pressure, other companies then may simply adjust their spec sheets to show similar performance.

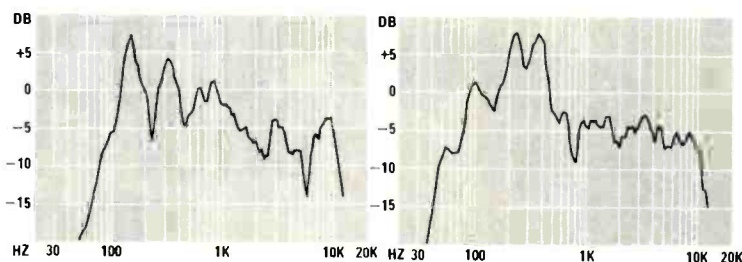
On the other hand, a manufacturer's description of his speakers can be revealing, as in the case of crossover frequencies. A three-way speaker with a 2-inch midrange driver crossed over at 5 kHz and a 1½-inch tweeter that comes in at 10 kHz is going to demand special placement. Because of the high crossover point,

the "midrange" driver is really being asked to act like a tweeter, and the "tweeter" is actually functioning as a supertweeter. A large-diameter tweeter, however, tends to concentrate its output in a tight, narrow beam. For rear-deck placement, this means that you probably should tilt the rear edge of the speaker up a bit, so that the high

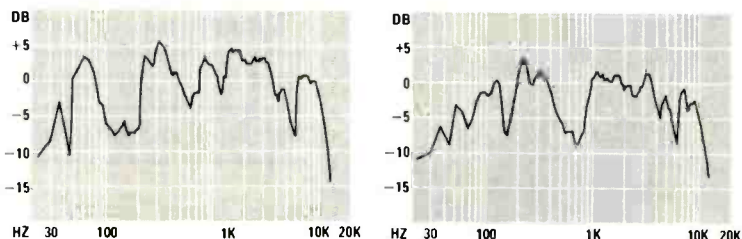
quality control was probably nil. A poorly made speaker isn't worth the effort and cost to install and will only disappoint you.

Try In-Car Auditions—The rack displays that some discount dealers use to demonstrate speakers will tell you nothing about how a speaker will sound in your car. But Howe feels that

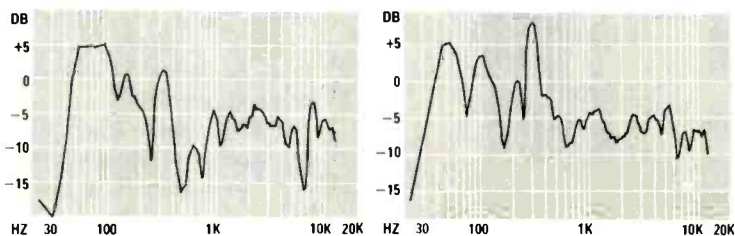
FRONT vs. REAR PLACEMENT



IN A MAZDA GLC, relocating the speakers from the front doors (left) to the rear side panels (right) extends the bass while smoothing the midrange and treble. Panel vibrations may account for some of the perturbations in the front-door curve.



IN THIS FOUR-DOOR Honda Civic sedan, moving the speakers from the front doors (left) to the rear deck (right) didn't make a big improvement. Replacing the cardboard deck with plywood would probably result in smoother response.



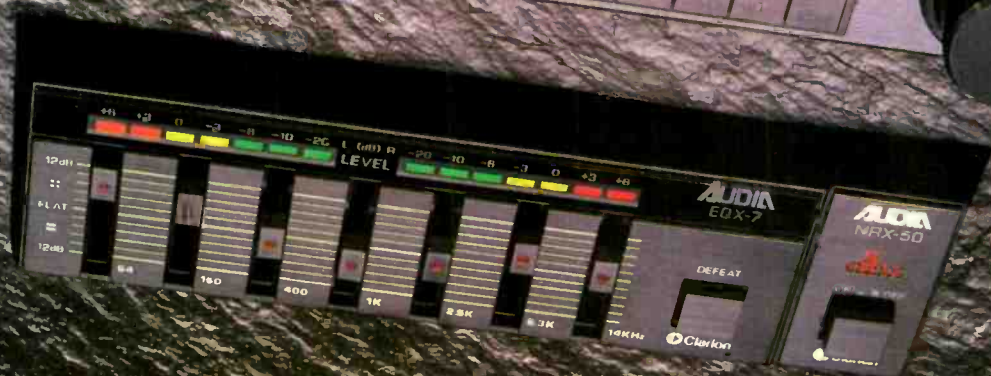
NOTE THE DRAMATIC SMOOTHING of the response above 500 Hz that occurred when the speakers mounted in the front doors (left) of a Subaru station wagon were moved to the rear side panels (right), which are more rigid than the door panels.

frequencies are aimed toward the passenger area. As for low frequencies, the larger the driver, the better the chance of achieving good output.

Construction Counts—You can get an idea of a speaker's quality by examining it carefully. Look for a neat, even plating job. If the finish is chipped or corroded, production-line

you can safely assume that no speaker in such a display will ever sound worse in a car. Choosing the best of the bad is not easy, but it's a start. He advises seeking out a dealer who has a couple of demonstration cars. These dealers may not offer great discounts, but hearing a speaker in a car is the only fair way of judging quality.

HF



Introducing Audia. The result of an uncompromising devotion to absolute performance.

Absolute performance is not just an attitude that can be created overnight. Audia was born out of 40 years of Clarion's expertise and success.

Audia is an entirely new and unique line of high end, no compromise speakers, amplifiers, equalizers, receivers and tuners, that meet the needs of even the most critical car audio purists.



Perfecting Performance in the Automotive Environment.

The FM Diversity Tuning System, a feature pioneered by Clarion, constantly monitors two FM front ends, picking out

the strongest signal in multipath conditions to virtually eliminate annoying "picket fencing" noise.

Typically, automobile interiors create an undesirable harmonic response in the low frequency ranges. The 180 Hz. Acoustic Compensation Control returns the bass to

its original deep, clean sound, while it allows the amplifier to run cooler.

The Auto Reverse Deck with Dual-Direction Automatic Azimuth Adjustment is more than just a convenience feature. It precisely adjusts the tapehead



to achieve zero-azimuth in both directions so you won't sacrifice high end frequency response.

Extend Your Limits of Perfection.

The entire Audia line represents total flexibility. It will easily interface with other components, allowing you to upgrade at any time and to create the most esoteric sound system.

Audia. A state of the art accomplishment that results from a philosophy of absolute performance.

AUDIA
CAR AUDIO PERFORMANCE

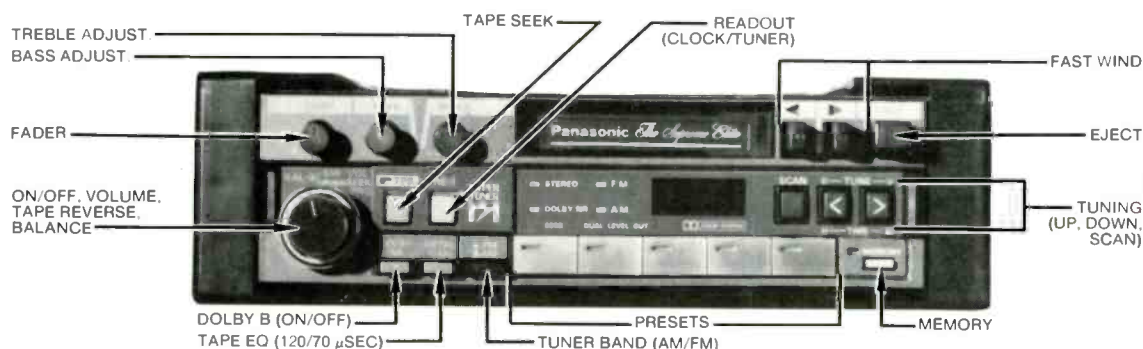
The Art of Sound in Motion.



CAR STEREO

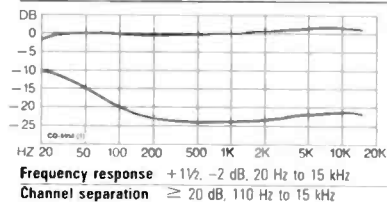
PANASONIC CQ-S958EU RECEIVER/TAPE DECK

Panasonic Supreme Elite Model CQ-S958EU AM/FM/cassette receiver with Dolby B noise reduction and bidirectional cassette transport. Dimensions: 7 by 2 inches (chassis front), 6 inches deep; escutcheon/"nose," 6¾ by 2 inches; trim plate, 7¼ by 2¼ inches. Connections: flat-clip female for ignition and battery, round single-wire female for automatic antenna (500 mA max.), four-conductor square male for speakers (with removable jumper for separate front and back connections), pin-jack female for line outputs, standard coaxial female for antenna input. Fuse: 3-amp in ignition line. Price: \$540. Warranty: "limited," one year parts and labor. Manufacturer: Matsushita Communication Industrial Co., Ltd., Japan; U.S. distributor: Panasonic Co., Division of Matsushita Electric Corp. of America, 1 Panasonic Way, Secaucus, N.J. 07094.



FM TUNER SECTION

FREQUENCY RESPONSE & CHANNEL SEPARATION



THE PHYSICAL FORMAT of Panasonic's flagship front end makes it a perfect match for the large, rectangular opening in the dashboard of a luxury European import (BMW, Mercedes, Alfa Romeo, or such). Working with extra front-panel space, the designers of the Supreme Elite CQ-S958EU were free to add several single-function controls, which are a joy to use in comparison with the usual push-pull, twist-twist multipurpose knobs found on most minichassis models. The unit would be even more convenient to operate if all tape and tuner controls were grouped in discrete areas.

Convenience features include five-station memory for each band, manual

tuning that steps by whole channels (200 kHz in FM, 10 kHz in AM), scan tuning (which samples about five seconds of each station before moving to the next), tape seek (which skips to the beginning of the next selection or goes back to repeat the current one), automatic capstan disengagement (but not tape ejection) when the power is shut off, and automatic tape reverse. More unusual—and particularly well handled—is a clock display that automatically appears about five seconds after you finish any tuning operation. The frequency button lets you check the station you're listening to and, if you hold in MEMORY, the tuning controls can be used to set the clock time.

Laboratory data for HIGH FIDELITY's autosound equipment reports are supplied by Diversified Science Laboratories; road testing and text are by Robert Long. 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.

Computer-controlled ATZ receivers put sensational sound at your fingertips.

Our new line-up of ATZ™ car stereo receivers look terrific and sound phenomenal. Every one has been engineered with pure audio performance and ease of operation in mind. That's why an exclusive Jensen designed and developed computer is built right in the ATZ. It controls all the major functions of the AM/FM tuner and full logic tape deck for you. So you can just sit back and enjoy the smooth sounds. And all ATZ receivers fit the standard dashboard installation openings, available in virtually all of today's domestic and import cars. So when it's the sound that moves you, let Jensen ATZ receivers point the way.

JENSEN
CAR AUDIO

When it's the sound that moves you.

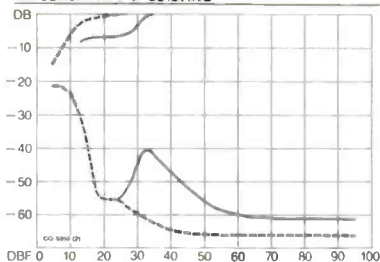
JENSEN





CAR STEREO

FM SENSITIVITY & QUIETING



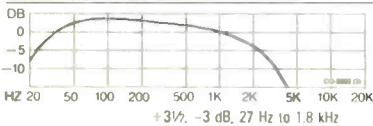
stereo quieting (noise) & output	
---- mono quieting (noise) & output	
Stereo sensitivity (for 50-dB noise suppression)	43 dBf*
Mono sensitivity (for 50-dB noise suppression)	17 3/4 dBf
Stereo S/N ratio (at 65 dBf)	60 1/4 dB
Mono S/N ratio (at 65 dBf)	65 3/4 dB
CAPTURE RATIO	4 dB
SELECTIVITY (alternate-channel)	59 1/2 dB
AM SUPPRESSION	55 dB

DISTORTION (THD+N)

	stereo	mono
at 100 Hz	2.9%	0.68%
at 1 kHz	1.4%	0.62%
at 6 kHz	1.4%	1.65%

AM TUNER SECTION

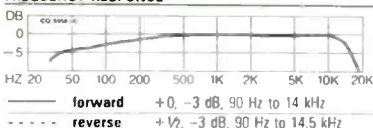
FREQUENCY RESPONSE



SENSITIVITY	2.2 µV
SELECTIVITY	32 3/4 dB
AVC RANGE	75 1/2 dB

CASSETTE TRANSPORT SECTION

FREQUENCY RESPONSE



WOW & FLUTTER	
forward	±0.18% average; ±0.23% peak
reverse	±0.22% average; ±0.27% peak
SPEED ACCURACY	
forward	0.7% fast, 10.8 to 14.4 volts
reverse	0.3% fast, 10.8 to 14.4 volts

PREAMP/AMPLIFIER SECTION

BASS CONTROL	+11 3/4, -16 dB at 100 Hz
TREBLE CONTROL	+10 3/4, -12 1/2 dB at 10 kHz
LINE OUTPUT IMPEDANCE	15 ohms
OUTPUT (per channel into 4 ohms; at 3% THD+N) at 1 kHz	4 1/4 watts (6 3/4 dBW)

*See text.

The quieting curves provide the key to understanding the Supreme Elite's behavior on the road. As the signal strength of a stereo broadcast drops below a moderate level (say, 45 dBf), the noise level rises rapidly. At just below 33 dBf, where the midband channel separation is about 25 dB, the noise level suddenly drops because of two factors: The receiver automatically goes into a blend mode (rapidly cutting separation to only a few dB and thus canceling much of the noise), and the overall output decreases by about 5 dB. As the RF level drops still farther, noise begins rising very rapidly again until a 13-dBf input is reached. Here the stereo circuitry and its pilot are disengaged (though the output has been essentially mono for all input levels below about 25 dBf), restoring most of the overall output before fading it away again.

Mono broadcasts produce much more consistent results as reception level decreases; unfortunately, the Supreme Elite has no mono-only option. Note that stereo reception delivers 50 dB of noise suppression at three signal levels: 17 1/2, 28, and 43 dBf. Between the last two of these figures, noise suppression is poorer than 50 dB; at the first two levels, stereo reception is nominal because of the automatic blend. So we show the highest of the three figures as the only meaningful stereo sensitivity measurement.

The apparently erratic behavior of stereo reception under fluctuating signal conditions (the rule, rather than the exception, in a moving car) is much less disturbing in practice than you might assume. The sound of borderline stations is quite unstable in both level and (particularly) stereo spread, but the "spitting" of noise bursts is minimal despite the rapidity of the fluctuations. Compared to many of the other units we have tested, the Supreme Elite exhibits noise that is very muffled and therefore less intrusive than average. AM reception, too, is relatively noise-free, though the sound is distinctly tubbier than usual. Presumably, however, you will be choosing FM when you want good sound, and the AM section is about par in other respects.

The tape section has switching for both playback EQ (120 microseconds for "normal" ferric tapes, 70 for "chromes" and metal) and Dolby B noise reduction. (Incidentally, these controls don't affect FM reception; any adjustment for reception of Dolby B

must be made at the tone controls.) The azimuth of the head doesn't match that of the BASF test tape, as you can see from the rolloff at the high end of the response graph, but performance is very consistent in all respects between the two directions of tape travel, which bespeaks good engineering.

Speed accuracy and stability (wow and flutter) are typical of car equipment as measured on the Diversified Science Laboratories test bench, and no discernible aberrations were added by even the bumpiest part of our on-the-road "test track." This is arguably the most important test of all in terms of audible tape playback quality in a moving vehicle, and our overall impression of the deck in this respect was very favorable.

The separate tone control knobs, equipped with nicely tactile center detents, make it easy to get the subjective sonic balance just right. The "flat" position does impose a slight rise in the treble (1 1/2 dB at most, in the region between 5 and 10 kHz), but it's certainly not objectionable. The maximum voltages that can be fed to the line outputs from 100 percent FM modulation or DIN 0 dB on a recorded tape represent clipping level in the preamp, rather than maximum gain, but the 3/4-volt level should be sufficient for most separate amps. Just don't crank up the volume all the way, or you will get gross distortion.

There is also a built-in amplifier, which has separate outputs for two pairs of speakers. To drive a single pair, you can use a supplied jumper that parallels the front- and back-speaker terminals. The power rating for this four-channel amp is fairly hefty alongside those of conventional car radios, as the data show. The built-in amp will be welcome if you want to install your gear in stages, thereby spreading out the cost of a system that may eventually include separate amps and crossover networks.

That sort of flexibility is perhaps the hallmark of the CQ-S958EU. Its convenience features, performance, and styling make it similar to very high-end models, but it addresses mundane needs as well. Practical posh, you might call it.

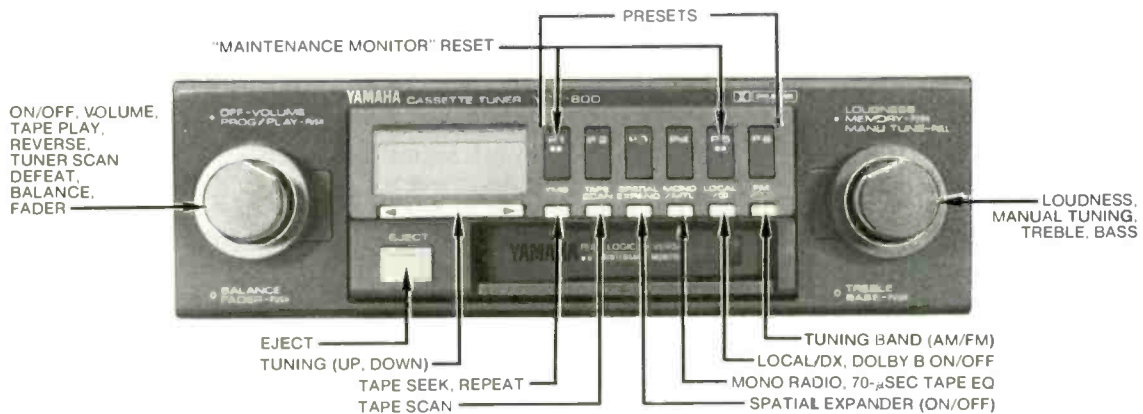
HF

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YAMAHA YCT-800 TUNER/TAPE DECK

Yamaha YCT-800 AM/FM/cassette front end, with tape equalization and Dolby B noise reduction switching, automatic reverse, and automatic eject when power is turned off. Dimensions: 7 by 2 inches (chassis front), 5¼ inches deep; escutcheon, 7¾ by 2¼ inches; "nose," 4¾ by 1¾ inches; main shafts, 5 or 5¼ inches o.c. Connections: bared wires for ignition, battery, power antenna, ground; pin-jack for line outputs; standard coaxial female for antenna input. Fuses: 3-amp in ignition line, 1-amp in battery line. Price: \$600. 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.



WE'VE COME TO expect fresh thinking from Yamaha, and the company's recently introduced car stereo line doesn't disappoint. With a control scheme that works in ways we haven't encountered before, the YCT-800 front end even sports a unique Maintenance Monitor that keeps track of actual operating time and lights an indicator after 40 hours of use. (The monitor is reset by pressing Presets 1 and 5 simultaneously.) A maintenance kit containing a head-cleaning cassette is supplied with the deck.

The YCT-800 abounds with convenience features that lend the unit a distinct personality. Whenever the deck encounters about 16 seconds of tape with no recorded signal, it automatically skips to the next recording (which usually begins the next side). The tape music seek feature can be used to recue the beginning of the current selection or to fast-wind to the beginning of the next. In addition, there's tape scan—which gives you a few seconds of each recorded selection

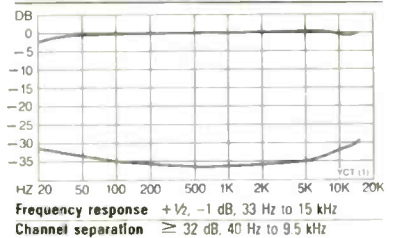
until you find what you want. The tuner, too, has an automatic seek that operates in either direction, depending on which end of the tuning rocker you push. The same rocker is used for manual tuning. And there are station presets as well—six in each band.

Somewhat more arcane are the two level knobs. The one on the left functions as a conventional on/off/volume control, among several other things. The one at right—which you would expect to be a tuning knob (and this one does pull out to switch to manual tuning)—is used for producing a loudness-compensated level adjustment. To dispense with the compensation, you leave this knob at maximum and adjust volume at the left-hand control; for maximum loudness compensation, you turn down the left-hand VOLUME and make your adjustments on the right.

There also is a Spatial Expander—the first such device in any car equipment we've tested so far. It's essentially the same as the comparable feature in Yamaha's home gear. In the

FM TUNER SECTION

FREQUENCY RESPONSE & CHANNEL SEPARATION



HOW WE TEST CAR STEREO EQUIPMENT

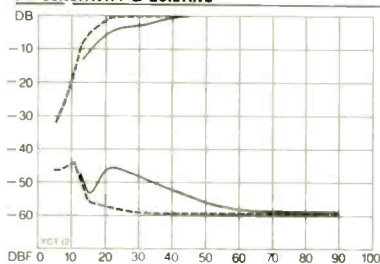
Diversified Science Laboratories taps line-level outputs to measure tuner, tape, and "preamp" performance; for those front ends equipped with a power-amp stage (what we call car receivers) but lacking line outputs, DSL takes data from the speaker connections. For our road testing, we use an ADS amplifier/crossover/speaker setup, bypassing the power-amp stages of receivers.

AM sensitivity is given in microvolts, and the lower the number, the better. For FM, we plot both the audio signal level and the noise level as a function of RF input. Since car tuners may have various reception modes, a number of curves may appear on the same graph. Finally, some tuners cannot be assigned a 50-dB stereo quieting figure because they are already in mono at that quieting level.



CAR STEREO

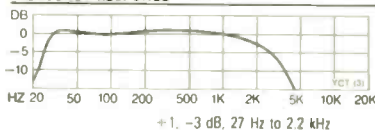
FM SENSITIVITY & QUIETING



stereo quieting (noise) & output	37 dBf*	
mono quieting (noise) & output	15 dBf	
Stereo sensitivity (for 50-dB noise suppression)		
Mono sensitivity (for 50-dB noise suppression)	58 ³ / ₄ dB	
Stereo S/N ratio (at 65 dBf)	59 ³ / ₄ dB	
Mono S/N ratio (at 65 dBf)	59 ³ / ₄ dB	
CAPTURE RATIO	5 dB	
SELECTIVITY (alternate-channel)	72 ³ / ₄ dB	
AM SUPPRESSION	62 ¹ / ₂ dB	
DISTORTION (THD+N)		
	stereo	mono
at 100 Hz	0.40%	1.7%
at 1 kHz	0.30%	0.25%
at 6 kHz	0.56%	0.64%

AM TUNER SECTION

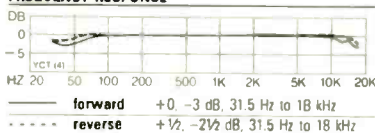
FREQUENCY RESPONSE



SENSITIVITY	1.8 μ V
SELECTIVITY	31 ¹ / ₄ dB
AVC RANGE	75 dB

CASSETTE TRANSPORT SECTION

FREQUENCY RESPONSE



WOW & FLUTTER	
forward	\pm 0.22% average; \pm 0.22% peak
reverse	\pm 0.22% average; \pm 0.28% peak
SPEED ACCURACY	
forward	\leq 1.3% fast; 10.8 to 14.4 VDC
reverse	\leq 2.4% fast; 10.8 to 14.4 VDC

PREAMPLIFIER SECTION

BASS CONTROL	+10 $\frac{3}{4}$, -11 $\frac{1}{4}$ dB at 100 Hz
TREBLE CONTROL	+11 $\frac{1}{2}$, -12 $\frac{3}{4}$ dB at 10 kHz
LINE OUTPUT IMPEDANCE	1,075 ohms

*See text.

enclosed space of a car, where imaging is rather surreal in most cases, the enhancement may delight some listeners and annoy others.

Finally, there's one physical wrinkle to the design that we were taken by: the provision for moving the control-shaft holes in the escutcheon panel. Most models require you to gouge out the plastic panel, enlarging the holes sideways toward the nosepiece until they provide the necessary clearance. If the shafts have been moved far enough, the original holes show under the outer edges of the knobs, giving a messy appearance. Yamaha uses snap-out inserts for the shaft holes. Place them one way, and the holes are in the outboard positions; rotate them 180 degrees and pop them back in, and the holes are shifted toward the nose. You can see them behind the knobs, but they're far neater than the usual holes. (Incidentally, the YCT-800 comes with knobs for the wider shaft spacing. If you want the narrower spacing, your dealer will get smaller knobs whose outer elements won't bind against the nosepiece.)

All these features do rather overload the controls—which, presumably in the interests of an uncluttered appearance, have been kept to a surprising minimum. Yamaha uses a microprocessor to keep track of their multiple functions. Even when you have switched to a different signal source or turned the deck off, the microprocessor will remember your last settings. Let's say that you listen to an AM station and choose LOCAL reception. Then you play some tapes, with and without Dolby B noise reduction. You may even stop the car and do some shopping. (The tape ejects automatically when the ignition is turned off.) But when you return to AM, the tuner will be at the same frequency and still switched to LOCAL.

Some of the controls have more than two functions. The most complex is the left-hand VOLUME. Besides the operations of its outer ring (which combines BALANCE with FADER) and its own, aforementioned on/off/volume functions, it accomplishes four more tasks—each triggered by pushing the knob in. The operating mode determines the individual task. If you're playing a tape, the deck will reverse direction. If you're fast-winding in either direction, the deck will revert to playback without changing direction. If you're scanning the tape, the scanning will stop and the deck will continue playing the selection

it's on. Finally, if you're in the tuner seek mode, that mode will be canceled at whatever frequency it has reached. That's a good deal to remember. Neophytes will find themselves fumbling until they learn what to push when. The labeling isn't always very helpful and at night is even less so, though there are indicators in the frequency-readout panel for many of the functions. Fortunately, the layout is neat and essentially logical.

As with most car tuners, the stereo FM sensitivity rating is a bit equivocal because separation is reduced as signal level falls to help control noise and the image instability that results when the stereo threshold is crossed. Separation at 1 kHz is about 40 dB at high RF (radio-frequency) signal levels but starts dropping rapidly for input levels below 55 dBf. At 37 dBf (the stereo sensitivity rating point), it is about 18 dB—still definitely stereo, but only just. It is this blending of channels (which cancels stereo noise) that keeps the noise curve from rising as steeply at low RF levels as it does in home gear. By the time the signal strength drops below 25 dBf, reception is essentially mono.

This makes for good behavior under picket-fencing conditions—or any sort of fading or borderline reception. There is some noise-burst “spitting” in the output, as usual, but there's very little sense of stereo instability—a collapsing and regenerating stereo sound field, which can be dizzying. Although some tuners we've tested don't attenuate the output as rapidly when RF levels fall, and therefore seem more sensitive on a subjective basis, we can't think of a model that has shown better manners in its handling of weak signals. Selectivity is very good, but capture ratio is higher than usual. The AM response is also admirable, and we consider the AM sound to be clearly above average.

On Diversified Science Laboratories' test bench, tape output was rather unstable at high frequencies in the forward direction, suggesting some azimuth mismatch between the deck and the BASF test tape. But the curves certainly are not at all bad, and reproduction on the road was excellent. The transport runs slightly fast, though not by enough to cause concern. Flutter, as measured on the bench, is near average for a car deck, and speed stability was audibly unimpaired by the bumps and turns of our road test.

The tone controls have good range

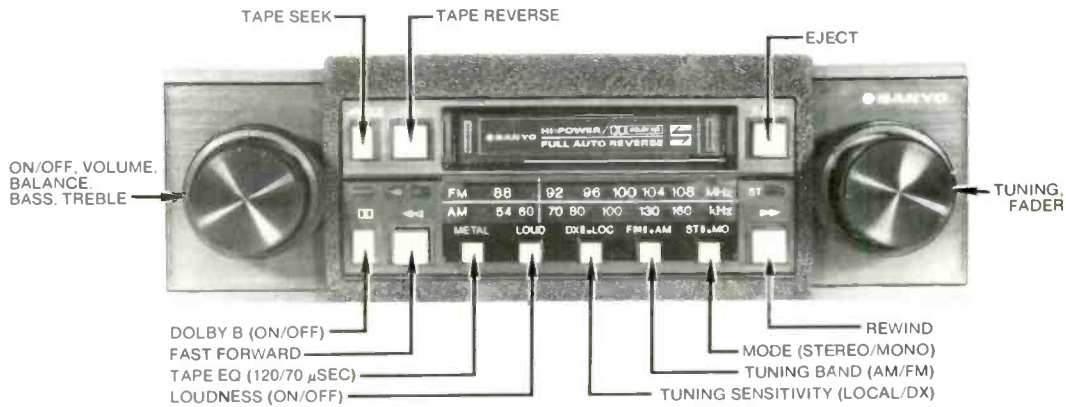
and characteristics, shelving a bit toward the frequency extremes. The loudness compensation is relatively gentle. When it is turned down about halfway, it induces a rise of only about 2 dB (relative to the midrange) in the bass below 100 Hz and in the treble above 3 kHz. Turned down all the way, it adds a maximum of about 10 dB at 50 Hz plus a shelf of about +3 dB at 5 kHz and above. If you want more drastic compensation, you can always add it with the tone controls.

So Yamaha has done it again. Its foray into autosound gear demonstrates a fresh, competent approach to a familiar type of equipment. The most unusual elements in the design will claim attention the first time you examine them. But the real thrust of the YCT-800, as we see it, is in the thoughtful planning of its automatic controls for both good performance and practical music-finding while you're driving. That objective isn't unique to Yamaha, but the solution is. **HF**



SANYO FT-V98 RECEIVER/TAPE DECK

Sanyo FT-V98 AM/FM/cassette receiver, with Dolby B noise reduction and bidirectional cassette transport. Dimensions: 7 by 2 inches (chassis front), 5 1/8 inches deep; escutcheon, 7 1/2 by 2 1/4 inches; "nose," 4 1/4 x 1 3/4 inches; main shafts, 5 3/8-6 3/8 inches o.c. Connections: flat-clip female for ignition and power antenna; bared wire for battery, speaker connections, ground; pin-jack female pair for line outputs; standard coaxial female for antenna input. Fuses: 5-amp in ignition line. Price: \$180. Warranty: "limited," one year parts, 90 days labor. Manufacturer: Sanyo Electric Co., Ltd., Japan; U.S. distributor: Sanyo Electric, Inc., 1200 W. Artesia Blvd., Compton, Calif. 90220.



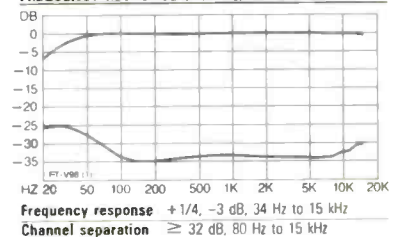
MOST OF THE CAR stereo models we review are distinctly on the fancy side, ranging from the somewhat special to the luxurious. This Sanyo receiver is the least expensive unit we've tested to date and, as such, represents an economical after-market option for those not interested in a similarly priced factory-installed model.

The FT-V98's amplifier section provides both front and back outputs as opposed to front-only stereo. On the Diversified Science Laboratories test

bench, it checks out to about 15 watts per channel—some three to ten times what you might expect from standard models, for 5 to 10 dB greater maximum output. In addition, there's a seek feature that will return the tape to the beginning of the selection you're playing or skip forward to the beginning of the next one. For correct tape playback, the FT-V98 offers both equalization switching and Dolby B noise reduction (which affects FM reception as well, in case you can pick up a Dolby FM station—and identify it

FM TUNER SECTION

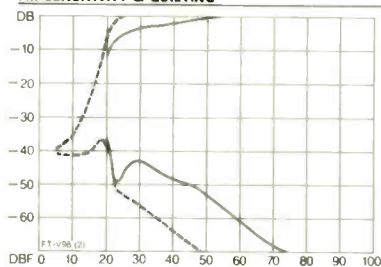
FREQUENCY RESPONSE & CHANNEL SEPARATION





CAR STEREO

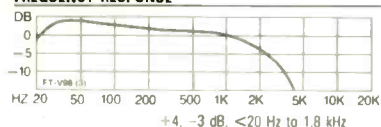
FM SENSITIVITY & QUIETING



—	stereo quieting (noise) & output	
- - - -	mono quieting (noise) & output	
Stereo sensitivity (for 50-dB noise suppression)		
	48 dBf	
Mono sensitivity (for 50-dB noise suppression)		
	24 dBf	
Stereo S/N ratio (at 65 dBf)		
	64½ dB	
Mono S/N ratio (at 65 dBf)		
	75½ dB	
CAPTURE RATIO		
	2½ dB	
SELECTIVITY (alternate-channel)		
	64 dB	
AM SUPPRESSION		
	67½ dB	
DISTORTION (THD+N)		
	stereo	mono
at 100 Hz	1.22%	1.45%
at 1 kHz	0.98%	0.98%
at 6 kHz	0.69%	0.78%

AM TUNER SECTION

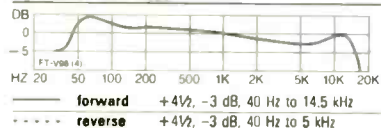
FREQUENCY RESPONSE



SENSITIVITY	13.6 µV
SELECTIVITY	37½ dB
AVC RANGE	52 dB

CASSETTE TRANSPORT SECTION

FREQUENCY RESPONSE



WOW & FLUTTER (either direction)	
	±0.30% average; ±0.36% peak
SPEED ACCURACY (either direction)	
	0.7% fast at 14.4 VDC; 1.3% fast at 10.8 VDC

PREAMP/AMPLIFIER SECTION

BASS CONTROL	+8, -10½ dB at 100 Hz
TREBLE CONTROL	+13¼, -6¾ dB at 10 kHz
LINE OUTPUT IMPEDANCE	≈4 ohms
OUTPUT (per channel into 4 ohms; at 3% THD+N)	
at 1 kHz	15 watts (1134 dBW)

as such). Further unlike typical factory-installed models, the V98 is engineered for easy hookup: Its wiring harness for power and speakers attaches to the chassis leads at a single multipin connector.

By the same token, you must give up some of the details you would expect in more expensive equipment. The most serious difference, particularly for the long-distance traveler, is the absence of automation in the tuner section: no presets and no scan or seek. As a station fades or begins to pall, considerably more of your attention must be diverted from driving and toward retuning than is necessary with the automated models. In another departure from many of the more luxurious models, the FT-V98 won't automatically eject a cassette when you shut off the power. And the approach to frequency balance is not the "objective" one we have come to expect in car componentry: There are no detents in the tone controls, which constitute a simple two-band equalizer.

This fact required an extra step in the lab. Using mono FM test signals at 100 Hz, 1 kHz, and 10 kHz, DSL adjusted the bass and treble controls for equal output at these three frequencies. All subsequent response measurements were made with these settings. Because of the inherent problems of car speakers and acoustics, they may or may not be the "normal" settings for any given installation. And when you factor in the inherent response differences between signal sources, the high-frequency rolloff that Sanyo deliberately introduces into the FM response when the RF signal strength is low, and the optional loudness compensation, frequency response must be considered as something that will be arrived at by ear in actual practice.

The treble rolloff at low signal strengths is a good idea, because the FM tuner section is not as sensitive as that of a more expensive receiver and therefore produces greater "spitting" than average during weak-signal picket-fencing. The resulting annoyance is considerably ameliorated by the rolloff, which softens the noise bursts and reduces the audibility of hiss between them.

The ill effects of weak antenna signals are further lessened by progressive blending of the two channels below 45 dBf, which represents fairly strong reception. By the time input has dropped to the stereo sensitivity rating point (48 dBf), 1-kHz separation is only 17 dB. That's

enough for true stereo reproduction, but the point quickly becomes arguable as input drops still lower. In this range (down to about 30 dBf), output can be increased slightly and noise reduced considerably—for a net gain of some 15 to 20 dB in signal-to-noise ratio—by switching to mono.

Inherent FM response with the tone controls adjusted as described above is very good—about as flat as you could hope for at high signal levels and with only a gradual rolloff (less than 3 dB per octave above about 3 kHz) with a 25-dBf input. The AM response has an even more precipitous treble rolloff than average and some bass boost, but the sound is not overly tubby (at least with the tone control settings chosen for our road tests, which presumably were not identical). Tape response in the forward direction also shows a progressive downward tilt in the high frequencies, though again we were able to achieve quite listenable results with a tone-control touchup. The great difference between the forward and reverse playback responses, however, will make it difficult to achieve consistent quality from side to side.

The need for frequency touchups makes us wonder if there is any real point in including an EQ switch. (Perhaps it's just to get that magic word "metal" on the front panel—though the 70-microsecond setting is equally appropriate for chrome, ferricobalt, and ferrichrome tapes.) The loudness compensation begins introducing a response bump centered at about 50 Hz by the time the volume has been reduced by 10 dB; at lower levels, the high end tilts upward progressively. By the time volume is down 40 dB from its maximum setting, both extremes of the range are reproduced about 12 dB louder than a 1-kHz reference tone. We found the effect rather heavy-handed and preferred to rely on the tone controls for any compensation at low listening levels.

The strongest single performance feature in our on-the-road tests was the motional stability of the cassette transport. Even on the bumpiest surfaces, the tone remained as free of audible shock-induced waver as that of any deck we've tested. But overall, the FT-V98 is not so apt to bear direct comparison with models costing two or three times as much. Rather, it is a good, modestly priced product (and a good value) with a useful, if not comprehensive, array of features. HF

SELECTAVISION



SelectaVision Video Monitor (model VJM 2023)



INTRODUCING A HIGH-PERFORMANCE TV THAT'LL TAKE ALL YOU CAN GIVE IT.
(FOR THE STORY BEHIND THE HEADLINE, TURN THE PAGE.)

RCA

VIDEO MONITOR

SELECTAVISION



INTRODUCING A HIGH-PERFORMANCE TV THAT WILL TAKE ALL YOU CAN GIVE IT. AND RESPOND TO EVERY COMMAND.

Introducing the SelectaVision® Video Monitor and Digital Command Center. A high-performance television with remote control designed to get the most from today's video products. To improve the picture, sound and performance you get from them. To make them easier to hook up. And far easier to use.

The SelectaVision Video Monitor works wonders as a high-performance television receiver, with our most advanced color picture and 127-channel tuning including cable. (The model shown actually fits 25" of picture, measured diagonally, in the same width as a 19" set.) Yet as a home video nerve center, it also does things conventional TVs can't.

15 rear input/output jacks allow you to bypass the set's antenna circuitry and plug RCA and other video and audio components—like the system shown—directly into

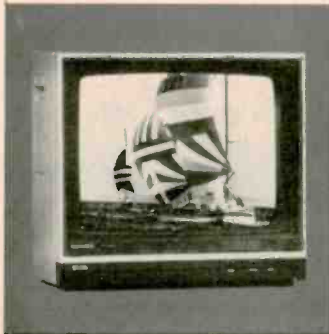
the chassis. That means a sharper picture from video tapes and videodiscs. That also means clean, dependable hookup with jacks instead of nerve-jangling wiring. And you can run the whole show with our 58-function Digital Command Center—switching instantly from broadcast to VCR or videodisc viewing.

You can even hear better sound, because audio jacks permit direct hookup to your own stereo system. That's flexibility no ordinary TV can even approach. For a demonstration of RCA's SelectaVision Video Monitor, see your RCA dealer. You'll see it's more than just a high-performance TV. For more information and a free copy of the "Living with Video" book (\$2.50 retail value), write: RCA Consumer Electronics, Dept. 32-312M, P.O. Box 1976, Indianapolis, Indiana 46206.

WE'LL OPEN YOUR EYES.

RCA

VIDEO MONITOR

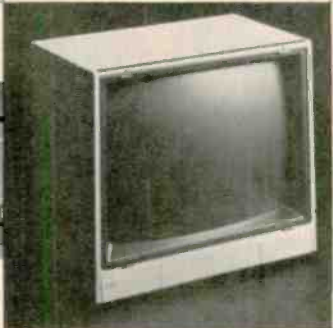
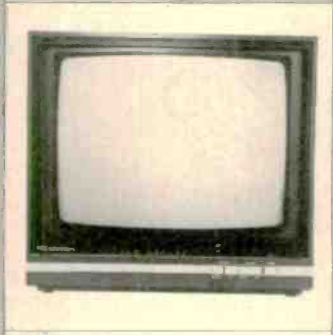
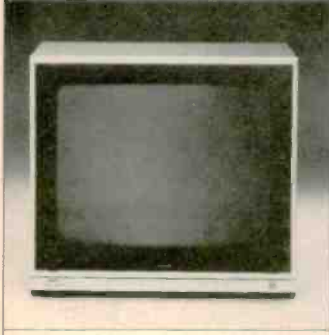


C O M P O N E N T
V I D E O
S Y S T E M S

**What's available: monitors,
tuners, and monitor/receivers**

THE BENEFITS OF A component television system are so numerous that it really makes little sense to settle for a conventional all-in-one model with no direct video inputs or audio outputs. Those advantages are most readily apparent in the degree of operating flexibility offered by such a

BY
FRANK LOVECE



TOP-LEFT CORNER: Sanyo AVM-258 monitor/receiver; Pioneer TVM-190 monitor; General Electric 19PM-4762K monitor/receiver; Jensen AVS-2100 tuner; NEC CT-1901A monitor/receiver; Sanyo AVT-100 tuner; Jensen AVS-3250 monitor; Proton 600T tuner; Sanyo AVT-100 tuner; Sanyo AVT-100 tuner; Jensen AVS-3250 monitor; Proton 600T tuner; Sony KX-1901A monitor; Pioneer VC-T700 tuner; Fisher MHT-250 monitor; Magnavox RD-4258SL monitor/receiver

MONITOR/RECEIVERS

MODEL	SCREEN SIZE ¹	CHANNELS	VIDEO IN/OUT	RGB INPUT	AUDIO IN/OUT	CONTROLS & FEATURES ²	SIZE ³ & WEIGHT	PRICE
FISHER HT-850	25 in.	105	2/1	No	2/1	3-source switching, simulated stereo, 2 speaker systems, 5 W/ch amp	42 by 29 by 20; 167 lbs.	\$1,200
GE 19PM-4762K	19 in.	130	2/1	No	2/1	3-source switching, MPX jack, simulated stereo, external-speaker terminals, 10 W/ch amp	20¼ by 18¼ by 18¼; 63 lbs.	NA
GE 25PM-4880K	25 in.	130	2/1	No	2/1	3-source switching, 12-hour channel blockout, MPX jack, simulated stereo, external-speaker terminals, 10 W/ch amp	24¾ by 21¼ by 20½; 87 lbs.	NA
JVC AV-2010US	19 in.	134	4/2	No	4/2	4-source switching, high-contrast filter on/off, external-speaker terminals, 2 speaker systems, 5 W/ch amp	21¼ by 19¾ by 19½; 62½ lbs.	\$900
JVC AV-2600US	25 in.	134	4/2	No	4/2	4-source switching, high-contrast filter on/off, text-sharpness control, external-speaker terminals, 2 speaker systems, 5 W/ch amp	26¼ by 24 by 21; 101¼ lbs.	\$1,100
MAGNAVOX RD-4258SL	19 in.	134	2/4 (1 mono)	No	2/4	2-source switching, 3.58-MHz color trap, 1-day/1-event timer, video input-level control, simulated stereo, MPX jack, external-speaker terminals, 5 W/ch amp	20¼ by 18½ by 18¾; 62 lbs.	\$760
MAGNAVOX RC-7320AS	25 in.	105	1/1	No	1/1	3-source switching, audio and video input-level controls, 2 speaker systems, 7 W/ch amp	27½ by 33 by 21; 170 lbs.	\$1,200
NEC CT-1901A	19 in.	134	2/3	No	2/4	3-source switching, 3.58-MHz color trap, 1-day/1-event timer, simulated stereo, MPX jack, external-speaker terminals, 2 speaker systems, 5 W/ch amp	20¼ by 18½ by 18¾; 53 lbs.	\$700
NEC CT-2501A	25 in.	134	2/2	No	2/2	3-source switching, 3.58-MHz color trap, 1-day/1-event timer, simulated stereo, MPX jack, external-speaker terminals, 2 speaker systems, 5 W/ch amp	25¼ by 23¼ by 20½; 90 lbs.	\$850
PANASONIC CT-5379R	25 in.	139	3/3	8-pin, 11-pin	3/3 (1 mono)	4-source switching, auto shutoff, simulated stereo, detachable remote with VCR functions, 2 speaker systems, 7 W/ch amp	25½ by 22¾ by 21; 105 lbs.	\$1,300
PROTON 619	19 in.	127	2/1	No	2/2	4-source switching, MPX jack, 3½ W/ch amp	27½ by 18½ by 20½; 79 lbs.	\$850
QUASAR TT-5999W	19 in.	139	3/3	8-pin	3/3 (1 mono)	2-source switching, auto shutoff, external-speaker terminals, simulated stereo, detachable remote with VCR functions, 2 speaker systems, 7 W/ch amp	20½ by 19 by 18¼; 55 lbs.	\$900
QUASAR TL-9985WD	25 in.	139	3/3	No	3/3 (1 mono)	2-source switching, auto shutoff, simulated stereo, detachable remote with VCR functions, 2 speaker systems, 8 W/ch amp	44¼ by 35¼ by 19¼; 160 lbs.	\$1,350
RCA VJM-2005	19 in.	127	2/2	No	2 mono/ 1 mono, 1 sim. st.	3-source switching, video input-level control, external-speaker terminals, VCR/videodisc player remote control, mono amp	26 by 17¼ by 17½; 58 lbs.	\$730
RCA VJM-2023	25 in.	127	2/2	No	2/3 (1 mono)	3-source switching, video input-level control, external-speaker terminals, VCR/videodisc player remote control, simulated stereo, 2 speaker systems	25¼ by 22 by 18¾; 106 lbs.	\$1,040
SANYO AVM-258	25 in.	112	1/1	No	1 mono/ 1 mono	2-source switching, MPX jack, 3 W/ch amp	25 by 23¼ by 19¼; 93 lbs.	\$850
SHARP 19H-600	19 in.	136	3/2	No	3/2 (1 mono)	3-source switching, simulated stereo, detachable remote control, 2 speaker systems, 3 W/ch amp	19¾ by 19¾ by 19½; 64½ lbs.	\$900
SHARP 20J-580	20 in.	142	2/No	8-pin	2 mono/ No	4-source switching; flat, square picture tube; MPX jack; auto shutoff; mono amp	20¾ by 19¼ by 20; 68¼ lbs.	\$760
SYLVANIA RXC-192SL	19 in.	134	2/4	No	2/4 (1 mono)	2-source switching, 3.58-MHz color trap, 1-day/1-event timer, video input-level control, simulated stereo, MPX jack, external-speaker terminals, 2 speaker systems, 5 W/ch amp	20 by 18¼ by 19; 60 lbs.	\$760
TOSHIBA CZ-2010	20 in.	133	3/2	No	3/2	4-source switching; flat, square picture tube; detachable remote control; external-speaker terminals; 2 speaker systems; 5 W/ch amp	19¾ by 18 by 18½; 55 lbs.	\$1,000

¹Measured diagonally.

²All monitor/receivers have on/off, volume, channel, bass, treble, balance, and manual picture adjustment controls (color, tint, brightness, contrast, sharpness), sometimes in combined controls. Unless otherwise noted, all units contain at least one speaker system for mono reproduction.

³Dimensions in inches, width by height by depth.



DO
CDs
SOUND
BETTER?

NOT
ALWAYS

BY

SAM SUTHERLAND

RECORD COMPANIES ARE LEARNING THE HARD WAY THAT MAKING SUPERIOR-SOUNDING COMPACT DISCS DEMANDS NEW ATTITUDES, NEW APPROACHES, AND EXTRA CARE.

THOUGH THE COMPACT DISC system has been heralded as a technological breakthrough, the Year of the CD has not gone by without an undercurrent of critical concern. The theoretical advantages of the new

digital medium aside, several critics have found that some CDs sound worse than their corresponding LPs.

There have been complaints of a harsh, fatiguing treble sound, a flattened or unstable stereo image, and

shifts in the overall ambience of familiar performances. A vocal minority of hard-core analog loyalists damn the Compact Disc for these effects, claiming that they are somehow tied to the digital process itself and are therefore insurmountable. Several recording engineers and producers, however, believe the problem can be traced back to sloppy handling of original analog master tapes—a sloppiness that becomes audible in the transfer to an unforgiving digital medium. My investigation over the past few months tends to confirm the latter view.

The majority of fully digital CDs—performances recorded, mixed, and mastered digitally, then transferred to CD—have acquitted themselves impressively. Most of the flaws are in CD reissues of analog recordings. Bernie Grundman, who oversees A&M records' top-rated mastering facility in Los Angeles, thinks the problem stems from CD transfer tapes: "Record companies have taken file copies of master tapes and sent them over, rather than going back to the mastering room to pull an exact digital copy of the original."

The file copy is suspect because "an analog generation represents light years of degradation over the original recording," says Elliot Mazer, a veteran engineer and producer whose early interest in digital audio culminated in his production of Elektra's ambitious new demonstration CD, "The Digital Domain." To Mazer, use of an inferior production dub may easily place the resulting CD in an unflattering light compared to an analog disc made from the same program's true master.

The hazards in relying on an analog copy are legion. Inherent anomalies in conventional analog recording and disc cutting have prompted the use of compensatory techniques to doctor tapes for optimum LP or cassette transfer. Heading the list, and cited by every producer and engineer I spoke with, is program equalization, applied during mastering to correct frequency response problems on the LP.

"There are very few studios equipped with exactly the same equalizers and tape equipment," explains Grundman. So even the detailed production notes listed on

master tapes to assist in future tape and disc transfers may not provide an adequate blueprint. "If they read in our notes that we added 2 dB at 5,000 Hz [to the LP lacquer] and try to do the same with a differently sloped equalizer, the result could be a completely different sound."

The variances among analog tape machines cause more complications. "Analog recorders all have low-frequency head bumps," Mazer notes, "and because of that I haven't seen two machines that had the same bass response, even from a single manufacturer." For instance, a specific deck may yield a frequency-response curve in which the program is down by several decibels at 40 Hz, up by an equal or greater amount at 45 Hz, yet ruler flat at 100 Hz. Played back on a unit with different peaks and valleys in the same region, even an unequalized tape would be in trouble. The problem is in fact exacerbated when an engineer follows the production notes and applies the equalization that was intended only for the original tape recorder.

Why, then, are CDs made from any source other than the original master tape played on the original two-track analog recorder? The answer, unfortunately, is that record companies are simply following procedures already set up to create conventional LPs and cassettes. Most major labels are accustomed to supplying later-generation tape copies to their overseas licensees (and, in many cases, to U.S. plants when replenishing stocks of old catalog titles). For pop music, such dubs are typically Dolby-encoded quarter-inch reels recorded at 15 ips—even if the original master was produced on half-inch tape at twice that speed.

Al McPherson, Warner Bros. Records' chief of engineering and shepherd for the label's CD transfers, acknowledges that this practice may have dominated production of the first CDs in Japan and Germany. Agreeing that original masters remain the best source, he also argues that "the producers of the original recordings are as much at fault as the record companies." By their tight-fisted insistence on keeping the master tape, McPherson claims, producers are forcing record companies to rely on later-generation dubs. He cites Warner's own frustrating experience

CD vs. LP: LITTLE THINGS MATTER

The accuracy with which a Compact Disc reproduces the sound of a master tape is no guarantee of listening satisfaction. A case in point is the Dire Straits release "Love Over Gold" [see review, October 1983]. The LP (Warner Bros. 23728-1) has been deservedly praised for its excellent frequency range, dynamics, and stereo image. But the CD (Vertigo 800-088-2), despite its lower noise and more solid bass, has a harsh, metallic quality that is very fatiguing.



These impressions come from a direct comparison of the LP and CD. Reports of this kind mean very little, however, unless the playback equipment is specified. I listened to the CD on a Sony CDP-101; the LP was played with a Denon DL-103D cartridge mounted in a special lightweight headshell on a Technics SL-500 integrated turntable with a custom isolation base. My preamp was an Apt/Holman One, whose moving-coil module was designed specifically for cartridges like the Denon. And I listened to both the CD and LP through early vintage Snell Type A loudspeakers.

To investigate the source of the difference in sound between the analog and digital releases, I used a CBS STR-100 test record and a Ballantine precision AC voltmeter to

measure the frequency response of the Denon/Apt combination at the Apt's external-processor-loop output. Channel balance was within 1 dB over the entire audible range, so Fig. 1 shows the averaged response of the two channels.

I then attempted to duplicate the cartridge's response curve using two equalizers in series: an octave-band unit and a parametric equalizer. (The combination of the two is much more versatile than either type alone.) Instead of trying to match the individual cartridge channels, I decided to split the already small difference, and the resulting EQ curve appears in Fig. 2.

Though not perfect, the equalization is as close as 15 minutes of careful tweaking could make it. As the curve illustrates, it is slight indeed. Of the 15 equalizer controls in each channel, none was moved by more than $\frac{1}{16}$ inch from its center position, and most by less than half that. To confirm the accuracy of the settings, I applied the equalization to the Compact Disc and compared the one-third-octave spectra of the CD and LP over the same musical passage. Within the 1-dB resolution of the spectrum analyzer, everything checked out okay.

The next step was to determine how the "corrected" CD of "Love Over Gold" sounded in comparison to the LP. Interestingly, the CD was almost identical to the record. But the digital version's lower noise, rock-solid pitch, and superior cleanness at both frequency extremes made it the preferred choice. The difference between the equalized and unequalized CD sounds was not overwhelming in direct comparison, but the subjective effect of the improvement became very important during extended listening. The test suggests that the LP and CD were both created from the same master tape—the one that was EQed specifically for LP use—and that the LP was cut with considerable care.

I also evaluated several other records

with "The Nightfly," Donald Fagen's digitally recorded solo debut.

But according to engineer Roger Nichols, Fagen and producer Gary Katz were so eager to make a Compact Disc version that they even allowed Sony to use the original tracks in creating demonstration CDs. Nichols recalls their dismay when reports surfaced that "The Nightfly" sounded off-kilter in its European CD version. "I borrowed a copy of the CD—Stevie Wonder's, in fact—and compared it to a digital cassette copy of the master

tape that I made with my own Sony digital processor. The imaging had all but disappeared, and Donald's vocal sounded more distant." Warner was contacted, and the label agreed to scrap the stock of CDs already received from Polygram's West German plant, postponing American release until Nichols could remaster the album from the original digital tape.

McPherson counters that a primary reason for Warner's failure to catch the mistake was the lack of a true digital copy in the record company's vaults:

and their Compact Disc counterparts, using the same correction settings. The results were similar, but not quite as consistent. When I tried the test with the two versions of "The Best of Manhattan Transfer" (Atlantic SD-19319 and 80085-2 for the LP and CD, respectively), I found that the upper midrange and treble on both the LP and CD sounded unpleasantly bright near the outside of the recording, but that the highs on the LP became progressively more attenuated as the

But why should we bother with the Compact Disc if some analog productions sound better than their counterparts? The answer depends on your outlook. You can't tell someone who has just paid close to \$1,000 for a player and \$20 for each disc to spend another several hundred dollars for an equalizer just to make it all sound "right." Still, the CD is inherently more accurate and more consistent a medium than the LP. Mastering techniques and playback systems must

FIG. 1. PHONO PICKUP RESPONSE

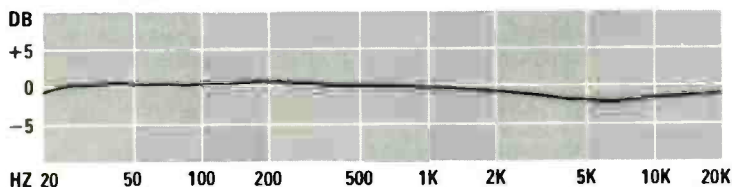
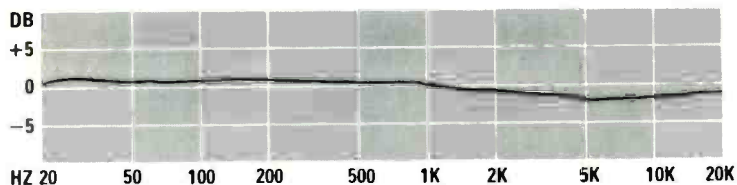


FIG. 2. COMPACT DISC "CORRECTION"



stylus made its way inward. This improved the sound of the LP, but in comparison made the equalized CD sound even brighter and more irritating.

What practical conclusions can be drawn from this exercise? My test results reconfirm the importance of small alterations in frequency response that extend over two or more octaves. With source material that is well recorded except for its frequency balance, subtle corrections can make a subjective difference out of all apparent proportion to their size.

change somewhat for the full potential of CD to be realized, but this experiment suggests that small changes can bring large benefits.

Ultimately, the responsibility for solving this problem lies with the record companies, who must change the way they record the music and exercise greater care in post-production. Until then, a good octave-band equalizer, especially one that has a high-resolution mode in which the range of its controls is reduced, can improve much of the current software.—E. Brad Meyer

"We didn't have a digital version of the album to compare the CD to." As a result, the first versions of "Nightfly" offered abroad represented an ironic subversion of the work—a CD derived from a later-generation analog dub that had been used for mastering the LP.

A similar fate befell Billy Joel's "The Nylon Curtain," also digitally recorded and mixed but unwittingly mastered for CD from an EQed analog copy sent to Japan by CBS. In this case, the mixup wasn't detected until

after CBS had started selling the flawed version in the U.S. "It's just spilled water at this point, because it has been corrected," says longtime Joel producer Phil Ramone. Still, he notes that in its finished form, the CD actually represented three additional analog generations.

Most CD engineers now require that an LP's original producers and engineers be contacted prior to CD mastering so that the best possible tapes can be used for the transfer. Bruce Swedien, Quincy Jones's

engineer of choice for years, admits his own irritation when he learned that Jones's multiple-Grammy hit "The Dude" had been issued by A&M on Compact Disc without either his or Jones's knowledge. Swedien says that he now insists on reading his own digital copies, usually from the original 30-ips half-inch master tape.

There's already evidence that such production lapses are causing the major labels to be more diligent, too. Several are using the services of Bruce Botnick, an engineer and producer who operates the high-tech consulting company Digital Magnetics. Botnick agrees that the first CDs produced abroad apparently were made from later tape generations, but he's convinced that U.S. labels are moving quickly to avoid future gaffes.

CBS's response to the need for tighter quality control was, according to Botnick, incredibly rapid: "I brought the problem to their attention, and they began checking the product immediately." Botnick's company was subsequently enlisted by CBS to take over digital mastering of old analog recordings, and he travels to the original studios to make properly equalized digital copies. Warner's McPherson says that similar measures are being taken with his company's CD transfers. Digital cassette copies, for instance, are now employed to track quality control, with McPherson supplying them to producers and engineers of the original works as needed.

MEANWHILE, A&M's Grundman uses his Los Angeles mastering facility as a CD crow's nest, supervising digital transfers on the premises. Because most of the label's albums are mastered there, he has easy access to the correct master tapes and knows the specific requirements of each. In handling albums mastered elsewhere, he insists on the best available tape generation before pulling a digital copy for CD production.

Engineers are unanimous, however, in suggesting that CDs can really only strive to be a mirror image of what's on the master. Consequently, if people continue to expect sonic perfection from CDs, then perhaps some recordings should be deemed unsuitable for CD release—at least until effective cosmetic techniques evolve to permit digital touchups. And

THE CARVER CD FIXER

When Bob Carver came by recently to drop off his new receiver, conversation naturally turned to other audio topics, including this issue's coverage of the "CD sound" problem. He was particularly intrigued with Brad Meyer's experiments, which paralleled his own in the development of a soon-to-be-released signal processor for Compact Disc players.

Carver says that when he got around to buying a CD player, he was pleased with the improvements in dynamic range, bass impact, and distortion that it provided over analog disc playback equipment. But he also was surprised at how bright and two-dimensional many CDs sounded. Convinced that the digital process itself was

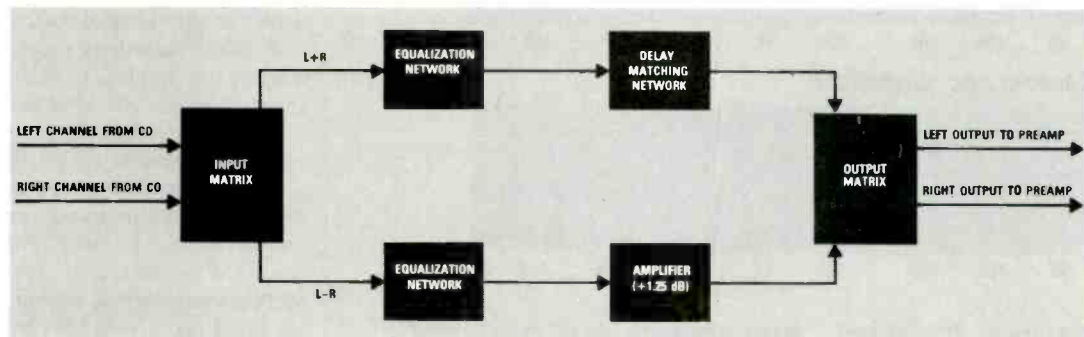
components. This exercise proved very revealing. The basic response differences between the CD and the LP remained much the same (as one would expect), but the variances between the two L+R signals and the two L-R signals were not identical, and except at very low frequencies, the LP's L-R component was about 1/4 dB stronger than the CD's. Increasing the proportion of L-R in a stereo signal has the effect of enhancing its "stereoness," adding a greater degree of separation and ambience. (This is because the L-R signal contains all the directional information; the L+R component is mono.)

Why there should be such a discrepancy is not immediately clear. The most

through a matrix that separates it into L+R and L-R components, which are then independently equalized. In addition, the L-R signal is boosted 1/4 dB by a low-gain amplifier. The final step is to run the processed L+R and L-R signals through a second matrix that reconstitutes the left and right stereo channels.

For accurate reconstruction, however, the signals going into the second matrix must have the same time-domain relationship as those that came out of the first. But any frequency-response alteration, such as that created by equalization, will cause frequency-dependent delays. Since the equalizations applied to the two signals in the Time Lens are slightly different, so are

BLOCK DIAGRAM OF CARVER DIGITAL TIME LENS



not at fault, he set out to discover the real culprit. One of the first things he tried was using an equalizer to match the sound of a CD to that of an LP reproduced with a high-quality analog record-playing system. The cartridge Carver used was a Denon DL-103D—the same model Meyer employed. Consequently, the curves they arrived at are very similar.

Although Carver could get the CD and LP to sound much more alike through equalization, he still felt that the match was not exact—that the LP projected a greater sense of ambience and depth. So he ran each of the two stereo signals—CD and LP—through a matrix that added and subtracted its left and right channels to produce sum (L+R) and difference (L-R)

likely explanation is that the cartridge, the disc cutter head, or both exaggerate the vertical modulation of the record groove, which carries the L-R information. (It has long been known that some pickups generate excess L-R in their outputs.) A much more remote possibility is that digital processing in some way diminishes the L-R component of a stereo signal, but it is not evident how this might occur.

Whatever the reason for the difference, Carver thought that it should be possible to obtain the best of both worlds simply by adding the qualities he liked in analog reproduction to the signal from a CD player. So he created the Digital Time Lens, whose block diagram is shown here. The stereo output from a CD player passes

the delays. The solution is to put a compensatory phase-shifting network into the L+R line ahead of the output matrix.

Carver feels that for Compact Discs in need of its help, his circuit provides a more desirable "analog" balance and ambience while retaining the lower noise and distortion characteristic of CDs. For those that don't require such processing, there's a bypass switch. And as time goes on and the record companies pull their act together, more and more CDs will merit the bypass mode. (Carver definitely sees the unit as an interim product.) Meanwhile, you might ask, why is the device called a "Digital Time Lens"? Frankly, we don't know, but we're sure Bob could give you a fascinating answer.—Michael Riggs

exaggerated expectations will not diminish until consumers realize that not all CDs are true digital products. The Society of Professional Audio Recording Studios has urged record companies to distinguish between analog-conversion CDs and digitally recorded, mixed, and mastered titles by

stating the appropriate information on the packages themselves.

So far, manufacturers have resisted adopting such labeling, but they have at least started using liner booklets and external merchandising materials to identify true digital products more clearly. As more all-digital recordings

are made and engineers learn to tailor their CD remakes of analog masters more consistently, the incidence of digital disappointments should diminish. In the meantime, keep reading CD reviews and pay heed to that ancient admonition: Let the buyer beware.

WHY PUT TWO FILTERS INTO ONE GREAT COMPACT DISC PLAYER?

Kyocera goes to double lengths to make sure there's no distortion in its DA-01 Compact Disc Player. It's got both digital and analog filters—so nobody hears distortion.

The advantage of digital and analog filtering systems.

Modern technology has made analog filters pretty effective. But there can be a problem—analogue filters by themselves render limited performance. By combining an analog filter with a digital filter, and precisely applying both types in just the right way, the limitations found with analog filters are not there anymore. Thanks to the unique use of these filters, and an impressive array of very advanced circuitry, the Kyocera CD Player provides accurate, crystal-clear, life-like sound.

The awesome specs that only digital can provide.

Needless to say, the Kyocera DA-01 comes through with some specs that are mind-boggling: A full 90 dB dynamic range... flat frequency response from 20-20,000 Hz... quiet 90 dB S/N ratio... and total isolation 90 dB channel separation.

And, just in case you didn't realize it, with the fabulous disc player system, as provided in Kyocera's DA-01 Player, there is no contact between disc and playback head. No tics, clicks, pops, scratches or record wear. And the DA-01 plugs right into your present audio system—Kyocera or others—just like a conventional turntable.

Easy to use, but total control of every function.

The DA-01 is easier to use than a modern cassette deck—slide the compact disc into the disc compartment, shut the door and hit the play button. With the DA-01's feather-touch controls, you can play the whole thing (60 minutes a side)... repeat a track... scan... pause... skip... advance... index... and program up to 24 different segments with an electronic memory. A functional LED digital panel tells you program running time and just where the optical scanner is on the disc.

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





Why this is the tape that sets the standard.

JVC sets the standard for all **VHS** videotapes, no matter who makes them.

That's the way it has been ever since JVC engineers originated the format for VHS videocassette recorders.

That's why we feel a special responsibility for manufacturing our own brand of VHS videotape at the highest possible quality level.

For our HG and Super HG videotapes, the process begins with a polyester-base

film. Using a new binding system, we coat the film with super-fine magnetic particles, which improves the packing density of the coating. Our own unique dispersion process makes the coating more uniform and sharply reduces the occurrence of drop-out.

The result is videotape that provides a continuously stable picture, with clear, pure colors.

Compared with JVC's own reference tape, our new HG tape has a 2.3 dB

higher color S/N ratio; with our new Super HG tape, the improvement is 4.0 dB.

All three grades of JVC videotape, including our Standard formulation, benefit greatly from JVC's extensive pioneering research in VHS tape-to-head dynamics.

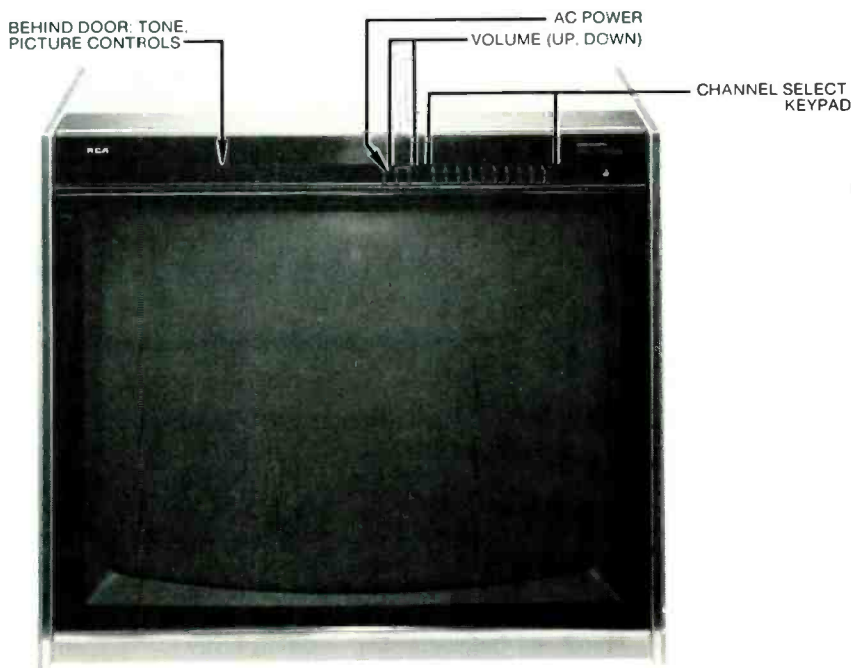
So no matter which grade of videotape you prefer, now you know how to pick the brand that sets the standard for all the others.

JVC® JVC JVC JVC JVC JVC JVC JVC

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

RCA VJM-2023S TELEVISION RECEIVER

RCA VJM-2023S SelectaVision 25-inch color television receiver, with antenna and composite video inputs and built-in loudspeakers. Dimensions: 25¼ by 22 inches (front), 18¾ inches deep. Price: \$1,040. Warranty: "limited," two years on picture tube, one year on all other parts, 90 days labor. Manufacturer: RCA Consumer Electronics, 600 N. Sherman Dr., Indianapolis, Ind. 45201.



FROM THE FOLKS who brought you color TV as you know it today comes the VJM-2023S color television receiver. The company (need you ask) is RCA, which spearheaded the development of the NTSC broadcast system used in North America and Japan. Although the VJM-2023S is billed as a "SelectaVision Video Monitor," it

really is two instruments in one: a 127-channel TV tuner and a 25-inch component video monitor. The tuner section's audio and video outputs feed not only the monitor but also external pin jacks, so that you can record on a VCR or watch on a remote monitor; direct monitor inputs enable you to bypass the RF link when viewing a videodisc or tape, minimizing signal

VIDEO MONITOR SECTION

Except where noted otherwise, all measurements were made through the direct video input.

HORIZONTAL RESOLUTION

direct input	≈260 lines
through tuner	≈290 lines

INTERLACE	very good
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OVERSCAN

horizontal	≈10%
vertical	≈8%

CENTERING

horizontal	right ≈1½%
vertical	up <1%

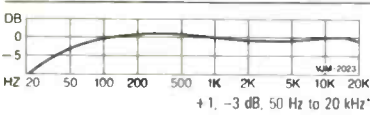
BLOOMING

negligible

TV TUNER SECTION

All measurements were taken at the direct audio and video outputs.

AUDIO FREQUENCY RESPONSE



AUDIO S/N RATIO (A-weighted)

best case (no video signal)	50 dB
worst case (white raster)	42 dB

RESIDUAL HORIZONTAL SCAN COMPONENT (15.7 kHz)

-48½ dB

MAXIMUM AUDIO OUTPUT

main output	1.53 volts
tape output	0.48 volt

AUDIO OUTPUT IMPEDANCE

main output	600 ohms
tape output	320 ohms

VIDEO FREQUENCY RESPONSE

at 500 kHz	-¼ dB
at 1.5 MHz	+1 dB
at 2.0 MHz	+¼ dB
at 3.0 MHz	+1½ dB
at 3.58 MHz	+2½ dB
at 4.2 MHz	-5¾ dB

LUMINANCE LEVEL	10% low
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GRAY-SCALE NONLINEARITY (worst case)	≈22%
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CHROMA LEVEL	1¾ dB high
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CHROMA DIFFERENTIAL GAIN	≈39%
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CHROMA DIFFERENTIAL PHASE	≈±5°
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CHROMA PHASE ERROR

red	+1°
magenta	+5°
blue	+2°
cyan	+10°
green	+8°
yellow	+12°
median error	+6½°

*See text.

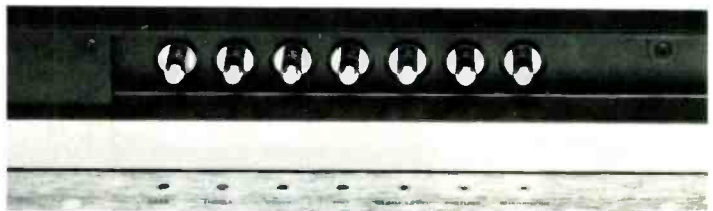
Laboratory data for HIGH FIDELITY's video-equipment reports are supplied by Diversified Science Laboratories. Preparation is supervised by Michael Riggs, Peter Dobbin, and Edward J. Foster. All reports should be construed as applying to the specific samples tested. HIGH FIDELITY and Diversified Science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

degradation. For broadcast viewing, the VJM-2023S is a complete television receiver with its own audio amplifier and speakers.

The tuner covers all VHF and UHF channels plus as many as 57 cable channels, including Midband, Superband, and Hyperband (A through I, J through W, and AA through QQ, respectively). Tuning is via a quartz-locked frequency-synthesis system, which enables you to punch up the channel you want on a numeric keypad at the monitor or on the infrared remote control. The remote also enables you to scan up and down through the channels, or to switch back and forth between the current selection and the preceding one with a "previous channel" button. The scan feature can be programmed to ignore channels that

Given all these automatic adjustments, you might think there would be no need for manual controls. Apparently, RCA thinks otherwise and has provided a full complement—including tone controls for the audio—behind a flip-down door above the screen. Volume is set via up/down buttons on the main panel or on the remote.

Audio purists might grumble about the nondefeatable pseudostereo imposed upon all broadcasts and the lack of detents on the BASS and TREBLE, and videophiles may find the absence of detents on the video controls equally frustrating. There's also a nondefeatable loudness contour that boosts bass response by about 7 dB at 100 Hz when the VOLUME has been turned down 30 dB below



THE VJM-2023S's SECONDARY CONTROLS are behind a panel above the screen. Included are adjustments for color, tint, black level, picture, sharpness, bass, and treble.

are not active in your area. Whenever you change programs, the time and channel number appear on the screen for a few seconds.

The monitor circuitry also includes a number of special features. Automatic color/fleshtone correction attempts to maintain the color intensity and fleshtones you've set manually, while automatic contrast/color tracking maintains the proper balance among color, contrast, and brightness, so that rotating the picture control changes only the apparent scene brightness. Plus, there is an automatic light sensor that adjusts the picture to compensate for changes in ambient lighting. An automatic sharpness control "tracks sharpness variations and corrects for them," and a "BlackLock Contrast Circuit" is said to maintain black level and picture detail under high-contrast conditions.

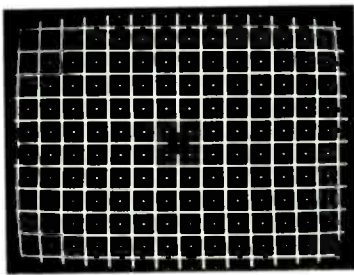
maximum (response at 50 Hz is up even more).

The VJM-2023S has a built-in stereo power amp, which normally drives left and right side-mounted speaker systems with 5-inch woofers and 2-inch tweeters. The speakers can be turned off with a switch behind the control door. The RCA speakers sound much better than you might expect from a table model, but if you wish, you can connect external speakers to a pair of standard ¼-inch phone jacks on the rear panel. This automatically mutes the internal speakers. The true audiophile will use an external stereo amplifier, which can be driven from a pair of pin jacks on the rear panel. (The pseudostereo, the volume and tone controls, and the loudness contour affect these outputs, too.) A mono output is available for recording on a VCR. (It is in the circuit before the

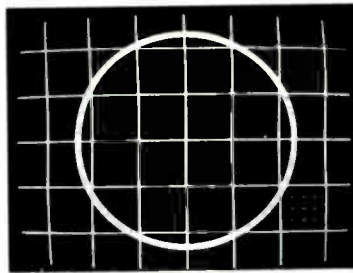
VOLUME, BASS, and TREBLE, but oddly, after the pseudostereo "Dual Dimension Processing," which separates the signal into two channels that are then recombined at the tape output.)

Two sets of direct video and stereo audio inputs are provided. The first has corresponding outputs, so that signals can be passed through to another device. A slide switch determines

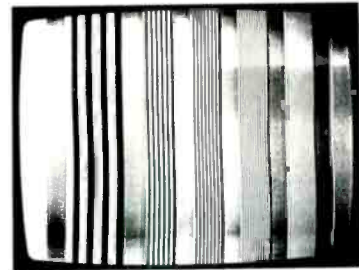
between the current channel and the previous one, display the time and channel number at will, select either auxiliary input, control volume and audio muting, set the clock, and control 26 RCA videodisc player functions and 27 RCA VCR functions! Of course, the videodisc player and VCR must be compatible with the Command Center, but when we think of the three remotes we normally



CONVERGENCE is tested with this cross-hatch display. Narrow, well-defined white lines indicate good convergence, with all three electron beams (for red, green, and blue) properly aimed. Wherever the monitor begins to lose convergence, the lines will broaden and become fuzzier. The VJM-2023S exhibits very good convergence for a 25-inch monitor, with most of the error confined to the corners and the upper and lower 10 percent of the screen.



GEOMETRIC DISTORTION, overscan, and centering are checked with this display, consisting of a crosshatch, a circle, and a set of dots. The VJM-2023S's horizontal linearity is excellent, but vertical lines weave noticeably near the center of the screen. Overscan is low vertically and only slightly greater horizontally, and the picture is well centered (though not perfectly so).



HORIZONTAL RESOLUTION is tested with a signal consisting of six tone bursts from 500 kHz to 4.2 MHz (the upper limit of the NTSC system). The monitor's frequency response is approximated by finding the last band in which the individual vertical lines remain clear and distinct. The line pattern is somewhat soft at 3.58 MHz (the fifth band) on the VJM-2023S and completely gone at 4.2 MHz, indicating a horizontal resolution of approximately 260 lines.

whether the internal circuitry "bridges" the Video 1 line (for looping through) or terminates it in a 75-ohm impedance. Another switch determines whether the Audio 1 input is presented in true stereo or in mono. The second set of audio-video inputs does not provide bridging or a mono option (although a Y-connector can be used to route a mono signal to both left and right inputs). Each video input circuit has a level control to match brightness between sources.

The RCA remote—called a "Digital Command Center"—could have been designed by George Lucas. It's large and, at first glance, intimidating, but we've never seen a more complete arrangement. There are no fewer than 51 buttons. You can turn the system on and off, tune any channel directly or via scan, program the channels to be scanned, switch

juggle to control our video system. RCA's "Star Wars" approach looks mighty appealing—a powerful inducement to go RCA the whole way. With this complex a system, you need good instructions; thankfully, RCA's manual is one of the most thorough and well written we've come across.

Diversified Science Laboratories tested the VJM-2023S's monitor and tuner sections separately, but we also checked its performance as a complete receiver, feeding signals into the RF input and viewing the results on the screen. As a monitor, the VJM-2023S has a bit more horizontal overscan than most others and a typical amount of vertical overscan. The picture is well centered vertically and displaced to the right by a negligible amount. For a 25-inch monitor, convergence is very good: It's difficult to maintain convergence over a large screen.

especially when using a 110-degree CRT (as RCA does) to minimize cabinet depth. Misconvergence is worst at the corners and over the upper and lower 10 percent of the screen, but even there it isn't great enough to be noticeable at normal viewing distance. Horizontal linearity is excellent, but vertical lines weave noticeably in the center. This is discernible both on test patterns and on broadcasts with straight vertical edges. Vertical interlace, though not perfect, is very good.

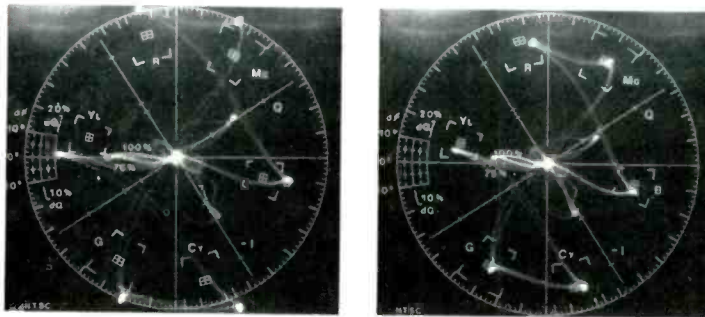
Without detents to suggest proper control settings, DSL followed the setup procedure recommended in the owner's manual, which takes only a

actually is better when the system is used as a receiver than when used as a monitor. The tuner has a fair amount of gray-scale nonlinearity, substantial chroma differential gain, average to above-average chroma differential phase, and a fair amount of noncorrectable chroma phase (hue) error. In these respects, performance as a monitor is definitely better than that as a receiver. The tuner output's luminance level is a bit low and its chroma level high, which convinced us to set color saturation differently on broadcasts than when using the system as a straight monitor.

Because of the nondefeatable synthetic stereo, DSL combined the left and right outputs to measure audio frequency response. (Independent measurements of the left and right outputs indicate that RCA creates its synthetic stereo in the most realistic way, by distributing energy between the channels on a frequency-selective basis.) The measurements were made with the VOLUME at maximum, to eliminate the effect of the nondefeatable loudness contour; the BASS and TREBLE were set to produce equal output at 100 Hz, 1 kHz, and 10 kHz. In all cases, DSL set the modulation level to avoid clipping, which occurs before maximum volume at 100 percent modulation.

Response rolls off at 6 dB per octave below 50 Hz but is within +1 dB, -1½ dB, from 70 Hz to 20 kHz, which is admirable. The tone-control ranges are +10¼, -14½ dB, at 100 Hz for the BASS, and +13, -9 dB, at 10 kHz for the TREBLE. The signal-to-noise (S/N) ratio is very good by TV standards, and the horizontal-scan component is well suppressed. There's more than sufficient level at both the main and tape outputs, and the output impedances are low, so there's no need to worry about compatibility in that regard.

RCA's VJM-2023S is remarkably compact for a 25-inch monitor, although its weight and lack of handles make toting a chore. While it doesn't quite match the best "separates" we've tested, it outperforms the average TV set by a wide margin and is far more flexible. The VJM-2023S is the obvious centerpiece for an all-RCA component television system, and if you choose to go that way, you've got the remarkable Digital Command Center as your faithful servant. **HF**



TUNER COLOR ACCURACY is good. The vectorscope photo at left indicates slightly excessive color saturation (chroma level) and some hue (chroma phase) inaccuracy. The photo at right—made with a 1¼-dB cut in chroma level and a clockwise phase rotation—simulates the best results obtainable using the monitor's color and tint controls. This puts all six color vectors (white dots) on or near their targets, which is very good performance.

few moments. With the resulting settings, black retention is excellent (about the best we've seen) and blooming negligible. Gray-scale linearity and chroma differential gain and phase also are unusually good. Red, green, and blue rasters are perfectly pure; color accuracy is very good on the first two and excellent on the third. There's some overshoot entering a white area, and a "whiter-than-white" band just before leaving one, but this should not be noticeable in normal reception. The multiburst pattern is a bit soft at 3.58 MHz and completely gone at 4.2 MHz, which leads us to rate horizontal resolution at approximately 260 lines. The sharpness control has almost no visible effect.

Tuner video response is up at 3.0 and 3.58 MHz; thus, picture sharpness

REVIEWS

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

POPULAR VIDEO

GIRL GROUPS:

The Story of a Sound.

Stephanie Bennett and Steve Alpert, producers. MGM/UA Home Video MV 600194 (videocassette), \$59.95 CED videodisc: MD 100194, \$29.95

The spirit of the '50s and '60s girl groups is perfectly summed up here by the Chantels' lead singer, Arlene Smith: "We were doing what we loved best: getting dressed up at night, going on stage, and singing and dancing." While a 65-minute videotape cannot duplicate the comprehensiveness of Alan Betrock's meticulously researched book of the same name, "Girl Groups" does manage to convey the sense of irrepressible enthusiasm shared by all of these young female ensembles. Many of these girls were fifteen years old or less and had no experience in the music business; though their groups often faded as quickly as their last hit, that very lack of experience lent a sense of freshness and excitement to their performances.

As with MGM/UA's previous collaboration with Delilah Films, "The Compleat Beatles," "Girl Groups" is constructed as a documentary. Concert and television footage provides a fast-paced performance montage, interspersed with brief discussions with songwriters and singers from the era. Among the best interviews is that with the Supremes' Mary Wilson, who reflects eloquently on her career without the cloying nostalgia that mars the memory of many former stars.

That the Go-Go's and other contemporary female groups got some of their boys-and-parties inspiration from these ensembles is without question. What is perhaps a little more surprising is the way film was used for illustration when the songs were performed on camera. It appears that

there was music video before there was MTV. Long before. On *Tell Him*, for example, the Exciters roam around a zoo singing to the obvious delight of polar bears, lions, swans, and deer. For *Dancin' in the Streets*, Martha & the Vandellas go romping through a Detroit auto assembly line, climbing into unfinished convertibles. Though there is little relation between the lyrics and the visual images, the results are fun. Rudimentary but extremely well-rehearsed unison choreography adds an extra dimension to the black-and-white segments from *Shindig!* and other early rock television shows.

As "Girl Groups" points out, many of these groups were faceless, with the same musicians and singers used from one recording session to the next. Prolific producer Phil Spector, for example, often worked with singer

Darlene Love (shown here singing *He's a Rebel*), even though she was primarily known as the lead singer of the Crystals. In some cases—Ronnie Spector, Diana Ross, Martha Reeves—individuals eventually went on to break out of the group mold. (Those who started out as soloists, such as Dionne Warwick, are not represented.) But figuring out who's who among the girl groups is an academic exercise. It's not important who the lead singer of the Angels was, or how many of the Dixie Cups were also in the Blossoms. The material and the sound are what count, and with 25 songs (by Jerry Leiber and Mike Stoller, Carole King and Gerry Goffin, Ellie Greenwich and Jeff Barry) and 17 groups performing them, "Girl Groups" is social and musical nostalgia at its best. —IRA MAYER

THE WEAVERS:

Wasn't That a Time.

Jim Brown, director; Jim Brown, Harold Leventhal, & George Stoney, producers. MGM/UA MD 100218, \$29.95 (CED disc)

Sitting in the small movie house beneath New York's Plaza Hotel watching "Wasn't That a Time," I remember thinking that this was the first contemporary musical film I would want to own. A documentary that provides just enough history for those unfamiliar with the Weavers—

SUPREMES: Mary Wilson, Diana Ross, Florence Ballard



the late '40s and '50s folksong quartet featuring Pete Seeger, Ronnie Gilbert, Lee Hays, and Fred Hellerman—it is charged with memories for those who “knew them when” and with music that transcends any and all generation gaps.

It was the Weavers whose carefully structured four-part harmonies put *On Top of Old Smokey* at the top of the charts, who made Leadbelly's *Goodnight Irene* a national singalong and who, had they not been victims of Senator Joe McCarthy's blacklist, would have had a good chance at changing the national anthem from *The Star Spangled Banner* to Woody Guthrie's *This Land Is Your Land*.

The script for “Wasn't That a Time” was written by Hays, who also serves as narrator and wry critic. Hays collaborated with Seeger on such classic pieces of Americana as *If I Had a Hammer* (originally titled *The Hammer Song*), *Kisses Sweeter Than Wine*, and the disc's title song, all included here along with some 20 other numbers. A fitting spokesman, he epitomizes all that the Weavers stood for—a combination of left-wing political concerns, good humor, and a propensity for good times.

“Wasn't That a Time” is built around a 30th (or so) anniversary reunion concert held at Carnegie Hall in 1981. It opens with the wheelchair-bound Hays leafing through scrapbooks with *Darlin' Cory* playing in the background. There are scenes from the Weavers' own reunion-picnic where the idea for a concert and documentary first came up, as well as glimpses of each of the Weavers' individual careers and ever so brief testimonials by Mary Travers, Don McLean, and Arlo Guthrie. An a cappella duet (*Hay Una Mujer*) between Gilbert and feminist writer-singer Holly Near is among the most dramatic moments, both in its musicality and in the intensity of the communion between the two artists.

The sound is mono but nonetheless outstanding, and the balance of the four voices, guitars, and banjos is quite natural. Simple overhead miking at the picnic and rehearsal segments, in particular, results in a warm, lifelike blend of their distinctive harmonies. The camera work is equally straightforward; there is no fast cutting to keep “the action” going. Some beautifully restored old television clips are artfully inserted at various places.

Though understated, the humanity and the humor throughout are truly overwhelming—no more so than at the end, when a simple title on the screen indicates that Hays died nine months after the Carnegie Hall concert. The closing numbers of that historic summer performance (*Good Night Irene* and *We Wish You a Merry Christmas*) prove as moving here as they did in the movie theater; indeed, they are almost as cathartic as the concert itself. —I.M.

POPULAR COMPACT DISC

MILES DAVIS:

E.S.P.

Irving Townsend, producer. CBS/Sony 35DP 69 (analog recording; digital Compact Disc). LP: PC 9150.

Available in CD as a Japanese import only, this pivotal mid-1960s album emerges from its digital makeover with a bit more presence but with many of its inherent production flaws intact. In the process, “E.S.P.” uncovers some of the ills of analog stereo masters from the period—ills that may have been masked by LP surface noise.

Producer Irving Townsend doesn't help matters with his stereo placement of the band, although his approach is far from atypical of the time. The rhythm section is split, with Ron Carter's bass parked at the left edge and Tony Williams's drums at the right, a move likely intended to emphasize stereo separation. Instead, it eviscerates the heart of the ensemble: Placing drums at center stage is a live-performance standard for some pretty good acoustical reasons. True, the setup does put the front men in bolder relief, and Williams's kit emerges a bit more cleanly from the mix (especially his stick work), but on balance this placement seems a Pyrrhic victory. Too often, Williams sounds almost exiled from the rest of the band.

Davis's trumpet and Wayne Shorter's exquisite tenor sax figures are cleaner, and Carter's double bass looms more palpably. But there are several glaring passages (notably on *Mood*) where Herbie Hancock's piano is smeared with distortion.

Davis fans seeking a fresh recording won't complain, since current analog copies are presumably

several generations removed. But jazz producers mulling contemporary digital dates might consult this set for some examples of what not to do in instrument placement.

—SAM SUTHERLAND

ELECTRIC LIGHT ORCHESTRA:

Secret Messages.

Jeff Lynne, producer. Jrt/CBS ZK 38490 (analog recording; digital Compact Disc). LP: Jrt/CBS QZ 38498.

Electric Light Orchestra's recent recordings have been leaner than the band's richest pop confections of the late '70s, placing less emphasis on the overly ornate string arrangements (satirized by no less than Randy Newman on *The Story of a Rock 'n' Roll Band*) in favor of layered keyboards and guitars.

However, even the relatively straightforward songs on “Secret Messages” contain a wealth of sonic detail, and in that respect the Compact Disc is confronted with a worthy test. For the most part, ELO's digital facelift is a successful one, helped considerably by Jeff Lynne's widescreen production. Full-bodied acoustic guitars, keening falsetto harmonies, rumbling bass vocals, and rich canvases of synthesizer voicings all achieve better detail here. At the same time, the flat stereo image that CD renderings can pose is avoided, with most of the original program's depth of sound field preserved.

The album emphasizes fast- or medium-tempo rockers, and Lynne's sharp commercial instincts steer him away from the bold shifts in dynamics that might showcase digital audio's wider parameters. Still, “Secret Messages” is one of ELO's strongest recent albums and proves an infectious set for which the digital leap is mostly beneficial. —S.S.

JOE JACKSON:

Night and Day.

Joe Jackson, producer. A&M CD 4906 (analog recording; digital Compact Disc). LP: SP 4906.

“Night and Day” marked songwriter Joe Jackson's graduation from enthusiastic but derivative pop-rock to a more fully realized personal approach. Having emulated the richer ensemble styles of jump blues and bebop on his earlier recordings, Jackson used this album to forge a contemporary band setting that featured sweeping keyboards and intricate percussion. Coupled with alternately

impressionistic and romantic songs, that equation earned Jackson his widest popularity yet.

"Night and Day" also exploited the limits of conventional recording, a factor that makes its translation to CD a shrewd move for A&M, which has included the album among its maiden Compact Disc releases. Although recorded on analog gear, these songs are ripe with sonic detail.

The benefits of the transfer can be heard from the opening bars of *Another World*. Booming tympani strokes exhibit a much deeper, unbridled low bass, while clanging timbales and splashing cymbals signal reduced distortion and improved transient response. Jackson's acoustic and electronic keyboards also have a bit more presence. His often rough-hewn vocal timbre exhibits slight enhancements, notably in the clarity of his enunciation. All of these add up to an impressive effort that should satisfy Jackson fans and Compact Disc enthusiasts alike. —S.S.

QUINCY JONES:

The Dude.

Quincy Jones, producer. A&M CD 3721 (analog recording, digital Compact Disc) LP SP 3721 Half-speed master LP: Nautilus NR 52.

Past reviews of both digital disc and half-speed mastered LP releases from producer Quincy Jones note the paradox of audiophile reissues of his work: Jones's immaculate technique, which uses conventional analog methods so effectively, leaves little room for improvement.

But "The Dude," which actually did eke modest gains in half-speed form, again makes new marginal progress in CD. Bass drums, cymbals, deep tom-toms, and other percussion instruments have slightly enhanced presence, while electric bass figures benefit from greater depth. The classy brass and reed choruses that punctuate *Ai no Corrida*, *Razzamatuzz*, and the title song likewise extract more bite from Jones and his studio battalion.

The set's best-known performances are *Just Once* and *One Hundred Ways*, sung by the then-unknown James Ingram. Surprisingly, it is these two romantic ballads, with their lush orchestral LP settings, that sound the least changed from their original LP versions.

That any improvements here are modest says more about Jones's seasoned studio art than about any

oversight during the transfer, of course. It's safe to bet "The Dude" will prove popular on CD as much for the format's durability as any other factor: Given a set so easy to listen to, the question of conventional LP wear is elevated to substantial importance.

—S.S.

PRETENDERS.

Chris Thomas, producer. Sire 6082-2 (analog recording, digital Compact Disc) LP SRK 6083 reviewed 3/80.

The rough-and-tumble verve of this 1979 debut stemmed in part from its defiant rejection of squeaky-clean studio sonics to resuscitate the virtues of raucous, guitar-dominated rock. A subsequent Nautilus half-speed audiophile LP suffered from too much spit-and-polish during remastering, enhancing Chrissie Hynde's laconic vocal presence at the expense of the band's driving instrumental work.

But this latest incarnation is just dandy, adding clarity to the performances without dulling that slashing, high-decibel attack. Here, the original LP's sense of a pitched battle between the snarling singer and her no-holds-barred partners survives. At the same time there are substantial audible improvements: background noise is sharply reduced; stereo separation is improved; deep bass taps a more visceral punch; and drummer Martin Chambers's splashy cymbals sound crisper and cleaner without the brittle edge sometimes interposed through digital recording. Given the net improvements, and the high quality of the tracks, "Pretenders" is good news indeed for CD enthusiasts in search of no-nonsense rock. —S.S.

CLASSICAL COMPACT DISC

LUCIANO PAVAROTTI:

Verismo Arias.

Luciano Pavarotti, tenor; National Philharmonic Orchestra, Oliviero de Fabritiis* and Riccardo Chailly†, conds. (Ray Minshull, prod.) LONDON 400 083 (fully digital Compact Disc) [price at dealer's option] LP: LDR 10020, \$12.98. Cassette: LDR5 10020, \$12.98.

BOITO: *Mefistofele*: Dai campi, dai prati: Ogni mortal mister gustai... Giunto sul passo estremo. CILEA: *Adriana Lecouvreur*: La dolcissima effigie; L'anima ho stanca. GIORDANO: *Andrea Chénier*: Colpito qui m'avete;... Un di all'azzurro spazio; Come un bel di maggio; Sì, fui soldato.† *Fedora*: Amor ti vieta. *MASCAGNI: *Iris*: Apri la tua finestra! *MASSENET: *Werther*: Pourquoi me réveiller? *MEYERBEER: *L'Africaine*: Mi batte il cor... D Paradiso. *PUCCINI: *La Fanciulla del West*: Ch'ella mi creda; Manon Lescaut: Ma se vi talenta... Tra voi, belle, Donna non vidi mai; Ah! non v'avvicinate... No! no! pazzo son! (with Neil Howlett, baritone).

Confronted with the surpassing tackiness of the package, one may spend so much time gaping at the showmanship that one forgets the



PRETENDERS: founder and survivor Hynde

contents. The CD presents a less extreme case than the LP, whose larger format gave the folks in marketing the opportunity to sell not only the album but also the sleeve. The cover copy on the LP is printed on a removable band so as to leave the portrait of the artist by one Gerrit Greve unobliterated and "suitable for framing." The bluish likeness is one of amateur-painter Pavarotti's own favorites; it says so right on that removable band. What to do with the record, having framed the cardboard, is another question. Listeners who find they do not want to keep it on their turntables permanently may just have to throw it out. If only London had had the foresight not to mess up the cover art in the compact edition with such unsightly lettering, the purchaser of the CD would have (apart from the better sound reproduction) the real advantage of getting *both* a desk-size icon *and* a place to store the disc, the literature and other embellishments all being more or less nondestructively extricable from their protective plastic box.

Oh, yes, the music. In the main, Pavarotti's heart-piercing, plangent instrument does good service, even if at times he slides up to pitch, snarls, and lags or jumps the beat. Though the program consists largely of snippets, he does not abuse them for crass self-display, but seeks in each the essence

of a dramatic situation. The three Giordano excerpts from *Andrea Chénier* burn with a visionary idealism utterly distinct from the ardent sweep of "Amor ti vieta," two famous minutes from the same composer's otherwise forgotten *Fedora*.

The *Manon Lescaut* material, almost convincing, ranges from the romance of "Donna non vidi mai" to the wrenching declamation of "No! no! pazzo son!," which maintains tragic stature even in the perilous sobbing. In the bantering "Tra voi, belle," the singer's lightness evokes his nimbler, more elegant days (though a similar attempt to recapture a distant past with the little serenade from Mascagni's *Iris* falls flat). "La dolcissima effigie," from Cilea's *Adriana Lecouvreur*, is sung and played with an overripe, drooling sensuality reminiscent of the worst Viennese renditions of Lehár; but "L'anima ho stanca," from the same opera, evokes perfectly the passage's sense of spiritual exhaustion. In the address from Puccini's spaghetti Western, Pavarotti's weighty declamations in unison with the orchestra strike the right chord of fatality, though his finest work in the doomstruck vein occurs in Werther's Ossianic elegy, "Pourquoi me réveiller?" (sung in French), with its somber movement of welling sorrow.

Massenet's soap opera after Goethe's tear-jerking (also suicide-inducing) novelette dates to 1892, the year of *I Pagliacci*, which followed by two years its perennial companion piece *Cavalleria rusticana*, that first strike in the verismo onslaught. All the same, few would classify the Frenchman among the composers of verismo, which is what, according to the name of this album, Pavarotti is investigating here. But the Meyerbeer excerpt, from *L'Africaine*, which after an endless gestation premiered posthumously in 1865, is decidedly out in left field, even if Pavarotti sings it in the time-honored, nonoriginal Italian verismo tenors favored. In this instance, it would seem to be the singers' verismo performing tradition rather than the verismo repertoire the contemporary superstar means to showcase, for it is here that he unpacks his least judicious tricks, like a fermata on a high note that threatens to go on forever. Boito's *Mefistofele* (1868) isn't remotely verismo either, but what the

hell; the two selections fit in well enough, making for a good change of pace, especially "Giunto sul passo estremo," delivered with a reflective maturity marred only momentarily by tenseness of tone.

—MATTHEW GUREWITSCH

RODRIGO

Concierto Madrigal* for Two Guitars and Orchestra; Concierto Andaluz† for Four Guitars and Orchestra.

Celedonio†, Celint, Pepe†, and Angel†† Romero, guitars; Academy of St. Martin-in-the-Fields, Neville Marriner, cond. PHILIPS 4000 024-2 (analog recording; digital Compact Disc [price at dealer's option], LP: 6500 918*; 9500 563†).

COMPARISONS—MADRIGAL:

Yepes, Monden, Navarro, Philharmonia DG 2531 208

ANDALUZ:

Moreno, Garibay, López, Ruiz, Batiz, Mex. State Orch. Varèse Sarabande VCDM 1000.150

In remastering for CD, Philips has done a bit of judicious repackaging: The *Concierto Madrigal*, for two guitars, was originally paired with Giuliani's First Concerto, and the *Concierto Andaluz*, for four guitars, was coupled with Rodrigo's *Concierto de Aranjuez*. It does make more sense to put the multiple concertos together, and undoubtedly further reshufflings will put straight the few remaining programmatic oddities in the Romeros's discography.

According to common lore—including the liner notes for both the Romero and Yepes-Monden discs—the *Concierto Madrigal* was composed in 1968 for Pepe and Angel Romero, who premiered it in 1970. Partly true: Joaquin Rodrigo actually intended the piece for the celebrated Presti-Lagoya duo, but upon Ida Presti's death in 1967, he gave the work to the Romeros, who had, around the same time, commissioned the *Concierto Andaluz*. Still, in an interpretive sense, the Romeros fully own both works, and although there have been other recordings, no competing team has come close to the warmth and finesse of either performance.

The *Concierto Madrigal* is basically a set of variations, in ten discrete movements, on an anonymous Spanish Renaissance madrigal, *Felices ojos míos*. These variations take somewhat modern, yet still traditional, Spanish forms—a Fandango, a Zapateado, and a Girardilla, for instance—as filtered through Rodrigo's conservative orchestration viewpoint. The result is a spirited, rhythmically vital piece, with plenty of opportunity

for virtuosic interplay between the two soloists.

The Romeros are not shy about this music, nor is Neville Marriner: The more robust movements are taken at full throttle, and both the guitars and the orchestra are bathed in a deep, lush, and rather grand ambience. The Yepes-Monden version, by contrast, has a brighter but disappointingly thinner sound, and the guitar work has that bouncy cast that Yepes's characteristically clipped attacks give nearly everything he plays. Tempo discrepancies between these versions abound, and in most cases the Yepes-Monden performances are slower—often against both the indication of the tempo marking and the spirit of the movement.

In the quadruple *Concierto Andaluz*, Rodrigo returns to a more standard three-movement format, and he bases the work (as the title suggests) on themes that, in rhythm and melody, evoke typically Andalusian folk forms. A few other elements are suggested as well—in the last movement, Rodrigo quotes from his *Concierto de Aranjuez*, and the Adagio sounds like a three-way hybrid of the *Aranjuez*'s slow movement, the so-called Albinoni Adagio, and Ravel's *Pavane pour une infante défunte*. I have not always been taken with the sound of massed guitars, but here the Romeros manage to make their four instruments sound as one, and as in *Madrigal*, they are given a gorgeously full-bodied orchestral backing. A competing version, on Varèse Sarabande, offers crystalline digital sonics and an immaculate JVC pressing; but to these ears, the Romero analog version, both on LP and CD, is more attractive, and the Mexican guitarists on Varèse Sarabande never approach the Romeros' ensemble unity.

Of related interest among Polygram's initial CD releases is Carlos Bonell's pairing of *Aranjuez* and the *Fantasia*, certainly the most popular concertos in guitar literature and probably the best known of Rodrigo's works in any medium. When I reviewed this program's LP release (May 1982), I recommended it as one of the finest recordings of these works, both on interpretive and sonic grounds. That endorsement stands, and the digital recordings, warm enough on LP, sound even purer in their CD incarnation.

—ALLAN KOZINN

Discovering

American Music



One critic's personal odyssey
by Paul Kresh

Riegger (top),
Gershwin, and
John Alden Carpenter

RECENTLY I WAS RUMINATING over the pages of John Rockwell's informative and infuriating book *All American Music* when it occurred to me that what American music means to him isn't necessarily what it means to me. I started remembering how I had come to discover the music of my own country in the first place, and wondering whether there really can be such a thing as American music anyhow, and, if there is, what part it has played in my life. And what a complicated, confusing subject it is.

When I was growing up during the Great Depression in the hilly neighborhood of uptown Manhattan known as Washington Heights, my family relegated our wind-up Victrola to my grandfather's room. In the living room stood a shiny floor-length walnut cabinet containing a "superheterodyne" radio—our "home entertainment center." Grandpa never deigned to play a record on the Victrola in his entire life, but he used to let me occupy his quarters when he was out with his cronies, and it was there I began my pursuit of the endless adventure of discovering music. I was about fourteen then, busy discovering a lot of other things too, but back in that musty little ground-floor room, I played over and over the records in our rather random collection that had been bequeathed to us by my father.

The discs were a fairly typical lot for

the period, reflecting the taste of the times for opera arias sung by Caruso and Galli-Curci, for Al Jolson singing *Sonny Boy* and *Toot-toot-toosie Goodbye*, for *Limehouse Blues* and Riccardo Drigo's *Serenade* and Fritz Kreisler playing *A Kiss in the Dark*. My father had adored the sextet from Donizetti's *Lucia di Lammermoor*, sung with an almost unbearable fervor by an all-star cast, while my mother tended to favor *Gems from Floradora* and the *Italian Street Song* from *Naughty Marietta*. Outside of Bing Crosby singing *Love in Bloom* and Irving Berlin's *Always*, that was about the extent of her interest in American music, although she didn't mind at all the score of *The Merry Widow* in small doses or a bit of Guy Lombardo here and there. As for classical music, that was something my mother's sister would listen to when the New York Philharmonic broadcast its concerts on Sunday afternoons, a time when I wasn't allowed in the living room and had to walk around the apartment on tiptoe.

I used to buy an occasional record out of my meager allowance and the proceeds of my commissions from after-school sales of *The Saturday Evening Post*. I acquired such treasured examples of what Rockwell calls our "happy babble of overlapping dialogues" as *Glow-Worm*, *Three Little Words*, and the *Washington Post March*. Of course, in those days there was no John Rockwell to explain American music, or "crosscurrents" and "crossovers" between "popular" and "serious" music, or what was "elitist" and what wasn't. Whatever the Philharmonic played on Sundays was, I suppose, elitist. I did my own crossing over, from *Glow-Worm* to Liszt's *Hungarian Rhapsody* (I had no idea he had com-

posed more than one) to *Gems from Aida* (sung in English by the Victor Light Opera Company), then back again to *Three Little Words* and Drigo's *Serenade*. My developing musical tastes were nothing if not catholic.

Then one evening on *The Paul Whiteman Hour*, I heard a performance of Gershwin's *Rhapsody in Blue* and I couldn't believe it. Here was music that spoke my language, composed in an idiom apparently invented especially for me, complicated enough to be taken more seriously than *Glow-Worm* as it swung wildly back and forth between strutting joy and self-pitying melancholy. It seemed as much a piece of "real" music as any of those screechy Italian arias Madame Galli-Curci intoned on our scratchy acoustical Victor Red Seals.

I fell in love with Gershwin's *Rhapsody* and came to despise Liszt's, never noticing that there were stylistic similarities. Nor did it occur to me to regard Gershwin's music, whether his popular tunes, his scores of musical comedies, or his "serious" works, as particularly American. Who made such distinctions? What did it matter, as long as the music moved you?

A few years later I had the thrill of watching and hearing Gershwin and the New York Philharmonic perform *Rhapsody in Blue* as well as *Concerto in F*. It was at one of the outdoor concerts in the now vanished precincts of Lewisohn Stadium, high above the hills of Harlem, where so many New Yorkers of my generation got their first taste of live classical music. As I sat there perched on a stone step high up in the cheap seats, the *Concerto* seemed to my young, untutored mind to offer a kind of musical promissory note on the American dream, all the way through to the *Finale*'s nervous invocation of jangling city sounds.

From Gershwin's *Rhapsody*, the *Concerto*, *Variations on I Got Rhythm*, and musical travelogues for Paris and Cuba, it was but a short step to *Porgy and Bess*, which I was taken to see when I finally passed algebra by the aunt who listened to the Philharmonic on Sundays. She objected

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to the "cacophony" in the orchestral fabric, which for me evoked the very essence of Catfish Row. I certainly admired the opera, and came to admire it even more when it was later restored to its proper operatic proportions down in Houston.

One day, shortly after I started attending Columbia University, I came across a recording in the library of John Alden Carpenter's *Skyscrapers* by Nathaniel Shilkret and the Victor Symphony Orchestra. By this time I had acquired a room of my own near school and a record player that was hooked up to a little table radio. I must have played the piece—which took up both sides of three 12-inch 78 rpm discs—dozens of times before reluctantly returning it. Impelled by curiosity to look up the work and its composer, I was fascinated to learn that Carpenter had been born in Chicago in 1876 and had studied music under John Knowles Paine. He wrote *Skyscrapers* in 1926 for a ballet of city life that was staged that year at the Metropolitan Opera House—where I thought they only did operas like *Carmen* and *Faust*. What a strange score that is, with its raucous, start-and-stop rhythms overlaid with a feverish French-inspired impressionism; its piling up of popular and ragtime tunes in broken segments that interrupt each other; the echoing on saxophones of newsboys shouting "extry, extry," as they did in the Twenties.

Delivering packages through sizzling streets that summer, I raced along humming passages from *Skyscrapers*, hating the critics who had so ungenerously dismissed its arrival and had compared it unfavorably with Carpenter's placid *Adventures in a Perambulator*, the musical impressions of an infant during an afternoon in a city park. Later I heard *Adventures* for myself, and *Krazy Kat*, a ballet based on the antics of the popular comic-strip character, and the *Gitanjali* cycle of songs inspired by the works of Bengali poet Rabindranath Tagore. I loved them all.

Nowadays, you won't read much about *Skyscrapers* in books like *All American Music*. It is, after all, a rather "dated" curiosity and a clumsy one compared with, say, the polished craftsmanship of Copland's *Music for a Great City*. Carpenter's ragtime rhythms and literal parodies of the popular music of the 1920s and the sounds of a big city probably seem hopelessly naive to ears younger than mine. If only those ears could hear a better recording than the one Desto wished on us a few years ago in severely attenuated form by the Vienna Symphony, a chopped-up farrago performed without humor or the slightest sense of the composer's satirical intent.

Further intoxicating discoveries at this time included that curious musical diary of a drunken night in the Roaring Twenties, Werner Janssen's *New Year's Eve in New York*. (They used to play it on WQXR in New York every New Year's morning.) But



W. G. Still: a traitor to his race?

my horizons soon expanded beyond city music to include Howard Hanson's surging *Romantic* Symphony, Walter Piston's astringent symphonies, Paul Hindemith's austere and knotty chamber works, Morton Gould's ballet scores for *Fall River Legend* and *Interplay*, and Henry Cowell's elbow-induced tone clusters on piano.

Then came the day I first heard the Third Symphony of Roy Harris, which the music mavens of today tend to turn their backs on after it was enthroned in 1939 as "the best American symphony" ever composed. It has taken some effort to find Harris's 14 other symphonies, but I have managed to hear most of them—the boisterous Fourth, with its jaunty folksong chorales; the elegiac Fifth; that dazzling dance symphony, the succinct, one-movement Seventh. But it is the Third that still bemuses me, with its steely, overarching architecture.

One afternoon, when I was still in my twenties, I caught on the radio a movement from a symphony based on the popular song *Bye Bye Blues*. How exhilarating that an entire symphonic scherzo should have its origins in that carefree tune! I have never heard another note of it, for the Scherzo was all Columbia ever recorded of Paul Creston's Symphony No. 1. But I have subsequently grown rather fond of the Westminster recordings of his Second and Third. Who plays the symphonies of Creston now? What a loss.

I recall watching Charles Weidman and Doris Humphrey in the '30s in a vivid rust-and-blue production of Wallingford Riegger's intensely syncopated *New Dance*. My enthusiasm for Riegger developed rapidly, long before he got the New York Music Critics' Circle Award in 1946 for his powerful Symphony No. 3. I remember going to the Juilliard School to hear a haunting choral setting by Norman Dello Joio of Hart Crane's *Brooklyn Bridge*. It stirred me as Elliott Carter's enigmatic *A Symphony of Three Orchestras*—inspired by the same text—has not, despite respectful attention to the latter's sophisticated intricacies.

Oh, that Forties sound! It is out of fashion now, but how we enjoyed ourselves in those days listening to Bernstein's *Fancy Free* (and *On the Town*, the Broadway musical that grew out of it), and later his incidental music for the movie *On the Waterfront*. His *Age of Anxiety* Symphony based on Auden's poem is inseparable in my memory from the Jerome Robbins ballet, but even on its own, with its astonishing jazz-based climactic episode, it is a piece that has always spoken to me in my own language.

So indeed, I found out, do the works by the forebears of these dismissable (according to Rockwell) "symphonists." I was fortunate enough to be listening to NBC one night long ago when Toscanini, in his taut, explosive way, conducted Charles Tomlinson Griffes's *The Pleasure Dome of Kubla Khan*. I learned then that there was an American brand of impressionism as well as a French one—even before Americans began trekking to Paris to study their craft under Nadia Boulanger. And how many of those there were! Copland, Harris, Piston, Virgil Thomson, Carter—and David Diamond, Elie Siegmeister, Irving Fine, Easley Blackwood, Arthur Berger, Harold Shapero, John Vincent . . . where would American music be without her? Yet George Whitefield Chadwick wrote his charming *Symphonic Sketches*, Edward MacDowell his ultraromantic piano concertos, Arthur Foote his Suite for Strings, and, yes, Benjamin Franklin his string quartet, without her guidance. I have delighted in them all, and also in the lush excesses of Charles Martin Loeffler's *A Pagan Poem*, from the era early in this century when every American composer seems to have had three names.

What is American music, anyhow? Is it any music by Americans? For Americans? Should it speak to the entire world, or just to us who live here? Should it be stuff that goes down as easy as ice cream, like Siegmeister's simplistic *Ozark Set*? Or should it be as tough to crack as a Carter concerto? Were Stravinsky and Bartók, Hindemith and Milhaud, Krenek, Weill, and Korngold American composers, or should they be disqualified as foreigners? Is there anything American about Alan Hovhaness's *Mysterious Mountain*? Is the *New World Symphony* American? Is *An American in Paris* French? Did Louis Moreau Gottschalk's naive diversions based on minstrel melodies set back our musical progress? Have Ulysses Kay and other black composers, like William Grant Still, who chose the classical route been a credit to their land or traitors to their race because they never played piano in a whorehouse, like Scott Joplin? If I attend more conscientiously to the flappings of Morton Subotnick's electronic butterflies, will that help me to atone for time lost in my youth innocently enjoying Ethelbert Nevin's *Narcis-*

ALL PHOTOS FROM HIGH FIDELITY ARCHIVES

sus? Must I go underground, shamefaced and alone, to relish William Schuman's *New England Triptych*, for fear it is out of date after a quarter of a century, and torture my ears instead with the cold-blooded mathematical constructions of Babbitt and Boulez?

Is it time for me to renounce George Antheil's *Ballet mécanique*—the riot-causing *dernier cri* in the Paris of 1926—for the minimalistic monotonies of Glass and Reich? To trade in Ned Rorem's tender, touching songs for Devo's rantings, or the

Song of Songs of the early, lyrical Lukas Foss for his later, exasperating "controlled improvisations"? How long should I sit in the auditorium waiting for a note to sound during one of John Cage's celebrated sessions of silence? Is there room in this wide land for the music of both Amy Beach and Laurie Anderson or for Ruth Crawford Seeger and Peggy Glanville-Hicks?

I don't believe American music has to deliver an "American" message like Copland's *Lincoln Portrait*, or be suitable for programming mainly on the Fourth of July,

like the jingoistic wartime works of Randall Thompson. I do believe it can be as blithe and eclectic as David Amram's Triple Concerto or as wayward and exploratory as the ritual chants devised by Charlie Morrow. I love it best when it sings or growls or marches to a literally different drum, as does the music of Charles Ives. When I hear his *The Unanswered Question*, I am transported to some distant cosmic realm, as beyond geography as Scriabin's *Vers la flamme* or *Poem of Ecstasy*; when I turn to (Continued on page 66)

American Music on Record

The following list was compiled by the author and reflects his personal tastes and predilections. It is intended as a basis for building a balanced library of "serious" American music, not as a comprehensive discography. Not included are works by such composers as Bartók, Hindemith, Stravinsky, Schoenberg, and other modern masters who, whatever their country of residence, continued to write in an essentially European idiom. —P.K.

DAVID AMRAM (1930–)
Triple Concerto for Winds, Brass, Jazz Quintet, and Orchestra†; Elegy for Violin and Orchestra††. Amram Jazz Quintet†; Howard Weiss, violin ††; Rochester Philharmonic, David Zinman, cond. FLYING FISH 27751.

GEORGE ANTHEIL (1900–1959)
Ballet mécanique; A Jazz Symphony; Sonata No. 2 for Violin and Piano. Vera Beths, violin; Netherlands Wind Ensemble, Reinbert de Leeuw, cond. PHILIPS 6514254 ©.

DOMINICK ARGENTO (1927–)
To Be Sung Upon the Water. Sandra Walker, mezzo-soprano; John Stewart, tenor. (Ned Rorem: King Midas). DESTO 6443.
Postcard from Morocco. Center Opera of Minnesota, Philip Brunelle, cond. DESTO 7137/8 (two discs).

MILTON BABBITT (1916–)
Philomel for Soprano, Recorded Soprano, and Synthesizer. Bethany Beardslee, soprano; Robert Helps, piano. (Roger Sessions: Sonata No. 3 for Piano). NEW WORLD 307.

SAMUEL BARBER (1910–1981)
Anthony and Cleopatra: Two Scenes; Knoxville, Summer of 1915. Leontyne Price, soprano; New Philharmonia Orchestra, Thomas Schippers, cond. RCA AGL 1 5221 ©.

Overture to the School for Scandal; Adagio for Strings; Essay No. 2 for Orchestra; Medea's Meditation and Dance of Vengeance. New York Philharmonic, Thomas Schippers, cond. ODYSSEY Y 33230 ©.

Dover Beach, for Voice and String Quartet; Quartet, Op. 11. Leslie Guinn, baritone; Concord String Quartet. (George Rochberg: Quartet No. 7 with baritone). NONESUCH 78017 ©.

Vanessa (libretto by Gian Carlo Menotti). Eleanor Steber, Rosalind Elias, Regina Resnik, Nicolai Gedda, Giorgio Tozzi; Metropolitan Opera Orchestra and Chorus, Dimitri Mitropoulos, cond. RCA ARL 2-2094 (two discs).

AMY MARCY CHENEY BEACH (1867–1944)

Concerto for Piano and Orchestra. Mary Louise Boehm-Kooper, piano; Westphalian Symphony, Siegfried Landau, cond. (Daniel Gregory Mason: Prelude and Fugue for Piano and Orchestra). TURNABOUT 34665.

JACK BEESON (1921–)
Lizzie Borden. Ellen Faull, Brenda Lewis, Herbert Beattie, Richard Krause; New York City Opera, Anton Coppola, cond. DESTO 6455/7 (three discs).

ARTHUR BERGER (1912–)
Chamber Music for 13 Players. Three Pieces for Two Pianos. Various ensembles. (Richard Donovan: Five Elizabethan Lyrics: Music for Six). CRI S 290.

LEONARD BERNSTEIN (1918–)
Fancy Free; Music for the Theater; Candide (overture); Facsimile; Mass: Two Meditations; On the Town (ballet music); West Side Story (ballet music). New York Philharmonic, Leonard Bernstein, cond. COLUMBIA MG 32174 (two discs) ©.

Symphony No. 1 ("Jeremiah"). Christa Ludwig, mezzo-soprano. Symphony No. 2 ("The Age of Anxiety"). Lukas Foss, piano. Symphony No. 3 ("Kaddish"). Montserrat Caballé, soprano; Michael Wager, speaker; Vienna Choir Boys. Chichester Psalms. Vienna Choir Boys; Israel Philharmonic, Leonard Bernstein, cond. DEUTSCHE GRAMMOPHON 3-DG 2709077 (three discs).

MARC BLITZSTEIN (1905–1964)
*Regina (based on "The Little Foxes" by Lillian Hellman). Brenda Lewis, Elisabeth Carron, Carol Brice, Joshua Hecht; New York City Opera Orchestra and Chorus, Samuel Krachmalnick, cond. COLUMBIA ODYSSEY Y 3-35236 (three discs).

MARK BUCCI (1924–)
*Tale for a Deaf Ear; Spring Aria, Summer Aria; Concerto for a Singing Instrument; Vocalise, Tug-of-War. Adele Addison, soprano; James Payne, piano. (Noel Lee: Five Songs from Lorca). CRI S 147.

JOHN CAGE (1912–)
Concerto for Prepared Piano and Chamber Orchestra. Yuji Takahashi, piano; Buffalo Philharmonic, Lukas Foss, cond. (Lukas Foss: Baroque Variations). NONESUCH 71202 ©.

JOHN ALDEN CARPENTER (1876–1951)
Adventures in a Perambulator. Eastman-Rochester Orchestra, Howard Hanson, cond. (Douglas Moore: The Pageant of P.T. Barnum; Ron Nelson: Savannah River Holiday). MERCURY 75095.
Concertino for Piano and Orchestra. Marjorie

Mitchell, piano; Göteborg Symphony, William Strickland, cond. (Charles Ives: Fourth of July; Walter Piston: Piano Concertino). CRI S 180.

Gitanjali (song cycle). Alexandra Hunt, soprano. (Charles Tomlinson Griffes and Edward MacDowell: Songs). ORION 77272.

Krazy Kat. Los Angeles Philharmonic, Calvin Simons, cond. (Henry F. Gilbert: The Dance in Place Congo; John Powell: Rhapsodie Nègre for Piano and Orchestra; Adolph Weiss: American Life). NEW WORLD 228.

*Skyscrapers (excerpts). Vienna Symphony, Walter Hendl, cond. (Frederick Shepherd Converse: The Mystic Trumpeter). DESTO DC 6407.

ELLIOTT CARTER (1908–)
Quartet No. 1; Quartet No. 2. Composers String Quartet. NONESUCH 71249.
A Symphony of Three Orchestras. New York Philharmonic, Pierre Boulez, cond. A Mirror on Which to Dwell. Speculum Musicae, Richard Fritz, cond. CBS M 35171 ©.

GEORGE WHITEFIELD CHADWICK (1854–1931)
Symphonic Sketches (suite for orchestra). Eastman-Rochester Orchestra, Howard Hanson, cond. (Walter Piston: The Incredible Flautist). MERCURY 75050.

PAUL CHIHARA (1938–)
Tree Music; Willow Willow; Logs; Branches; Driftwood; Legs XVI. Various ensembles. CRI S 269.

MICHAEL COLGRASS (1932–)
Concertmasters, for Three Violins and Orchestra†. Robert Rudié, Masako Yanagita, Ronald Oakland, violins†; American Symphony Orchestra, Kazuyoshi Aklyama, cond.† John Perry, piano ††; University of Texas Wind Ensemble, Thomas Lee, cond.†† (Karl Korte: Concerto for Piano and Winds††). TURNABOUT 34704.

AARON COPLAND (1900–)
Appalachian Spring; Suite; Billy the Kid; Dance Panels; Fanfare for the Common Man; Lincoln Portrait; Our Town (suite); Rodeo; El Salon México. London Symphony, Aaron Copland, cond. COLUMBIA D3M 33720 (three discs).

*Connotations for Orchestra; Inscape. New York Philharmonic, Leonard Bernstein, cond. COLUMBIA MS 7431.

Concerto for Clarinet and Orchestra; Old American Songs. Benny Goodman, clarinet; William Warfield, baritone; Columbia Symphony, Aaron Copland, cond. COLUMBIA MS 6497.

Music for a Great City; Statements for Orchestra. London Symphony, Aaron Copland, cond. COLUMBIA M 30374.

Music for the Theater; Concerto for Piano and Orchestra. Aaron Copland, piano; New York Philharmonic, Leonard Bernstein, cond. COLUMBIA MS 6698.

Symphony No. 3. Philadelphia Orchestra, Aaron Copland, cond. COLUMBIA M 35113.

*Recordings recently out-of-print but still available at some outlets.

©Available in cassette.

Parentetical information in italic: Additional composers and works represented on the disc.

JOHN CORIGLIANO (1938–)
Concerto for Clarinet and Orchestra. Stanley Drucker, clarinet; New York Philharmonic, Zubin Mehta, cond. (*Samuel Barber: Essay No. 3 for Orchestra*). NEW WORLD 309.

HENRY COWELL (1897–1965)
Hymn and Fuguing Tunes Nos. 1–8; Ballad. (*Charles Koechlin: Cinq chorals dans les modes du moyen-âge; Robert Starer: Mutabill; Variants for Orchestra*). Louisville Orchestra, Jorge Mester, cond. LOUISVILLE S 682.

PAUL CRESTON (1906–)
Dance Overture. Oslo Philharmonic, Alfredo Antonini, cond. (*Herbert Haufrecht: Square Ser; Wells Hively: Summer Holiday; Pedro Sanjuan: Ritual of Symphony—La Macumba*). CRI 111.

A Rumor. Academy of St. Martin in-the-Fields, Neville Marriner, cond. (*Samuel Barber: Adagio for Strings; Henry Cowell: Hymn and Fuguing Tune; Aaron Copland: Quiet City; Charles Ives: Symphony No. 3*). ARGO ZRG 845 ©.

GEORGE CRUMB (1929–)
Ancient Voices of Children. Jan de Gaetani, soprano; Michael Dash, boy soprano; Contemporary Chamber Ensemble, Arthur Weisberg, cond. NONESUCH 71255 ©.

NORMAN DELLO JOIO (1913–)
New York Profiles. Oslo Philharmonic, Arthur Bennett Lipkin, cond. (*Nicolai Berezowsky: Christmas Festival Overture; Ulysses Kay: Fantasy Variations*). CRI S 209.

DAVID DEL TREDICI (1937–)
Final Alice. Barbara Hendricks, soprano; Chicago Symphony, George Solti, cond. LONDON LDR 71018.
In Memory of a Summer Day. Phyllis Bryn-Julson, soprano; St. Louis Symphony, Leonard Slatkin, cond. NONESUCH 79043 ©.

DAVID DIAMOND (1915–)
World of Paul Klee. Portland Junior Symphony, Jacob Avshalomov, cond. (*William Bergsma: Chameleon Variations; Roy Harris: Elegy and Dance; Benjamin Lees: Prologue, Capriccio, and Epilogue*). CRI S 140.

JACOB DRUCKMAN (1928–)
Windows. Orchestra of the 20th Century, Arthur Weisberg, cond. (*Robert Moes: Concerto Grosso for Piano, Percussion, and Orchestra*). CRI S 457.

ARTHUR FARWELL (1872–1952)
Three Indian Songs; Old Man's Love Song; Navajo War Dance. William Parker, baritone; New World Singers, John Miner, cond. (*Charles Wakefield Cadman: Four American Indian Songs*). NEW WORLD 213.

IRVING FINE (1914–1962)
Symphony†; Toccata Concertante††; Serious Song; Lament††. Boston Symphony, Irving Fine† and Erich Leinsdorf††, conds. DESTO 7167.

VIVIAN FINE (1913–)
Concertante for Piano and Orchestra †. Reiko Honsho, piano; Japan Philharmonic, Akeo Watanabe, cond. † North Holland Philharmonic, Henri Arends, cond.†† (*Johan Franco: Symphony No. 5. "Cosmos"††*). CRI S 135.

WILLIAM FLANAGAN (1923–1969)
Songs and Cycles. Carole Bogard, soprano; Herbert Beattie, bass-baritone; David del Tredici, piano. DESTO 6468.

ARTHUR FOOTE (1853–1937)
Suite in E for Strings. Boston Symphony, Serge Koussevitsky, cond. (*C. P. E. Bach: Concerto for Orchestra; Grieg: Two Elegiac Melodies; Vivaldi: Concerto Grosso*). TURNABOUT 34784.

LUKAS FOSS (1922–)
Time Cycle for Soprano and Orchestra. Adele Addi-

son, soprano; Columbia Symphony, Leonard Bernstein, cond. COLUMBIA SPECIAL PRODUCTS AMS 6280.

GEORGE GERSHWIN (1898–1937)
Cuban Overture; An American in Paris; Concerto in F; "I Got Rhythm" Variations. Lullaby for String Quartet; **Porgy and Bess Suite** (arr. Gershwin). St. Louis Symphony, Leonard Slatkin, cond. Vox SVBX 5132 (three discs) ©.
Porgy and Bess. Clamma Dale, Donnie Ray Albert, and cast. Houston Grand Opera, John de Main, cond. RCA ARL 3-2109 (three discs) ©.
Rhapsody in Blue (original arrangement for piano and jazz band); **Concerto in F for Piano; Preludes for Piano.** Eugene List, piano; Berlin Symphony, Samuel Adler, cond. TURNABOUT 34457 ©.

HENRY F. GILBERT (1868–1928)
The Dance in Place Congo. Los Angeles Philharmonic, Calvin Simmons, cond. (See *Carpenter: Kraazy Kai*). NEW WORLD 228.

PHILIP GLASS (1937–)
Glassworks. The Philip Glass Ensemble. CBS FM 37265 ©.

LOUIS MOREAU GOTTSCHALK (1829–1869)
Gran Tarantella for Piano and Orchestra; Nuit des Tropiques (symphonic poem); **Piano Music.** Reid Nibley and Eugene List, piano; Utah Symphony, Maurice Abravanel, cond. VANGUARD S 723/4 (two discs).

Ten Characteristic Pieces. Amiran Rigai, piano. MUSICAL HERITAGE SOCIETY MHIT 3135T ©.

MORTON GOULD (1913–)
Latin American Symphonette; Cotillion; Festive Music; Philharmonic Waltzes; Quickstep. London Symphony, Morton Gould, cond. VARESE SARABANDE VCDM 1000.10.

Spirituals for Orchestra. Chicago Symphony, Morton Gould, cond. (*Aaron Copland: Dance Symphony*). RCA AGL 1-4213 ©.

CHARLES TOMLINSON GRIFFES (1884–1920)
Fantasy Pieces; Roman Sketches; Sonata in F for Piano; Three Tone-Pictures. NONESUCH 71409 ©.
The Pleasure Dome of Kubla Khan; Four German Songs; Four Impressions; Song of the Dagger; Three Poems of Fiona McLeod; Three Tone-Pictures. Phyllis Bryn-Julson, soprano; Sherrill Milnes, baritone; Olivia Stapp, mezzo-soprano; New World Chamber Ensemble; Diane Richardson and Jon Spong, piano; Boston Symphony, Seiji Ozawa, cond. NEW WORLD RECORDS NW 273.

FERDE GROFÉ (1892–1972)
Grand Canyon Suite. New York Philharmonic, Leonard Bernstein, cond. COLUMBIA MS 6618.

HOWARD HANSON (1896–1981)
Symphony No. 1 ("Nordic"); Symphony No. 3. Eastman-Rochester Orchestra, Howard Hanson, cond. MERCURY GOLDEN IMPORTS SRI 75112 ©.
Symphony No. 2 ("Romantic"); Lament for Beowulf. Eastman-Rochester Orchestra and Chorus, Howard Hanson, cond. MERCURY GOLDEN IMPORTS SRI 75007 ©.

***Symphony No. 4 ("Requiem").** Eastman-Rochester Orchestra, Howard Hanson, cond. (*Walter Piston: Symphony No. 3*). MERCURY 75107 E.
Symphony No. 5 ("Sinfonia Sacra"). Eastman-Rochester Orchestra and Chorus, Howard Hanson, cond. (*Victor Herbert: Concerto No. 2 for Cello*). ERA 1014 E.

Symphony No. 6. Westphalian Symphony, Siegfried Landau, cond. (*Virgil Thomson: Louisiana Story*). TURNABOUT 34534.

ROY HARRIS (1898–1979)
***Symphony No. 3.** Vienna Symphony, Walter Hendl, cond. (*William Schuman: American Festival Overture; Roger Sessions: Black Maskers: Suite*). DESTO 6404 E.

Symphony No. 4 ("Folk Song"). American Festival Orchestra and Chorus, Vladimir Golschmann, cond.

VANGUARD S 347.

HERBERT HAUFRECHT (1909–)
Symphony for Brass and Timpani. Various ensembles. (*Karel Husa: Landscapes; Walter Mowant: Aria for Orchestra. "Harper's Ferry, West Virginia"*). CRI S 192.

VICTOR HERBERT (1859–1924)
Music of Herbert. Beverly Sills, soprano; London Symphony, André Kostelanetz, cond. ANGEL SPO 37160.

WELLS HIVELY (1902–1959)
Icarus†. Polish National Radio Orchestra, Vohdan Wodiczko† and William Strickland††, conds. Vienna State Opera Orchestra, Franz Litschauer, cond.††† (*Walter Piston: Concerto for Orchestra†††; Carl Ruggles: Men and Mountains††; Howard Swanson: Short Symphony†††*). CRI S 254.

ALAN HOVHANESS (1911–)
Symphony No. 2 ("Mysterious Mountain"). Chicago Symphony, Fritz Reiner, cond. (*Stravinsky: Baiser de la Fée*). RCA AGL 1 4215 ©.

CHARLES IVES (1874–1954)
Sonata No. 2 ("Concord, Mass. 1840–1860"). Gilbert Kalish, piano. NONESUCH 71337.
Songs. Jan de Gaetani, soprano; Gilbert Kalish, piano. NONESUCH 71325.

A Symphony: Holidays (complete). Dallas Symphony, Donald Johanos, cond. TURNABOUT 34146 ©.

Symphonies (4) (complete). Philadelphia Orchestra, Eugene Ormandy, cond. (No. 1); New York Philharmonic, Leonard Bernstein, cond. (Nos. 2 and 3); American Symphony, Leopold Stokowski, cond. (No. 4). COLUMBIA D 3S-783 (three discs).

Three Places in New England. Boston Symphony, Michael Tilson Thomas, cond. (*Carl Ruggles: Sinfonia*). DEUTSCHE GRAMMOPHON 2530048.

SCOTT JOPLIN (1868–1917)
Music of Joplin. Joshua Rifkin, piano. NONESUCH 73026. 71264 (two discs) ©.

Treemonisha. Carmen Balthrop, Betty Allen, Willard White; Houston Grand Opera, Gunther Schuller, cond. DEUTSCHE GRAMMOPHON 2707083 (two discs).

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Cakewalk (ballet. after Gottschalk, selections); **Stars and Stripes** (ballet suite, after Sousa). Boston Pops, Arthur Fiedler, cond. RCA AGL 1-1271.

ULYSSES KAY (1917–)
Six Dances for String Orchestra. Westphalian Symphony, Paul Freeman, cond. (*William Grant Still: From the Black Belt: Darker America*). TURNABOUT 34546.

HOMER KELLER (1915–)
Serenade for Clarinet and Strings. Eastman-Rochester Symphony, Howard Hanson, cond. ERA 1001.

ERICH WOLFGANG KORNGOLD (1897–1957)
Die Tote Stadt. Carol Neblett, Rene Kollo, Benjamin Luxon, Hermann Prey; Bavarian Radio Orchestra and Chorus, Erich Leinsdorf, cond. RCA ARL 3-1199 (three discs).

ERNST KRENEK (1900–)
***Jonny spielt auf.** Evelyn Lear, Lucia Popp, William Blackenship, Kurt Equilus, Rudolf Sykora, Anton Wendler, Gerd Feldhoff, Thomas Stewart, Hans Handios, Leo Hoppe; Chorus and Orchestra of the Vienna Volksoper Academy, Heinrich Hollreizer, cond. MACE 9094 ©.

GAIL KUBIK (1914–)
***Symphony No. 2 in F.** Louisville Orchestra, Robert Whitney, cond. (*Roger Goeb: Concertino for Orchestra*). LOUISVILLE 58-5.

MEYER KUPFERMAN (1926–)
The Celestial City, for Piano and Tape; The Garden of My Father's House, for Violin and Clarinet;

Angel Footprints, for Violin and Tape. Various performers. CRI S 476.

ROBERT KURKA (1921–1957)

Good Soldier Schweik: Suite. Louisville Orchestra. Robert Whitney, cond. (*Carlos Surinach: Symphonic Variations*). LOUISVILLE S 656.

EZRA LADERMAN (1924–)

Concerto for Orchestra. Baltimore Symphony. Sergiu Comissiona, cond. (*Benjamin Britten: Diversions on a Theme for Piano, Left Hand, and Orchestra*). DESTO 7168.

JOHN LA MONTAINE (1920–)

Birds of Paradise†. John La Montaine†. Alfred Mouldous††, piano; Eastman-Rochester Orchestra. Howard Hanson, cond. (*Howard Hanson: Piano Concerto††; Mosaics*). ERA 1006.

OTTO LUENING (1900–)

Synthesis for Orchestra and Electronic Sound†; Fantasia for Organ††. Ralph Kneecream, organ††. Helfian Radio Symphony Orchestra, David van Vactor, cond.† Polish National Radio Orchestra. Jan Krenz, cond.††† (*Colin McPhee: Nocturne†; Wallingford Riegger: Fantasy and Fugue for Orchestra and Organ†††*). CRI S 219.

EDWARD MACDOWELL (1860–1908)

Woodland Sketches; Two Fantasy Pieces. Paulina Drake, piano. (*Ethelbert Nevin: Piano Music*). GENESIS 1067.

Concerto No. 2 for Piano; Suite No. 2 ("Indian"). Eugene List, piano; Westphalian Symphony. Siegfried Landau, cond. TURNABOUT 34535.

ANN McMILLAN (1923–)

A Little Cosmic Dust, for Piano and Tape. Various performers. (*Nancy Laird Chance: Exultation and Lament, for Alto Saxophone and Timpani; Lee Hyla: Pre-Amnesia, for Alto Saxophone; James Lauth: Pieces of Eight, for Clarinet*). OPUS ONE 790.

PETER MENNIN (1923–1983)

Symphony No. 7: Piano Concerto. John Ogden, piano; Chicago Symphony, Jean Martinon, cond. CRI S 399.

GIAN CARLO MENOTTI (1911–)

The Medium. Regina Resnick, Judith Blegen, Emily Derr, Julian Patrick, Claudine Carlson; Washington Opera Society, Jorge Mester, cond. COLUMBIA MS 7387.

The Telephone. Paula Seibel, Robert Orth; Louisville Orchestra, Jorge Mester, cond. (*Ivana Marburger Thermen: Shelter This Candle from the Wind*). LOUISVILLE 767.

***The Saint of Blecker Street.** David Poleri, Gloria Lane, Gabrielle Ruggiero, Maria de Gerlando; Orchestra and Chorus, Thomas Schippers, cond. (recorded under the composer's direction). RCA CBM 2-2714 (two discs).

DOUGLAS MOORE (1893–1969)

The Ballad of Baby Doe. Beverly Sills, Frances Bible, Walter Cassel; New York City Opera, Emerson Buckley, cond. DEUTSCHE GRAMMOPHON 2709061 (three discs).

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Concerto for Flute with String Quartet; Sonata for Piano Duet and String Quartet††. Francis Zlotkin, flute†; Sahar Arzuni, Ron Gianattosio, pianos††. Sorbonne Quartet. VARÈSE SARABANDE VC 81101.

CHARLES MORROW (1942–)

The Horizontal-Vertical Direct-to-Disc. Glen Velez, percussion; Charles Morrow, vocal and wind instruments. OTHER MEDIA 5681 (obtainable from New Music Distribution Service, 500 Broadway, New York, N.Y. 10022).

ETHELBERT NEVIN (1862–1901)

Piano Music. Paulina Drake, piano. (*Edward MacDowell: Woodland Sketches; Two Fantasy Pieces*). GENESIS 1067.

JOHN KNOWLES PAINE (1838–1906)

Mass in D. St. Louis Symphony and Chorus. Gunther Schuller, cond. NEW WORLD 262/3 (two discs).

VINCENT PERSICHETTI (1915–)

Symphony No. 8. Louisville Orchestra, Jorge Mester, cond. (*Wallingford Riegger: Study in Sonority*). LOUISVILLE LS 706.

DANIEL PINKHAM (1923–)

Proverbs, for Organ; Miracles, for Flute and Organ; Diversions, for Harp and Organ. James David Christie, organ; Doriot Anthony Dwyer, flute; Carol Baum, harp. SINE QUA NON CASSETTE 63.

WALTER PISTON (1894–1976)

The Incredible Flutist (complete ballet). Louisville Orchestra, Jorge Mester, cond. (*Dudley Buck: Festival Overture on "The Star Spangled Banner"*). LOUISVILLE 755.

Symphony No. 1. Louisville Orchestra, Jorge Mester, cond. (*Roy Harris: When Johnny Comes Marching Home; An American Overture*). LOUISVILLE 766.

Symphony No. 5. Louisville Orchestra, Robert Whitney, cond. (*William Kraft: Concerto Grosso*). LOUISVILLE S 653.

Symphony No. 6. Boston Symphony, Charles Munch, cond. (*Bohuslav Martinu: Fantasies Symphoniques*). RCA AGL 1-3794.

Symphony No. 7. Louisville Orchestra, Jorge Mester, cond. LOUISVILLE LS 746.

STEVE REICH (1936–)

Tehillim. Steve Reich Ensemble. Steve Reich, cond. ECM/WARNER BROS. 1215.

WALLINGFORD RIEGGER (1885–1961)

Study in Sonority. Louisville Orchestra, Jorge Mester, cond. (*Vincent Persichetti: Symphony No. 8*). LOUISVILLE S 706.

Symphony No. 4. Louisville Orchestra, Robert Whitney, cond. (*Roberto Gerhard: Alegrias*). LOUISVILLE S 646.

***New Dance.** Eastman-Rochester Orchestra, Howard Hanson, cond. (*Elliott Carter: The Minotaur; Henry Cowell: Symphony No. 4*). MERCURY GOLDEN IMPORTS SRI 75111.

GEORGE ROCHBERG (1918–)

Quartets Nos. 4, 5, 6. Concord String Quartet. RCA ARL 2-4198 (two discs).

NED ROREM (1923–)

King Midas (cantata). Sandra Walker, mezzo-soprano; John Stewart, tenor. (*Dominick Argento: To Be Sung Upon the Water*). DESTO 6443.

Poems of Love and the Rain†; Four Madrigal††; Seven Madrigal††. Beverly Wolff, mezzo-soprano†; Modern Madrigal Quartet††. DESTO 6480.

Miss Julie (excerpts). New York Lyric Opera. Peter Leonard, cond. PAINTED SMILES 1338.

ERIC SALZMAN (1933–)

Nude Paper Sermon. Stacy Keach, narrator; Nonesuch Consort, New York Moet Singers, Joshua Rifkin, cond. NONESUCH 71231.

GUNTHER SCHULLER (1925–)

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New England Triptych, Three Pieces for Orchestra. Eastman-Rochester Orchestra, Howard Hanson, cond. (*Charles Tomlinson Griffes: Poem for Flute and Orchestra; Peter Menin: Symphony No. 5*). MERCURY 75020.

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"Faust"). MERCURY 75049.

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LOUISE TALMA (1906–)

La Corona-Holy Sonnets of John Donne. Dorian Choral, Harold Aks, cond.; Japan Philharmonic, Akeo Watanabe, cond. (*Lester Trimble: Symphony in Two Movements; Five Episodes*). CRI S 187.

DEEMS TAYLOR (1885–1966)

***Through the Looking Glass.** Eastman-Rochester Orchestra, Howard Hanson, cond. ERA 1008.

RANDALL THOMPSON (1899–)

Symphony No. 1†; The Testament of Freedom††. Utah Symphony† and Chorus††, Maurice Abravanel, cond. ANGEL S 37315.

VIRGIL THOMSON (1896–)

Four Saints in Three Acts. Various soloists, chorus; Orchestra of Our Time, Joel Thome, cond. NONESUCH 79035 (two discs) ©.

Louisiana Story: Suite. Westphalian Symphony, Siegfried Landau, cond. (*Howard Hanson: Symphony No. 6*). TURNABOUT 34534.

The Mother of Us All. Sante Fe Opera, Raymond Lepard, cond. NEW WORLD 288/9 (two discs).

The Plow That Broke the Plain; The River. Symphony of the Air, Leopold Stokowski, cond. VANGUARD 2095.

EDGAR VARÈSE (1883–1965)

Ionisation; Density 21.5; Integrales; Octandre; Hyperprism; Poème Electronique. Members of the Columbia Symphony, Robert Craft, cond. CBS MS 6146 C.

BERNARD WAGENAAR (1894–1971)

***Symphony No. 4.** Vienna Symphony, Herbert Haefner, cond. (*Ernst Bacon: Ford's Theatre*). DESTO 6415 E.

ROBERT WARD (1917–)

The Crucible. Frances Bible, Chester Ludgin, Patricia Brooks, New York City Opera, Emerson Buckley, cond. CRI S 168 (two discs).

KURT WEILL (1900–1950)

Silverlake. Elaine Bonazzi, Joel Grey, Jack Harrold, Elizabeth Hynes, William Neill; New York City Opera Orchestra and Chorus, Julius Rudel, cond. NONESUCH DB 79003 (two discs).

The Unknown Kurt Weill. Teresa Stratas, soprano; Richard Weitach, piano. NONESUCH D 79019.

HUGO WEISGALL (1912–)

The Tenor (opera in one act). Richard Cassilly, Richard Cross, Dorothy Coulter, Doris Young, Chester Ludgin, John Kuhn; Vienna State Opera Orchestra, Herbert Grossman, cond. CRI S 197 (two discs).


ALEC WILDER (1907–1980)


Sextet for Marimba and Wind Quintet; Suite for Flute and Marimba; Suite for Trumpet and Marimba. Gordon Stout, marimba; Clarion Wind Quintet. GOLDEN CREST 4190.

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AMERICAN MUSIC

(Continued from page 63)

his *A Symphony: Holidays*, on the other hand, I am squarely in my own country. Copland's *Inscape* and his *Connotations* for Orchestra are as abstract as modern music can get, written in a vocabulary that is up-to-the-minute international; his outdoorsy scores dance us across the prairies; his *Music for the Theater* takes us to a burlesque show around the corner from Times Square.

And what of American opera, and particularly musical comedy, now that Broadway has become a kind of high-admission museum? Will there be life on the Great White Way after Stephen Sondheim? Now that *Porgy* and *Candide* have been restored to their original proportions and graduated to operatic status (Menotti's operas, Weill's *Street Scene*, and Thomson's *Four Saints in Three Acts* also began their careers on Broadway), is *Sweeney Todd* to be next into the opera house? Are the hymnlike tunes to which Thomson set the cubist prose of Gertrude Stein and the operatic efforts of composers like Jack Beeson and Douglas Moore too elementary for our complex age? Is Philip Glass's *Einstein on the Beach* more daring for its day than was, in 1947, *The Mother of Us All*? Would I be well advised to relinquish my enjoyment of the "conservative" operas by Dominick Argento and Thomas Pasatieri for the trendy vagaries of Robert Ashley's "problematically minimalist" *Perfect Lives (Private Paris)*?

American music to me is any and all music that speaks—or, better still, sings—in some sort of American accent. It can be symphonic, operatic, folk, jazz, rock, Broadway, or electronic; it can be regional, nationalistic, universal, simplistic, or sophisticated. The thing I object to is the way our critics tend to judge it according to the dictates of fashion. "Dated" is the pejorative word. But we must be careful not to change our musical clothes and discard last season's favorites for new models whose only interest is their novelty.

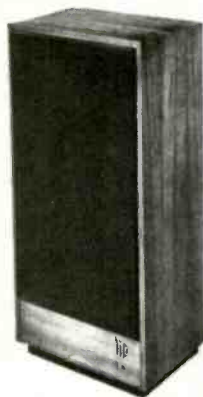
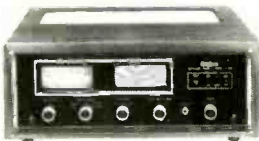
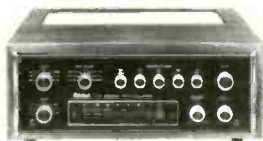
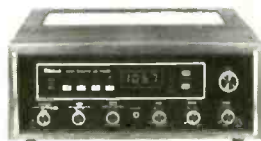
I still enjoy Gershwin's *Rhapsody in Blue*, although by this time I have grown a little numb to its charms. I think some of us who grew up with the Victrola are too prone as adults to cast aside the music we played on it. "I tell you the past is a bucket of ashes," Carl Sandburg wrote in *Prairie*, but it isn't entirely true. The past stays in us, along with the child, and nurtures and enriches us despite the burden of carrying that bucket. Why shouldn't our composers have searched for their own musical voices in the European lands of our origins? Why shouldn't "symphonic jazz," like Ernst Krenck's, speak with a slight Viennese accent? Listen to *Jonny Spielt Auf* sometime and decide for yourself. There is plenty of room for a wide variety of musical dialects in our midst. It isn't the musical form or language that counts, but what a genius can make it say.

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CLASSICAL

Reviews

BERWALD: Septet for Clarinet, Horn, Bassoon, and Strings, in B flat. JANÁČEK: Concertino for Horn, Bassoon, Piano, and Strings. PROKOFIEV: Overture on Hebrew Themes for Clarinet, Piano, and Strings, Op. 34.

Amsterdam Nonet. [Klaas A. Posthuma, prod.] NONESUCH 71412B, \$5.98.

The juxtaposition of one 19th-century work and two contemporary compositions is quite attractive. The chief beneficiary is the Amsterdam Nonet, an ensemble of excellent musicians, who are given the opportunity of demonstrating their versatility and technical proficiency; pianist Marion Pollard, first violinist Else Krieg, and the clarinetist Harry Bijholt are outstanding.

So little is known of Franz Berwald's music that one is grateful for any new discovery. The Septet recorded here uses the Beethovenian instrumentation but produces a near-Romantic sound, more akin to Weber. (When Schubert imitated Beethoven, he added a second violin and expanded the ensemble to an octet, but Berwald had no knowledge of that at the time.) Berwald was an experimenter, and when the Septet was first performed in 1828 in his native Stockholm it was considered rather bold. He modulates freely and often unexpectedly. His treatment of form is innovative; thus, the second movement is an Adagio, bisected by a Scherzo. Here, the virtuosity of the players is particularly evident.

Prokofiev's *Overture on Hebrew Themes*, Op. 34, was composed in New York in late 1919 at the request of Zimro, an ensemble of emigré Russian-Jewish musicians who had been his classmates at the St. Petersburg Conservatory. The idea was a curious one, since Prokofiev was not Jewish, but after studying a collection of Jewish folk tunes he became interested and produced an effective piece that sounds a bit like "klezmer" music. Zimro gave the premiere in New York on January 26, 1920, with the composer at the piano. The piece was so successful that Prokofiev made an arrangement for full orchestra in 1934, but the original version for sextet is preferable because its true charm lies in the "village music" character. The Amsterdam performance is, perhaps, not the most idiomatic imaginable, but it is skillful and in good taste.

Janáček's *Concertino* opens with a brief theme that sounds startlingly Hebraic, or Slavic—a nice contrast to the Prokofiev. However, Janáček's disjointed and abrupt phrases fail to fuse into a valid statement, at least to my ears. While I have great admiration for Janáček as an opera composer, I

*Paul Esswood:
without peer—
See page 71*



find his instrumental music less compelling. There is much tension and vitality in the *Concertino*, at the expense of lyricism (there is no slow movement among the four constituting the work). The piece is dominated by the solo piano, with the colorful but selective support of the other instruments. The Amsterdam ensemble performs with excellence, and pianist Pollard is brilliant. Horn player Joop Meijer also deserves special mention. **BORIS SCHWARZ**

ual sequence). Cassette: 3382 025, \$38.94 (three cassettes).

Never met a recording of *Carmen* I didn't like. Well, hardly ever. If you run your eye down the list in the current domestic catalog you will find nine complete sets, not counting the present one. They go back to stereo's dawn and keep appearing at intervals of three or four years. You might think it easy to reject all but a few without having to look back over your shoulder to see what you had lost: not so.

For example, I would not wish to be without Sir Thomas Beecham's 1960 version, for nobody since has made Bizet's melodies move as succulently and elegantly. True, Beecham had Victoria de Los Angeles as *Carmen*, a soprano with limpid phrasing, rather than the mezzo customarily employed, and an actress without the sexual aggressiveness you may think vital to *Carmen*'s character. Perhaps Leontyne Price, also a soprano, had more of the wanton in evidence when she recorded with Karajan in 1964, but that was a rough ride. That set also offers one of the two superb portrayals of Micaëla recorded by Mirella Freni (the other is with Grace Bumbry as *Carmen*, Frühbeck de Burgos conducting). For my ears, Maria Callas is *Carmen*, though she never played the part on stage; so the 1964 Paris recording, conducted by Georges Prêtre, is de rigueur; no parting with that. And would you expect me to jettison Bernstein's 1973 gentle but coiled-spring view of *Carmen*, with Marilyn Horne's vocally opulent, sexually enriched view of the title role? Nothing doing.

The French language is spoken (and sung) from somewhere further forward in the mouth than Anglo-Saxons are used to.

It is with sadness that we announce the death of Boris Schwarz on December 31, 1983. A Russian-born violinist and musicologist, he was the author of Music and Musical Life in Soviet Russia 1917-1981 and Great Masters of the Violin. The record reviews in this month's issue are among his last music writings, and his contributions will be missed.—Ed.

BIZET: Carmen.

CAST:

Micaëla	Katia Ricciarelli (s)
Frasquita	Christine Barbaux (s)
Mercédès	Jane Berbié (s)
Carmen	Agnes Baltsa (ms)
Don José	José Carreras (t)
Remendado	Heinz Zednik (t)
Dancaire	Gino Quilico (b)
Escamillo	José van Dam (bs-b)
Zuniga	Alexander Malta (bs)

Paris Opera Chorus, Schöneberg Boys Choir, Berlin Philharmonic Orchestra, Herbert von Karajan, cond. [Günther Breest and Renate Kupfer, prods.] DEUTSCHE GRAMMOPHON 2741 025, \$38.94 (digital recording; three discs, man-

This is evident when you hear Regine Crespin's recording for Erato, in other respects an undistinguished rendition. But would you eject the only Frenchwoman presently capable of singing the title role on a major stage? Certainly not.

The two most recent recordings are both of remarkable quality. The first is Solti's 1976 set with Tatiana Troyanos as a sultry, provocative Carmen, Domingo as Don José (comparable only to his other performance, for Abbado in 1978), Kiri te Kanawa as Micaëla, and José van Dam, a prince of toreros. The second is the Abbado; with Domingo are Milnes as the toreador, Ileana Cotrubas as Micaëla, and Teresa Berganza, an elegant, imperious, indeed elevated Carmen.

One complication more: There are *editions*. Old-timers like me grew up with what is now called (not without a curl of the lip) the Choudhens edition, that being the name of the original publisher. This is the one containing recitatives composed not by Bizet but by Ernest Guiraud and first used in the Vienna staging of October 1875. Before Choudhens there was the 1875 Opéra Comique score with unaccompanied dialogue, and after Choudhens, indeed quite recently, there has emerged Fritz Oeser's *ur-Carmen*, an enlarged spoken-dialogue version restoring words cut from the 1875 rehearsals. The full Oeser makes a long night's work of the opera. Of the recordings, the Bernstein is Oeser most nearly complete—more complete than some might feel necessary. The older recordings of Beecham/de Los Angeles, Karajan/Price, Prêtre/Callas, and Lombard/Crespin have the Guiraud recitatives, Burgos/Bumbry has the 1875 Opéra Comique score, and the rest have Oeser short, Oeser long, or Oeser mostly, as the case may be. But every now and then, Choudhens shines through.

So much for the past, which, as everybody knows, is prelude: On to the new Karajan set, which offers sumptuous playing and singing in the sort of large-scale sonic environment that reminds the listener of the conductor's offerings in Salzburg's Grosses Festspielhaus. His is an opera for a large theater, with a full-size orchestra (the Berlin Philharmonic, no less), and a cast of major voices. Karajan is not a man to take the rough when he can have the smooth, so one of the first things you will note about the new recording is the luxurious juiciness of the orchestral playing, the sheer sensual pleasure to be taken from it. Perhaps you will next encounter, and consider, the intensity and overt sexiness of Agnes Baltsa in the title role. To my ears, here is a singing actress approaching Callas in quality—the principal difference between them is that Callas *never* relaxes, never just pads along, while Baltsa does, very occasionally.

There are fascinating comparisons available among the three current front-

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rank Carmens—Berganza, Troyanos, and Baltsa. Each gives full value, and to have available three such wonderful singers in modern recordings conducted by authority figures like Solti, Abbado, and Karajan is to have a choice among splendors.

Karajan's Don José is José Carreras, touching, melodious, perhaps just a shade self-pitying, but he sings with uncommon grace, and the soft, high B flat that brings the Flower Song to a close is a haunting cadence. But his competition is Domingo—indeed, Domingo twice (for Solti and Abbado)—and this is music Domingo

might have had tailor-made. There is nothing to rival the measured increase in desperation that Domingo manifests in the closing duet; the climax falls precisely where it should. But Carreras is deeply moving just the same, and gives full value.

Karajan's choice for Micaëla doesn't quite come off. Katia Ricciarelli seems a tame and mouselike creature, and she swallows her words disconcertingly. French is the one language in which that cannot be allowed to happen. José van Dam confirms for Karajan what he asserted for Solti: that he is the supreme Escamillo of the day, the

acknowledged master of a part that bedevils baritones and basses, causing problems of vocal resonance to all but a handful of exponents. In all of the ten current complete recordings, Van Dam is the only satisfactory Escamillo. The French chorus is fine, so the words cut through keenly. The smaller parts are capably handled and the technology cannot be faulted.

But there is one big and (to me) unhappy feature of the new Karajan set, and that is the decision to employ actors for the dialogue. At each transition from music to speech there is a mighty glitch, giving the listener an uncomfortable feeling of not wanting to believe. So disagreeable is the consequence of this double casting that one is tempted to ask whether the bad old Guiraud recitatives were quite as impossible as has been claimed. Transitions never bothered me in the old days, when I knew no better.

GEORGE MOVSHON

MAHLER: Symphony No. 6, in A minor.

London Philharmonic Orchestra, Klaus Tennstedt, cond. [John Willan, prod.] ANGEL DSB 3945, \$27.98 (digital recording; two discs, manual sequence). Cassette: 4X2S 3945, \$19.98 (two cassettes).

It is perhaps significant that Tennstedt chose this work with which to conclude his impressive cycle of Mahler's nine completed symphonies: Mahler said that his so-called *Tragic* Symphony was an especially "tough nut to crack," for conductors as well as listeners, and he accurately predicted that it would be generally appreciated only after all his other compositions were understood. Not discounting the ominous subtitle and the anecdotes surrounding the trademark sonorities (the quietly jangling cowbells that Mahler said represented "the last terrestrial sounds penetrating into the remote solitude of the mountain peaks," the hammer strokes in the finale that, according to the composer's widow, symbolize the "three blows of fate" that bring down the hero), the Sixth Symphony is the most abstract in the set; notwithstanding the emotional forcefulness of its gestures and the broad sweep of its lyrical passages, this is in essence a neo-Classical composition, its progression of ideas based far more on the disciplined development of motivic kernels than on Mahler's more characteristic alternation of episodes and quasiprogrammatic scenarios.

The main interpretive problem has to do with balancing the work's ebulliently Romantic feeling with its controlled Classical form, and, indeed, most conductors emphasize the former at the expense of the latter. Tennstedt seems to do full justice to both elements: It may be true that individual moments of the Symphony are not as sonically brilliant or as theatrical in effect as those in the versions by Karajan and the Berlin Philharmonic (DG 2707106), Solti and the Chicago Symphony (London

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2227), or Levine and the London Symphony (RCA ARL 2-3213), but the parts add up to a whole that is ultimately overwhelming in its power, and the skill with which Tennstedt welds that whole certainly makes this one of the most intelligent performances in the entire Mahler catalog.

Tennstedt uses the 1963 edition prepared by Erwin Ratz, and listeners who use the Eulenburg score (1968, edited by Hans Redlich) of the "original version" will notice the slight discrepancies in the percussion parts. Liner-note author Michael Kennedy makes much of the three hammer strokes (the third of which the superstitious Mahler eliminated after the premiere in 1906), but he does not tell us if Tennstedt, following the lead of some other modern conductors, decided to restore it: Even if it were there it would be inaudible under the din of brass and timpani, but it's a detail about which many listeners are curious.

JAMES WIERZBICKI

PURCELL: Songs (15).

Paul Esswood, countertenor: Johann Sonnleitner, harpsichord: Charles Medlam, viola da gamba. [Mark Brown, prod.] HYPERION A 66070. \$13.98 (digital recording) (distributed by Harmonia Mundi, 2351 Westwood Blvd., Los Angeles, Calif. 90064).

If Music Be the Food of Love (two versions): Oh! Fair Cedaria; I See She Fly's Me; The Sparrow and the Gentle Dove; Fly Swift, ye Hours; Cynthia Frowns Whene'er I Woo Her; Not All My Torments; Fairest Isle; Love Thou Can't Hear; Let Us Dance; Sweeter than Roses; Beneath a Poplar's Shadow; Ah! Cruel Nymph; Music for a While.

Those who know Purcell's songs do not need to be told that they remained without peer until Schubert's for variety, passion, strangeness, and fancy. Those who keep up with countertenors know that a better one than Paul Esswood has not yet been found. This disc will recommend itself to such listeners. It does justice as full as a single recital may to the composer's range, and the singer covers himself with glory.

For others, I would recommend in particular the four songs that close Side 1: *Fly Swift, ye Hours* for its virile, sure bravura; *Cynthia Frowns* for its delicious, understated wit; *Not All My Torments* for the startling frankness of its yearning and the note of wildness in the vocal figuration; and the renowned *Fairest Isle* for that rare grace and serenity that belong only to a great melodist.

Esswood himself is a model. Listeners who have not acquired the taste for countertenors (and a few doses of shrieking competition with modern orchestras in large halls can do much to retard it) will want to know that he has a scrupulously fine and even production; powers of florid execution that are remarkable not so much for speed as for perfect evenness, intonation, and rhythmic flow (compare Marilyn Horne, who seems to be *working*—Esswood doesn't); something close to "le-

git" tenor resonance in his lower range; and extremely subtle resources of characterization. A countertenor's vocal production does not permit (any more than the music wants) the kind of declamatory emphasis and coloristic nuance we expect from mainstream-repertoire singers. Once one stops expecting those, passion, melancholy, and irony alike can be heard here, superbly captured.

The accompaniments, some with and some without viola da gamba, are apt and unfussy without being reticent.

WILL CRUTCHFIELD

WOLPE: Suite im Hexachord for Oboe and Clarinet. **DAHL: Five Duets for Clarinets.** **SCHULLER: Duo Sonata for Clarinet and Bass Clarinet.**

Floyd Williams, clarinet; Charles West, bass clarinet; Darrel Randall, oboe. CRYSTAL S 355, \$8.98.

Unfamiliar and surprising music awaits the listener of this disc: One is presented with three works scored for various combinations of oboe, clarinet, and bass clarinet. All three pieces freely combine tonal and atonal elements into a tart, chromatic, often dissonant harmonic blend. Because all are



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for "melody" instruments—without the harmonic support that would be provided, for example, by a piano—the writing is linear, contrapuntal, spare in texture.

The finest of the three is Stefan Wolpe's *Suite in Hexachord for Oboe and Clarinet*, composed in 1936 during the composer's sojourn in Palestine. Cast in four movements, this is a fiercely concentrated work whose opening three-note motive generates the substance of the entire piece. It is harmonically dissonant, melodically indicative of the influence of Webern (with whom Wolpe studied in 1933), and rhythmically complex. Yet it is anything

but dogmatic in its free mixture of tonal and atonal material. Wolpe's interest in Middle Eastern folk music is evident in the lovely slow movement, which places rhapsodic oriental melismas in the oboe above repeated bass patterns in the clarinet.

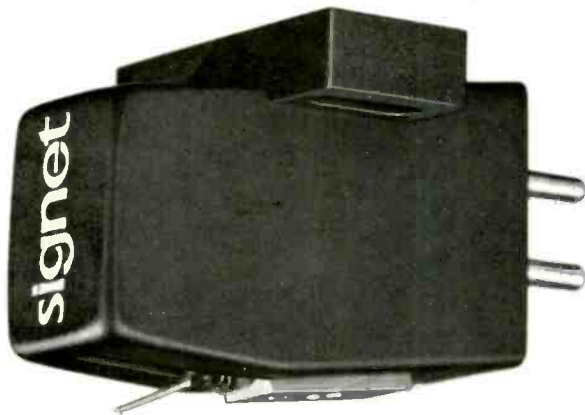
The other two offerings are well crafted, utilitarian, but hardly inspired. Ingolf Dahl's *Five Duets for Clarinets* (1970) employs a neoclassic Stravinskian idiom that is lean in texture, economical in substance, and highly contrapuntal. Gunther Schuller's *Duo Sonata for Clarinet and Bass Clarinet* (1949) is youthful and eclectic, ranging from a plaintive improvisatory

opening to a perpetual-motion conclusion. Dahl and Schuller performed a useful service by creating music for infrequently employed combinations of instruments, but the pieces themselves hardly ever rise to the level of these composers' best efforts.

Floyd Williams, Charles West, and Darrel Randall (all university professors in New Mexico) must be congratulated both for their choice of repertoire and for their interpretive skills. Their sensitive phrasing, timbral nuances, dynamic inflections—together with prodigious technique—combine to illuminate the musical structure and substance in a convincing manner. While this disc is of primary interest to wind players, the Wolpe is important to anyone concerned with that composer's development. Crystal contributes a silent pressing, though my review copy was rather warped.

K. ROBERT SCHWARZ

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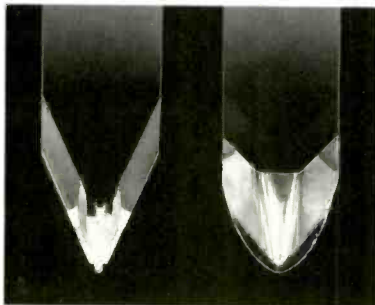


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Recitals and Miscellany

NICOLAI GEDDA: *Anthology of Swedish Song.*

Nicolai Gedda, tenor; Jan Eyron, piano. [Frank Hedman, prod.] BLUEBELL 121, 122, 127, 142, 147; \$10.98 each (distributed by Polygram Special Imports, 810 Seventh Ave., New York, N.Y. 10019).

DE FRUMERIE: 20 songs, 1936–64 (BELL 127). PETERSON-BERGER: 18 songs, 1896–1910 (BELL 121); Songs, Op. 10: Four Ballads in Swedish Folk-style, Op. 5: Four Poems of August Strindberg (1911); Poems of Friedrich Nietzsche, Book 1 (1901); 6 others, 1887–1921 (BELL 122). SJÖGREN: *Tannhäuser-Sange*, Op. 3: 10 others, 1873–1891 (BELL 141); Six Songs from *Tannhäuser*, Op. 12; Five (German) Songs, Op. 16 ("An Eine"); 7 others, 1887–1902 (BELL 142). STENHAMMAR: Songs of Bo Bergman, Op. 20; Poems of Verner von Heidenstam, Op. 37; 11 others, 1888–1918 (BELL 147).

Every so often, after hearing one of our more self-indulgent contemporary composers complain about the neglect of his art songs (as though he could somehow shame singers and audiences into taking them at his own estimation), I find myself imagining a clutch of grouching songwriters in, say, the Netherlands, castigating that pretentious Elly Ameling who goes all around the world singing in French and German, and serving a Dutch cookie or two only among the encores. If they could bully her into programming their national treasures, so my theory goes, we'd probably all find out why she hadn't wanted to sing them in the first place.

But it is an uncharitable response. The fact is that every Western nation with any sort of musical heritage has cultivated what we call the "art song" to some degree, and the fruits are well worth sampling both for

the light they shed on the cultures in question and for the opportunities they offer to singers brought up on them. A particularly rewarding demonstration comes from Nicolai Gedda's new series on Bluebell, which for the first time makes a strong case for the Swedish song tradition as one worth closer international examination.

Sweden was in the German orbit: Emil Sjögren (1853-1918), Wilhelm Stenhammar (1871-1927), and Wilhelm Peterson-Berger (1867-1942) were all central Romantic lyricists (the last also a noted critic and commentator on Wagner), and their songs often resemble the once-popular German ones of Robert Franz, updated to include just a whiff of Wagnerian harmony and some increase in independence for the piano part. They are better than Franz, though, I think; unlike him, Peterson-Berger and Sjögren at least have it in them to at times rise to complex or troubling poems with a corresponding deepening of musical language. In particular, Peterson-Berger's 1901 group of Nietzsche settings merits quick adoption into the standard repertory (all the quicker because they are in their original German and pose no language problem). They range from a piece of simple charm and harmonic quirks (*Meine Rosen*), through a quietly feverish evocation of Venice and an impassioned "Ecce homo" fragment, to a deeply serious setting of the *Rundgesang* that is woven through

Critics' Choice

The most noteworthy releases reviewed recently

BACH: Concertos for Oboe, Strings, and Continuo; Concerto for Oboe d'Amore, Strings, and Continuo. Hammer: Bach Ensemble, Rifkin. PRO ARTE PAD 153, Feb.
BEETHOVEN: Piano Sonata. Michelangeli. DG 2543 505, Feb.
BEETHOVEN: Violin Concerto. Ughi; London Symphony, Sawallisch. RCA ITALY RL 31590, Oct.
BRAHMS: Keyboard Works. Zimmerman, Vásáry, Kempff. DG 2740 278 (11), Dec.
BRAHMS: Songs. Norman. Fischer-Dieskau, Barenboim. DG 2740 279, Jan.
BRITTEN: Our Hunting Fathers; Folksong Arrangements. Söderström, Armstrong. EMI ASD 4397, Oct.
CRUMB: Apparition. IVES: *Songs (9)*. DeGaetani, Kalish. BRIDGE BDG 2002, Dec.
DEL TREDICI: In Memory of a Summer Day (Child Alice, Part 1). Brynne-Julson; St. Louis Symphony, Slatkin. NONESUCH 79043, Feb.
FALLA: The Three-Cornered Hat. Boky. Hoenich; Montreal Symphony, Dutoit. LONDON LDR 71060, Jan.
FIELD: Concertos for Piano and Orchestra (7). O'Connor; New Irish Chamber Orchestra, Fürst. FIDELIO CSM 55-58 (4), Jan.
HAHN: Ciboulette. Mesplé, Gedda; Monte Carlo Philharmonic, Diederich. EMI FRANCE 2C

167-731 05/6 (2), Dec.

HANDEL: Arias from Rinaldo and Other Operas. Horne; I Solisti Veneti, Scimone. ERA TO MUN 75047, Feb.

HINDEMITH: Concertos for Cello and Orchestra; for Clarinet and Orchestra. Machula. Pieterston; Concertgebouw Orchestra, Kondrashin. ETCETERA ETC 1006, Feb.

MOZART: Quintet for Clarinet and Strings, K. 581; Quintet for Piano and Woodwinds, K. 452. Stoltzman, Serkin; Tashi. RCA AGL 1-4704, Feb.

MOZART: Quintet for Clarinet and Strings, K. 581. WEBER: *Introduction, Theme, and Variation for Clarinet and Strings.* Meyer; Philharmonia Quartet Berlin. DG 410 670-1, Feb.

PROKOFIEV: String Quartets Nos. 1, 2. Sequoia Qt. NONESUCH 79048-1, Nov.

PUCCINI: Orchestral Works; Operatic Excerpts. Berlin Radio Symphony, Chailly. LONDON LDR 71107, Nov.

SZYMANOWSKI: String Quartets, Nos. 1, 2. Varsovia Quartet. PAVANE ADW 7118, Feb.

VERDI: Opera Arias. Tomova-Sintov; Bulgarian Radio Vocal Ensemble, Sofia State Philharmonia, Raychev. TURNABOUT TV 34786, Jan.
WOLF-FERRARI: Sly. Polaski, Bader, Reeh; Chorus and Orchestra of Niedersachsichen, Maxim. ACANTA 23.501 (3), Jan.

KOYAANISQATSI. Ruiter; Philip Glass Ensemble; Western Wind Vocal Ensemble, Riesman. ANTILLES ASTA 1, Jan.

NELLIE MELBA: The American Recordings. RCA AUSTRALIA VRL 5-0365 (5), Nov.

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CLASSICAL Reviews

the "Song of Drunkenness" in *Also sprach Zarathustra* (disappointing only slightly at the rather sweet conclusion).

"Maids under the linden-tree" and the Opus 5 group of songs in *svensk folkton* are notable for sheer melodic felicity, and this is a keen attraction also with the less sophisticated songs of Sjögren (who composed two cycles on the legendary/historical figure of Tannhäuser, both included here) and Stenhammar. With Gunnar de Frumerie (born in 1908, and apparently, to judge by the jacket photo, present at Gedda's recording sessions), we encounter something recognizably related but distinct. His songs have a sparer, less lush lyricism, and Debussy is as strong a point of reference as any. All of those included here have texts by the extraordinary poet and playwright Pär Lagerkvist; Gedda sings them with rapt concentration.

The tenor is in fact in splendid voice throughout the series, singing with the same combination of heft and delicacy, verve and lyricism, that distinguishes his best records of 25 years ago. One of his great characteristics has always been an ability to make the very sound of his voice take on the rhythmic energy of animated music. A "charged" piano, a smiled vowel, a well-placed staccato or crescendo—these are the analyzable attributes of a spontaneous style that gives bracing life to item after item that on the printed page shows little evidence of vital-

ity. When comparisons are possible, that quality in particular tends to confirm Gedda's achievement as an advocate of this repertory. Elisabeth Söderström, for instance, has recorded some Sjögren, with warmth and a lovely bloom on the high notes, but she and her pianist make a rather limp thing of *Jeg giver med dig*, which with Gedda and

Gedda's series makes a strong case for the Swedish tradition.

the excellent Jan Eyrön springs and leaps. Gedda's great Swedish predecessor Jussi Björling sang a few of the Peterson-Berger songs. Playing *Jungfrun unterm Lind*, one is struck anew by Björling's irreplaceable timbre; the tone is fresher, too, but not so much as one might have expected (Björling was forty-one. Gedda is inching towards sixty), and it is actually Gedda whose voice ranges most easily, as a "fresh," supple instrument, through the wide span and arch-over-the-passaggio of the first phrases.

Just occasionally the comparison works the other way. (Joseph Hislop recorded one of the Tannhäuser songs with more lyricism but without loss of passion;

John Forsell, that great-grandfather of Swedish singing, did a few others with a firmer-sounding legato.) But far more often it is Gedda who finds a mood, a detail, a memorable phrase on which to focus, that would not have been guessed from other performances. The series is slated to continue, by the way, with more Sjögren, Rangström, and samplers of 18th, 19th, and 20th century songs. They'll all be welcome; this is a splendid way, at once adventurous and retrospective, for a beloved singer to round out a long recording career.

One drawback, serious but fortunately not permanent: The records are presently sold without texts or translations, which means that one must either enjoy them as bits of vocalism and melody (easy enough) or attack the Scandinavian poetry shelves of a big library and wade through them with dictionaries (hard but worth the effort, especially for the poems of Lagerkvist, Ibsen, and Strindberg). However, luckily for those who doubt they'd find a week to concentrate on Swedish songs, I am assured in a cover letter from producer Frank Hedman that translations are in preparation and will be sent free of charge to anyone who has bought the records without them. My advice is to buy now (you never know whether importers will re-order), and then importune Bluebell for the inserts: Firma Frank Hedman, Ankdammsgatan 13, 171 43 SOLNA, Sweden. WILL CRUTCHFIELD

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The Tape Deck

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

Conductart

High-tech resurrections of historical milestone recordings have worked best with early stereo-era materials; results with mono LPs and still earlier 78 rpm discs have been mixed at best. Until now, that is, and Barton Wimbles miraculously successful Conductart series of restorations in super-chrome cassettes, superbly processed in real time and Dolby B by In Sync Laboratories (\$17.98 each; 2211 Broadway, New York, N.Y. 10024).

As an old-timer who knew most of these early electricals in their original 78s, I can testify that they never sounded as unbelievably live and vivid as they do in these reissues. The hitherto unsuspectedly wide frequency and dynamic ranges are revelations in themselves, as are the minimizations of shellac-disc surface noise. But the most rewarding revelation is that of the unfaded genius and personalities of past titans. Listen to Leo Blech, Albert Coates, Piero Coppola, Wilhelm Furtwängler, Sir Hamilton Harty, Willem Mengelberg, and Walther Straram in their c. 1926-30 "Orchestral Sampler" (C 4130) to hear some of the pioneering recording conductors come dramatically alive again!

No less striking are Richard Strauss's Beethoven Fifth and Oskar Fried's still spectacular Liszt *Mazepa* and Wagner *Faust* Overture in "Berlin 1928" (C 4128), or the great Karl Muck's incomparable 1927-28 Wagnerian excerpts (C 4133 and C 4136). And the 1928-30 "Concerts Straram, Paris" (C 4134), a Debussy/Ibert/Roussel program that also includes Philippe Gaubert's Ravel *Daphnis et Chloé* Suite No. 2, reminds us what quintessential Gallic sounds and styles were like before they became diluted.

I haven't yet heard the Mengelberg (C 4129) and Fritz Kreisler (C 4135) examples, nor the 1927 Carlo Sabajno/La Scala complete Puccini *Bohème* (C 4131-32), but I presume they also make every earlier 78s-restoration seem hopelessly inadequate. Further extensions of this unique, truly priceless series can't come along too soon!

Varied instrumental artistry. Even by the loftiest standards of the past, some of today's recording instrumentalists must be ranked high, while many of lesser stature illuminatingly explore an infinite timbral and expressive range. Fritz Mayr and Dieter

Kirsch deftly display, for example, the capacities of the Jew's harp and mandora (a kind of lute) in two quaint concertos by Johann Georg Albrechtsberger conducted by Hans Stadlmeir (Orfeo digital/chrome M 035821).

Then, John Torcello enlists top-notch engineering and processing in bravely trying to establish the legitimacy of the modern chromatic/free-bass accordion in a "Music of the Baroque" miscellany (JTC 002, \$12; John Torcello Co., 17100 Midwood Dr., Granada Hills, Calif. 91344). And the multitalented expatriate Emanuel Sheynkman follows up his recent fine "Art of the Balalaika" (Nonesuch 79034-4, \$11.98) with an equally beguiling "Art of the Mandolin" (Nonesuch 78019-4, \$8.98), a light program that is magic-carpet transportation directly back to Odessa.

Turning to orthodox woodwinds, a fascinating new star is Karajan's controversial choice as Berlin Philharmonic coprinicipal clarinet, Sabine Meyer. Her Mozart Clarinet Quintet (K. 581) with the Philharmonia Quartet Berlin, filled out with a novel if lightweight Opus 32 Quintet by Joseph Küffner (1776-1856), reveal a fully matured artist in soberly Romantic readings given the most vividly realistic presence of any chamber music recordings to date (Deutsche Grammophon digital/chrome 410 870-4, \$12.98) [see review, February HF]. And our own clarinet luminary Richard Stoltzman is heard in elegantly bravura, well-recorded, rather heavily accompanied (Mostly Mozart Orchestra) versions of Weber's First Concerto, Rossini's Theme and Variations, and Mozart's K. 315 Andante, originally for flute (RCA Red Seal digital/chrome ARE 1-4599, \$12.98).

If my September 1978 praise for the CRD two-disc set of the charming Preston/Pinnock/Savall periodthentic Bach Flute Sonatas made you hanker for a tape edition, here at last it most rewardingly is (MHC 226761, two cassettes, \$15.50; \$9.90 to members; add \$1.95 for shipping; Musical Heritage Society, now at 1710 Route 35, Ocean, N.J. 07712). Or choose between baroque- and modern-style fipple flute (i.e., recorder) by Hans-Martin Linde and Michala Petri, respectively. Linde's four Handel Opus 1 Sonatas, with continuo players Christopher Hogwood and Pere Ros, are models of authenticity enlivened with zest (Angel digital/ferric 4XS 37983, \$9.98, no notes). Petri's Corelli/Lorenzo/Van Eyck/anonymous miscellany, with her more reticent harpsichordist mother and

cellist brother, are uninhibitedly bravura displays of sheer virtuosity (Philips digital/chrome 7337 166, \$12.98).

Two relatively unfamiliar soloists establish top-ranking credentials as masters of the modern and the Baroque oboe, respectively. Britain's Celia Nicklin stars, with fellow Academy Chamber Ensemblists, in three Handel concertos, two sonatas, and an overture (Philips digital chrome 7337 385, \$12.98); the pieces are unalloyed delights and give the great Heinz Holliger's Handel concertos (1978 disc edition only) real competition. In a stimulating Bach concerto program with Joshua Rifkin's little Bach Ensemble, Stephen Hammer doubles on period-replica oboe and oboe d'amore—the former in first recordings of newly reconstructed works in D minor and E flat, the latter in the now familiar Concerto in A, from S. 1055 (Pro Arte digital/chrome PCD 153, \$9.98) [see February HF]. Rifkin's musicological justifications for these restorations are advanced in notes too long for inclusion with the tape, but available on request; their aesthetic rationale is evident from these beautifully recorded performances, particularly the irresistible E flat Concerto.

Everest Transformed. The so-called Master Series of newly reissued reissues begins to do justice to some of the often mistreated treasures in Everest's hedge-podge catalog. The initial some 50 releases (\$3.98 each) are still noteless, but they are better labeled and seem vastly improved in processing. Indeed, the new edition (MKC 1824) of "Ravel Plays Ravel!" boasts incalculably more natural piano tone than its predecessor (see "Tape Deck," October 1977) and eliminates the inexcusable side break in *Oiseaux tristes*. And a companion Archive Duo-Art roll program effectively revitalizes Paderewski's highly idiosyncratic, grand-mannered Chopin—two ballades, a scherzo, and a military polonaise, among other selections (MKC 1835).

For now, at least three of five reissues starring flutist-supreme Rampal can be warmly recommended for combined musical, performance, and sonic appeals: the Chopin/Schubert/Schumann "Romantic Flute" collection (MKC 1808), the Benda/Richter/Prokofiev "Golden Flute Sonatas" (MKC 1813), and the Loeillet/Visée/Giuliani program with guitarist René Bartoli (MKC 1826). Only "Rampal Plays Bach" (MKC 1821) and "Greatest Hits of the Seventeenth Century" (MKC 1831) are for Rampal aficionados exclusively. **HF**

BACKBEAT



The New Jaco

Who's the greatest bass player? Just ask Jaco Pastorius.

by Samuel Graham

SINCE JOINING WEATHER REPORT in 1976, John Francis Pastorius III has become one of this country's most influential electric bassists. Anyone who has heard him play would understand why; anyone who hasn't, well, he'd probably be happy to tell you all about it. One thing about ol' Jaco: He doesn't suffer from false modesty.

This is not to say that he is an insufferable braggart. On the contrary, as one pundit has said, "If you can do it, it ain't braggin' at all."

Pastorius was born in Pennsylvania and, before he was ten, moved to South Florida. As a youngster he studied a variety of instruments; by the time he was a teenager he had developed his arranging and composing skills sufficiently to work in the music department at the University of Miami. Early stage experience included piano and guitar backup work with a number of touring performers, from the Temptations to Bob Hope and Phyllis Diller.

In the early Seventies, Pastorius played with r&b stalwarts Wayne Cochran's C. C. Riders, jazz composer/pianist Paul Bley, and multi-instrumentalist Ira Sullivan, among others. (He also claims to have rejected offers to tour with Fleetwood Mac, Jimi Hendrix, and Buddy Miles.) He worked briefly with Blood, Sweat and Tears in 1975 and a year later was asked by

Samuel Graham is a free-lance writer based in Los Angeles.

keyboardist Josef Zawinul and saxophonist Wayne Shorter to join Weather Report.

It's easy to see why that premier jazz fusion ensemble wanted him: His technique was marked by both speed and agility, his intonation on the fretless bass unerring, his tone fat and true, and his use of harmonics and double and triple stops fairly unique for the time. He also had a flair for showmanship and, perhaps most of all, a playing style and attitude that clearly said the bass would never be an anonymous rhythm instrument in his hands.

Many would argue that Weather Report's best work was with Pastorius. "Heavy Weather" (1977) was certainly their most fully realized, commercially successful studio production. But after "8:30" ('79), the thrill was apparently gone; "Night Passage" and "Weather Report" ('80 and '82), Jaco's last two albums as a member, are mediocre compared to their predecessors. It was no surprise when he left in '82 to lead his own bands.

Pastorius's two most recent LPs feature exotic orchestrations and use a dizzying array of source material, from Bach to Charlie Parker to the Beatles, from r&b to dense, dissonant avant-garde jazz. Perhaps a little more focus is needed, but you cannot fault the guy for lack of imagination. "Invitation," the newest disc, is an ambitious big-band work recorded in Japan last year. Currently he is working with a smaller six-man unit that includes percussionist Don Alias, guitarist Mike Stern, and saxophonist Alex Foster. The following interview, conducted the day after the band's Novem-

ber appearance in Los Angeles, found Pastorius in remarkably good spirits.

Backbeat: In a recent interview you said, "I invented the electric bass, and everyone knows it." What do you really think your biggest contribution to the instrument has been?

Pastorius: Harmonic concept: not playing harmonics on strings, but harmonic concept. Approaching and knowing how to play changes—whether on [Charlie Parker's] *Donna Lee* or on *Harlequin*, Wayne's tune from "Heavy Weather"—that's probably my biggest contribution. I'm more or less the first person just to come up with that facility. The harmonics and the flageolet tones—people would have eventually figured all that out.

Backbeat: What aspect of your playing do you think other bassists have copied?

Pastorius: I don't listen much, but I hear people hitting harmonics, and I hear them trying to play vibrato, especially when they're playing a fretless.

Backbeat: Do you think the fretless bass has become more popular since you came along?

Pastorius: Yeah. In fact, half the bass players I know don't even own fretted basses anymore, which is stupid. If you've got something hard to read on a fretless Fender bass, unless you're the greatest bass player in the world you're going to play some notes that are out of tune. With frets, at least you stand a chance.

Backbeat: Do you think your own playing has improved and developed since you

joined Weather Report?

Pastorius: I am blessed to have been able to play with Joe and Wayne every night for six-and-a-half years. I definitely copped all sorts of stuff from them, too.

Backbeat: How much do you practice?

Pastorius: None. I work all the time now; I don't have time. I practice mentally.

Backbeat: To me, the last great Weather Report recording was the studio side of "8:30." And you played drums, not bass, on two of the songs.

Pastorius: I feel my main instrument is drums, even though I don't practice and don't have super facility. My father was a drummer, so I've more or less always wanted to be one. That was me playing on *Teen Town* [from "Heavy Weather"].

Backbeat: Is there anyone that you admire as a bassist?

Pastorius: Gerald Jemmott. James Jamerson, bless his soul—he just died. I like some of the things Larry Graham did with Sly on those first [Family Stone] records. I like the way Sting plays, too.

Backbeat: Who are your main jazz influences?

Pastorius: Ron Carter, Jimmy Blanton, Gary Peacock, Steve Swallow. I don't really have any favorites. It's like, I've got four kids, and none of 'em is my favorite.

Backbeat: Not many players have taken the bass as far outside as you have. What inspired you to do that?

Pastorius: Oh, "Trane. Ornette, Charlie Parker. When I was young, I used to listen to this Max Roach record with Hank Mobley, Kenny Dorham . . . I couldn't hear the bass player, so I figured out the horn parts instead.

Backbeat: When you were learning to play, was your grounding as much in r&b as in jazz?

Pastorius: When I started as a kid, within three months I knew every rhythm and blues tune there was in the world, and I could play 'em on bass, drums, guitar, piano, and saxophone. I was a fanatic.

Backbeat: I remember that it blew my mind when I heard a Sam and Dave tune on your first solo album.

Pastorius: I played bass with them when I was 15. It was pretty wild.

Backbeat: I also hear some kind of connection between your playing and Jimi Hendrix's. You recorded *America the Beautiful* and he did *The Star Spangled Banner*, but it goes beyond that. You've also done his *Third Stone from the Sun* and used a lot of effects. . . .

Pastorius: We just happen to have something in common in our musical thinking.

Backbeat: It's not that you try to be like him, but you both took new approaches to your instrument, and occasionally you end up at the same place he did. To me the word is affinity.

Pastorius: Exactly. He did things with distortion that I haven't heard anybody else do except me.

Backbeat: I saw Zawinul and Shorter at your last concert in Los Angeles, so I assume that you're on amicable terms.

Pastorius: We're the best of friends. We talk to each other all the time about what Weather Report's doing and what I'm doing. We set up tours that don't conflict with each other, we listen to one another's

Selected Discography

JACO PASTORIUS

Jaco Pastorius. Epic PE 33949; 1976.

Word of Mouth. Warner Bros. BSK 3535; 1981.

Invitation. Warner Bros. 23876; 1983.

With WEATHER REPORT

Black Market. Columbia PC 34099; 1976.

Heavy Weather. Columbia PC 34418; 1977.

Mr. Gone. Columbia PJC 35358; 1978.

8:30. Columbia PC2 36030; 1979.

Night Passage. Columbia PJC 36793; 1980.

Weather Report. Columbia. PFC 37616; 1982.

With JONI MITCHELL

Hejira. Asylum 7E 1087; 1976.

Don Juan's Reckless Daughter. Elektra/Asylum BB/BBC 701; 1977.

Mingus. Asylum 5E 505; 1979.

Shadows and Light. Elektra/Asylum BB 704; 1980.

With PAT METHENY

Bright Size Life. ECM 1073; 1976.

With HERBIE HANCOCK

Sextant. Columbia PC 32212; 1972.

projects. Hey, man, I never have left Weather Report. That's a family.

Backbeat: What was the best thing the group did while you were part of it?

Pastorius: Well, as I said earlier, I have four kids, and none of 'em is my favorite. But I would have to say "Heavy Weather," business-wise and musically, was a real unit project. We put everything we had into it, whereas on the later albums, deadlines weren't met, and so on.

Backbeat: What do you think your own best contribution to the band was?

Pastorius: Probably *Havona* [from "Heavy Weather"]. It's a simple tune, and a lot of people say it's their favorite; I took a good bass solo on it. I like *Punk Jazz* [from "Mr. Gone"], *Teen Town*, *River People* . . . I could just keep going.

Backbeat: When do you think the band was at its hottest?

Pastorius: Probably around "8:30," as far as performing. Peter [Erskine, the drummer] was just a terror. It was also hot with Manolo [Badrena, the percussionist] and Alex [Acuña, the drummer], but that band never totally clicked. Joe thought Manolo was too busy, and sometimes he was.

Backbeat: Were there limitations to being in Weather Report?

Pastorius: Oh, yeah. It was Joe's band, basically. I also had things to do. It's not really anything to talk about.

Backbeat: On most albums, you were listed as coproducer and Zawinul as producer. What does that mean, coproducer?

Pastorius: Let's say Joe would get most of the ideas, but in lots of instances I made the decisions, which is what a coproducer is supposed to do. I actually was more of a workhorse, you know. I feel I let Joe free up his ideas.

Backbeat: You once referred to Zawinul's "technological overkill." What did you mean by that?

Pastorius: Joe would be in the studio, and he's such a perfectionist that he would stay on one tune when we should have gone on to the next. The bills add up that way. But I really don't feel like talking about any of this, to tell you the truth.

Backbeat: Well, I'm asking as a fan of the band. On your last two Weather Report records you seemed a little less interested than you had been earlier. You only wrote one tune between the two of them—*Three Views of a Secret*—and you later rerecorded it on your own.

Pastorius: I was *more* interested, actually. It was just getting very hard for me to keep up the pace, living in Florida, traveling coast to coast all the time, making little or no money. I hate to get into money but that's what it really is. I finally had to think about doing my own thing.

Backbeat: How about your lack of tunes on those albums?

Pastorius: Well, Joe has so much music—he's always trying to do his own record. Every year he would put it off to do another Weather Report album. He's a consummate writer, so I can understand him wanting to do more of his own stuff, but I really didn't have much of a chance. I would bring music in and play one or two notes, and he'd say, "No, I don't like it," without even listening to the whole thing through.

Backbeat: People know you mostly through Weather Report—few know you from the Wayne Cochran days. What do you remember most about that gig?

Pastorius: I loved everything about it. In many ways, the C. C. Riders gig was my favorite ever. What I'm doing now is very reminiscent of it, and my big band writing is directly influenced by Charlie Brent, who was the guitar player for that band.

Backbeat: The music you're making now, live, with your six-piece outfit sounds much more open and less arranged than what you were writing for the big band.

Pastorius: With the kind of music that I write, the players have to be virtuosos, and all virtuosos are gonna want to stretch out once in a while. So you need a band where the focus is on individuals, and the small band is much more flexible.

(Continued on page 85)

Reviews



GARY GERSHOF/FRIENA (Armatrading); COURTESY ATLANTIC RECORDS (King)

Armatrading and King: different paths, similar aspirations

Joan Armatrading: Track Record

Various producers
A&M SP 4987

Carole King: Speeding Time

Lou Adler, producer
Atlantic 80118

At this point in their very different career paths, Joan Armatrading and Carole King find themselves in surprisingly similar straits. Since the mid-Seventies, Armatrading has been acclaimed by critics as the Woman Most Likely To. But despite a bold swing toward modern rock on her last three albums and a series of convincing tours, she remains only modestly popular. King meanwhile sustains a limited public, despite a succession of major label deals in the wake of her commercial zenith 13 years ago with "Tapestry." Not surprisingly, both "Track Record" and "Speeding Time" are straightforward bids for wider attention.

For the hitless Armatrading, the strategy is simple enough: A&M has reissued 11 of her catalog's most memorable tracks and added two songs coproduced by Armatrading and Steve Lillywhite, who produced 1981's excellent "Walk Under Ladders." What makes "Track Record" a strikingly offbeat anthology is its editorial scheme, which twists the artist's chronology: The album begins with the Caribbean-born, English-bred songwriter's most recent work. But "Track Record" is most revealing when it discards the calendar in the interest of musical logic.

Apart from her distinctively rich, deep alto, Armatrading's musical trademarks include the use of shifting rhythmic schemes, skill at coupling simple rock riffs with more expansive pop melody lines, and

a sweet-and-sour romantic perspective conveyed through melting vulnerability or steely resolve. The previously unreleased songs, *Frustration* and *Heaven*, dovetail with her recent forays into new rock, but the real standouts are the familiar pieces: the playful rockers (*I'm Lucky* and *Me Myself I*); the lilting, uptempo pop numbers with Caribbean underpinnings (*Show Some Emotion*); and the dewy early ballads.

King, by contrast, hardly needs yet another anthology. Her retirement from performing and concurrent hermetic retreat have given her so low a profile that she's more a nostalgic figure than a contemporary one. She has long needed a new musical setting to update the sturdy pop virtues of her best-known work, and "Speeding Time" supplies just that. King is here reunited with Lou Adler, the producer for her epochal early '70s records, and her original lyricist and ex-husband, Gerry Goffin; a new studio band showcases her own shift from piano to synthesizers.

The balance of proven assets and fresh blood is largely successful. King's sturdy, rhythmic playing style translates well to the multiple keyboards (played in tandem with Robbie Kondor) that frame these songs, imparting a lush harmonic backdrop while preserving the uncomplicated momentum of her attack. Although the synthesizer emphasis brings her inevitably closer to the latest generation of technopop warblers (any of whom might be her own kids), she avoids gratuitous usage of that firepower. Old ally Danny Kortchmar and session ace Lee Ritenour supply crisp guitar work.

She still comes across as a too-cosmic earth mother at times; the ecological ser-

mon *Chalice Borealis* abounds in leaden rhymes and heavy-handed imagery. But the same sweetly sadder-but-wiser persona that enlivened her best solo work reappears on the title song and *Standin' on the Borderline*. That's a heartening sign, one of several on King's most persuasive album in quite a while.

SAM SUTHERLAND

The Robert Cray Band: Bad Influence

Bruce Bromberg & Dennis Walker, producers. Hightone HT 8001 (P.O. Box 8064, Emeryville, Calif. 94662)

"Bad Influence" is the second album by thirty-year-old Tacoma guitarist and singer Robert Cray, one of the few young black musicians dedicated to playing the blues. His musical direction seems less unusual now than it did in 1980, when his debut, "Who's Been Talkin'," was released on Tomato records: During the past year or so, modern blues recordings have started rebuilding fans through r&b and urban contemporary exposure, suggesting a decline in the inverted racial stigma of the white-rock dominated '60s blues revival.

"Who's Been Talkin'" displayed a hearty, instinctive style that mirrored Cray's debts to white interpreters as well as blues originators. His earlier involvement in rock bands had acquainted him not only with such guitarists as Peter Green and Eric Clapton, but also with his acknowledged inspirations—Magic Sam, Buddy Guy, and Albert Collins. The feel was authentic without smacking of scholarship; it preserved the small-group scale of Chicago blues while introducing elements of modern funk and rock. Best of all, Cray's own songs meshed seamlessly with his choice of standards, matching them in down-home humor and gritty detail.

The new album, however, marks a quantum jump. Cray's singing shows greater range and confidence, while his stinging Stratocaster leads are complemented by more focused, if deliberately low-keyed, rhythm work modeled on classic '60s Memphis r&b records. The Memphis connection extends as well to several of his vocals, especially on Eddie Floyd's *Got to Make a Comeback*. Moreover, the new band adds alto sax player Warren Rand and the tenor sax of keyboardist Mike Vannice to supply righteous reed choruses.

Cray and quintet also shine in their sense of rhythmic poise, stepping into some nimbly syncopated grooves that owe as much to modern, dance-oriented funk as to classic blues. When they wind into the sizzling *So Many Women, So Little Time*, their momentum reinforces the tongue-in-cheek lyric with hustling, impatient energy.

"Bad Influence," the debut release of a tiny label from Emeryville, California, surpasses its predecessor in production technique. The earlier recording's slightly flat ambience is replaced here with a fuller,

lucid mix, the finishing touch to a very strong performance. SAM SUTHERLAND

Andy M. Stewart: *By the Hush*

Andy M. Stewart, producer
Green Linnet SIF 3030

Andy M. Stewart, lead singer with the highly (and rightfully) touted Scottish folk band Silly Wizard, has a voice that would give goosebumps to a choir of angels. It's not a chimney, classically trained voice; it's a sweet tenor, rough around the edges, that's craggy and wavery and perfectly suited for broody ballads about Irish emigrants and doomed trysts, itinerant drunkards, and smug colonialists.

Accompanied by Wizard cohort Phil Cunningham on whistles, accordion, keyboards, and guitar, and by Martin Hadden on guitar and bass, Stewart offers up eight tunes on "By the Hush," his first solo album. His originals, like the four Irish and Scottish traditional songs, are steeped in lore, inspired by strange village stories, and

owe their inspiration to the misty reveries of Celtic tradition.

But while these tunes are drenched in thick, wistful melancholy, they are not innocuous little ditties about maids and maidens and knights going off to battle elves in enchanted woods. *Patrick Sheehan*, a haunting ballad made all the more so by Cunningham's whistles and organ, describes an Irish farmer who is forced by near starvation to enlist in the English army and then packed off to fight in the Crimean War. Sheehan comes back literally and figuratively a broken man, blinded in battle and alienated from his own countrymen because he joined the "enemy"—the English army. The English get it again in Stewart's *They Wounded Old Ireland*, a beautiful—and beautifully venomous—story of political oppression that, sadly, holds as much relevance today as it did 300 years ago.

Stewart covers additional terrain here, from a good-humored drinking song (*The Ramblin' Rover*) to a good-humored stab at fire-and-brimstone religious sects (the a

cappella *The Parish of Dunkeld*). Though the latter is light in tone, it centers around a group of Scottish Protestants who hang a minister, trash his church, and set up a whiskey still so the folks can get sloshed on Sundays.

Throughout "By the Hush," Stewart sings with intelligence and passion, his voice variably high and plaintive, gentle and precise. On the sorrowful, ironic *The Orphan's Wedding*, a tune about ill-fated lovers and incest, Stewart sings "And good folk held to the church bells," his voice rising and ringing to match his lyric. It's a subtle, sensitive bit of singing, something this quiet gem of a record abounds with.

STEVEN X. REA

James Blood Ulmer: *Odyssey*

James Blood Ulmer, producer
Columbia BFC 38900

On his first two major-label LPs, "Free Lancing" and "Black Rock," guitarist James Blood Ulmer laid down a fractious funk full of splintered guitar rhythms,

Top 10 of '83 from the Big 6

We asked our regular reviewers to name their favorite ten albums of 1983, including 1982 releases whose major impact was felt this year. The lists are alphabetical. On the question of whether to award point values to each record, our critics voted a unanimous "no." At least they agreed on something.

—Georgia Christgau

King Sunny Ade and His African Beats: *Synchro System*; Martin Meissonnier, producer; Mango MLPS 9737. **David Bowie: *Let's Dance***; David Bowie & Nile Rodgers, producers; EMI America SO 17093. **Elvis Costello and the Attractions: *Punch the Clock***; Clive Langer & Alan Winstanley, producers; Columbia FC 38897. **Michael Jackson: *Thriller***; Quincy Jones, producer; Epic QE 38112. **Jeffrey Osborne: *Stay with Me Tonight***; George Duke, producer; A&M SP 4940. **P-Funk All Stars: *Urban Dancefloor Guerillas***; George Clinton, Gary Shider, Walter Morrison, Sylvester Stewart, & William "Bootsy" Collins, producers; CBS BFZ 39168. **The Police: *Synchronicity***; Hugh Padgham & the Police, producers; A&M SP 3735. **Prince: *1999***; Prince, producer; Warner Bros. 123720. **UB40: *Labor of Love***; UB40 & Ray Falconer, producers; A&M SP 64980. **Was (Not Was): *Born to Laugh at Tornadoes***; Don St. Was, David St. Was, & Jack Tann, producers; Geffen Ze GHS 4016. CRISPIN CIOE

Richard Barone/James Mastro: *Nuts and Bolts*; Richard Barone & James Mastro with Mitch Easter, producers; Passport PB 6021. **The Blasters: *Non Fiction***; the Blasters, producers; Slash/WB 23818. **Elvis Costello and the Attractions: *Punch the Clock***; Clive Langer & Alan Winstanley, producers; Columbia FC 38897. **The Moreells: *Shake and Push***; no producer credited; Borrowed BORO 3302. **Randy Newman: *Trouble in Paradise***; Russ Titelman and Lenny Waronker, producers; Warner Bros. 23755. **R.E.M.: *Murmur***; Mitch Easter, producer; I.R.S. SP 70604. **Roxy Music: *The High Road***; Rhett Davies & Roxy Music, producers; Warner Bros./EG 23808. **Shalamar: *The Look***; Leon F. Sylvers III, producer; Solar 60239. **Richard Thompson: *Hand of Kindness***; Joe Boyd, producer; Hannibal HNLP 1313. **UB40: *1980-1983***; UB40, Bob Lamb, & Ray "Pablo" Falconer, producers; A&M 4955. MITCHELL COHEN

The John Carter Octet: *Dauwhe*; John Carter, producer; Black Saint BSR 0057. **Ornette Coleman: *Broken Shadows***; James Jordan & Jim Fishel, producers; Columbia FC 38029. **Anthony Davis: *Hemispheres***; Jonathan F. P. Rose & Anthony Davis, producers; Gramavision GR 8303. **Jimmy Giuffrè 4: *Dragonfly***; Giovanni Bonandrini, producer; Soul Note SN 1058. **Keith Jarrett: *Standards, Vol. 1***; Manfred Eicher, producer; ECM 1255. **Sheila Jordan/Harvie Swartz Duo: *Old Time Feeling***; Herb Wong, producer; Palo Alto PA 8030-N. **Sam Rivers Winds of Manhattan: *Colours***; Giovanni Bonandrini, producer; Black Saint BSR 0064. **Roswell Rudd, et al: *Regeneration***; Giovanni Bonandrini, producer; Soul Note SN 1054. **Lennie Tristano: *New York Improvisations***;

Bruce Lundvall, producer; Musician 60264-1. **Weather Report: *Procession***; Zawinul & Wayne Shorter, producers; Columbia FC 38427. DON HECKMAN

Bananarama: *Deep Sea Skiving*; Barry Blue, producer; London 810102-1R-1. **T-Bone Burnett: *Proof Through the Night***; Jeff Eyrich, producer; Warner Bros. 23921-1. **Marshall Crenshaw: *Field Day***; Steve Lillywhite, producer; Warner Bros. 23873-1. **John Hiatt: *Riding with the King***; Ron Nagle, Scott Matthews, & Nick Lowe, producers; Geffen GHS 4017. **Michael Jackson: *Thriller***; Quincy Jones, producer; Epic QE 38112. **Kate & Anna McGarrigle: *Love Over and Over***; Kate, Anna, & Jane McGarrigle, producers; Polydor 810042-1Y-1. **Jonathan Richman & the Modern Lovers: *Jonathan Sings!***; Peter Bernstein, producer; Sire 23939-1. **Jules Shear: *Watch Dog***; Todd Rundgren, producer; EMI America ST 17092. **Andy M. Stewart: *By the Hush***; Andy M. Stewart, producer; Green Linnet SIF 3030. **Was (Not Was): *Born to Laugh at Tornadoes***; Don St. Was, David St. Was, & Jack Tann, producers; Geffen Ze GHS 4016. STEVEN X. REA

David Bowie: *Let's Dance*; David Bowie & Nile Rodgers, producers; EMI America SO 17093. **Elvis Costello and the Attractions: *Punch the Clock***; Clive Langer & Alan Winstanley, producers; Columbia FC 38897. **The Robert Cray Band: *Bad Influence***; Bruce Bromberg & Dennis Walker, producers; Hightone HT 8001. **Charlie Haden (with Caria Bley and The New Liberation Orchestra): *The Ballad of the Fallen***; Manfred Eicher, producer; ECM 23794-1. **John Hiatt: *Riding with the King***; Ron Nagle, Scott Matthews, & Nick Lowe, producers; Geffen GHS 4017. **The Police: *Synchronicity***; Hugh Padgham & the Police, producers; A&M SP 3735. **Linda Ronstadt: *What's New***; Peter Asher, producer; Asylum 60260. **Paul Simon: *Hearts and Bones***; Paul Simon, Russ Titelman, & Roy Halee, producers; Warner Bros. 23942. **Richard Thompson: *Hand of Kindness***; Joe Boyd, producer; Hannibal HNLP 1313. **Was (Not Was): *Born to Laugh at Tornadoes***; Don St. Was, David St. Was, & Jack Tann, producers; Geffen Ze GHS 4016. SAM SUTHERLAND

The Ed Bickert 5: *At Toronto's Bourbon St.*; Carl E. Jefferson, producer; Concord Jazz CJ 216. **Doc Cheatham: *It's a Good Life!***; Hugh Leal, producer; Parkwood 101. **Duke Ellington: *All Star Road Band***; Bob Thiele, producer; Dr. Jazz W2X39137. **Jim Galloway Quartet: *Thou Swell***; John Norris & Bill Smith, producers; Sackville 4011. **Bireli LaGrene: *15***; John Simon, producer; Antilles AN 1009. **Ron McCroby: *Plays Puccini***; Carl Jefferson, producer; Concord Jazz CJ 208. **Roswell Rudd, et al: *Regeneration***; Giovanni Bonandrini, producer; Soul Note SN 1054. **Jim Self Quintet: *Children at Play***; Jim Self, producer; Discovery DS 886. **Swinggrass '83**; Buell Neidinger, producer; Antilles AN 1014. **Ben Webster: *The Horn***; George Buck, Jr., producer; Circle CLP 41. JOHN S. WILSON

bluesy angular horn lines, and complex but miraculously danceable drum patterns. The music of those two 1982 albums also reflected the styles of his professional past, from rhythm 'n' blues and rock in the '50s to avant-garde jazz in the late '60s. Throughout the '70s, Ulmer worked in New York City with Art Blakey, Joe Henderson, and most significantly, Ornette Coleman, whose use of shifting tonal centers and theory of "harmelodies" has profoundly influenced Ulmer's sense of melodic freedom and his unique mixture of drone strings, ringingly sustained chords, and helter-skelter melodies on guitar. Combined with his model's "structured freedom" approach to soloing, Ulmer's mélange of rock/r&b roots has not only attracted a diverse, pop-oriented audience, but also influenced an up-and-coming generation of nouveau funk-rockers.

With the help of Warren Benbow on drums and electric violinist Charles Burnham, Ulmer digs deep into his roots on "Odyssey." Its loose-limbed, "funky hoe-down" sound springs from the guitarist's childhood in South Carolina Baptist churches and from his teenage years in the Southern Sons, a touring gospel quartet. *Church*, for instance, instantly summons up gospel's searing combination of solemn dignity and raucous backbeat, and, as the first cut, sets the album's tone.

Ulmer's rhythm attack leans on slithering modal fourth chords—a sound as Appalachian as a buck-dance party—juxtaposed with Burnham's alternately bluegrass-style sawing and Jimi Hendrix-inspired bent-note pyrotechnics. Throughout, Ulmer filters his roots through the fiery technique and, at times, sheer clutter of his jazz and avant-garde experience. On first hearing, *Love Dance's* "chicken picking" guitar style provides the perfect gospel/r&b backdrop for the flowing solo violin line, underscoring the tune's Deep South party-time origins. Closer listening, however, reveals this classic rhythm part to be constructed from a complex cadence system, brimming with adroit chord substitutions and precise rhythmic variations.

The sounds here are as thick and colorful as the red clay of Ulmer's home turf. His guitar has never sounded clearer or more incisive on record, and the balance and subtle interplay among the three musicians never flags in the mix. (For all its goodtime flash and spark, this is very structured music.)

The closer, *Swing and Things*, combines a rockabilly drum beat and guitar fills with Near Eastern scalar themes, a soaring wash of violin, and a miraculously tight breakdown figure at the end of each chorus. The song is a rhythmic tour de force of the old and the new, the foreign and the domestic. Like fellow famed South Carolinian Dizzy Gillespie, James Blood Ulmer has ears as big and eclectic as his formidable technique.

CRISPIN CIOE



DEBORAH FENGOLD

Anthony Davis: startling results

Luther Vandross: *Busy Body*
Luther Vandross & Marcus Miller,
producers. Epic FE 39196

"Never Too Much," Luther Vandross's solo debut, was a triumph of emotion and technique, intensity and control. Two years later, with important productions for Aretha Franklin and Dionne Warwick in between, the singer-producer-songwriter has apparently spread himself too thin. The third Vandross album finds the balance off; there's too much method for the madness of "Busy Body."

Luther remains a marvelously seductive vocalist—rich, vibrant, often inspired—and a producer capable of uncommon subtlety and drama. But his range of styles is hardly broad: He is supremely sophisticated in the Gamble/Huff-meets-Quincy Jones vein, but rarely gets past a clever love song. And his insinuating vocal attack, once effortlessly revelatory, opening up the slightest material to unexpected depths, has lost nearly all its surprise and much of its impact.

Still, if the arrangements are overrefined (so polished that there's nothing to grasp onto) and the songs underdeveloped (wonderful lines here and there with no place to go), Vandross's voice carries "Busy Body" easily and sometimes sends it soaring in spite of itself. He is a smoothie, a stylist who takes delight in the spin, twist, and bounce of a phrase. He writes impossibly long lines, then flies through the rush of their syllables without a slur or a lost nuance. Vandross is irrepressible in the upbeat songs (*I Wanted Your Love* and *For the Sweetness of Your Love* are the brightest), and even the ballads and the big-hurt numbers have a certain joy because his delivery reflects a fierce pleasure in the expressive power of the human voice.

Problem is, his vocal power is all out of proportion to the material; he throws himself away, generously but foolishly, on an unaccountably flattened and drawn-out version of Leon Russell's *Superstar*, the album's biggest production number and its most puzzling misstep. Vandross may be one of the finest contemporary voices, but even with Marcus Miller collaborating, he's far from the best producer or writer where his own albums are concerned. The stylistic pleasures and pains here almost cancel each other out. Still, the voice lingers on.

VINCE ALETTI

Jazz

Anthony Davis: *Hemispheres*
Jonathan F. P. Rose & Anthony Davis,
producers. Gramavision GR 8303

Composer/pianist Anthony Davis's new album continues his rigorous exploration of the territories that lie between jazz, contemporary concert music, and "world" music. In this case, the vehicle is a five-movement dance suite, "Hemispheres," commissioned by dancer Melissa Fenley for a program at the Brooklyn Academy of Music.

The ten-piece ensemble that performs the work is fairly equally divided between classical- and jazz-oriented performers. The mix is appropriate, for the suite is Davis's most successful effort to blend elements from quite different disciplines. Movement 1, subtitled *Èsù at the Crossroads*, serves, according to the composer, to establish "... the harmonic vocabulary for the suite." It is also a showcase for Davis's remarkable piano technique, most notable in some bombastic left-hand articulations. The "harmonic vocabulary" sounds very much like tone-row derivations, filled with flat-ninth interval leaps and half-tone simultaneities.

Movement 2 (*Little Richard's New Wave*), Movement 3 (*Ifù: The Oracle—Èsù the Trickster*), and Movement 5 (*Clonetics*) evolve naturally out of Davis's interest in multileveled rhythmic densities. Like Don Ellis before him, he is fascinated with the manner in which jazz-based musicians deal with metric environments beyond the familiar 4/4, 3/4, and 6/8.

Davis, however, has found an ingenious solution to metric improvisation. He avoids the familiar trap of overemphasizing the first beat of the bar (a vital landmark for most musicians when they play in unfamiliar meters) by overlaying several meters with a common ictus to maintain a connection. Movement 2, for example, combines 4/4 with 11/4 with a common quarter note. While the resulting patterns sound gloriously complex, the advantage to the improvising players is that they have the option of stressing either 11 or 4 and can forget about

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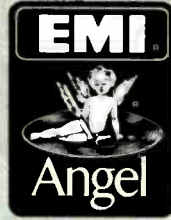
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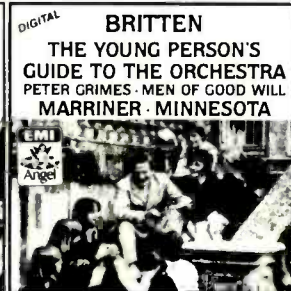
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BACKBEAT Reviews

maintaining an intellectual awareness of where the bar lines recur. Trombonist George Lewis makes full use of this freedom, with a typically grunting, groaning, snorting, and soaring solo.

Movement 3 marries 5/4 and 7/4 with equally startling results. Davis further brightens the piece with a slow, almost mystical-sounding middle section featuring vibes and string fragments. Bass clarinetist J. D. Parran and trombonist Lewis dominate the final section.

Movement 5 uses a somewhat different method, overlapping long rhythm "rows" or "systems" that range from 30 to 50 beats in length. The results are a bit less successful, if only because the means are more interesting than the end; rather than become immersed in the momentum of the music, we are captivated by the way in which it is achieved.

Movement 4 (*A Walk Through the Shadow*) provides one more treatment of a lyrical piece that also appears on Davis's "Episteme" album. The reexamination is harmonically complex enough to sustain interest and provocative enough to stimulate quite different interpretations from the musicians. Despite the stolid pedal bass note that roots a good portion of it, *Walk* seems to blossom and grow in a series of passionate cycles.

While "Hemispheres" is clearly a compositional breakthrough for Davis into genuine originality, credit should also go to the musicians: Lewis fully justifies his growing reputation as the best of the post-bop trombonists; clarinetist Parran makes the most of a few highlights; string players Shem Guibbory, Eugene Friesen, and Rick Rozie manage to sound like a full orchestra; and drummer Pheeroan akLaff, with perhaps the most difficult job of all, manages (among other things) to somehow find the proper mix point between 5/4 and 7/4.

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The other interesting aspect of "Pea- (Continued on page 85)

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